**Marshall’s scissors and a**

**human organisation and praxis classical theory of value**

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**Abstract**

We critically assess and develop Marshall’s contribution to the theory of value in economics. We revisit Marshall’s scissors analogy and claim that arguably as important are his views on the human agents and the non-human determinants of value. We provide a generic definition of value and build critically upon Marshall and related literature to propose a post classical human organization and praxis (HOaP) theory of value. The post classical theory of value reinstates the role of entrepreneurs, managers and workers discussed by Marshall, and incorporates major Marshallian ideas on organization knowledge and innovation, increasing returns to scale and inter-firm cooperation and competition (co-opetition), in industrial districts. By integrating and developing key Marshallian and related concepts and ideas the post classical theory of value helps address key limitations of extant theories and provide public policy implications and opportunities for theory development.

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# 1. Introduction

In his classic Principles, Marshall (1920) had stated in an oft-quoted sentence, that

‘we might as 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 has served as a critique of the two then dominant theories of value in economics, the labour theory of value (LTV) and the marginal utility theory (MUT), an attempted synthesis of the two and a voice of moderation of the apparent over-jealous support by proponents of one or the other camp. The LTV emphasizes labour and labour power as the exclusive source of value. The MUT, focuses on consumers and the utility they derive from the consumption of an additional unit of a good. Two hybrid theories, the Industrial Organization (IO)-based and the post-Keynesian and Kaleckian are direct descendants of the Marshallian synthesis. Marshall ‘s contribution to the theory of value, however, went beyond the scissor’s analogy to also address the human agents and other non-human determinants of value creation. These have been under-explored in economics literature.

In this paper we assess critically, update and develop Marshall’s contribution and develop a novel post classical theory of value based on human organization and praxis (HOaP). This develops classical, Marshallian, and related ideas that are closely aligned with the focus of the classical school of thought on value and wealth creation and distribution: hence its title of post-classical.

In the next section, we first revisit the LTV and MUT. The following section looks at post Marshallian developments, namely the Marshall inspired neoclassical Industrial Organization (IO), the post Keynesian and Kaleckian theories of value and contributions from organizational economics, entrepreneurship, and strategic management literature. In the following section, we revisit Marshall’s ideas about the human agents and non-human determinants of value. We then draw upon our analysis and contributions from adjacent schools of thought, to propose a generic definition of value and develop a post classical theory of value based on human organization and praxis. This leverages, synthesizes, develops and extends many a Marshallian idea. We conclude that while much is still in Marshall, subsequent development warrant revisiting and developing several of his views. We conclude by exploring limitations, implications and opportunities for further theory development, and public policy.

# 2. Theories of value in economics: a critical appraisal

***Labour power and marginal utility theories***

In classical political economy and in modern economics the two main theories of value are the labour theory of value (LTV) and the marginal utility theory (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 ([Dobb, 1973](#_ENREF_21); [Robinson, 1962](#_ENREF_68)). 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. According to [Robinson (1962)](#_ENREF_68), 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)](#_ENREF_68).

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 the socially necessary for its reproduction. Socially necessary refers to what is widely regarded as minimum requirements to subsist, beyond strictly physical, such as calories-based, calculations. In capitalism, workers could and would be required by employers to work extra hours than those strictly necessary for the reproduction of their labour power, by virtue of the power afforded to them through their ownership and control of the means of production. The extra hours worked produce a ‘surplus value’ which can be realized in markets as a profit of the employer/capitalist. That implies there is exploitation structural and endemic 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 their labour power. The appearance of equal exchange in markets moreover would help obscure this original inequality and hence the exploitation of labour in production.

Marx had stated that for a commodity to have exchange value, it must be of use to someone. No usefulness implied that labour time spent in a commodity would result in no buyers, no exchange and hence to no exchange value. In this sense, in the LTV both usefulness does play a role in helping explicate market prices. The important difference however lies in that the LTV usefulness is a prerequisite for the creation of (surplus) value. Given the pre-existence of usefulness, value could only be added in the process of production. In simple terms Marx assumed that whoever undertakes production will not be misguided enough to do so for a product or service of no use to anyone. This is an important assumption to which we return below.

For [Lichtenstein (1983)](#_ENREF_43), the LTV and the MUT are objective and subjective respectively, in that while the LTV is based on production and production process, the MUT depends upon exchange relationships and subjective evaluations of utility and dis-utility alone. Another key difference is that in the MUT work is regarded as a perceived dis-utility, a ‘bad’ to be traded off against the ‘good’ leisure. In the LTV instead work per se is regarded as a creative and self-realizing and actualizing process. This, however, is turned into a compulsory non-creative one for manual labourers, under capitalist conditions ([Lichtenstein, 1983](#_ENREF_43)).

Both the LTV and the MUT sought to link values to prices. The LTV focused on prices of production and argued these differ from market prices. While the latter are subject to demand and supply considerations, 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](#_ENREF_21))[[1]](#footnote-1). 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 realized at the level of exchange. Indeed the MUT is a theory of price determination, and the terms value and prices are synonymous ([Debreu, 1959](#_ENREF_19)).

The majority of scholars consider both the LTV and the MUT as *theories* *of value* ([Dobb, 1973](#_ENREF_21); [Gordon, 1964](#_ENREF_25)). Instead, 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](#_ENREF_68)) (emphasis in original)[[2]](#footnote-2). She was also scathing about 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](#_ENREF_68)). 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](#_ENREF_68)) (quoting Marx). 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](#_ENREF_68)), and the LTV itself as a ‘mere rigmarole of words’ ([1962, p. 39](#_ENREF_68)). While it could help inform other testable and falsifiable economic hypotheses, in and by itself, it was no more than an ‘orthodox dogma’ ([1962, p. 38](#_ENREF_68)). Its main purpose was to assert that exploitation of labourers by capitalists could take place even under conditions of equal exchange in markets. In her view, while ingenious, that was an ideological statement, not a scientific hypothesis.

