

Marshall's scissors and a post-classical human organisation and praxis theory of value

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We revisit Marshall's scissors analogy to the theory of value in economics and his discussion of human actors and other determinants of value creation. We build critically upon Marshall and related literature in economics and organisations to propose a novel post-classical human organisation and praxis theory of value. The theory reinstates the role of entrepreneurs, managers and workers discussed by Marshall and incorporates and develops key Marshallian ideas on organisation, knowledge and innovation, increasing returns to scale, inter-firm cooperation and (in) industrial districts, and their subsequent developments. In so doing the post-classical theory of value helps address limitations of extant theories and provides opportunities for theory development and implications for public policy.

Key words: Marshall, Theories of value, Nature of value, Human actors, Non-human determinants of value, Human organisation and praxis theory of value

JEL classifications: B5, B20, L21, M10

1. Introduction

In an oft-quoted sentence of his magnum opus '*Principles of Economics*' (*Principles* hereafter), first published in 1890, Marshall (1920) had stated 'we might reasonably dispute whether it is the upper or the under blade of a pair of scissors that cuts a piece of paper, as whether value is governed by utility or cost of production' (Marshall, 1920, p. 203).

Marshall's scissors analogy acknowledged that both labour power and utility play a role in determining value, hence there is merit in both the then dominant theories of value in economics, the labour theory of value (LTV) and the marginal utility theory (MUT).

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From the two theories, the LTV emphasised labour and labour power as the exclusive source of value. The MUT, focused on consumers and the utility they derived from the consumption of an additional unit of a good. Marshall had sought to maintain a continuity of this thinking with the tradition of classical economists such as Smith and Ricardo and viewed the contributions by MUT scholars as familiar truths (Bharadwaj, 1978).¹

Two subsequent theories, the industrial organisation (IO)-based and the post-Keynesian and Kaleckian, descend from the Marshallian synthesis. Marshall's contribution to the theory of value, however, went beyond the scissor's analogy to explore the human actors and non-human determinants of value creation. These have been under-explored in mainstream economics literature but found more fertile ground in heterodox economics and in organisational economics, entrepreneurship, and strategic management (henceforth 'organisations') literature.

In this paper we draw upon Marshall and subsequent contributions in economics and organisations, to assess critically, update and develop Marshall's contribution and develop a novel human organisation and praxis (HOaP) post-classical theory of value. This develops Marshallian, related and supporting ideas that are closely aligned with the focus of the classical school of thought on value and wealth creation and distribution, thereby explicating its title of post-classical.

In the next section, we provide a bird eye's view of the LTV and MUT. The following section looks at the Marshall-inspired mainstream IO, the post-Keynesian and Kaleckian theories of value, and contributions from the organisations literature. In the following section, we revisit Marshall's ideas about the human actors and non-human determinants of value. We then draw upon our analysis and contributions from economics and organisations, to develop a post-classical theory of value which leverages, synthesises, develops and extends key Marshallian ideas. We conclude that while much is still in Marshall, subsequent developments warrant revisiting and developing several of his views. Following that we discuss implications, limitations, and opportunities for further theory development. Given the breadth of the issues considered and space availability, below we focus on issues of direct relevance to Marshall and our original contribution, citing key references which provide more extensive treatment of issues, familiar to the readers of this journal.

2. Theories of value in economics: a critical appraisal

The two main theories of value in economics are the LTV and the MUT. Key contributors to the LTV were classical economists, notably Adam Smith, David Ricardo, and Karl Marx. The Marxian version is widely regarded as the most developed by proponents and critics alike (Robinson, 1962; Dobb, 1973). The MUT was developed by founding fathers of 'neoclassical' economics, notably William Stanley Jevons, Carl Menger and Leon Walras. The concept of marginal utility, namely the utility derived from an additional unit, is arguably one of the major inventions in neoclassical economic theory (Robinson, 1962).²

¹ Both the continuity and the familiar truths arguments are supported by that the year of publication of the first edition of the *Principles* coincided with one of the earlier known attempts by the highly respected Marxist-trained scholar Tugan-Baranovsky to synthesise the LTV and the MUT (Boianovsky and Melnik, 2024). For Groenewegen (1995, p. 1) Marshall 'established that peculiar branch of English neo-classical economics which combined aspects of both earlier classical thinking and the then new, marginalist economics, into a novel system of economics based on supply and demand'.

² According to Robinson (1962), this idea came to Jevons with the force of illumination. In his own words, 'In the past few months I have fortunately struck out what I have no doubt is the true *Theory of Economy*...' (Robinson, 1962, p. 48).

2.1 The LTV

According to the LTV, labour power is the only source of value. All commodities, namely products for sale in the market for a profit, are exchanged at their value. Labour power itself is a commodity, the value of which equals what is socially necessary for its reproduction. Socially necessary refers to the minimum requirements to subsist in a given epoch, given prevailing societal norms, namely beyond strictly physical, such as calories-based, calculations. In capitalism, workers are required by employers to work extra hours than those strictly necessary for the reproduction of their labour power, by virtue of employers' ownership and control of the means of production. The extra hours worked produce a 'surplus value' which can be realised in markets as a profit of the employer/capitalist. That implies structural and endemic exploitation in the system by virtue of the two parties entering the exchange with different endowments—one with means of production over and above their human power, the other only with the latter. The appearance of equal exchange in markets helps obscure this original inequality and hence the exploitation of labour in the sphere of production.

Marx had stated that for a commodity to have exchange value, it must be useful to someone. In the absence of a useful product, labour time spent in a commodity would result in no buyers, hence no exchange and no exchange value (Barber, 1967). This is an important assumption to which we return below.

While most scholars considered both the LTV and the MUT as *theories of value* (Gordon, 1964; Dobb, 1973), Robinson (1962) regarded only the LTV as a theory of value. She dispensed with the MUT, considering utility as 'a metaphysical concept of impregnable circularity', in that 'utility is the quality of commodities that makes individuals want to buy them and the fact that individuals want to buy commodities shows that they have utility' (Robinson, 1962, p. 48; emphasis in original).³ She was also critical of the LTV. She stated that in the LTV value was defined neither as 'usefulness—the good that goods do to us' nor as 'market prices' (Robinson, 1962, p. 29). Instead in its most developed Marxian version, the value of a commodity was determined by the 'human labour in the abstract' (Robinson, 1962, p. 37; quoting Marx).⁴

Kalecki (1971) shared Robinson's distaste of the LTV (Brus, 1977) and considered it unnecessary as an explanation of exploitation. Robinson's earlier book on imperfect competition had highlighted the exploitation of labourers in their capacity as consumers and as input-labour suppliers through above-perfectly-competitive prices and through the increased bargaining power of business vis a vis labour because of their monopsonistic power (Robinson, 1933). Kalecki (1971) had linked profits to the degree of monopoly and monopoly pricing, a view shared by Baran and Sweezy (1966) and the 'monopoly capital(ism)' tradition (Cowling, 1982; Conyon *et al.*, 2022).

Differential bargaining power due to unequal endowments, and/or debt (Keen, 2021) and financialisation could also support that exploitation can manifest itself at

³ Robinson's circularity critique of the MUT has not been addressed by mainstream economics (aka 'neoclassical') scholars. Instead, key defenses have focused on the argument that the importance of theory lies in its ability to predict. Besides bypassing the circularity question, the ability of the MU-based theory to predict is limited mostly to micro (consumer/firm) changes and to a lesser extent for meso (industry, sector, ecosystem) ones.

⁴ Robinson argued that was an assertion, that value in LTV was 'one of the great metaphysical ideas in economics', 'just a word' (1962, p. 29), and the LTV itself as a 'mere rignmarole of words' (1962, p. 39), an 'orthodox dogma' (1962, p. 38) the main purpose of which was to assert that exploitation of labourers by capitalists could take place even under conditions of equal exchange in markets. While ingenious, that was an ideological statement, not a scientific hypothesis.

the level of exchange.⁵ Additionally, monopsony power could help wage rates remain at socially defined near subsistence levels, sometimes even in strict physical terms, despite increasing monopoly profits. This could lead to a deteriorating distribution of incomes, as predicted by Marx's thesis of a relative immiseration of labour.

A key function of the LTV in Marx was to explicate macroeconomic transformations, including economic crises and the systemic transition from capitalism to socialism. The Marxian theory of the rising organic composition of capital/declining rate of profit (ROC/DRP) stated that because labour power was the only source of value, labour saving technical change, which was itself due to competition between capitalists and class struggle between capitalists and labour, would gradually lead to a tendency for a declining profit rate and eventually to capitalist crisis. Based on that there were several countervailing forces to stem the ROC/DRP, Marx and several leading Marxist scholars, have since built theories of intensification and degradation of work (Braverman, 1998), un-employment/reserve army of labour, joint stock companies and finance capital (Hilferding, 1910), imperialism and armaments (Luxemburg, 2015), monopolisation, effective demand pressures and state actions to absorb the surplus that could not be realised due to the lack of effective demand (Baran and Sweezy, 1966; Cowling, 1982; Pitelis, 1987).

