This is a repository copy of *Accounting for competitive advantage:the resource-based view of the firm and the labour theory of value*.

White Rose Research Online URL for this paper:
https://eprints.whiterose.ac.uk/64350/

Version: Accepted Version

**Article:**
Bowman, Cliff and Toms, Steve (2010) Accounting for competitive advantage:the resource-based view of the firm and the labour theory of value. Critical Perspectives on Accounting. pp. 183-194. ISSN 1045-2354

https://doi.org/10.1016/j.cpa.2008.09.010

**Reuse**
Items deposited in White Rose Research Online are protected by copyright, with all rights reserved unless indicated otherwise. They may be downloaded and/or printed for private study, or other acts as permitted by national copyright laws. The publisher or other rights holders may allow further reproduction and re-use of the full text version. This is indicated by the licence information on the White Rose Research Online record for the item.

**Takedown**
If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.

eprints@whiterose.ac.uk
https://eprints.whiterose.ac.uk/

Critical Perspectives on Accounting, Volume 21, Issue 3, The Contours of Critical Accounting, March 2010, Pages 183-194

# Accepted Manuscript

Title: Accounting For Competitive Advantage: The Resource-Based View Of The Firm And The Labour Theory Of Value

Authors: C. Bowman, S. Toms

PII: S1045-2354(09)00133-6
DOI: doi:10.1016/j.cpa.2008.09.010
Reference: YCPAC 1518

To appear in: *Critical Perspectives on Accounting*

Received date: 1-3-2007
Accepted date: 1-9-2008

Please cite this article as: Bowman C, Toms S, Accounting For Competitive Advantage: The Resource-Based View Of The Firm And The Labour Theory Of Value, *Critical Perspectives on Accounting* (2008), doi:10.1016/j.cpa.2008.09.010

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

# ACCOUNTING FOR COMPETITIVE ADVANTAGE: THE RESOURCE-BASED VIEW OF THE FIRM AND THE LABOUR THEORY OF VALUE

**By**

**C. Bowman**

**and**

**S. Toms**

Accepted Manuscript

Cliff Bowman, Cranfield School of Management, Cranfield, Beds, MK43 OAL UK Tel: +44 (0) 1234 751122, Fax: +44 (0) 1234 750070 Email: c.bowman@cranfield.ac.uk

* **Correspondence details:** Steve Toms, The York Management School, Sally Baldwin Buildings, University of York, York YO10 5DD,Tel: +44-1904-434122, Email: st27@york.ac.uk

ACCEPTED MANUSCRIPT

# ACCOUNTING FOR COMPETITIVE ADVANTAGE: THE RESOURCE-BASED VIEW OF THE FIRM AND THE LABOUR THEORY OF VALUE


## ABSTRACT

The paper uses accounting concepts to assist the field of strategic management in its search for a theory of value, competitive advantage and superior profitability. Specifically, it argues that the resource-based view of the firm requires a labour theory of value creation. Using the *Circuit of Capital* as an organizing framework the paper integrates RBV and Marx's value theory, by introducing the notion of *value* as socially necessary labour time, into the analysis of resource based advantage. This enables us to identify the impact of particular sources of competitive advantage as they become diffused through an industry. Some resource based advantages, when eventually imitated lead to an overall reduction in industry profitability, and other advantages lead to increases in industry average profitability.



**Key words:**

value creation, resource based view, labour theory of value, industry profitability


Accepted Manuscript

ACCEPTED MANUSCRIPT

## INTRODUCTION

An important problem in the strategic management literature is to establish linkages between managerial actions and their consequences in terms of measurable outcomes. In one strand of this literature in particular, the resource based view (RBV) there is an explicit acknowledgement that the theory cannot be fully developed without reference to a consistent and complete theory of value (Miller and Shamsie, 1996, p.539; Makadok and Coff, 2002). Although there have been significant contributions in the critical accounting literature to the problem of value (Tinker, 1980, Bryer, 1994), which might assist in this respect, thus far there has been little interaction between the accounting and strategic management literatures. Both literatures are rooted in the classical traditions of Marx and Ricardo, and in view of this commonality, rather than add to the weight of critique of the RBV (for example and a summary see Priem and Butler, 2001), this paper assesses whether the RBV can be developed from a more rigorous application of its too often unacknowledged intellectual origins. The purpose of this paper is to propose an integration which offers the opportunity of a theory of competitive advantage consistent with a theory of value.

The field of strategic management concerns itself with identifying strategies that allow some firms to produce 'super-normal' profits. From the 1980s the structure-conduct-performance paradigm of industrial organisation economics dominated the field, which explained how competitive advantage derives from privileged market positions. Following Porter (1980) the strategy problem could be decomposed into decisions about 1) where to compete, as some markets are more structurally attractive to incumbent firms than others; 2) how to compete, which involves a basic choice between two alternative 'generic strategies'; and 3) strategy implementation.



Accepted Manuscript

ACCEPTED MANUSCRIPT

From the early 1990s an alternative explanation of superior profit performance emerged, labelled the resource-based view (RBV). The RBV locates the sources of advantage inside the firm and views the firm as a bundle of resources (Barney 1991; Rumelt, 1984; Amit and Shoemaker, 1993; Carter and Mueller, 2006). Resources that are simultaneously valuable, rare, inimitable and non-substitutable earn the firm rents in equilibrium. The RBV argument can be traced back to Selznick's (1957) idea of 'distinctive competences' and on Penrose's (1959), who perceived the firm as a collection of resources, and that performance depends on its ability to use them.

The RBV could be said to dominate discourse in the strategy field, and it has spawned other sub-fields like the knowledge-based view of the firm (e.g. Kogut and Zander 1992; Grant, 1996), which focuses specific attention on knowledge resources, and the dynamic capabilities literature (Teece, Pisano and Shuen 1997; Eisenhardt and Martin 2000), which explores how firms can sustain resource-based advantages in rapidly changing environments. However, there are problems with the theory. For example, it can be argued to be tautological as we cannot know whether a firm has unique capabilities independently of the description of them (Priem and Butler 2001; Carter et al, 2008). There are problems in empirically identifying unique resources: it is particularly difficult to attribute, unambiguously, superior performance to specific activities or assets. Moreover, resources occur in configurations with complex interaction effects between resources, some synergistic, others conflicting. And as a theory of competitive advantage, the RBV has little advice to offer managers, and, to date, there has been little empirical work into how resources come about.