Robinson also considered the LTV unnecessary as an explanation of exploitation. For example, her 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 monopsonist power (Robinson, 1933) Differential bargaining power due to unequal endowments, monopoly pricing ([Baran and Sweezy, 1966](#_ENREF_5)), and/or debt ([Keen, 2021](#_ENREF_34)) could all support that view[[3]](#footnote-3). Additionally, monopsony power could help wage rates remain at socially defined near subsistence levels, and sometimes 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[[4]](#footnote-4).

Besides the exploitation 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 the idea that there were several countervailing forces to stem the ROC/DPR, Marx and several leading Marxist scholars, have since built, theories of (un)employment/reserve army of labour, joint stock companies and finance capital ([Hilferding, 1910](#_ENREF_29)), imperialism and armaments ([Luxemburg, 2015](#_ENREF_44)), monopolization, effective demand pressures and state actions to absorb the surplus that could not be realized due to the lack of effective demand ([Baran and Sweezy, 1966](#_ENREF_5); [Cowling, 1982](#_ENREF_16)). 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 revolutionize the forces of production and create ‘a world after its own image’ ([Marx and Engels, 1969, p. 16](#_ENREF_47))[[5]](#footnote-5). Much of the above are testable and support Robinson’s view that even if metaphysical, the LTV could be useful in developing scientific propositions.

Defenses of the LTV include [Fine and Saad-Filho (2018)](#_ENREF_23). Responding to critiques of the LTV and to calls by Steedman (1977), to abandon the LTV in favor of Sraffa’s (1960) standard commodity-based analysis of prices, the authors claimed that ‘The abiding relevance of value theory is that it forges attachments between grand theory and complex and diverse outcomes without descending into eclecticism or rigid determinism’ ([p. 352](#_ENREF_78)). [Hunt (1983)](#_ENREF_31), 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 favorably to the preanalytical visions of neoclassical economics that focused instead on impersonal exchange and prices. [Sen (1978)](#_ENREF_74) 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.

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, the conceptual, data and measurement challenges notwithstanding. The key question remains what the analytical added value from a separation between production and exchange/market prices is. Proponents of the MUT assume that there is no added value. Classical scholars can 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](#_ENREF_71)) and so has deteriorating income distribution ([Reich, 2016](#_ENREF_64)). And the failure of neoclassical analysis to predict economic crises, is arguably its Achilles’ heel ([Minsky, 1982](#_ENREF_49)). The question remains if such phenomena are only or better explained through the LTV. Neither Rosenberg nor Minsky based their analyses on the LTV.

# 3. Marshal’s scissors and the legacy of the Marshallian synthesis

As we noted previously, Marshall synthesized the LTV and the MUT likening their contribution to the two blades of a scissor. However, his contribution went much deeper. By developing the microeconomic, industry-based theory of the firm, that remains almost intact in microeconomic textbooks today, Marshall dispensed with the need to separate prices from economic values. In his schema, 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). While demand is more important in the short run, cost of production becomes more important in the longer run. Values are therefore already reflected in prices.

It is arguable that was a more lasting contribution of Marshall’s than the scissors analogy, in that his focus on price determination helped expunge separate considerations of values and prices both in the mainstream industrial organization (IO), and in the post Keynesian and Kaleckian views (Lichtenstein, 1983). The same is true of the burgeoning literature on organizations. entrepreneurship and strategic management (OESM). We turn to those below.

***The microeconomics and Industrial Organization (IO) approach***

The microeconomics, and Industrial Organization (IO) approach to price-output decisions by firms remains that of Marshall even to date. It includes both the cost of production in the form of a cost curve and the (marginal) utility as reflected in a demand/marginal revenue curve. This is shown in Figure 1.

FIGURE 1 AROUND HERE

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 maximizing behavior. In line with [Modigliani (1958)](#_ENREF_50), one can add a flavor 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 n 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 Pc, Qc, that of a monopolist at Pm, Qm and that of an oligopolistic with a limit pricing Pl, Ql. 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 that 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).

[Modigliani (1958)](#_ENREF_50) drew mathematically and diagrammatically 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. If other barriers are considered too, prices can be higher than Pl. In the same diagram if one assumes market contestability (free entry and costless exit), one reaches back to Pc even in cases of oligopoly ([Baumol, 1982](#_ENREF_8)). If instead one assumes a profit maximizing oligopolist unconstrained from the fear of entry, one can reach the generalized 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)](#_ENREF_17). If we assume successful entry deterrence through credible commitments prior to profit maximization, we can re-establish the monopoly price even in the presence of potential entry ([Cowling, 1982](#_ENREF_16)).

The IO-based analysis is not pure MUT, as the latter would not normally require the cost curve. Once the cost curve enters and given that labour costs are often an important part of production costs, neoclassical economic market structure analysis still adheres to the Marshallian synthesis.

Figure 1 has served as a powerful tool that is affecting everyday life even today. An important reason is because the logic and results behind it still dictate much of public antitrust policy, 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](#_ENREF_58)). 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 (much like the natural monopolies of microeconomic textbook analysis), and the gulf between reality and neoclassical economic theory becomes far too glaring for comfort.