Exploitation and crises remained key to the Marxian belief that the capitalist system has its limits, and it is best and inevitable that it is replaced by a better (socialist) system once it has exhausted its historical purpose to revolutionise the forces of production and create 'a world after its own image' (Marx and Engels, 1969, p. 16).⁶ Such arguments support the idea that the LTV can help develop scientific propositions, even were one to accept Robinson's claim of it being metaphysical. Moreover, Sen (1978) saw three aspects in the LTV, a descriptive, a predictive and a normative one. He claimed that critics like Robinson focused upon and critiqued the last two. In his view, LTV was descriptively meaningful, hence erroneous to call it metaphysical.⁷

It is arguable that the emphasis of LTV on labour as the only determinant of value downplayed Marx's own emphasis on the role of capitalists and technical change. Referring to both the capitalists (the 'bourgeoisie'), and technical change, Marx and Engels noted (in a non-exactly politically correct language), that 'By the rapid improvement of all instruments of production, by the immensely facilitated means of communication, the latter

⁵ In addition to such criticisms, the argument in the LTV that structural exploitation is predicated upon the assumption that labour power as a commodity is paid at its value, raises the question of whether the cost of reproduction applies from the moment one enters the labour force, and hence starts getting exploited at work. If one takes the view that the cost of reproduction extends to bringing a labourer from the cradle to the labour market, exploitation takes place prior to entering the labour market in that the cost of pre-employment reproduction is borne mostly from the family of the labourer to be. That introduces a source of potential exploitation that would persist even if traditional exploitation was zero (i.e. labour did not work more hours than required to reproduce itself post-employment) and even if exploitation was negative, namely labour was destructive. All these suggest that it is not necessary for labour as a class to work surplus hours to be exploited. In theory at least labour could receive all the value it has created in production, and still be exploited through pre-production investments in labour power unpaid by the capitalist.

⁶ Critics, of the LTV-inspired ROC/DRP theory of crisis, on the other hand had noted that the idea of a ROC leading to a DRP was not warranted even in the case of a constant degree of exploitation and it was quite wrong when a rising ROC leads to a higher degree of exploitation, as indeed one should expect given its (positive) impact on the productivity of labour (Robinson, 1942).

⁷ Other defences of the LTV include Fine and Saad-Filho (2018): responding to critiques of the LTV and to calls by Steedman (1977), to abandon the LTV in favour of Sraffa's (1960) standard commodity-based analysis of prices, Fine and Saad-Filho claimed that 'The abiding relevance of value theory is that it forges attachments between grand theory and complex and diverse outcomes' (p. 352). Hunt (1983) observed that value in Marx could be seen as a pre-analytical vision, that helped highlight the role of labour as social beings and producers. That compared favourably to the pre-analytical visions of neoclassical economics that focused instead on impersonal exchange and prices.

draws all, even the most barbarian, nations into civilization' (Marx and Engels, 1969, p. 16). This inconsistency could help explain why Marxism-trained economists such as Tugan-Baranovsky, Kalecki and Dobb did not adhere to the LTV.

Both LTV and MUT have sought to link values to prices. The LTV focused on prices of production and argued that these differ from market prices. While the latter were subject to demand and supply fluctuations, production prices were determined at the level of production, as opposed to the level of exchange. Values are transformed to prices and were proportional to them (Dobb, 1973). In contrast, in the MUT, the separation of values from prices is regarded as superfluous. In this view, value and prices are inseparable and are realised at the level of exchange. Indeed the MUT is a theory of price determination, and the terms value and prices are synonymous (Debreu, 1959).

The prediction by the LTV that production prices would tend over time toward their values, and that market prices alone will fluctuate due to demand and supply factors, is in principle testable; conceptual, data and measurement challenges notwithstanding. A key question remains what the analytical added value from a separation between production and exchange/market prices is.

Proponents of MUT and friendly critics of LTV alike assume that there is no such value.⁸ By developing the industry-based theory of the firm that remains almost intact in microeconomic textbooks today, Marshall helped cement the view that the cost and demand conditions in an industry alongside competition and the objective of firms in it suffice to determine prices. These reflect consumers' sacrifice-willingness to partake with their income, and the workers and producer's willingness to sacrifice time and effort for the rewards they receive from so doing. The efforts of the workers were work, the sacrifices of producers were 'waiting' (Robinson, 1962; Barber, 1967).⁹ Values are therefore already reflected in prices.

Marshall's focus on price determination was maintained in the mainstream IO, in the post-Keynesian and Kaleckian approach (Lichtenstein, 1983) as well as in the 'monopoly capital(ism)' approaches (Conyon *et al.*, 2022; Pitelis, 2022a). The same is true, mostly unwittingly, of the burgeoning literature on organisations. We turn to those below. This attests to Marshall's influence, which we argue later goes much further than the scissors analogy.

3. Marshall beyond the scissors: human actors and non-human determinants of value

A limitation of LTV and MUT is their failure to explore in some detail the human actors and non-human determinants of value. That consumer utility suffices to explicate values and prices shifts attention away from the widely recognised role by Marshall, as well as neoclassical and heterodox economists alike, of the firm, its strategy and (monopoly) power. The argument by the LTV on the other hand that only labour creates value seems inconsistent with Marx's own focus on the achievements of capitalist entrepreneurs.

⁸ Supporters of the LTV can still counter that besides structural exploitation, the LTV's focus on production facilitates predictions such as labour-saving technical progress, distributional changes, and economic crises. Labour saving technological progress has been widely observed (Rosenberg, 1992) and so has deteriorating income distribution (Piketty, 2014; Reich, 2016). Importantly and in contrast to a large literature on Marxian economic theories of capitalist crisis (Pitelis, 1991), neoclassical analysis cannot explain nor predict economic crises (Minsky, 1982; Pitelis, 1987).

⁹ Moreover, in Marshall's view, while demand is more important in the short run, cost of production becomes more important in the longer run.

Commenting on the LTV, Marshall observed that the spinning of a yard in a factory is not just the product of labourers alone, but rather ‘It is *the product of their labour, together with that of the employer and subordinate managers, and of the capital employed; and that capital itself is the product of labour and waiting*; and therefore, the spinning is of labour of many kinds and waiting. If we admit it is the product of labour alone, and not of labour and waiting, we can no doubt be compelled by inexorable logic to admit that there is no justification of interest, the reward for waiting’ (Marshall, 1920, p. 587, emphasis added).

In the paragraph Marshall includes both *human actors* (workers, capitalists, and managers) and non-human determinants of value, notably capital. Marshall’s other non-human determinants of values as prices discussed in his *Principles* include firm conduct and inter-firm competition. Marshall (1919, 1920) went well beyond these, however, to discuss knowledge and organisation, innovation, business strategy, increasing returns to scale, inter-firm cooperation and/in industrial districts. We look at these in turn.

In his account of factors of production, Marshall explicitly added the role of organisation, alongside labour, land, and capital. He argued that:

‘The agents of production are commonly classed as Land, Labour and Capital... Capital is ... the main stock of wealth regarded as an agent of production rather than as a direct source of gratification. Capital consists in a great part of *knowledge and organisation*: and of this some part is private property and other part is not. *Knowledge is our most powerful engine of production*; it enables us to subdue Nature and force her to satisfy our wants. *Organisation aids knowledge*; it has many forms, for example, that of a single business, that of various businesses in the same trade, that of various trades relatively to one another, and that of the State providing security for all and help for many. *The distinction between public and private property in knowledge and organisation is of great and growing importance: in some respects of more importance than that between public and private property in material things; and partly for that reason it seems best sometimes to reckon Organisation apart as a distinct agent of production...*’ (1920, p. 84, emphasis added).

Marshall went on to state that:

‘In a sense there are only *two agents of production, nature and man*. *Capital and organisation are the result of the work of man aided by nature* and directed by his power of forecasting the future and his willingness to make provision for it. *If the character and powers of nature and of man be given, the growth of wealth and knowledge and organisation follow from them as effect from cause*. But on the other hand man is himself largely formed by his surroundings, in which nature plays a great part: and thus from every point of view man is the centre of the problem of production as well as that of consumption; and also of that further problem of the relations between the two, which goes by the twofold name of Distribution and Exchange’ (1920, p. 84, emphasis added).