But rather than address these and other problems with the RBV we focus here on the question of value and what 'valuable' might mean in the RBV. We would suggest that although the RBV is concerned with the role of valuable assets, it does

ACCEPTED MANUSCRIPT

not have a theory of value, and is unlikely to find one from the neo-classical perspective that dominates the field. Instead, when not relying on conventional economic theories of market imperfection, the RBV uses Ricardian rents to explain excess profits (for example, Barney, 1986, Conner, 1991, Makadok, 2001, Peteraf, 1993, Wernerfelt, 1984) as part of a taxonomy of rent earning opportunities (Peteraf, 1994) These Ricardian RBV perspectives utilise the notions of inelastic factor supply or heterogeneous resource picking skills. In these respects, they are manifestations of classical Ricardian approaches, but which ignore the neo-Ricardian approach. This is surprising since Sraffa's, (1960) neo-Ricardian theory offers an explanation of wages, profits and prices, consistent with Marx's first volume of *Capital*, all of which are potentially important to the establishment of a resource-based *theory* of the firm. Sraffa's analysis offers a useful starting point, but only insofar as it explains the technical relationships between these categories in a homogeneous commodity-based economy. In the RBV heterogeneous processes of value creation are all important and, as in Marx's more general analysis, a function of social relationships.

` In the critical accounting literature, there has been much discussion of how accounting is implicated in the policing of the social relations of production. There has also been much discussion of the nature of value, how it is measured and its relation to the rate of profit (Tinker, 1980, Bryer, 1994, Toms, 2006a, 2006b, 2009a, 2009b). There has also been some development of practical accounting techniques to deal with the analysis of competitive advantage, although typically these have not incorporated the RBV (see for example Roslender and Hart, 2003).

What is needed therefore is a model incorporating a robust theory of value, thereby explaining different profitability outcomes in different competitive situations. Such a model is presented below in the remainder of the paper, which is structured as

ACCEPTED MANUSCRIPT

follows. We begin with a summary of the RBV that concludes that there is sufficient scope within the view to justify the introduction of an explicit labour theory of value perspective. Then we compare in broad outline the RBV and Marx's labour theory of value and conclude that there are important and fundamental similarities between the theories. We then set out a critical component of Marx's theory, the Circuit of Capital. We use the notation of the circuit to explore four primary types of resource creation process. The processes of profit rate equalization are then considered, and we explore what happens to average industry profitability when these resource advantages are imitated. We explain that some types of resource advantage when diffused throughout the industry lead to average profits falling, whilst other resource advantages, when copied, lead to increases in average profitability. Finally propositions are set out that capture the essential arguments of the paper.

## DEFICIENCIES IN THE RBV

Recent literature has recognised the need for a theory of value, and, as a result, two quite narrow and to some extent mutually exclusive perspectives have emerged. One strand examines processes within the organisation (Denrell et al., 2003), addressing value creation through adaptive learning, whilst another considers market interactions, particularly the division of value through bargaining games (Lippman and Rumelt, 2003a, 2003b). The first perspective concentrates on the role of human activity in creating competitive advantage, but without reference to a value creation process. The second perspective sets out some theoretical problems with the neoclassical underpinnings of the RBV, and puts forward an alternative, the bargaining and payments perspectives, which offer a theory of rent and value distribution, but again



Accepted Manuscript

ACCEPTED MANUSCRIPT

without considering the process of value creation. In another example of this approach, value is merely a function of market structure, or the presence of a willing buyer (MacDonald and Ryall, 2004).

To develop these interpretations further a theory which reconciles value creation and value distribution is necessary. Recent literature has begun to explore this possibility. Using the distinction between separable, typically physical, and embedded resources, or assets, which include brand value, processes and procedures, Bowman and Swart (2007) usefully extend the Lippman and Rumelt (2003a) bargaining perspective to inside the organisation. They develop a model to show the links between embedded capital, which is created from ambiguity surrounding the rent creating contributions of human capital, and the capture of rents thereby generated by owners, managers and employees, which depends on the extent to which assets are separable or embedded.[i]

Embedded capital is therefore a useful starting point for the analysis of profitability, and can be extended in a number of ways. First, the notion of embedded capital as a process is extended explicitly to include the labour process. Because it is concerned with power (for example Knights 1990) and not valorisation (Nicholls, 1999), the potential contribution of labour process theory (LPT) to the RBV and theories of competitive advantage has been ignored. Knowledge and human capital assets are meanwhile regarded as sources of competitive advantage in the RBV and elsewhere (Grant, 1996). If the LPT perspective is adopted the notion of knowledge workers as owners of capital (Drucker, 1993) can be abandoned. Using an LPT perspective, value creation occurs only in the labour process and not through social capital or similar osmosis.

ACCEPTED MANUSCRIPT

A second important extension is therefore the adoption of the labour theory of value (LTV), and with it the idea of socially necessary labour.[ii] LTV provides a consistent explanation of the source of surplus, in the mental and physical actions of labour as a common component of all commodities, explaining why they are systematically sold at above the value of the other separable inputs. Third, embedded capital is not in itself sufficient to explain the distribution of surplus between workers, managers and shareholders. The outcome depends also on the processes of accountability, which begin with valorisation in the labour process. Here the management accounting system ascribes homogenous monetary values to heterogeneous outputs from the service delivery or production process. Because the process is less easily observable in the case of embedded capital, the probability of asymmetry between the social value of the labour expended and the realised monetary amount increases. In other words there is a greater probability that workers will appropriate rent by receiving the same wage through lower effort. Managers will therefore use the management accounting system to reduce information asymmetry whilst retaining the competitive advantage that embedded capital brings. They will appropriate rents themselves if successful, but their ability to do so will be influenced in turn by the transparency provided to owners through governance, audit and financial accounting. In this case the potential asymmetries are greater because investors are typically non-expert and in any case may mitigate risk through portfolio diversification rather than firm specific monitoring arrangements. Monitoring through internal and external accounting and governance processes is in itself a costly exercise, which reduces the availability of surplus to managers and outside investors.