That said, Marshall’s contribution and the post Marshallian Figure 1 has been important in several other ways. First is the invention and/or formalization of key concepts and ideas such as industry structure, economic profit maximization hence ‘opportunity cost’, cost and demand curves, consumer surplus, and strategic behavior by firms. Arguably these ideas could have been invented without Marshall, and mainstream economic theorizing and modeling, and many have been, see [Kalecki (1971)](#_ENREF_33) and [Steindl (1952)](#_ENREF_79). Where neoclassical method appears to have a comparative advantage, is that by serving as a benchmark, it invites scholars develop novel ideas by critiquing it and relaxing its assumptions.

***The post Keynesian and Kaleckian approach***

The more realistic analysis of the post Keynesian and Kaleckian school is a case in point. That retains several of the Marshallian ideas of IO while ridding the least realistic assumptions and introducing the role of entrepreneurial animal spirits. For several reasons post Keynesian and Kaleckian economists have also followed the Marshallian tradition to focus on price determination, not values of production. These include Keynes’ (1936) disdain of Marx, Robinson’s (1962) critique of the LTV, and the major contribution of Sraffa (1960) on price determination and income distribution without resort to the LTV. Revisiting the theory of value, 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, p186).

Kalecki (1971) had developed the concept of degree of monopoly, as the price-cost margin. Based on these and IO neoclassical contributions on strategic entry deterrence, Cowling (1982) co-derived the relationship between the price cost margin, the degree of concentration, the degree of collusion and the price elasticity of demand. In so doing he was able to become co-founder of a major IO model and a post keynesian/neo-marxist theory of monopoly capitalism.

Post Keynesian and Kaleckian scholars are a broad church with several sub variants (Lichtenstein, 1983). In common, they share a focus on production and producer (as opposed to consumer) sovereignty, decision making under uncertainty by imperfectly rational agents, a disdain to comparative static, equilibrium-based analysis, a focus on organizational and institutional complementarities as opposed to markets and market failures-based analysis alone, and a belief that capitalism entails both co-operation and conflict, as well as bargaining between classes. (Robinson, 1962, Lichtenstein, 1983).

In addition, [Pasinetti (1974)](#_ENREF_55) had called the limited attention to technological change in neoclassical economics as its original sin that persisted throughout the years. Keynes (1936) placed emphasis in psychological factors and entrepreneurial ‘animal spirits’ in explicating investment decisions. These set them well apart from neoclassical IO-type theorizing, in which firms are points in a cost curve, and managers and entrepreneurs do not exist (Penrose, 1959). Interestingly this brings them closer to Marshall’s ideas about the agents and non-human determinants of value and offer promise to go beyond extant theory. Towards this end, they are assisted by a burgeoning literature in organizational economics, entrepreneurship, and strategy (OEMS).

***Organizational economics, entrepreneurship and strategic management perspectives***

It is arguable that key critiques and developments of the Marshallian tradition have come outside mainstream economics, by scholars of organizations, entrepreneurship, and strategic management (OESM). These emphasize the role of organizations, managers, entrepreneurs, resources and capabilities, innovation, resource mobility, competition with cooperation (co-opetition), firm heterogeneity and business strategy. For instance, in strategy scholarship, [Porter (1980)](#_ENREF_61) turned the logic of Figure 1 on its head and claimed that firms should seek to reduce the forces of competition (competitors, potential entrants, suppliers, customers and substitutes), to acquire as much market power as possible. In so doing he became one of the pioneers of modern strategy scholarship.

[Penrose (1959)](#_ENREF_56) had lamented the view of firms in neoclassical theory as mere points in a cost curve, with no insides and no actors such as managers. [Von Mises (1949)](#_ENREF_83), regarded the neoclassical approach as mythical. The exclusive emphasis of the LTV on labour as the only determinant of value, downplays Marx’s own emphasis on the importance of technical change, and of the capitalist. For instance, referring to both the capitalists (the ‘bourgeoise’), and technical change, Marx and Engels noted that ‘By the rapid improvement of all instruments of production, by the immensely facilitated means of communication, the latter draws all,… into civilization’ ([Marx and Engels, 1969, p. 16](#_ENREF_47)).

[Nelson and Winter (1982)](#_ENREF_51) 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, 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 intraorganizational relations and conflict, to help explain value creation in firms, its distribution and the organizational objective that optimizes in terms of value creation ([Alchian and Demsetz, 1972](#_ENREF_1); [Barzel, 1989](#_ENREF_7); [Klein et al., 2013](#_ENREF_39); [Panico, 2023](#_ENREF_54)). In so doing these theories helped identify agents and factors that can help create value. 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](#_ENREF_6); [Berti and Pitelis, 2022](#_ENREF_10)).

[Coase (1937)](#_ENREF_14) and [Williamson (1975)](#_ENREF_84) observed that the 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 economic development ([North, 1990](#_ENREF_53)). [Penrose (1959)](#_ENREF_56), [Demsetz (1973)](#_ENREF_20) and [Teece (1977)](#_ENREF_81), and the resource and capabilities-based views took exception of the assumption that all firms have the same resources and capabilities and developed novel theories that emphasized firm heterogeneity. Much like in the LTV, the behavioral theory of [Cyert and March (1963)](#_ENREF_18), questioned the assumption of unbounded rationality and the implied absence of intra organizational conflict.

An operational measure of value in economics and OESM 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.

Much of the OESM literature, takes value creation as given (Madakok 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](#_ENREF_12); [Priem and Butler, 2001](#_ENREF_62)). Given the focus of strategy scholarship and the RBV on value capture, it has been suggested that a theory of value creation that can be borrowed from other theories (Madakok and Coff, 2002). Considering the affinity of the OESM with Marshallian ideas, that might be a wasted opportunity. More recent literature on value creation and value capture in OESM scholarship, however, seeks to explore the determinants of value creation ([Hitt et al., 2011](#_ENREF_30); [Lepak et al., 2007](#_ENREF_42); [Pitelis, 2009](#_ENREF_59)).