In addition to organisation and knowledge, Marshall observed and analysed the ubiquity and importance of *increasing returns to scale* (when doubling the inputs more than doubles the output), and their implications on competitive capitalism. He was quick to point out that increasing returns would offer a head start to large firms and hence tend to undermine the perfect competition model, engendering oligopolistic industry structures (Robinson, 1962; Barber, 1967). In Marshall’s own words ‘when the production of a commodity conforms to *the law of increasing return in such way as to give a very great advantage to large producers, it is pat to fall almost entirely into the hands of a few large firms;...the production of such a commodity really partakes in a great measure of the nature*

of a monopoly' (1920, p. 230, emphasis added). This implies that under increasing returns, the supply curve could not be derived clearly and unambiguously (Barber, 1967, p. 182). Needless to say that increasing returns to scale are ubiquitous, especially today in digital platform-based born global oligopolies (Conyon *et al.*, 2022; Pitelis, 2022a).

In his 1919 book *Industry and Trade*, Marshall went further to emphasise the role of firm heterogeneity, innovation, entrepreneurship, management, business strategy, resource mobility and differential capabilities, alongside revisiting increasing returns and (hence) the role of big business (Kerstenetzky, 2010). All these predated much of subsequent organisations literature. Several of his ideas were put together in his other major contribution, the concept of *industrial districts*. Marshall recognised and stressed the importance of non-collusive inter-firm cooperation in industrial districts. He observed that co-location and cooperation combined with competition (what today we call co-opetition) engendered external economies of scale, that would allow small firms in industrial districts to enjoy some of the unit cost advantages of large size. His ideas on industrial districts have proven enduring and influential and engendered very extensive literatures, notably on agglomeration, industrial districts and clusters (Belussi and Caldari, 2009; Pitelis, 2012).¹⁰

Regarding method, a key legacy of Marshall was to view the economy through an evolutionary lens. He argued that the mecca of economics was biology, and that variation was key to economic progress (Loasby, 1978; Pratten, 1998; Metcalfe, 2007). All these views are most pertinent in today's intangible assets, knowledge-based organisational market economy (Simon, 1991; Teece, 2014).

Many of Marshall's ideas are hard to reconcile with the perfectly competitive model, and by extension with neoclassical thinking. For this reason, Marshall is seen by some as the doyen of neoclassical economics and at the same time a rather subversive figure (Barber, 1967). Several of his ideas have been subject to scrutiny by critics and by admirers alike. His attempt to maintain competitive equilibrium in the face of increasing returns, was based on the presumed existence of special as opposed to more general industries, allegedly protected from competition, and to the concept of a life cycle of firms (Barber, 1967). Equivocal as that was even then, it hardly is justified in an era of digital platform-based oligopolies. These firms operate in global markets and remain alive and well for long periods through various means, like the employment of professional management, the internalisation of the forces of creative destruction (Penrose, 1959), by being more efficient, but also through anti-competitive practices and acquisitions that allow them to outcompete existing and potential rivals (Kamepalli *et al.*, 2019).

Marshall did not link explicitly the treasure trove of his ideas about human actors and the non-human determinants of value in a common framework. In effect his contribution to the theory of value is usually limited to the scissors analogy. In what

¹⁰ Marshall's idea of waiting as a justification for rewarding capital for sacrificing present consumption, and the related idea by scholars such as Böhm-Bawerk that waiting provides an opportunity to use more roundabout techniques (see Hausman, 1981) have been subjected to powerful critiques in the famous Cambridge controversies (Harcourt, 1969). It is arguable that Marshall's idea that capital also consists of organisation and knowledge is inconsistent with the idea of waiting as a reward to capital. In the entrepreneurship and dynamic capabilities research, optimal timing is more important than waiting (Teece, 2014; Pitelis, 2022b). In this literature, waiting can be justified if it reveals and/or opens and/or creates better entrepreneurial opportunities. But in such a case partaking of these opportunities is 'capital's' own reward. In many a case waiting can be bad too, if it helps offer first mover advantages to competitors. Many a digital platform firm abides by the motto attributed to Meta founder Mark Zuckerberg, to 'move fast and break things'. In such cases speed, not waiting, is the reward to the entrepreneurs.

4. The legacy of Marshall's contribution

4.1 The Marshallian roots of the microeconomics and IO approach

The graph illustrates the relationship between Price (P) and Quantity (Q) for a monopolist. It shows the Demand curve (D), the Marginal Revenue curve (MR), and the Long-Run Average Cost curve (LAC).

The initial equilibrium is at quantity Q_m and price P_m . A shift in demand to the right, labeled \bar{Q} , moves the equilibrium to quantity Q_c and price P_L . The shift in quantity is labeled MES . The LAC curve is at price P_c .

Source: Author, adapted from [Marshall \(1920\)](#), [Robinson \(1933\)](#) and [Modigliani \(1958\)](#).

Figure 1 depicts price/output equilibria in different industry structures, namely perfect competition, imperfect competition/oligopoly and monopoly, under the assumptions of perfect knowledge, cost and demand conditions common to all firms, same technology and resources and capabilities and profit maximising behaviour. In line with Modigliani (1958), one can add a flavour of ‘realism’ by employing an L-shaped cost curve (seen as more realistic in manufacturing firms at the time of Modigliani’s writing than the more common textbook U-shaped ones). In the U-shaped cost curve, diseconomies of scale set in after the lowest point of the U. In the L-shaped cost curve, once economies of scale are exhausted, average costs remain constant. The price/output equilibrium of a perfect competitive firm is at P_c , Q_c , that of a monopolist at P_m , Q_m and that of an oligopolistic with a limit pricing P_l , Q_l .¹¹

Modigliani (1958) derived the elegant result that the price that deters entry (‘limit price’) will be positively related to economies of scale and negatively to the price elasticity of demand and the market size.¹²

Given that value is equated to prices and that labour costs are an important part of production costs, the neoclassical economic market structure analysis adheres fully to the Marshallian synthesis.¹³

4.2 Marshall and the post-Keynesian and Kaleckian approaches

Post-Keynesian and Kaleckian scholars are a broad church with several sub variants (Lichtenstein, 1983). Post-Keynesians share to varying degrees a focus on exchange relationship, yet on producer (as opposed to consumer) sovereignty, a focus on organisational and institutional complementarities as opposed to markets and market failures-based analysis alone, and a disdain to comparative static, short-term equilibrium analysis. They share a belief that capitalism entails both cooperation and conflict, as well as bargaining between classes (Robinson, 1962; Lichtenstein, 1983) and that technical change and

¹¹ In the limit pricing model Modigliani assumes that the minimum efficient scale (MES), that is the point on the cost curve where economies of scale are exhausted, functions as (the sole) barrier to entry and that entrants will only enter if post-entry prices are going to be higher than the perfectly competitive ones. As entry even of a single firm at the MES level of output leads to the perfectly competitive price, entry will not take place in that it defeats its very purpose (namely above normal profit).

¹² Note that if other barriers than economies of scale are considered too, prices can be higher than P_l . In the same diagram if one assumes market contestability (free entry and costless exit), one reaches back to P_c even in cases of oligopoly (Baumol, 1982). If instead one assumes a profit maximising oligopolist unconstrained from the fear of entry, one can derive an oligopoly outcome in which the price cost margin in the industry is related positively to the degree of collusion and the Herfindahl index of concentration and negatively to the price elasticity of demand (Cowling and Waterson, 1976). If we assume successful entry deterrence through credible commitments prior to profit maximisation, we can re-establish the monopoly price even in the presence of potential entry (Cowling, 1982).

¹³ Marshall’s contribution and the post-Marshallian Figure 1 has been important in several other ways. First is the invention and/or formalisation of key concepts and ideas such as industry structure, economic profit maximisation hence ‘opportunity cost’, cost and demand curves, consumer surplus, and strategic behaviour by firms. In terms of policy influence, the logic and results behind Figure 1 dictate much of public antitrust policy even to date. This is based on comparative consumer surpluses deriving from the different price-output equilibria in different industry structures. This suggests that perfectly competitive structures and prices are best for efficient resource allocation, that is widely regarded as the purpose of mainstream economics (Petit and Teece, 2021). Arguably these ideas could have been invented without Marshall and mainstream economic theorising and modelling; and many have been, see Kalecki (1971) and Steindl (1952). In addition, the restrictiveness of the assumptions behind the elegant post-Marshallian IO construct appears to render it devoid of reality. Considering, among others, that today most Big Tech companies like Microsoft, Alphabet, and Meta face average cost curves but curves that are declining throughout (like the natural monopolies of microeconomic textbook analysis), and the gulf between reality and neoclassical economic theory becomes far too glaring for comfort.

innovation are key determinants of productivity growth. They dispense with the idea of perfect knowledge, favouring instead the idea that decisions are taken under conditions of fundamental uncertainty (not just calculable risk) by agents who face limitations in knowledge and cognition. For instance, [Keynes \(1936\)](#) had placed emphasis on psychological factors and entrepreneurial ‘animal spirits’ in explicating investment decisions.¹⁴

For several reasons that can include [Keynes’ \(1936\)](#) disdain of Marx, the critiques of the LTV by Tugan-Baranovsky, Kalecki and Robinson, and arguably the contribution of [Sraffa \(1960\)](#) on price determination and income distribution without explicit resort to the LTV, the analysis of the post-Keynesian and Kaleckian school followed the Marshallian tradition to focus on price determination in exchange, not values of production. In this context and regarding the post-Keynesian contribution to value theory, [Robinson \(1978\)](#), noted that ‘Combined with a theory of imperfect competition, the Keynesian theory of value starts from the formation of prices as it occurs. Prices of manufacturers are set by a gross profit margin added to prime costs. The main influence of prime costs is the level of money-wages rates. Thus, the wage bargain determines the general level of prices’ ([Robinson, 1978](#), p. 186).