Adding these three elements, labour process, labour theory of value and accounting process to the notion of embedded capital introduces Marx's definition of



Accepted Manuscript

ACCEPTED MANUSCRIPT

and theory of value into the RBV conversation. Gaining some clarity about what is meant by "value", and by "valuable" resources within the RBV should lead to a strengthening of the perspective and should provoke some new lines of inquiry, some of which are pursued here. In particular, by introducing Marx's concepts of *value* and surplus value we can explore the impacts of resource advantages as they become imitated, diffused through a set of close competitors. In this way we are able to effect linkages between the firm level analysis of competitive advantage, and the analysis of relative industry profitability.

## DEVELOPING THE RBV

Proponents of the RBV generally argue that human or 'cultural' resources are the sources of above normal returns, not purchasable and tradable physical assets (Barney, 1986; Castanias and Helfat, 1991). This is because physical inputs like computers or machinery can usually be purchased by competing firms, thus any advantage from buying a better piece of equipment is usually rapidly eroded, as competing firms are free to acquire the same equipment. In contrast, valuable human resources such as specially skilled or talented employees, or resources that take the form of embedded tacit routines, tend to be difficult to replicate and can therefore enable the firm possessing these resources to *sustain* higher levels of profit.

In most firms both the *performance* of valuable behaviours within the routines, social networks, and cultures of the organization (Nelson and Winter, 1982), and the *direction* and deployment of these resources with other inputs, are activities undertaken by hired employees, be they executives, middle managers or shop-floor workers. This implies that sustained profitability derives from the actions of various types of labour working on and with other inert inputs (Lado and Wilson, 1994;



Accepted Manuscript

ACCEPTED MANUSCRIPT

Pfeffer, 1995). Thus, within resource-based theorizing the "resources" that produce rents are more likely to be human resources, rather than physical or inert resources.

RBV recognizes that resources can be built or bought. The deliberate creation of resources would also be a managerial activity, and the processes of resource creation executives enact have been described as *dynamic capabilities* (Teece et al., 1997). Unlike the Ricardian perspective, which relies only on artful procurement (or 'resource picking', Makadok 2001), the dynamic capabilities perspective depends on the artful deployment of inert and human resources. In the first case surplus arises through the transfer of resource from one organisation to another. In the second case value is created through non-replicable management action as part of the labour process.

There are strong parallels between RBV reasoning and Marx's economics. Marx adopts a "human resource" based theory of value and surplus value. His theory represents an advanced form of the labour theory of value developed by prior "classical" economists, notably Smith, Mill and Ricardo. In line with Marx's theory, the RBV explicitly acknowledges that the value created by a particular resource is not fully returned to the resource provider (Rumelt, 1984; Peteraf, 1993). The rents produced by the special resource have to be captured by the capitalist, not the resource provider or supplier, if super-normal profits are to accrue to the firm. Thus, RBV separates the creation of value from the capture of value: rents only lead to super-normal profits if they can be appropriated from the resource provider (Bowman and Ambrosini, 2000; Coff 1999). Marx's theory of value and profit also clearly distinguishes between value creation (exploitation in the labour process) and value capture (appropriation of profit). It is therefore fundamentally congruent with this basic tenet of the RBV.



Accepted Manuscript

ACCEPTED MANUSCRIPT

There are further important similarities between Marx's argument and the RBV. They both argue that super-normal profits result from the firm's possession of unique and valuable resources, and that the rent-generating or surplus-generating capacity of these resources may be temporary if these resources can be imitated:

> "a manufacturer who employs a new invention before it becomes generally used, undersells his competitors, and yet sells his commodity above its individual value, that is realizes the specifically higher productiveness of the labour he employs as surplus labour. He thus secures a surplus profit." (Marx, 1954, *III*: 238)

Both theories also recognize that the bargaining power of resource suppliers is a critical determinant of firm profitability. Marx argues that it is the capitalist's control over access to specific inanimate resources (the "means of production") that enables the exploitation of labour to take place. Put another way, if individuals are able to earn a living by selling the *products* of their labour directly, rather than through selling their labour-*power*, then they have no need to contract with owners of capital. Exploitation can only take place where this alternative is denied the worker, and this is primarily the result of developments in what Marx terms the "forces of production" e.g. economies of scale.

According to the RBV, the physical assets that are the precursor of this relationship between capitalist and worker are unlikely to be the source of super-normal profits. As argued earlier, these assets, which are usually tradable and readily available, are likely to be *common* across competing firms. But the problem is they are *expensive*. They are expensive but not unique, and hence they do not qualify as *resources*, in resource-based thinking. Access to these resources is rationed because of their costs of production, not because of their inherent uniqueness. If these assets



Accepted Manuscript

ACCEPTED MANUSCRIPT

became very cheap, then efficient scale production could be undertaken by individuals and self-organized groups without the involvement of the capitalist. So capital, in its money form, is homogeneous, therefore, it cannot pass the test of a resource in the RBV. However, capital enables its owner to capture surplus value, as it is required in all scale-sensitive areas of production. If the required physical assets to produce, for example, steel, cars, or electricity were inexpensive, if they were within the reach of most people, then capital would have to retreat from these industries.

So, in this sense, Marx's theory is also a resource-based theory. In his argument, the scarce resource is money capital. When this resource is rendered redundant because it is not required for socially efficient production, the people involved in creating new value are able to capture the full fruits of their labour. Both theories deal with the phenomenon of entry barriers, but there is a crucial distinction between them. In Marx's economics, the barrier to entry is primarily money capital: a sufficient sum of money must be advanced before socially efficient production can begin. It is, then, a *quantitative* barrier to entry. In the RBV, barriers to entry, or barriers to imitation exist which permit the firm to earn rents for sustained periods of time. Here the barriers are typically *qualitative*: they consist of subtle differences in work process, reputations, and personal relationships that constitute the firm's rent-generating resources. Although we would expect that most resources in the firm would be forms of labour in action, RBV also recognizes that inert inputs into the productive process can also be resources e.g. special equipment, a brand. However, these resources should be considered as *intermediate use values* involved in the productive process that are themselves the products of labour in action. Either the intermediate inert use value has been artfully *procured*, or it has been *created* by people inside the firm. If artful procurement creates resources for the firm this must





Accepted Manuscript

ACCEPTED MANUSCRIPT

mean that the *value* of the resource in its current deployment is greater than the price that was originally paid for it.