Marshall does not feature much in the OESM literature. However, save for transaction costs, virtually all other ideas were anticipated and discussed often in much detail in his writings. This suggests that the OESM literature can be important in building a post Marshallian theory of value. We explore this below.

# 4. Marshall, human agents, and non-human determinants of value

A limitation of value theories is their failure to explore in some detail the human agents and non-human determinants of value. The assertion by the LTV that nobody and nothing else creates value other than labour power is limiting and inconsistent with Marx’s focus on the achievements of capitalist entrepreneurs. The idea that the MU of consumers suffices to explicate value as prices, on the other hand, is also limiting in that it shifts attention away from other determinants of value than consumer utility alone and other sources and actors than consumers.

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;’ (p587).

In the paragraph Marshall includes both agents (workers, capitalists, and managers) and non-human determinants of value-notably capital. Marshall’s other non-human determinants of value include firms, their conduct, competition, and industry structure, which have been shown to impact on value as prices. Marshall however went well beyond these, to discuss r business strategy, innovation, entrepreneurship, knowledge, and organization, increasing returns to scale, inter-firm cooperation and/in industrial districts and hence the regional milieu.

In his account of factors of production, Marshall explicitly added the role of organization, 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 organization: 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. Organization aids knowledge; it has many forms, e.g. 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 organization 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 Organization apart as a distinct agent of production….

In a sense there are only two agents of production, nature and man. Capital and organization 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 organization 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).

In addition to organization and knowledge, Marshall observed and analyzed 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 good start and hence tend to perfectly undermine competition model, in that by reducing the unit costs for larger firms, they would tend to engender oligopolistic industry structures (Barber, 1967, Robinson, 1962). In Marshall’s 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). This implies that under increasing returns, the supply curve could not be derived clearly and unambiguously (Barber, 1967, p 182). In ‘industry and trade’ moreover, Marshall, (1919), emphasized the role of firm heterogeneity, innovation, entrepreneurship, management, business strategy, resource mobility and differential capabilities, hence predating OESM.

Several of the ideas are put together in Marshall’s other major insight and contribution, the concept of industrial districts. Marshall recognized 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, Belussi and Caldari, (2009). His ideas on industrial districts have proven enduring and influential and have engendered very extensive literatures, notably on agglomeration, industrial districts and clusters (Pitelis, 2012).

Marshall’s idea of capital as an independent aggregate factor of production has been discredited in the famous Cambridge controversies, in which Marshall’s neoclassical followers conceded defeat (Harcourt, 1969). Similar considerations apply his idea of waiting as a justification for rewarding capital for sacrificing present consumption, as well as the related idea by Böhm-Bawerk that waiting provides an opportunity to use more roundabout techniques (see [Hausman, 1981)](#_ENREF_27). Waiting as a reward to capital seems to be inconsistent with the focus of entrepreneurship and dynamic capabilities research, on optimal timing (Teece, 2014). In this literature, waiting can be justified if it reveals and/or opens and/or creates better entrepreneurial opportunities. But in such a case the latter is ‘capital’s’ own reward. In many a case waiting can be bad if it helps offer first mover advantages to competitors. Many a digital platform firm abide by the moto attributed to the founder of Facebook, Mark Zuckerberg ‘to ‘move fast and break things.’ In such cases speed, not waiting, is the reward to the entrepreneurs. Interest as a reward to abstinence faces similar difficulties, in that it deprives the economy from effective demand, even if temporarily.

Despite the above, it is arguable that tangible, financial, and intangible resources (‘capital’) that are rare, inimitable, and non-substitutable (RIN) as suggested by the RBV, can help firms capture value that in turn can be invested in value creating and co-creating activities. By helping firms capture value, RIN resources and capabilities help incentivize 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 investment in productive assets ([Keen, 2021](#_ENREF_34)). Even if it is not producing as such financial capital can be non the less productive ([Cohen, 1979](#_ENREF_15)).

Going back to the scissors analogy, in Marshall the cost of production is determined by human agents as well as by non-human factors such as increasing returns to scale, by knowledge and organizations, technology and innovation, and the structure and strategy of firms and industries, Demand on the other hand is affected by perceived quality, hence differentiation, appeal, and the promotion strategies by firms. Drawing upon more recent literature, we can add organizational identity and branding ([Pitelis, 2009](#_ENREF_59)). Moreover, cost and demand are both affected by the degree of competition between firms ([Porter, 1980](#_ENREF_61)), hence the degree of oligopoly ([Cowling, 1982](#_ENREF_16); [Kalecki, 1971](#_ENREF_33)) and by the nature and degree of cooperation, and co-opetition ([Pitelis and Teece, 2010](#_ENREF_60)). Business strategy can confer first mover advantages that help impact prices ([Chandler, 1962](#_ENREF_13)). 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.

Another of Marshall’s key legacies was to view the economy in an evolutionary lens. He argued that the mecca of economics was biology. He argued that variation was key to economic progress (Metcalfe, 2007, Loasby, 1978). All these views are most pertinent in today’s intangible assets, knowledge-based organizational market economy (Simon, 1991, Teece, 2014). Increasing returns to scale are ubiquitous, especially today in digital platform-based born global oligopolies (Pitelis, 2022).

Marshall’s ideas are not easy to reconcile with the perfectly competitive model, and by extension with neoclassical thinking. For this reason, Marshall is the doyen of neoclassical economics and at the same time a rather subversive figure. Several of his ideas have been subject to scrutiny by critics and by admirers alike. His attempt to maintain the construct of 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 the life cycle of firms. 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 internalization of the forces of creative destruction (Penrose, 1959), being more efficient, but also through anti-competitive practices and acquisitions that allow them to outcompete existing and potential rivals (Kamepalli., et al, 2021).