The focus of many post-Keynesian and Kaleckian scholars on investment, entrepreneurial animal spirits and innovation, sets them apart from neoclassical IO-type theorising, in which firms are points in a cost curve, and managers and entrepreneurs do not exist ([Penrose, 1959](#)). As we show below, this focus renders their contributions more closely aligned to Marshall than to neoclassical IO. At the same time the failure of both post-Keynesians and Kaleckians to go beyond Robinson’s cursory remarks and develop an alternative post-Keynesian theory of value leaves something to be desired and represents an opportunity for theory development.

Arguably and in an interesting way, significant progress towards this direction has been made by the burgeoning literature on organisations. We explore this below.

4.3 *Marshall and the organisations literature*

Often unwittingly, major developments of the Marshallian tradition have come from scholars of organisations. A host of important scholarly contributions in this tradition emphasise the role of organisations, managers, entrepreneurs, resources and capabilities, innovation, resource mobility, competition with cooperation (co-opetition), firm heterogeneity and business strategy. Many key contributors in this school were heterodox economists who were critical with the state of post-Marshallian microeconomics and IO and received a better reception in business and management schools. In critiquing and developing neoclassical economics, many such contributors developed key ideas and themes covered by Marshall. Many of those organisational economists had similar interests to classical thinkers and given the focus of organisation scholars on profitability-value capture, the relation between value capture and value creation also

¹⁴ Like in other traditions, here too, similarities and differences often coincide. For instance, despite his adherence to the Marxian concept of long term equilibrium, [Pasinetti \(1974\)](#) argued that the limited attention to technical change in neoclassical economics was ‘its original sin’, that persisted throughout the years, delimiting its relevance and contribution (Pitelis, 2016). On the other hand, [Kalecki \(1971\)](#) has often adopted the profit maximisation heuristic but was loath of long-term equilibria approaches, analysed the dynamics of investment and its role in capitalist crises. He had also developed the concept of degree of monopoly, as the price-cost margin in an industry and predicted variation in profits based on the degree of monopoly. Based on these and IO neoclassical contributions on strategic entry deterrence, [Cowling \(1982\)](#) co-derived the relationship between the degree of monopoly and industry structure and conduct variables.

became central to organisation literature (Ramírez, 1999; Lepak *et al.*, 2007; Pitelis, 2009). Considering there is a huge literature on organisation, below we only focus on key contributions of relevance to Marshall and value theory.

Key critics of the neoclassical approach, included Austrian scholars, such as Von Mises (1949), who considered the said approach to be mythical because of its unrealistic assumptions and views on markets, competition and human action. Penrose (1959) had lamented the view of firms in neoclassical theory as mere points on a cost curve, with no insides and no actors such as entrepreneurial managers. Both adopted a dynamic, evolutionary approach. Nelson and Winter (1982) also critiqued the static nature of the theory and proposed a process-based evolutionary theory of economic change that leveraged ideas and parallels from biology. This is aligned with Marshall's view that the mecca of economics should be biology.

Penrose (1959), Demsetz (1973) and Teece (1977), and the more recent resource and capabilities-based views took exception of the assumption that all firms possess the same resources and capabilities and developed novel theories that emphasised firm heterogeneity. The behavioural theory of Cyert and March (1963), questioned the assumption of unbounded rationality and (echoing Marx and the post-Keynesians), the implied absence of intra organisational conflict. Coase (1937) and Williamson (1975) observed that the neoclassical IO approach disregarded transaction costs which should be included in the analysis to explicate the nature and strategy of firms. Transaction costs reductions were found to be very important also for macro-economic development (North, 1990).

Team production, property rights and agency theories highlighted the role of actors, such as owners-residual claimants (principals), the ex-ante and ex-post-allocation of property rights in firms and intraorganisational relations and conflict, as determinants of value creation in firms, its distribution and the organisational objective that help foster value creation (Alchian and Demsetz, 1972; Barzel, 1989; Klein *et al.*, 2013; Panico, 2024). Stakeholder value and open team production theories highlighted the role of ecosystem actors who have invested in firm-specific assets, in value co-creation (Barney, 2018; Berti and Pitelis, 2022). In so doing these theories helped unearth more actors and factors that can help create value.¹⁵

In line with its focus on organisational performance, much of the organisations literature took value creation as given (Makadok and Coff, 2002). For instance, by defining resources as valuable rare, inimitable, non-substitutable (VRIN), the Penrose-inspired resource-based view (RBV) of the firm effectively implies that value is exogenously given and understood as such (Bowman and Ambrosini, 2000; Priem and Butler, 2001). Given its focus on value capture, it has been suggested that organisations theory, could borrow its theory of value creation from other theories such as micro-economics (Makadok and Coff, 2002). That however is the MUT, a theory singularly unsuited for organisations theory. Considering the affinity of the organisation's literature with Marshallian and heterodox ideas, and the relation between value capture and value creation and co-creation, borrowing the theory of value from neoclassical microeconomic theory is also a waste of the opportunity to consult all alternatives, and

¹⁵ An operational measure of value in economics and organisations is that of 'value added', defined as the difference between the (comprehensively accounted) value of a firm's output and the (comprehensively accounted) cost of the firm's inputs. Economic value added includes the opportunity cost of capital. Value added is an objective measure of value creation, measured at the level of production albeit by taking prices to reflect fully perceived value.

to develop novel theory. More recent literature on value creation and value capture in organisation scholarship sought to go further and explore more determinants of value creation (Lepak *et al.*, 2007; Pitelis, 2009; Hitt *et al.*, 2011).

Below we draw upon Marshall and relevant pre- and post-Marshallian contributions to develop a novel theory of value.

5. Marshall and beyond: a post-classical human organisation and praxis theory of value

5.1 The nature of value

The ontology (nature) of value (namely what is value), is first and foremost an epistemological question (Gordon, 1964) that has exercised philosophers for millennia. For instance, according to Lichtenstein (1983), the philosopher Aristotle had expounded a ‘just price’ theory of value. That entailed price serving as a ‘just reward’ for efforts applied in exchanging a product of potential use to others, so that both parties could maintain their respective station in life. Gordon (1964) claimed that Aristotle’s anticipated many a modern idea in that his theory involved both utility and labour input-based aspects about the source of value.

None of the theories we have covered have offered a definition of value as such. The LTV is about one key source/actor and determinant of value, namely labourers and labour power in the abstract, while the MUT asserts that subjectively perceived utility alone suffices to explain value. The IO and post-Keynesian and Kaleckian approaches assert that values are basically equivalent to prices. For a theory of price determination, this assumption may suffice. For a theory of value, as such, it is unsatisfactory.¹⁶

In this paper, we define value in a generic sense as *perceived and/as co-perceived worthiness of subject matter X to subject matter Y*. In this generic definition X is a person and Y can be anything. It can be art, reading, music, a nice day, good personal and family relations, a good morning coffee or tea, a nice meal, getting fewer spams, anything that is perceived to better one’s feeling of wellbeing (what Aristotle called eudemonia, which etymologically means being on good terms with one’s own demons). The subject matter X that perceives value can be a consumer, but also a producer, an investor, an art collector. It can also be a shareholder and/or a stakeholder, as in the shareholder/stakeholder value theories of the firm (Barney, 2018).

Aristotle considered value to have an interpersonal element, namely a social dimension and suggested that perceptions by others could impact on own perception of value (Gordon, 1964). Robinson (1962) went as far as claiming that value (as in the LTV) had no meaning in a Robinson Crusoe world. In our generic definition of value, the human element is key. Even a single human can perceive value, albeit the social dimension shapes one’s own perceptions of value and in fact value in this sense is co-perceived as such. In this sense Robinson Crusoe could derive value from fruits, seeds, sun, sand, and sea, as well as the appearance of Friday. The latter might help Crusoe derive higher value from items he commanded and were also desirable but not

¹⁶ Building theory upon a non-defined concept is not as rare as one might have hoped. For instance, extensive analyses of markets, firms and capitalism usually take their definition (nature), as given (Coase, 1937). In the case of value, a reluctance to provide a definition may be because the nature of value in general is an ontological question that is best left to philosophers. Be that as it may, we agree with Coase (1937) that clearly defining terms at the outset helps foster better communication and mutual understanding.

available to and/or shared with, Friday. In this sense value is co-created and can be shared (Pitelis and Teece, 2009; Porter and Kramer, 2011).¹⁷

The concept of perceived and co-perceived worthiness is apparently closely linked to that of utility in the MUT or pre-production usefulness in Marx's LTV. As already noted, both LTV and the MUT subjectively perceived usefulness is key to value and highlights the shared understanding between classicals and neoclassicals. However, co-perceived worthiness dispenses with the individualism of MUT, and it places emphasis on the idea of value's collective, societal nature. In this sense co-perceived worthiness is alien to marginal utility (MU), for which the consumer's utility alone suffices to define-create value.