The RBV offers an explanation of how firms can earn super-normal profits in *equilibrium*. The RBV is rooted in neo-classical thinking, where the notion of equilibrium forms a central plank of theory building. Thus equilibrium is a useful construct to assist in theory development, but we would not expect equilibria to exist in reality. Marx and Schumpeter (and other Austrian School economists) take a dynamic view of markets and economies, which taken at face value seems to be a more promising place to start building theories about relative firm performance. The processes of 'creative destruction', and Marx's explanation of the 'moral depreciation' of capital recognise that competitive advantages have a limited shelf-life. We believe the assumptions about equilibrium can be explained by the RBV's neo-classical roots. Insights about the idiosyncratic sources of advantage the RBV provides are still interesting and important even if we relax the equilibrium conditions. Thus, in what follows we take a longer-run notion of competitive advantage than that implied by the RBV. Specifically, we assume that resource based advantages can exist at a point in time, but that processes of imitation and replication will, over time, lead to these resource advantages being eroded. So, we are relaxing a strict interpretation that resources are indefinitely non-imitable, suggesting instead that inimitability reduces over time. Such adjustments to resource advantage are mirrored by adjustments in socially necessary labour. The discovery of a new, more efficient system will reduce the socially necessary labour time to produce the same goods. The firm making the discovery enjoys competitive advantage because all other firms must employ labour above the socially necessary minimum. In the longer run, less well-endowed firms lose market share to the efficient firm and exit the industry,



Accepted Manuscript

ACCEPTED MANUSCRIPT

or alternatively, the leading firm is imitated, so that the new social minimum is generalised to the industry.

Meanwhile, because there is embedded capital, causal ambiguity and information asymmetry, the division of surplus (including the transfer of rents from other firms as the leading firm gains market share) within the efficient firm is indeterminate. In this firm, monitoring costs are high to begin with as embedded capital is created, and these costs diminish through time as tacit knowledge in employees is generalised into managerial and other forms of explicit, but firm specific knowledge. Even at the end of the process, monitoring cost is greater than zero, therefore there is always a social minimum monitoring cost. From the point of view of capital, the realised rate of surplus across firms and industries is a function of the social minimum variable capital minus the social minimum monitoring cost. The latter is a cost of circulation, necessary for the functioning of capital but not a necessary production cost and does not therefore form part of society's stock of valuable assets.

Accounting labour, for example administration and bookkeeping are therefore classes of unproductive labour in circulation costs that act as deductions from profit (Marx, 1978, pp.207-211). To extend this notion into our analysis of profitability, it is necessary to extend the scope of socially necessary labour to include socially necessary labour costs in circulation. Whereas this labour is unproductive, since it arises from the social relations of production under capitalism, it is nonetheless required for capitalism to function so that the valorisation of the labour process can be completed through the realisation of money capital in the circuit of capital. There is accordingly a socially efficient level of labour required to sustain this process.



Accepted Manuscript

ACCEPTED MANUSCRIPT

Combining Marx's economics with the fine-grained insights into variations in firm-level profitability provided by the RBV enables us to develop a categorization of types of labour. This can then be used to explain changes in firm profitability, and strategies employed to counter falling profitability, specifically how firms' counter what Marx refers to as the "moral depreciation" of capital. Moreover, we can use this integration to explore the effects of resource imitation on *industry* profitability.

The basic arguments of the RBV have been set out above in the context of the current debate (Priem and Butler, 2001). Marx's argument requires some integration, and in the next section we shall attempt to briefly summarize the aspects of his work most relevant to the RBV. His *circuit of capital* approach explains capital as a *process*, and it will provide the conceptual underpinning for the paper.

## MARX'S "CIRCUIT OF CAPITAL"

**----------**

**Insert Figure 1 about here**

**----------**

Figure 1 sets out the circuit of capital. It has two spheres: the sphere of production and the sphere of circulation. The circuit captures the essential aspects of the process of capital accumulation (Marx, 1954; Fine and Harris, 1979). Marx employs three different types of 'value' in his argument: use value, exchange value and *value*. Use value refers to the physical or other properties of a commodity that provoke a demand for it; use value is product utility. Exchange value is the monetary value that the product exchanges for; it is value in its money form. *Value* refers to the labour time embodied in the commodity. Taking Marx's macroeconomic perspective, *value* refers



Accepted Manuscript

ACCEPTED MANUSCRIPT

to socially necessary labour in the abstract i.e. the labour is a portion of total labour deployed across the system as a whole.

In order to explain cases of heterogeneous labour productivity and resource endowment, the model begins with a simple benchmark describing homogeneous commodity production. In the benchmark case, the value rate of profit and money rate of profit are equal, and this is also a useful base-case for the RBV, since firms earn the general rate of profit and there is no competitive advantage. Where market prices form the prices of production, non-Ricardian competitive advantage or disadvantage depends on the difference between the money value of labour paid and the money value of socially necessary labour. Socially necessary labour is defined as the monetary equivalent of the required labour time in the most efficient firm. In the less efficient firm, rent accrues to labour at the expense of surplus in the form of wage payments above the socially necessary level. Because the labour process generates asymmetric information and monitoring costs attenuated by accounting controls the surplus appropriated even in the most efficient firm is lower that the total appropriable surplus. To the notion of Ricardian rents, therefore is added the notion of 'labour rents' which arise from the social productive process and whose magnitude is mediated by the effectiveness of accounting controls. For example a labour rent would arise inversely to lost profit where a worker takes more time for a task than the socially necessary required time. Individual firm profits are therefore heterogeneous as a function of combinations of standard RBV Ricardian rents, labour rents arising from differences in efficiency and labour rents arising from the ineffectiveness of accounting controls. The general rate of profit is formed through adjustments of money wages to the socially necessary equivalent through imitation; a process which is continually disrupted by new developments of dynamic capabilities.



Accepted Manuscript

ACCEPTED MANUSCRIPT

The simple benchmark circuit begins with *M*, a sum of money advanced as capital. In order for this capital to "self-expand", it has to be transformed into productive resources. Thus, money capital, *M*, is converted into inputs, labour power (*LP*) and means of production (*MP*). *C* is a sum of labour *value* made up of value "stored" in the machinery, and the *value* in the collection of wage goods required to "produce" the labourer. So *C* is a sum of *value*, a quantity of socially necessary labour time embodied in machinery etc. and wage goods.