Marshall did not link explicitly the treasure trove of his ideas about the human agents and the non-human determinants of value in a common framework. In effect his purpose contribution to the theory of value remains the scissors analogy. His references to organization were mostly about organizations such as firms, and organizational structures such as industries and industrial districts. In what follows, we draw critically and build upon Marshall and related literature to propose a human organization and action-based post classical theory of value that incorporates in a single framework and develops Marshall’s ideas. We call this a post classical theory, because like classical economists, it focuses on value and wealth creation, as compared to the neo-classical efficient allocation of scarce resources. First, we elaborate on two important underlying issues that have been left undertheorized in literature, namely the nature of value and human organization and praxis.

***5. T*he nature of value and human organization and praxis**

***The nature of value***

The ontology (nature) of value (namely what is value), is first and foremost an epistemological question ([Gordon, 1964](#_ENREF_25)) that has exercised philosophers for millennia. For instance, according to [Lichtenstein (1983)](#_ENREF_43), 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)](#_ENREF_25) 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.

It is interesting to observe that 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 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 merely 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, that is the subject of this paper, simply won’t do. 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](#_ENREF_14)). 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)](#_ENREF_14) that clearly defining terms at the outset helps foster better communication and mutual understanding.

In this paper, we define value in a generic sense as *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 bettering one’s feeling of wellbeing (what Aristotle called eudemonia, which etymologically means being in 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](#_ENREF_6)). Or it can be shared value as in Porter and Kramer (2011).

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](#_ENREF_25)). [Robinson (1962)](#_ENREF_68) 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 can help shape one’s own perceptions of value and in fact value is often 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 man Friday. The latter might help Crusoe derive higher value from items he commanded and were also desirable but not available to and/or shared with, man Friday. In theory, X can also be a multi-person entity such as a firm if there exists a decision-making body such as a CEO 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 organization ([Berti and Pitelis, 2022](#_ENREF_10); [Cyert and March, 1963](#_ENREF_18)).

That value is subjectively perceived by a person, does not render it more metaphysical than the pleasure derived from a good company and/or a welcome event/news. 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. Subjectively 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 economic value of an item (commodity, product, or service) derives from its 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. Exchange could be barter as in Adam Smith’s original examples of the hunters killing beavers and deer, or in markets. As already noted, both in the LTV and the MUT subjectively perceived usefulness is key to value creation.

***Human organization and praxis***

Value creation entails human organization and praxis by all humans and that several non-human factors help add value. Humans act and organize 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 organization and co-operation permit survival through exclusive reliance on others, reaching the outcome of sustained hetero reliance requires action. Human organization 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 organizations such as multinational corporations and economic ecosystems. Human action ranges from instinctive and reactive to a purposeful attempt to realize ideas, aspirations and dreams (Jones and Pitelis, 2015).

Several philosophers over the years have proposed theories based on the concept of praxis. These range from Plato and Aristotle to [Von Mises (1949)](#_ENREF_83) and his magnum opus on human action and its scientific investigation (aka praxeology). Drawing upon Marx’s claim that philosophy could only be realized through purposeful human axiom aimed at bettering the world, [Gramsci (1929–1935)](#_ENREF_26) 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. Two key aspects of praxis are that it is action that is socially embedded and purposeful. It is almost paradoxical that the concept has not been employed to develop a theory of value. Praxis however is ideal for this purpose. First the very reliance on embeddedness implies a form of pre-existing organizational setting. Purpose is widely regarded as a key differentiator of humans from many other species ([Von Mises, 1949](#_ENREF_83)). Below we submit that praxis, as purposeful and embedded human action, is the key source of value.

Key categories of human actors are labourers, capitalists, managers, artists and scientists. Through their actions, all human actors bring about to transform their habitats and themselves. Each actor category possesses comparative advantages and ways to do this. Artists and scientists, mostly engender ideas and knowledge. Labourers, transform inputs into outputs. Capitalists seek to monetize and capture co-created value. Managers take decisions that impact upon organizational performance. Entrepreneurs are not restricted to capitalists. They can be private, public, or social, including academic. They exercise imagination to realize ideas, vision, and knowledge. The realized 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 the benefiting of others. Private entrepreneurs or capitalists are normally assumed to be motivated by profit. Public entrepreneurs are motivated by bringing about policy changes that further the public good. Ideally going well by doing good. Social entrepreneurs are motivated by socio economic and environmental cohesion and 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, realizing, achieving, and succeeding in what is intended is paramount. The latter is as important and sometimes more, 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 winning.

Even at the time classical economists were writing, the role of the capitalist entrepreneur was becoming apparent. For instance the communist manifesto is an elegy to the bourgeoise (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](#_ENREF_48)). 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)](#_ENREF_48) have pointed to that and lamented the state and conditions of the working classes under capitalist mass production.

Echoing Marshall, Edith [Penrose (1959)](#_ENREF_56) had emphasized managers as a key value creating human resource. That was because in advanced so-called managerial capitalism, characterized 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 to 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)](#_ENREF_13), the manager, not the labourer, was the (new) hero.