That value is subjectively co-perceived, does not render it metaphysical. One need not go as far as the Epicurus-attributed concept that all happiness passes through the stomach, to think that at least sometimes some happiness does that. Subjectively co-perceived value can be readily measurable using for instance questionnaires and Likert scales—all well-established techniques in scholarship.

In the case of economic value, the value of an item (commodity, product, or service) derives from its perceived or co-perceived worthiness either of itself or in terms of its ability to be exchanged for other items perceived to be worthy, what classical economists called its command value, and/or to be shared with others. Exchange could be barter as in Adam Smith's original examples of the hunters killing beavers and deer, or in markets.

5.2 Human organisation and praxis

In his introductory paragraph in the *Principles* Marshall stated that 'Political Economy or Economics is a study of mankind in the ordinary business of life; it examines that part of *individual and social action* which is most closely connected with the attainment and with the use of the material requisites of wellbeing. Thus it is on the one side a *study of wealth*; and on the other, and more important side, a part of the study of man' (Marshall, 1920, p. 6, emphasis added).

While Marshall's definition of political economy has been widely discussed, the part about wealth and human action has gone almost unnoticed. Yet it is profound. Value creation and co-creation entail human organisation and praxis by human beings. Humans act and organise for several reasons that range from survival, through uncertainty reduction to exorcising the fear of death. At its most basic level, human action is a prerequisite to existence as without action of some kind or another, survival cannot be taken for granted. Even when organisation and cooperation permit survival through exclusive reliance on others, reaching the outcome of sustained hetero reliance requires action. Human organisation can entail the mere act of two or more humans joining forces to hunt more effectively, to the co-creation of complex socio-economic habitats and organisations such as multinational corporations and economic ecosystems (Pitelis and Teece, 2010). Human action ranges from instinctive and reactive to a purposeful attempt to realise ideas, aspirations and dreams (Jones and Pitelis, 2015).

In contrast to mere action, praxis is socially embedded and purposeful. Several philosophers over the years have proposed theories based on the concept of praxis. These range from Plato and Aristotle (Gordon, 1964), to von Mises (1949) and his

¹⁷ In theory, X can also be a multi-person entity such as a firm if there exists a decision-making body such as an entrepreneurial manager and/or a Board whose perception of value is considered to represent that of the entity in question. This is not devoid of challenges, when there are different interests and perceptions within the organisation.

magnum opus on human action and its scientific investigation (aka praxeology), and to [Arendt's \(1958\)](#) views of the human condition. Drawing upon Marx's claim that philosophy could only be realised through purposeful human action aimed at bettering the world, [Gramsci \(1929–1935\)](#) had defined Marxist philosophy as the philosophy of action. That the concept of human praxis is shared by such diametrically opposed socio-economic philosophers, among very many others, highlights its importance.

It is almost paradoxical that the concept of praxis has not been employed to develop a theory of value. This is because the very reliance on embeddedness implies a form of pre-existing organisational setting. Purpose, moreover, is widely regarded as a key differentiator of humans from many other species ([von Mises, 1949](#)). Below we submit that praxis, as purposeful and embedded human action, is the key source of value.

Human actors include labourers, capitalists, managers, artists and scientists. Through their actions, human actors transform their habitats and themselves. Each actor category possesses comparative advantages and means to do this. Artists and scientists engender ideas, knowledge and in many cases eudaimonia. Labourers transform inputs into useful outputs. Capitalists explore how they can monetise and capture co-created value. Managers take decisions that impact upon organisational performance. Entrepreneurs imagine realities and take actions to realise their desired realities ([Jones and Pitelis, 2015](#)). Often the same actor can serve several of these roles.

Entrepreneurship is not restricted to capitalists. All humans can act entrepreneurially. Entrepreneurs can be private, public, or social, including academic. They exercise foresight and imagination to realise ideas, vision, and knowledge. The realised outcome depends on the purpose. At the most basic level all human actors act with an eye to benefiting in some way or another. Benefiting can involve that of others. Private entrepreneurs or capitalists are normally motivated by profit. Public entrepreneurs are motivated by bringing about institutional changes that further the public good, ideally doing well by doing good. Social entrepreneurs are usually motivated by their perception of public interest, socio economic and environmental sustainability. Scientists and artists are motivated by the hope that their work can improve humanity, and they will be acknowledged for that. In most cases an underlying common objective is to also self-benefit from their actions in terms of money, promotion, kudos, recognition, and status. Virtually in all cases the satisfaction gained from creating, realising, achieving, and succeeding in what is intended is paramount. The latter is as important and sometimes more so, with private entrepreneurs. Becoming number one can keep motivating private and other entrepreneurs well after they have satisfied all other more mundane objectives. And so does the satisfaction gained from playing the game and from winning.

Even at the time classical economists were writing, the role of the capitalist entrepreneur was evident and even paramount. For instance the communist manifesto is an elegy to the bourgeoisie (the capitalists) which 'during its rule of scarce one hundred years, has created more massive and more colossal productive forces than have all preceding generations together' ([Marx and Engels, 1972](#), p. 17). In time, two human agents identified by Marshall, managers and entrepreneurs, have gradually acquired more prominence than labour. This is not surprising because under conditions of mass production, labour power and work can sometimes entail repetitive action, that need not always qualify as praxis. It is embedded but not always purposeful on the part of the labourer. Several classical economists, not least [Marx and Engels \(1972\)](#) have pointed to that and lamented the state and conditions of the working classes under capitalist mass production.

Echoing Marshall, Edith Penrose (1959) had emphasised managers as a key value creating human resource. That was because in advanced so-called managerial capitalism, characterised by a separation of ownership from management, managerial decisions and actions were key determinants of firm growth and profitability. The wrong decision could turn success into failure. The right one could foster growth and hence also provide employment for labour. The lack of good managers was the major constraint on firm growth. To claim that management is unproductive labour, as classical economists did, in this context, would make little sense. For Penrose as well as for famed business historian Alfred Chandler (1962), the manager, not the labourer, was the (new) hero.

On the other hand, in Schumpeter (1942) and more recently in a very extensive entrepreneurship literature (Alvarez and Barney, 2007; Jones and Pitelis, 2015), the hero became the entrepreneur. Schumpeter (1942) had already argued that the failure of Marx to make a clear distinction between the capitalist and the entrepreneur was a major flaw of the Marxist schema. He went on to emphasise the gales of creative destruction engendered through innovations by entrepreneurs and entrepreneurial organisations. Drawing on Hayek (1948) and von Mises (1949), Kirzner (1973) had argued that in their pursuit of profit, entrepreneurs are the key agents that make markets work and unleash creativity and innovation. Besides its coordinating function, entrepreneurship was a process of knowledge and opportunity discovery and hence also of opportunity creation.

More recent contributions went further in positing that entrepreneurs also create and co-create organisations, markets, and business ecosystems (Jones and Pitelis, 2015). This helps create and co-create value that the said entrepreneurs then capture by developing value capture apparatuses and business models (Pitelis and Teece, 2010). In turn and as originally argued by Smith (1776) and developed by Penrose (1959) specialisation, division of labour, teamwork and learning within organisations engender knowledge, innovation, and productivity improvements. These give rise to excess resources that can be used at almost zero marginal cost in that they have already been paid for (Penrose, 1959). This engenders endogenous firm growth, leads to economies of growth that reduce average costs and hence helps add value through both the revenue side and the cost side.

Public and social entrepreneurship may be motivated by other than pure profit considerations, but they are no less entrepreneurial and potentially value creating—in many a case the public sector can well be an important value creator and co-creator (Klein *et al.*, 2010). Additionally, knowledge, innovation and value can be created and co-created through science and research, often basic blue-sky research. Some of that is embedded in so-called general-purpose technologies which require investments often beyond the reach of individual entrepreneurs. In these cases, value is co-created through public-private collaboration.

The government can also play a key role in setting up and enforcing the rules of the game (North, 1981), reducing transaction costs, and providing security and legitimisation. Marshall had noted that in addition government could also help improve the allocation of resources by markets, through actions that could help shift activities away from those characterised by decreasing returns to scale and towards those characterised by increasing returns (Barber, 1967). This is a far cry from subsequent neoclassical market-failure based arguments of public policy. These require that in the face of increasing returns hence potential monopoly, governments should step in to establish perfectly competitive conditions, the opposite of fostering activities characterised by increasing returns.