The sum of *value* advanced procures two types of capital. The first is *c*, *constant* capital. It is constant because it cannot create more *value* than it already embodies. So the *value* embodied in the procured means of production *MP* remains constant through the productive process. In contrast, *v* is *variable* capital, as it has the capacity to create *value* and *surplus value* over and above the costs of its production, represented by wage goods. So labour power has the capacity to re-create the value advanced for wage goods i.e. it can produce sufficient new value to pay for itself, and it is also capable of producing *surplus value*. The working day is divided into the time spent on creating the sum of value advanced as wages (*v*) and the remainder of the day, which produces *surplus value* (*s*) procured by the capitalist. The ratio *s* to *v* Marx refers to as the rate of surplus value, or the rate of exploitation.

So *MP* and *LP* are joined in the process of production *P*. *MP* and *LP* are *use values* that combine to produce new *use values* in the form of commodities. Labour power working with the means of production (i.e. machinery, components, electricity) creates commodities with a *value* of *C′*. These commodities then have to enter the sphere of circulation in order for the value and surplus value created in the production process to be realized. The exchange of *C′* for cash realises a quantity of money (*M*+*m*) where *m* represents the surplus value created in the production process,

ACCEPTED MANUSCRIPT

appropriated by the capitalist in the form of profit. *m* is the monetary expression of surplus value. From *m*, the costs of circulation, including monitoring costs are deducted.

Thus the circuit begins with a sum of *exchange* value *M*. This is converted into the *use* values of labour power and the means of production. The *value* of these inputs is the socially necessary labour required to produce the means of production *c* and to "produce" the labourers *v*. In the production process new *use* values are created, a bundle of commodities which we shall label *K* subsequently, which have a *value* of *C'* (which is the sum of *c*+*v*+*s*). When these are sold, the use values are exchanged for a sum of money *M*+*m*.

Marx argues that *m* cannot all be frittered away on luxury consumption. The external coercive laws of competition force the capitalist to reinvest *m* in an attempt to extend his ability to extract even more surplus value, and as a defensive measure to preserve the original value of *M*. Competition between capitals leads to 'moral depreciation' of the concrete means of production owned by the capitalist. Innovations in productive processes devalue past investments in machinery, and changing consumer tastes or product innovations can devalue the commodities (*C'*) the capital can produce. So re-investment is also a defensive necessity for the individual capitalist.

We can now explore some dynamic processes within this circuit that affect the value of a particular capital. First, we echo the concerns of RBV by exploring the case of super-normal profits. Then we examine the processes that tend to bring about an equalization of profit rates within an industry.



Accepted Manuscript

ACCEPTED MANUSCRIPT

**Average Capitals**

An average capital in a particular industry will be producing an average return. Using the notation in the circuit of capital, and representing this as a process, we have:

$$M \rightarrow C(c,v) \rightarrow P(MP,LP) \rightarrow K \rightarrow C'(c,v,s) \rightarrow M+m$$

Where, to recap, $M$ is a sum of money advanced as capital that is converted into productive capital. $C$ is a *value* construct, not a monetary amount. It represents the sum of labour time embodied in the constant capital $c$ required for socially efficient production, and $v$, variable capital is the amount of value that makes up the sum of wage goods advanced for the labour time of the employees. Then the two procured components of capital, constant $c$ and variable $v$ combine in a productive process $P$. $c$ and $v$ are now in the form of concrete or specific *use* values, the means of production $MP$, and labour power $LP$. The productive process produces commodities $K$ which have a *value* of $C'$, which comprises the $c$ used up in the productive process, the variable capital $v$ employed, and surplus value $s$ created in the production process. Again $C'$ is a *value* construct. If and when these products are sold they realize a sum of exchange value $M+m$ where $m$ is the monetary equivalent of the surplus value $s$ created, minus the costs of circulation.

In the average capital or firm in an industry, $LP$ would consist of homogeneous labour power $LP_h$, and homogeneous constant capital $MP_h$. In other words the *quality* of labour and means of production is the average for the industry, and together they combine to produce average rates of profit:

$$M \rightarrow C(c,v) \rightarrow P(MP_h,LP_h) \rightarrow K \rightarrow C'(c,v,s) \rightarrow M+m$$

and the average *monetary* rate of profit earned by this firm would be: $\frac{m}{M}$

The average *value* rate of profit would be:

ACCEPTED MANUSCRIPT

$$\frac{s}{c+v}$$

Throughout the following exploration we will assume that for the average capital in the industry the monetary rate of profit is equivalent to the value rate of profit i.e.

$$\frac{m}{M} \approx \frac{s}{c+v}$$

We will then examine the case where individual capitals may have *differing* monetary and *value* rates of profit at a point in time.

**Capitals Producing Super-Normal Profits**

The RBV is concerned with capitals that are able to capture *above*-average profits, and we shall now use the circuit of capital to explore different forms of resource based advantage. In each case of resource advantage the created resource is valuable in conventional terms because it confers a per unit margin improvement relative to the average firm. Such advantage results from either lower relative unit costs or higher relative prices multiplied by the mass of commodities the capital produces. We start with the straightforward case of economies of scale.

***Scale Advantage***

Here the firm has achieved scale advantage ahead of competitors, as a result of the development of a new process. We can assume that this first mover advantage results from increases in the *quantity* of constant capital employed:

$$M^{+} \rightarrow C^{+}(c^{+}, v) \rightarrow P(MP^{+}, LPh) \rightarrow K^{+} \rightarrow C'^{+}(c^{+}, v, s) \rightarrow M^{+} + m^{+}$$

where

$$M^{+} > M, C^{+} > C, \quad MP^{+} > MP, K^{+} > K, C'+ > C' \quad and \quad m^{+} > m$$

ACCEPTED MANUSCRIPT

Assuming that scale advantages do exist in this case, then additionally:

$(m^{+} - m) > (M^{+} - M)$

We would expect that profits ($m$) from a previous circuit have been retained and invested in capital equipment ($M^{+}$ converted into means of production $MP^{+}$ that have a *value* of $c^{+}$). The effect of this additional quantity of constant capital is to increase the productivity of labour power, which results in a higher volume of commodities produced in the circuit ($K^{+}$) relative to the average capital ($K$). If we assume the market price for these commodities is set by the average capital, this scale efficient firm is able to capture additional profit due to its lower costs of production. The resource that has been created by this first mover investment in scale efficient processes and the value of this resource is the per unit margin improvement multiplied by the mass of commodities the capital produces.