On the other hand, in [Schumpeter (1942)](#_ENREF_73) and more recently in a very extensive entrepreneurship literature ([Alvarez and Barney, 2007](#_ENREF_2); [Jones and Pitelis, 2015](#_ENREF_32)), the hero became the entrepreneur. [Schumpeter (1942)](#_ENREF_73) 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 emphasize the gales of creative destruction engendered through innovations by entrepreneurs and entrepreneurial organizations. Drawing on [Hayek (1948)](#_ENREF_28) and [Von Mises (1949)](#_ENREF_83), [Kirzner (1973)](#_ENREF_36) 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 organizations, markets, and business ecosystems ([Jones and Pitelis, 2015](#_ENREF_32)). 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](#_ENREF_60)). In turn and as originally argued by [Smith (1776)](#_ENREF_76) and developed by [Penrose (1959)](#_ENREF_56) specialization, division of labour, teamwork and learning within organizations, 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](#_ENREF_56)). This engenders endogenous firm growth, leads to economies of growth that reduce average costs and hence adds value through both the revenue side and the cost side.

Entrepreneurship is not limited to the private sector. 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 it could well be an important value creator and co-creator ([Klein et al., 2010](#_ENREF_38)). Additionally, knowledge, innovation and value can be created and co-created through science and research, often basic blue-sky research.

The government can also play a key role in engendering this by setting up and enforcing the rules of the game ([North, 1981](#_ENREF_52)), reducing transaction costs, and providing security and legitimization. Marshall was ahead of his time on that too. He added that government could also help improve the allocation of resources by markets, by through actions that could help shift activities away from those characterized by decreasing returns to scale and towards those characterized by increasing returns (Barber, …). This is a far cry from subsequent neoclassical market failure--based arguments. These require that in the face of increasing reruns hence potential monopoly, governments should step in to establish perfectly competitive conditions. This is the opposite of furthering activities characterized by increasing returns. Marshall’s ideas were supported by [Baumol (1990)](#_ENREF_9) who had famously characterized entrepreneurship to be productive, unproductive, and destructive. Baumol emphasized 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](#_ENREF_68)).

As already noted, in the IO theory managers do not exist. On the other hand, and based on the classical idea of the LTV, managers were viewed as unproductive (basically parasitic) labour, much like the capitalist. In the post-Keynesian tradition, Joan [Robinson (1979)](#_ENREF_69) acknowledged the importance of ‘administration’ but she too considered it to be unproductive in that, in her view, it lived off the ‘surplus’. This did not amuse Edith Penrose ([1980, p. 318](#_ENREF_57)) who wrote a rather scathing critique of Robinson’s 1979 book. In a letter to Robinson in February 1980, moreover, Penrose pointed out 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.’* Like private entrepreneurs, managers can be unproductive and/or destructive as described by ([Baumol, 1990](#_ENREF_9)).

***6..* The post classical human organization and praxis theory of value**

Marshall introductory paragraph in the principles 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, p6, emphasis added).

Marshall’s first sentence has received a lot of attention. Below, we focus instead on the parts about wealth and on human action.

As we noted previously, while classical economists and the LTV had focused on value and wealth creation and its distribution, at the level of production, neoclassical economists and the MUT had focused on the efficient allocation of scarce resources at the level of exchange, realized 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. 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)](#_ENREF_65) did in his famous essay, in today’s world of a knowledge, innovation and intangible assets-based economy, seems dated. Both knowledge and many intangible assets share public good 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](#_ENREF_85)). 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 giants and in so doing we can derive increasingly higher satisfaction from more units of it. Similar considerations can apply to power.

We can synthesize the two approaches by defining economics is 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 that are not. This entails a focus on human actors motivated by the pursuit of betterment, that take judgmental decisions under conditions of both risk and Knightian uncertainty, namely uncertainty conditions in which no probabilities can be attached to future outcomes ([Knight, 1921](#_ENREF_40)). In such situations, it is usually the pursuit of capture of co-created value by entrepreneurs broadly defined and other human actors through the discovery and creation of opportunities and the creation and co-creation of organizations, markets ecosystems and institutions that foster their objectives ([Alvarez and Barney, 2007](#_ENREF_2); [Kirzner, 1973](#_ENREF_36); [Pitelis and Teece, 2010](#_ENREF_60); [Von Mises, 1949](#_ENREF_83)). It also entails considering the host of non-human determinants of wealth creation, discussed in this paper.

Figure 2 builds upon our discussion so far and on related developments and helps serve as an organizing framework for our proposed post-Marshallian, human organization and praxis, post classical theory. In Figure 2, value is placed at the center of the analysis. The Figure then shows the key human agents and the non-human determinants of value. These are examined at multiple (micro, meso and macro) and scalable levels.

FIGURE 2 AROUND HERE

The inner circle of Figure 2 depicts the organizational/firm level, while the outer depicts the macro-institutional level. The meso-level depicts the industry/sector, and the industrial district/ecosystem.

At the organizational level, workers/labour, managers, entrepreneurs, as well as researchers and scientists are shown to engender value. ‘Technology and innovation’ include changes in organizational knowledge, product and process innovations as well as changes in the business model of organizations. Organizational governance, strategy and structure are defined and discussed extensively in [Chandler (1962)](#_ENREF_13) and the OESM literature we have cited. organizational infrastructure refers to the internal organization, processes, best practices, and routines of firms as in Cyert and March (1963). ‘Increasing returns to scale’ include economies of scale, scope, growth, learning, transaction costs and external.

Indirect influences on value include non-human physical, resources that are RIN. This is because they facilitate value capture and hence motivate the process of value creation and co-creation. Financial resources can also help create value by facilitating the process of exchange and production. Other indirect determinants of value creation, through their impact on value capture include positioning strategies and barriers to entry/mobility. Organizational 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 a as potential barrier to mobility, hence helping value capture. In turn value capture potential incentivizes value co-creation. In all cases, factors that can impact on value creation through value capture, may also lead to value redistribution, or destruction.