Baumol (1990) had famously characterised entrepreneurship to be productive, unproductive and destructive, and emphasised the role of the institutional and regulatory framework, in other words public entrepreneurial praxis, and the extent of the supporting infrastructure, influencing the allocation of private entrepreneurial activity between the three categories. In all, absent entrepreneurs and entrepreneurial managers, research and the role of public and social entrepreneurs, and it might well be the case that the only alternative to (and worse than) the exploitation of labour would be its total non-exploitation, hence non-employment (Robinson, 1962).

As already noted, in IO theory managers do not exist. On the other hand, and based on the classical idea of LTV, managers were viewed as unproductive labour—basically parasitic, much like the capitalist. This contrasts with the prominence attributed to managers and management by Penrose (1959). Clearly, private entrepreneurs, managers and (bad) management can be unproductive and/or destructive. Here again the organisational context and culture can be critical.¹⁸

As we have already argued, many post-Marshallian contributions in organisations literature draw upon and develop Marshallian ideas—even if unwittingly. Below we build upon all of these and Marshall's and ideas on human action and wealth creation to develop a post-Marshallian, post-classical theory of value.

5.3 Marshall and a human organisation and praxis theory of value

While classical economists and the LTV had focused on value and wealth creation at the level of production and its distribution, neoclassical economists and the MUT had focused on the efficient allocation of scarce resources at the level of exchange, realised through subjective perceptions of diminishing MU. The two approaches are at odds, but not entirely incommensurable. Several resources are scarce and stating that they need to be allocated efficiently is little more than arguing against waste and inefficiency. This is especially the case for natural and non-producible, non-renewable resources. It is even more important in the case of the ultimate scarce resource, that is a human's time for action. Time allocated to one action is time taken away from another. In this sense efficient resource allocation can help create value.

However, not all resources are scarce and non-producible. This implies that efficient resource allocation of existing resources is not the only way to create value. Basing economics as a whole, on the assumption of efficient allocation of scarce resources alone, as Robbins (1932) did in his famous essay, in today's world of a knowledge, innovation and intangible assets-based economy, seems dated (Pitelis and Runde, 2017). Both knowledge and many intangible assets share public goods characteristics (they are not excludable) and can be subject to increasing returns to scale. Non-scarce resources can include knowledge and innovation and the power that is often derived from these. Knowledge, innovation, and power are often endemic and at the heart of the economy (Zingales, 2017). They are also subject to increasing returns to scale and can help create value. Knowledge and innovation are not subject to diminishing MU either. To claim that an additional unit of knowledge or learning or creativity or innovation provides diminished utility, would be naïve. If anything, we build on the shoulders of

¹⁸ Robinson (1979) had acknowledged the importance of 'administration' but considered it to be unproductive in that, in her view, it lived off the 'surplus'. This did not amuse Edith Penrose (1980, p. 318) who in a letter to Robinson in February 1980, observed that '...at one point you agree that administration is useful; and necessary, but at the same time you insist that because it lives on the surplus, it reduces the growth of wealth. I find it impossible to follow' (*Edith Penrose Archives*, Christos Pitelis, Queens' College, Cambridge, UK).

giants and in so doing we can derive increasingly higher satisfaction from more units of it. It is also arguable that a minimum threshold of knowledge is a prerequisite for getting satisfaction from gaining further knowledge.

We can synthesise the two approaches by defining economics as the study of value and wealth creation through the efficient allocation of resources that are scarce, alongside the co-creation of new resources and capabilities. This entails a focus on human actors motivated by the pursuit of betterment, that take judgmental decisions under conditions of both risk and fundamental uncertainty, namely uncertainty conditions in which no probabilities can be attached to future outcomes (Knight, 1921). In such situations, it is usually the pursuit of capture of co-created value by entrepreneurs broadly defined which creates value through the discovery and creation of opportunities and the creation and co-creation of organisations, markets ecosystems and institutions which foster their objectives (von Mises, 1949; Kirzner, 1973; Alvarez and Barney, 2007; Pitelis and Teece, 2010). It also entails considering the relevant non-human determinants of wealth creation, discussed earlier in this paper.

Figure 2 builds upon our discussion so far and on related developments and helps serve as an organising framework for our proposed post-Marshallian human

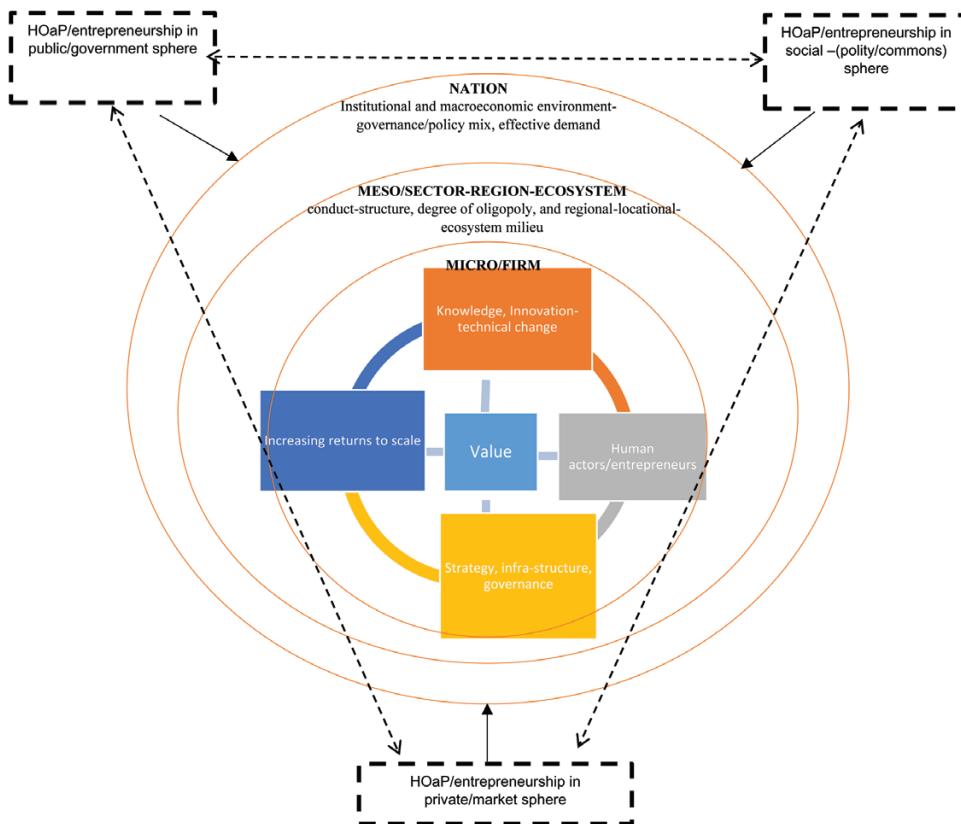


Fig. 2. Human actors and non-human determinants of value at the firm (micro), industry/sector/ecosystem (meso) and national (macro) levels.

Source: Author.

organisation and praxis theory. In [Figure 2](#), value is placed at the centre of the analysis. The figure then shows the human actors (entrepreneurs') and non-human determinants of value. These are examined at multiple (micro, meso and macro) and scalable levels.

The inner circle of [Figure 2](#) depicts the organisational/firm level. The industry/sector, and the (Marshallian) industrial district/ecosystem depicts the meso-level, while the outer depicts the macro-institutional level.

At the firm/organisational level, four direct (or in Marshall's terminology primary) determinants of value creation are 'human actors/entrepreneurs', 'knowledge, innovation and technical change', 'organisational structure and infrastructure and strategy-governance' and 'increasing returns to scale'. Human actors, notably workers/labour, managers, private entrepreneurs, as well as researchers and scientists are shown to be capable in principle of engendering value. The same is true of knowledge, innovation and technical change. These include knowledge and changes in organisational knowledge, product and process innovations as well as changes in the business model of organisations. The third determinant of value creation is organisational strategy, structure and infra-structure. These are discussed extensively in [Chandler \(1962\)](#), [Porter \(1980\)](#) and in the rich organisations literature. More specifically organisational infra-structure refers to the internal organisation, processes, best practices, and routines of firms as in [Cyert and March \(1963\)](#). The fourth primary determinant of value creation is 'increasing returns to scale'. This includes economies of scale, scope, growth, learning, transaction costs and external economies.

As we have already shown, while all four determinants are mentioned in [Marshall \(1919, 1920\)](#), they have not been developed into a theory of value, while their inter-relationships were left underexplored. For instance, going back to Marshall's scissor's analogy, demand is affected by perceived quality, hence differentiation, appeal, and the promotion strategies by firms. Drawing upon more recent literature in organisations, we can add organisational identity and branding as factors that influences demand ([Pitelis, 2009](#)). Organisational branding/identity is the sum of what firms do and how they do it, as well as the way they present themselves to the world. They can help create value through differentiation. The latter has the dual effect of adding perceived utility to products and of acting as a potential barrier to mobility, hence helping value capture. In turn value capture potential incentivises value co-creation.