However, if we inspect the changes in *value* dimensions a different picture emerges. Any investment in scale efficient equipment is an investment in constant capital. By definition constant capital cannot create more value than it embodies; it cannot create *surplus* value. The amount of surplus value created in this process remains the same as that in the average capital ($s$). How are we to account, then, for the additional profits earned?

Marx was very aware of the processes of 'creative destruction'. He uses the concept of *socially necessary* labour to capture the ongoing developments in processes that increase the productivity of labour. In the case of the scale efficient firm modelled here, the socially necessary amount of labour power required to produce this bundle of commodities has been redefined. Those competing capitals that have not been able to imitate these scale efficient processes are now employing more labour power than is socially necessary. As long as this persists the market



Accepted Manuscript

ACCEPTED MANUSCRIPT

price of these commodities will be set by the average capital, enabling the RBV firm to sustain its superior rate of profit. Of course, the scale efficient firm could choose to undercut its competitors, and maybe drive them out of business, but we will assume that the firm chooses to take the margin advantage.

So the first-mover's investment in scale efficient production has had the effect of redefining the amount of *socially necessary* labour required to produce these commodities. Thus although the surplus value created in the process remains the same as the average, the scale efficient capital is able to charge prices above the labour *value* embodied in the commodities it produces. Prices reflect the average capital's costs of production which now includes a proportion of socially *unnecessary* labour time.

Assuming that scale economies do indeed lower the unit costs of each commodity the monetary rate of profit should increase even though more $M$ has been advanced ($M^+$) to fund the investments in equipment etc. But although the monetary rate of profit will have increased for this firm:

$$\frac{m^+}{M^+} > \frac{m}{M}$$

the *value* rate of profit has declined:

$$\frac{s}{c^+ + v} < \frac{s}{c + v}$$

We would not expect investments in scale efficient production to lead to sustained advantage, particularly where the scale efficient equipment is procured. Investments in bought-in machinery etc are likely to be readily imitated. The effects of other firms imitating this move would be the redefinition of the socially necessary

ACCEPTED MANUSCRIPT

amount of labour required to produce these products. In the circuit the *average* amount of constant capital will have increased from $c$ to $c^+$.

The first mover achieving scale advantage has invested ahead of the competition. The obvious source of the additional $M$ invested is the retained $m$ from a prior circuit. This is essentially Marx's process of accumulation. Because the investment is in explicit production processes and separable physical capital, $m$ is reduced by circulation costs to only a minimal extent. But a consequence of this process of accumulation is an increase in the ratio of constant capital $c$ to variable capital $v$. We consider some of the ramifications of this later in the paper.

We now turn our attention to three more typical sources of resource-based advantage. First we consider the situation where differentiated labour power creates *intermediate use values* that add to the efficiency or effectiveness of the firm's capital. Intermediate use values are assets like special equipment, systems, brands, databases, and patents. As *inert* use values they form part of constant capital.

***Intermediate Use Values***

Differentiated labour ($LP_d$) could create intermediate use values in a prior circuit of capital. Here the actions of labour have resulted in a *qualitative* improvement in constant capital ($MP$ becomes $MP_d$). So whereas Marx generally treats constant capital as homogeneous, constant capital with differential capabilities can be created internally within the firm by the actions of labour. We can represent this process of resource creation by setting out two sequential but abbreviated circuits of capital. Here differential labour creates better quality *intermediate* use values:

$$\ldots MP_h, LP_d \rightarrow K \rightarrow M + m \rightarrow \; M \rightarrow MP_d, LP_h \rightarrow K^+ \rightarrow M + m^+$$

*circuit n* *circuit n* + 1

ACCEPTED MANUSCRIPT

But note that in circuit *n* some labour power has been diverted from the production of commodities to the development of superior intermediate use values like better systems, brands, equipment. These then confer advantage in subsequent circuits of capital *n+1* etc. The process at work here is knowledge co-production with causal ambiguity so that $MP_d$ is embedded capital. However the ambiguity produces indeterminate pay-offs in the valorisation process. Three specific permutations can be considered as defining or limiting cases. In the first case, represented above, differential labour in the first circuit is transformed into homogenous labour in the second. In other words, the labour process is reorganised instantaneously so that the tacit knowledge in $LP_d$ is transferred into $MP_d$ as complex but separable capital that can be operated by homogeneous de-skilled labour. In this case profit accumulation proceeds smoothly and *m* is only diminished by the socially normal monitoring cost. Even so, the problem for capital is in the first circuit since there is no mechanism for translating $LP_d$ into the full value of *m* and the amount available for reinvestment in the second circuit necessary to create $MP_d$ is constrained. Therefore even in this limiting case, because value is created from skilled labour, suppliers of skilled labour always appropriate a positive rent in the first period when their labour is used in the co-production of knowledge assets. The second case is the same, except that the same amount of $LP_d$ is also required in subsequent periods. In the third case monitoring mechanisms are insufficient to account immediately for the revised value generation arrangements in the labour process. As we go through each of the three cases it can be seen that the proportion of value appropriated as *m* diminishes, such that the likely outcome in case three is normal profit, as the extra value created through the new process approaches 100%. In all three cases the amount realised through *m* is

ACCEPTED MANUSCRIPT

insufficient for accumulation purposes, and so the subsequent circuit requires supplementary investment from new capital.

As with the investment in scale efficient processes, the internal development of intermediate use values like better procedures, better equipment, patents etc results in an increase in *constant* capital *c*. These resource developments in circuit *n* become "dead labour" in circuit *n*+1. And as with the case of investments in procured equipment the augmentation of constant capital without any commensurate increase in the rate of surplus value (*s/v*) would result in a reduction in the *value* rate of profit, and again this is progressively accentuated in the three cases above. So although the co-production of knowledge assets creates the theoretical basis for competitive advantage, and indeed an actual advantage in the sense that rent-seeking employees and managers of other firms attempt to copy the leading firm's state of the art working methods, the underlying value rate and the realised rate of profit remain normal.