The four generic determinants of value creation are scalable in that each can refer to firms (micro), industry/sector/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, increasingly more aggregate, layers-namely the organizational, the industrial/sectoral/ecosystem and the macro/institutional ([Pitelis, 2009](#_ENREF_59)). These are all embedded within three types of human organization and praxis: the private, the public, and social-polity levels.

As previously noted, the lineage is of the four direct factors of value creation can be traced in Marshall, but also to the great and the good from political economy and OESM. It is for this reason that we present it 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 organizational capabilities ([Teece, 2014](#_ENREF_82)). Increasing returns to scale are important in scholarship ranging from [Sraffa (1960)](#_ENREF_77), to endogenous growth theories ([Romer, 1994](#_ENREF_70)). Innovation and technical change are key to [Schumpeter (1942)](#_ENREF_73), to [Penrose (1959)](#_ENREF_56), to Pasinetti (1974), the field of innovation studies and the neoclassical endogenous growth theory ([Fagerberg, 2003](#_ENREF_22)), to the business model innovation literature ([Teece, 2014](#_ENREF_82)). The role of organization, and organizational governance, strategy and structure have been explored in OESM, for instance in [Chandler (1962)](#_ENREF_13) and by several leading scholars since. Infrastructure, in the form of internal organization, routines, processes and best practices, were key in [Chandler (1962)](#_ENREF_13); [Cyert and March (1963)](#_ENREF_18); [Nelson and Winter (1982)](#_ENREF_51); [Williamson (1975)](#_ENREF_84) and the (dynamic) capabilities literature ([Teece, 2014](#_ENREF_82)). Aggregate organizational differentiation, identity and branding are key to both IO and to strategy and marketing scholarship.

The four key determinants of value creation are interrelated. Human agents and their capabilities impact technology and innovation, increasing returns, organizational governance, strategy and infra-structure. Organization 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 organizational heterogeneity and hence differentiation ([Pitelis, 2009](#_ENREF_59)). All determinants are impacted by entrepreneurial behavior at the private, public and social spheres, the immediate focus of private entrepreneurship is at the organizational micro and meso levels, of public entrepreneurship at the macro and meso levels and of the social entrepreneurship at the 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 very 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, however, of the Figure is to offer a novel theory of value that cross-fertilizes and builds upon Marshall and post Marshallian extant perspectives. While it emphasizes the role of humans, their organization, and the organizations they help create, it also considers the ancillary non-human factors that can help add value. This aligns it closely to OESM scholarship ([Hitt et al., 2011](#_ENREF_30); [Lepak et al., 2007](#_ENREF_42); [Pitelis, 2009](#_ENREF_59)).

The HOaP post classical theory of value helps derive predictions about the relationship between value and prices that is closely aligned to real life situations. In developed market economies, a key reason for increased 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 let’s say 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 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 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 the 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, also suggests the need to go beyond the two theories. It is interesting to note that the IO and post Keynesian 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 summarizes 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.

TABLE 1 AROUND HERE

We have divided the OESM theories in two variants, the static one that includes the transaction costs approach and the resource-based view that is based on RIN, and the dynamic that includes Schumpeterian, Penrosean, evolutionary, and dynamic capabilities perspectives. From the theories presented in Table 1 only the LTV and the MUT are normally viewed as theories of value. Except for the references by Robinson, on a (post) Keynesian theory, all others are not viewed nor have been presented as such. As we have argued in this paper, however, they have clear implication on value creation that go beyond Marshall’s scissors, and serve as important steppingstones into developing a value theory that befits today’s market assisted organizational 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. Importantly it highlights that in an organizational market economy, attributing value creation exclusively a single or even a few factors can be seriously underdetermined.

# 7. Discussion, research opportunities, policy implications,

The breadth and depth of Marshall’s ideas is remains breath taking. Save for transaction cost thinking, almost everything can still be traced in Marshall. Some important issues, like intra-organizational and intra-societal conflict, organizational governance, and branding, have arguably been underplayed. The same is true of the link between value capture and value co-creation. Among others, this is important because it helps identify indirect non-human determinants of value creation. Marshall’s ideas have been enduring and are being developed by many a leading scholar, on many occasions unknowingly. For instance, they underlie key contributions in the burgeoning OESM literature in which Marshall features rarely.

In this paper we have drawn upon Marshall’s contribution two propose a Marshall-inspired, post classical theory of value, based on Human Organization and Praxis. Having critically assessed extant theories we went on to define value is perceived worthiness that can be tangible or intangible. We argued that value is not a metaphysical concept. The LTV is not metaphysical either. 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 agents and non-human determinants of value remain undertheorized. And the role of human organization and praxis, where that includes all humans and their organization, including the organizations they create, are underplayed.

Extant theories also under-conceptualize the interrelationship between value creation and value capture. Value capture considerations and their relationship to value creation and co-creation, instead, are critical for OESM scholarship ([Bowman and Ambrosini, 2000](#_ENREF_12); [Panico, 2023](#_ENREF_54)). 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 incentive structures, specialized managers, and entrepreneurs. 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 organization, 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 withering the LTV and the MUT. The focus of the LTV on production, labour saving technical progress, intra-organizational conflict, and dynamics, can help explain organizational success and failure and afford macroeconomic predictions such as economic crises, that defy neoclassical thinking. On the other hand, post Marshallian neoclassical models, such as IO, have made important contributions, in terms of key ideas and through the relaxation by critics of their more restrictive assumptions. Consider again Figure 1, which [Latsis (1976)](#_ENREF_41) and others have viewed as the epitome of the neoclassical method, and compare it to Figure 2. The latter is far 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 we have already detailed. Some of these like the invention of transaction cost economics are among few ideas that are not in Marshall.