Cost and demand are both affected by the degree of competition between firms ([Porter, 1980](#)), hence the degree of oligopoly ([Kalecki, 1971](#); [Cowling, 1982](#)) and by the nature and degree of cooperation, and co-opetition ([Pitelis and Teece, 2010](#)). Business strategy can confer first mover advantages that help impact prices ([Chandler, 1962](#)). Sometimes being second can also confer advantages. Some innovations can help increase appeal and reduce costs simultaneously. Additionally, cost and demand are determined by cultural and institutional and regulatory factors. These are all important in developing a more comprehensive theory of value.

The four primary determinants of value creation are scalable in that each can refer to firms (micro), industry/sector/region, industrial districts/ecosystems (meso) and/or to nations (macro). From these the meso-level also includes the nature and degree of competition/monopoly and cooperation, hence co-opetition. The macro includes the institutional and regulatory context of the market, hierarchy, collaboration mix, the aggregate effective demand and the government and its (public) policy. This renders the meso and macro determinants micro-founded in the sense that the unit of analysis

(value) is influenced by multiple, more aggregate layers—namely the organisational, the industrial/sectoral/ecosystem and the macro/institutional (Pitelis, 2016). These are all embedded within three types of (entrepreneurial) human organisation and praxis: the private, the public, and social-polity levels.

The lineage of the four primary factors of value creation go back to Marshall and include the great and the good from political economy and organisations. Because their key contributions are well known, we present them here in a summary taxonomical form. For instance, the role of human resources and capabilities, include contributions by the three classical economists (Smith, Marx, Ricardo) on labour; Schumpeter, Schumpeterian and Austrian scholars on the entrepreneur; Penrose, the Penroseans and the RBV on managers, and on human and organisational capabilities (Teece, 2014). Increasing returns to scale are important in scholarship ranging from Sraffa (1926), to endogenous growth theories (Romer, 1994). Innovation and technical change are key to Schumpeter (1942), to Penrose (1959), to Pasinetti (1974), the field of innovation studies and the neoclassical endogenous growth theory (Fagerberg, 2003), and the business model innovation literature (Teece, 2014; Pitelis, 2022b). The role of organisation, and organisational governance, strategy, structure and infrastructure have been explored in organisations, for instance in Chandler (1962) and by several leading scholars since, see Pitelis *et al.* (2024). Infrastructure, in the form of internal organisation, routines, processes and best practices, were key in Chandler (1962); Cyert and March (1963); Nelson and Winter (1982); Williamson (1975) and the (dynamic) capabilities literature (Pitelis, 2022b). Aggregate organisational differentiation, identity and branding are key to both IO and to strategy and marketing scholarship (Pitelis, 2009).

The four primary determinants of value creation are interrelated. Human actors and their capabilities impact knowledge, innovation and technology, increasing returns, organisational governance, strategy, structure and infrastructure. Organisation affects increasing returns, technology, and innovation, including business model innovation. Branding differentiates an entity hence adds value through enhanced appeal. Increasing returns reduce costs and foster organisational heterogeneity and hence differentiation (Pitelis, 2009). All determinants are impacted by entrepreneurial behaviour at the private, public and social spheres. The immediate focus of private entrepreneurship is on the organisational micro and meso levels, of public entrepreneurship on the macro and meso levels and of the social entrepreneurship on the social and institutional levels.

Unlike the neoclassical economic focus on mathematical models, Figure 2 is a schematic, appreciative framework that goes from the general to the more specific. It is possible to narrow it down by imposing restrictions and assumptions and go to the specific level, such as the neoclassical IO, industry structure-based analysis. For instance, by focusing on firms alone, industries and under the well specified assumptions of IO, the outcomes of Figure 1 can be derived as a special case from Figure 2.

The main intended contribution of Figure 2, however, is to showcase the novel theory of value that cross-fertilises and builds upon Marshall and post-Marshallian developments. The theory emphasises the role of humans, their organisation and praxis, and the organisations they help co-create through praxis. But it also considers some ancillary (in Marshall terminology secondary), non-human factors that can help create value, such as inimitable resources and finance. These are better understood in the context of the link between value creation and value capture.

The relation between value creation and value realisation and capture is undertheorised in much of economics literature on value. However, the pursuit of value capture can be a potent motive for value creation and co-creation. And value must be realised as profit. In this context it is arguable that tangible, financial, and intangible resources (capital), notably those that are inimitable, can help firms capture value that in turn can be invested in value creating and co-creating activities. By helping firms capture value, such resources and capabilities help incentivise the process of capturable value creation and co-creation. In addition, financial markets and capital can also help create value indirectly, for instance by facilitating the investment in productive assets (Keen, 2021) and the realisation of value. Even if it is not producing as such, financial capital can be nonetheless productive (Cohen, 1979).

In addition to highlighting the link between value capture and creation, the post-classical theory of value helps derive predictions about the relationship between value and prices that are closely aligned to real life situations. In developed market economies, a key reason for increased co-perceived worthiness is what we conventionally call ‘value for money’ (VFM). This is the gap between the price one pays and what one perceives that one gets in return. An important implication of VFM is that it can help predict a negative relationship between market values and prices. This is because for a given perceived worthiness of, for example, a branded watch, the lower the market price, the higher can be the perceived value derived from purchasing it at that lower price. (Clearly this is up to a point, in that lower prices are sometimes taken to imply lower quality hence reducing the appeal/perceived worthiness, and potentially even the command value). Accordingly, HOaP predicts a contingent negative or positive relationship between value and prices.

The hypothesis of a potential negative relationship between values and market prices contrasts with both the LTV and the MUT. It is also readily testable. It entails asking a random representative sample of consumers to compare the impact of changes in the perceived worthiness to them of the same product for different prices. The implication is that defining value as co-perceived worthiness poses challenges to the MUT and the LTV, because they both predict a positive relationship between value and prices. It is arguably more challenging to MUT because the LTV focuses on production prices that are argued to be independent from, and merely moderated by supply and demand considerations. That value and prices are not synonymous and need not even be positively related, however, it also suggests the need to go beyond the two theories.¹⁹

Table 1 summarises and compares the extant theories to our proposed post-classical HOaP theory of value, with regards to the nature of value, aims and scope. source and actors, intended domain of its applicability, method, determinants, and relation to price.

In Table 1, the organisation theories are divided into two variants, the static one that includes the transaction costs approach and the VRIN-based resource-based view and the dynamic that includes Schumpeterian, Penrosean, evolutionary, and dynamic capabilities perspectives. From the theories presented in Table 1 only the LTV and

¹⁹ It is interesting to note that the IO and post-Keynesian and Kaleckian hybrids can also predict a negative or positive relationship. This is because in the case of IO, increased prices that are due to oligopolistic pricing and restrictive practices, can in addition to its allocative inefficiencies, help reduce the consumer surplus. In the post-Keynesian approach, producer sovereignty alongside conspicuous consumption, can imply that some goods like luxury ones are valued more highly, the higher is their price (Robinson, 1978).

Table 1. Major theories and perspectives on value (Source: Author)

	Labour Theory of Value (LTV)	Marginal Utility Theory (MUT)	Neoclassical Industrial Organisation (IO)	Post-Keynesian and Kaleckian economics	Organisations (static) transaction costs economics and resource-based view (RBV)	Organisations (dynamic) Schumpeterian/Austrian, Penrosean, evolutionary, (dynamic) capabilities view	Post-classical, human organisation and Praxis (HOaP)
Nature	Pre-production usefulness, labour power in production	Consumer utility	Consumer surplus and cost of production)	Price	Consumer utility (exogenous)	Utility of target user	Co-perceived worthiness
Key source/actors	Workers/labour power in the abstract	Consumers (sovereignty)	Consumers, producers/firms in industries	Producers (sovereignty), entrepreneurs, labour	Managers in firms (hierarchies)	Markets, organisations, entrepreneurs	Human (entrepreneurs, managers, workers), organisation and praxis, organisations/institutions
Determinants	Worker activity and inventions, in the context of specialisation, division of labour, teamwork and learning	Consumer utility, preferences/scarcity	Demand and cost conditions, industry price-cost margin	Industry structure, 'animal spirits'	VRIN resources and capabilities, reductions in transaction costs	Innovation, creative destruction, entrepreneurship, in the context of specialisation, division of labour, teamwork and learning	Non-human VRIN resources, increasing returns to scale, innovation, organisational governance, strategy, and (infra-)structure, in the context of specialisation, division of labour, teamwork and learning
Domain	Production/'objective'	Exchange/'subjective'	Exchange and production	Production/'objective' and exchange	Production and exchange	Exchange and production	Production and exchange