***Economizing on Constant Capital***

A third source of resource advantage would be resources that enable the firm to increase the rate of capital turnover. Resources that might deliver this advantage may well be work methods that make better use of bought-in material and equipment. Although the same capital is advanced as under the previous less efficient method, the rate of realisation into *M* is speeded up, so that more capital turnovers are possible in a given time period. The effect is to increase the rate of profit. Examples might include the introduction of just-in-time (JIT) delivery systems. Again several scenarios are possible. In the part of the value chain administering JIT, the socially necessary labour in circulation costs falls. To see the overall impact however, the whole value chain must be considered. If the impact of the firm's introduction of JIT

ACCEPTED MANUSCRIPT

is that suppliers must hold more stock than previously, there is merely a reallocation of the aggregate value chain total profit through increased capital turnover in the customer firm and a corresponding reduction in the supplier. If on the other hand some technical process delivers improvements throughout the value chain, for example computerisation, the socially necessary labour in circulation costs falls and the aggregate capital turnover and rate of profit rises. The net effect depends on the relative scale of these processes and the bargaining power of firms in the value chain. A powerful firm will collect rents from weaker firms through trade-offs in the profit allocation process. If the vehicle for this diffusion process were consultants (e.g. SAP, MRP, QA, JIT systems) then firms buying the systems would be adding to their stock of constant capital *c* and the net effect would be to reduce the average rate of profit. Codification then also increases the possibility that these advantages can be replicated in rival firms. Procured systems like these would then be intermediate use values like those considered above.

***"Bought" Resources***

These procured systems could not be resources as they would confer *equivalent* use value to the firms that bought them. But resources *can* be bought. Since price differs from value, but price = value in the aggregate, it follows that resources can be bought at, above or below their true value. In the case where they are acquired at below value:

$$M^{-} \rightarrow C(c,v) \rightarrow (MP_h, LP_h) \rightarrow P \rightarrow C'(c,v,s) \rightarrow K \rightarrow M + m$$

Here the sum advanced for socially efficient production $M^{-}$ is *less* than that advanced by competing capitals. So although the amount of *value* created is the same as in competing capitals (*c*+*v*+*s*), the exchange value advanced for the specific *LP* and *MP* was *less* than that advanced in competing capitals. If as in the case of this

ACCEPTED MANUSCRIPT

circuit the use values conferred by the procured inputs are equivalent to the use values of the average capital, then strictly this firm does not possess a resource advantage. The "resource" existed in a prior circuit and it consisted of special procurement expertise or insight. Again because the market price is set by the average capital this resource endowed firm is able to earn a superior rate of profit:

$$\frac{(M - m^{-}) + m}{M^{-}} > \frac{m}{M}$$

But would it be possible to acquire true resources that have differential use value (i.e. acquire $MP_d$ or $LP_d$)? The *value* of these resources would be the costs of their production, in labour time units. Although the specific use values of the procured *MP* and *LP* may be differentiated we have no reason to suppose that their *values* would be any more or less than undifferentiated inputs procured by the average firm. Hence even in the case of the procurement of true resources the value rate of profit ($s/(c+v)$) may be the same for the resource-endowed firm as for the average firm. The RBV arrives at the same conclusion, since the ability to purchase implies imitability and hence normal profit.

There is a fourth form of resource based advantage that is more likely to be sustainable because it does not involve the creation of intermediate use values, and hence does not result in an increase in constant capital *c*. Advantage here derives from improvements in the rate of surplus value.

***Increasing the* Rate *of Surplus Value***

Marx defines the rate of surplus value, or the rate of exploitation as the ratio $s/v$. Resource-based advantages can be developed that operate directly on this ratio. Any improvements in learning, experience, skills etc that a firm can achieve ahead of competitors may have the effect of reducing the given quantity of *v* required to

ACCEPTED MANUSCRIPT

produce the average quantity of commodities *K*. These improvements in productivity would not necessarily involve any investments or changes in *MP*, so *c* would not be augmented. Here the rate of surplus value has increased through resources that require less *v* for an average bundle of commodities *K*:

$$M^{-} \rightarrow C^{-}(c, v^{-}) \rightarrow (MP_h, LP_d) \rightarrow P \rightarrow C^{-'}(c, v^{-}, s) \rightarrow K \rightarrow M + m$$

where $\frac{s}{v^{-}} > \frac{s}{v}$

The actual improvement in the rate of profit depends however on the ability of management to observe *v*. In the earlier case we considered knowledge co-production and the limited opportunities for improvements in the labour process to accrue to *s*. If we now consider the case of increased organisational learning which comes purely from $LP_{d,}$ the problem of higher profit realisation is intensified. This case reflects increased tacit knowledge on the part of the skilled employee, which is by definition not directly observable. Faced with monitoring problems, management or external stakeholders might resort to action or output type control mechanisms (Ouchi and Maguire, 1975). Where the task is complex, the management accounting system therefore retreats from action and behaviour controls, since their application requires understanding a technical labour process from a non-technical point of view. Instead it relies on performance, or output control, so that the employee may set their own level of efficiency provided the target is met. Because the managers have no technical knowledge of the tacit process, they are forced to rely on their understanding of socially necessary labour when setting standard costs. Typically they will set these standards with reference to competitor firms or incrementally from historical practices in their own firm. In all scenarios of this kind, the employee appropriates the gain from improved tacit knowledge in rent, for example economy of effort for a given

ACCEPTED MANUSCRIPT

wage. Even where managers can monitor the labour process and extract some surplus, the information asymmetry between them and their non-expert shareholders becomes all the larger, leaving shareholders with remote possibilities of surplus appropriation. The amount of *v* required could be reduced in other ways, but these may be more imitable. For example, the length of the working day could be extended without a commensurate increase in wages. Supervisory and quality control circulation costs could be reduced by having employees police their own behaviour, but self-policing is likely to reduce the value captured from the labour process.

## FALLING RATES OF PROFIT

We have seen that, in an effort to reduce costs, living labour (*v*) is replaced by "dead" labour (*c*) embodied in the means of production. If the rate of exploitation (*s/v*) remains constant, then the increasing organic composition of capital has the overall effect of causing the rate of profit to fall. This is Marx's 'Law of the Tendency of the Rate of Profit to Fall', an inherent tendency within the system that nevertheless can be moderated by "counteracting forces". From the perspective of RBV, this process of increasing *c/v* could be explained as follows.