In the above context, the neoclassical benchmark-based method may have the advantage of incentivizing critiques and extensions. In addition, in some cases there is a certain undeniable beauty (dare I say value) in formal modelling. This is for instance the case when the Herfindahl index of concentration appears from the mathematical solution to the equation of a profit maximizing oligopolist ([Cowling and Waterson, 1976](#_ENREF_17)) 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 story.

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 ([Reich, 2016](#_ENREF_64)). 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](#_ENREF_85)). It can also incentivize intraorganizational 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 skillful 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 that lower remunerations did not prevent capitalist economies from achieving better performances in the past than is the case today.

Once it is accepted that all human power (i.e. worker, manager, entrepreneur, scientist/researcher), organization and praxis can add (as well as destroy) value, and the role of organization and organizations in creating value, the issue of distribution becomes more complex than perceived by proponents of the LTV and MUT. 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, organization, knowledge and creativity, science and technology, capabilities, and innovation. In many ways both the LTV and the neoclassical approach’s singular focus renders them unfit to explain value and wealth creation and distribution in modern economies.

Our analysis suggests that public policy should go beyond consumer utility considerations to help ascertain what policies can help add value, by incentivizing 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 organizations, their culture and implementation capabilities. This helps explain why in an era of rampant neoliberalism, a paper such as this may appear to attack the LTV. We believe that while taking a strong, singular view can sometimes help counterbalance arguments views that dismiss the role of labour, singular views can also help serve as an easy target.

While beyond the scope of this paper to explore public policy in more detail, it is worth reiterating that 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 proposes creating market failures to foster wealth creation-a very classical view. It is also important in that a focus in supporting activities characterized by increasing returns, anticipated, and underpinned much of the industrial policy of Japan and the Far Eastern countries, including China (Bailey et al., 2018).

The human organization and praxis, 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 agents 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 integration of political economy, neoclassical economics and OESM thinking, is a good albeit rather modest starting point.

Another key (arguably the most important of all) issue is that of the treatment of ‘nature’ and the natural environment in all theories, including our HOaP. As we stated previously, Marshall considered humans and nature as the two ultimate factors of production. However, the said natural environment is assumed to be mostly a given, a mana from heaven, that is transformed through human creativity to help add value. But unless the said creativity is geared towards 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 the nature, human agents and non-human determinants of value, while maintaining the assumption of freely exploitable natural resources. It is far from obvious that all value adding transformations are sustainable or indeed value adding in an intertemporal way 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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**Fig. 1.** Price/Value Determination in Different Industry Structures



**MICRO/FIRM**

**MESO/SECTOR-REGION-ECOSYSTEM
 conduct-structure, degree of oligopoly, and regional-locational-ecosystem milieu**

**NATION
Institutional and macroeconomic environment-governance/policy mix, effective demand**

**HOaP/entrepreneurship in public/government sphere**

**HOaP/entrepreneurship in private/market sphere**

**HOaP/entrepreneurship in social –(polity/commons) sphere**

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

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

|  | **Labour Theory of Value (LTV)** | **Marginal Utility Theory (MUT)** | **Marshall’s synthesis and neoclassical Industrial Organization**  | **Post-Keynesian Economics Theory** | **OESM, (static)****Transaction Costs Economics and Resource Based View (RBV)** | **OESM, (dynamic)****Schumpeterian/ Austrian, Penrosean, evolutionary, (dynamic) capabilities View** | **Post classical, Human Organization and Praxis (HOaP) View** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Nature** | Pre-production usefulness, labour power in production | Consumer utility | Consumer surplus (utility and cost of production) | Price | Consumer utility (exogenous) | Utility of target user | 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, organizations, entrepreneurs | Human (entrepreneurs, managers, workers), organization and praxis, organizations/institutions |
| **Determinants**  | Worker activity and inventions, in the context of specialization, division of labour, teamwork, and learning | Consumer preferences/scarcity | Demand and cost conditions, industry price-cost margin | Industry structure,‘animal spirits’ | RIN Resources and capabilities, reductions in transaction costs  | Innovation, creative destruction, entrepreneurship, in the context of specialization, division of labour, teamwork, and learning | Non-human RIN resources, increasing returns to scale, innovation, organizational governance, strategy, and (infra)-structure, in the context of specialization, 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 |
| **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 | Organizational sustainable competitive advantage | Organizational and system-wide structure and evolution of capitalism | Multi-level (micro, meso, macro) scalable organizational and systemic sustainable value co-creation |
| **Method** | Frameworks | Mathematics/models | Mathematics/models in IO, more appreciative in Marshall | Frameworks, models | Frameworks | Frameworks | Frameworks,Contextual modelling  |
| **Value-price relation**  | Positive | Positive | Positive or negative | Positive or negative | Positive | Positive | Contingent, Value for Money |

1. Critics, of the LTV-inspired ROC/DPR 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, J, 1942). [↑](#footnote-ref-1)
2. Robinson’s circularity critique of the MUT has not been addressed by neoclassical scholars. Instead, key defenses have focused on the argument that the importance of theory lies in its ability to predict Friedman, M. (1953). *Essays in Positive Economics*. Chicago, University of Chicago press.. 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. [↑](#footnote-ref-2)
3. 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. [↑](#footnote-ref-3)
4. It is interesting that Robinson, J. (1962) critiqued the *relative* immiseration thesis of Marx based on improvements made at the time by the working class. It is arguable that nowadays with the dramatically increased power of big business and inequities in the distribution of income, the Marxist relative immiseration thesis is on much stronger grounds. [↑](#footnote-ref-4)
5. Critics, of the LTV-inspired ROC/DPR 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). [↑](#footnote-ref-5)