Table 1. Continued

	Labour Theory of Value (LTV)	Marginal Utility Theory (MUT)	Neoclassical Industrial Organisation (IO)	Post-Keynesian and Kaleckian economics	Organisations (static) transaction costs economics and resource-based view (RBV)	Organisations (dynamic) Schumpeterian/Austrian, Penrosean, evolutionary, (dynamic) capabilities view	Post-classical, human organisation and Praxis (HOaP)
Aim/scope	Macroeconomic laws of motion of capitalism	Microeconomic efficient allocation of scarce resources	Microeconomic efficient allocation of scarce resources given productive efficiency	Macroeconomic dynamic efficiency and productivity	Organisational sustainable competitive advantage	Organisational and system-wide structure and evolution of capitalism	Multi-level (micro, meso, macro) scalable organisational and systemic sustainable value co-creation
Method	Frameworks	Mathematics/ models	Mathematics/ models	Frameworks, models	Frameworks	Frameworks	Frameworks, contextual modelling
Value-price relation	Positive	Positive	Positive or negative	Positive or negative	Positive	Positive	Contingent, value for money

the MUT are normally viewed as theories of value (and for Robinson only the LTV). Except for the sparse references by Robinson, on a (post) Keynesian theory of value, all others are not regarded nor have they been presented as such. As we have argued in this paper, however, they have clear implications on value creation that align with and develop Marshall's contributions and serve as important stepping-stones into developing a value theory that befits today's market assisted organisational economies.

The key observation from Table 1 is that HOaP is more comprehensive and inclusive but also more discerning with regards to its predicted relationship between value and prices. It highlights that in an organisational market economy attributing value creation exclusively, a single or even a few factors can be seriously underdetermined. Additionally, it considers the undertheorised interrelationship between value capture and value creation and co-creation.

6. Discussion, research opportunities and public policy implications

The breadth and depth of Marshall's ideas remains breath taking. Save for transaction cost thinking, almost everything can still be traced in Marshall. Some important issues, however, like intra-organisational and intra-societal conflict, and the link between value capture and value co-creation have been underplayed. Marshall's ideas have endured and are being developed by many leading scholars, in several cases unwittingly. For instance, they undergird many a key contribution in the burgeoning organisation literature in which Marshall features rarely if at all.

In this paper we have drawn upon Marshall's contribution to propose a Marshall-inspired, post-classical theory of value, based on human organisation and praxis. Having critically assessed extant theories we went on to define value as co-perceived worthiness that can be tangible or intangible. We argued that value is not a metaphysical concept. Both the MUT and the LTV are incomplete in that cost of production considerations and MU considerations impact upon value. But the post-Marshallian hybrid theories are limited too in that the definition, human actors and non-human determinants of value and their interrelationships remain undertheorised. And the role of human organisation and praxis, where that includes all humans and their organisation, including the organisations they create, are underplayed.

Unlike HOaP, extant theories also under-conceptualise the interrelationship between value creation and value capture. Value capture considerations and their relationship to value creation and co-creation, instead, are critical for organisations scholarship (Bowman and Ambrosini, 2000; Panico, 2024). The failure of the LTV and its proponents to appreciate the relation between value captured as profit and (the incentives provided to other human actors for) value creation and co-creation, leads to the idea that one can change production and distribution structures and relations, without affecting the value creation process. It helps explain the view that one can take over a business (or for that matter a whole country) and keep running it successfully without aligned incentive structures, specialised managers, and entrepreneurs.²⁰

²⁰ Up to a point, that might have been the case under conditions of mass production and when one tries to catch up. However, forging ahead requires discovery, innovation and the right organisation, resources and capabilities, strategy, and actions. In an intertemporal sense it is the pursuit of value capture that helps ensure that the value creation process continues. Remove that and one may well end up without value to be captured and/or re-distributed.

Our HOaP theory of value is also a plea for pluralism of ideas and methods, rather than for withering the LTV and the MUT. The focus of LTV on production, labour saving technical progress, intra-organisational conflict, and dynamics, can help explain organisational success and failure and afford macroeconomic predictions such as economic crises, that defy neoclassical thinking. Post-Marshallian neoclassical models, such as IO, have made important contributions, in terms of key ideas and through the relaxation by their critics of their more restrictive assumptions. Consider again [Figure 1](#), which [Latsis \(1976\)](#) and others have viewed as the epitome of the neoclassical method, and compare it to [Figure 2](#). The latter is more realistic and general. Based on it one could derive [Figure 1](#) as a special case by imposing relevant restrictions. That said, [Figure 1](#) has helped motivate numerous path-breaking ideas, many of which as criticisms. Some of these, like the invention of transaction cost economics, are among the very few which are not in Marshall.²¹

Our emphasis on the value creating role of entrepreneurs and managers (alongside labour), does not justify the excessive inequities in income, wealth and opportunity distribution observed today ([Piketty, 2014](#); [Reich, 2016](#)). If anything, these can be value destroying in that excessive remuneration of managers and entrepreneurs eventually can blunt the incentive to innovate and hence undermine future value creation ([Zingales, 2017](#)). It can also incentivise intraorganisational and societal conflict. Ideally one should identify the incentive-compatible remuneration of managers and entrepreneurs that fosters value creating innovation and place their remuneration at that level. While a rather complex exercise, that should not be too hard for a skilful scholar. Moreover, it is safe to assume that it would be well below current levels. This seems to be supported in part, at least by the fact that lower remunerations did not prevent capitalist economies from achieving better performances in the past than is the case today, with much lower remunerations of entrepreneurial managers.

Once it is accepted that all human power (i.e. worker, manager, entrepreneur, scientist/researcher), organisation and praxis can add (as well as destroy) value, and the role of organisation and organisations in creating value, the issue of distribution becomes more nuanced. It is neither pure exploitation at work nor the marginal productivity of capital and labour, with each receiving their reward for their contributions that helps explicate distribution. Besides obscuring pre-production distribution inequities, the marginal productivity theory underplays all that the market economy is about—entrepreneurship, management, organisation, knowledge and creativity, science and technology, capabilities, experimentation and innovation.

Our analysis suggests that public policy should go beyond consumer utility and price considerations to help ascertain what policies can help add value sustainably, by incentivising and enabling its actors and by impacting upon its major determinants. It shows that although workers and labour are not the only sources of value, they are nevertheless important in helping co-create it, not least by virtue of their key role in organisations, their praxis, culture, and capabilities.

²¹ The neoclassical benchmark-based method may have the advantage of incentivising critiques and extensions. In addition, in some cases there is a certain undeniable beauty (dare we say value) in formal modelling. This is for instance the case when a specific (the Herfindahl) index of concentration emerges from the mathematical solution to the equation of a profit maximising oligopolist ([Cowling and Waterson, 1976](#)) rather than by being asserted to be a good concentration index on a priori grounds. Clearly this advantage only applies, for as long as scholars follow Marshall's example to stop short of believing that the benchmark case is the full and/or only story, and that appreciative theorising is unnecessary and/or inferior; see [Sutton \(2000\)](#).

While beyond the scope of this paper to explore public policy in detail, it is worth reiterating Marshall's idea that public policy could support activities that exhibit increasing returns to scale, flies in the face of the neoclassical focus on 'correcting' market failures to improve efficient resource allocation. Instead, Marshall's focus on increasing returns and external economies, is aligned with policies which help the create 'structural market failures' (oligopolistic conditions), and/or industrial districts, to foster wealth creation—a very classical view. It is also important in that a focus in supporting activities characterised by increasing returns, anticipated, and underpinned the industrial policy of Japan and the Far Eastern countries, including China (Cowling and Tomlinson, 2011; Bailey *et al.*, 2018; Piteli and Pitelis, 2023).

The post-classical theory of value opens a huge array of issues to discuss, elaborate, develop, and test. Among others, the respective roles of the key human actors and non-human determinants of value can be delineated further and tested empirically. The nature and degree of interface between the determinants of value can also be a very rewarding research avenue that can inform a more rounded theory of distribution. In an era when interdisciplinarity is praised, the discerning integration of political economy, neoclassical economics and organisations thinking is a good, albeit rather modest starting point.

The most important limitation in all theories of value, including our HOaP, is the treatment of 'nature' and the natural environment. As we stated previously, Marshall considered humans and nature as the two ultimate factors of production. However, the natural environment is often assumed to be mostly a given, a manna from heaven, that is transformed through human creativity to help add value. But unless creativity is geared towards reproducibility and sustainability, the idea that nature is a free resource is naïve, problematic, and dangerous. Accounting for sustainable value creation is arguably the greatest challenge we face today. Our novel theory helps address limitations of extant theories regarding nature, human actors and non-human determinants of value, but pays inadequate attention to the sustainability of nature. It is far from obvious that all value adding transformations are sustainable or indeed value adding in an intertemporal sense that accounts for their impact on future generations. The analysis of *sustainable value creation* in its link to value capture should be the key research opportunity and development of the theory of value.

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