We have seen how economies of scale and the creation of intermediate use values can all lead to an increase in the organic composition of capital *c/v*. Ultimately the process of proceduralising and de-skilling can result in the process being performed by a machine. Here living labour *LP* is replaced first by $LP_d$ through organisational learning and knowledge co-production and then through deskilling $LP_d$ is transformed into $LP_h$ and *MP* is transformed into $MP_d$ (where $LP_h < LP$). Transparency, achieved through management accounting and financial reporting, speeds up the value capture process, but at the same time makes the changes more

ACCEPTED MANUSCRIPT

easily imitable by other firms. Moreover, with imitation across the industry the net outcome is an increase in the organic composition of capital in that industry, relative to other industries: $c^+/v$ compared with $c/v$ for other spheres of production, where $c^+>c$. As surplus value can only be derived from the actions of living labour ($v$), if there is no corresponding increase in the rate of surplus value in the industry (i.e. $s/v$ is average), then the rate of profit in this industry will decline:

$$\text{Rate of Profit} = \frac{s}{c+v}$$

If we divide through by $v$, then:

$$\text{Rate of Profit} = \frac{\frac{s}{v}}{\frac{c}{v}+1}$$

And so, if $c^+/v$ for a particular industry is greater than average $c/v$, then the rate of profit in this industry will be lower than average, assuming no change in $s/v$:

$$\frac{c^+}{v} > \frac{c}{v}$$

therefore the rate of profit in this industry is below average:

$$\text{(a)} \quad \frac{\frac{s}{v}}{\frac{c^+}{v}+1} < \frac{\frac{s}{v}}{\frac{c}{v}+1}$$

So the replacement of living labour with machinery, de-skilling and the creation of intermediate use values confers a *temporary* advantage on the firm that innovates first. But, if these moves are imitated the result is an increase in the organic composition of capital in the *industry*, relative to others, and hence a declining rate of profit in this industry. So the process of resource creation in these cases can lead to a

ACCEPTED MANUSCRIPT

short-term advantage for the first mover, but the net effect of this process is to lower profit rates across the industry as this ploy is imitated.

To summarize, if the resource augments constant capital e.g. scale efficient equipment, or intermediate use values, the resource-endowed firm is able to sell its output above its *value*. If these resources then get imitated the result is that the *value* rate of profit in the industry declines as the amount of constant capital has increased without any commensurate increase in surplus value (inequality (a) above). So the effect of resources that are *capitalized* is that once they are imitated the average rate of profit in the industry *declines*.

## CONCLUSION

In this paper we have used insights from Marx's economics to inform RBV, and RBV in turn has enabled us to develop certain aspects of Marx's schema. We have seen that the process of accumulation, which is at the heart of Marx's analysis and which we have explored in the circuit of capital, is capable of representing and accounting for many of the phenomena developed in the RBV. By introducing Marx's concept of *value* we have been able to explore the effects on firm's and industries of particular types of resource developments, how the value created from such developments is split between employees, managers and shareholders and how accounting mediates the split, and the impact on industry profitability if these are imitated.

Direct empirical testing of the relationships outlined is possible for example by using realised profit rates to ascertain the most efficient firm and hence the socially necessary labour in any given industry sector. Moreover the categories used by Marx above have been shown to be consistent with conventional accounting categories (Bryer, 2005). Profit rates can be mapped over time for firms and industries, and



Accepted Manuscript

ACCEPTED MANUSCRIPT

approximations to the value constructs *c* and *v* can be made using cost information. But further theoretical work is needed to explore the effects of introducing market dynamics, rates of resource diffusion, and entry barriers into the theory. Finally, there is a macro perspective that could be developed to consider these processes and tendencies at a system level. Even so, it is hoped that this paper represents a radicalisation of strategy and will assist in the development of future discussions of critical strategy as well as critical accounting.

Accepted Manuscript

ACCEPTED MANUSCRIPT

## REFERENCES

Amit, R. & Schoemaker, P.J.H. 1993. Strategic assets and organisational rents. *Strategic Management Journal*, 14(1): 33-46.

Barney JB. (1986a). Strategic factor markets: expectations, luck, and business strategy. *Management Science* **32**(10): 1231–1241.

Barney, J.B. (1986b). Organizational culture: can it be a source of sustained competitive advantage? *Academy of Management Review*, 11(3): 656-665.

Barney, J.B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1): 99-120.

Bryer, R.A. (1994). Why Marx's labour theory is superior to the marginalist theory of value: The case from modern financial reporting. *Critical Perspectives on Accounting*, 313-340.

Bowman, C. & Ambrosini, V. 2000. Value creation vs value capture. *British Journal of Management*, 11: 1-15.

Bowman, C. and Swart, J. (2007). 'Whose human capital? The challenge of value capture when capital is embedded, *Journal of Management Studies* (forthcoming)

Carter, C and Mueller, F (2006) The colonisation of strategy: Financialization in a post-privatisation context. *Critical Perspectives on Accounting*, *Volume 17, Issue 8*, *December 2006*, *Pages 967-985*

Carter, C, Clegg, S. and Kornberger, M (2008) Strategy as Practice? *Strategic Organization.* Vol 6 (1) pp 83-99.

Castanias, R.P. & Helfat, C.E. 1991. Managerial resources and rents. *Journal of Management*, 17(1): 155-171.



Accepted Manuscript

ACCEPTED MANUSCRIPT

Coff, R. W. (1999). 'When competitive advantage doesn't lead to performance: the resource-based view and stakeholder bargaining power'. *Organization Science*, **10**, 2, 119-213.

Conner KR. (1991). A historical comparison of resource-based theory and five schools of thought within industrial organization economics: do we have a new theory of the firm? *Journal of Management* **17**(1): 121–154.

Denrell, J., Fang, C. and Winter, S.G. (2003). 'The economics of strategic opportunity'. *Strategic Management Journal*, **24**, 977-990.

Dierickx, I. & Cool, K. 1989. Asset stock accumulation and sustainability of competitive advantage, *Management Science*, 35(12): 1504-1511.

Drucker, P. (1993). Post capitalist society, Oxford: Butterworth-Heinemann

Eisenhardt, K and Martin, J. (2000) 'Dynamic Capabilities: What Are They?', Strategic Management Journal, 21 1105-1121.

Fine, B. & Harris, L. (1979). Rereading Capital. Macmillan, London and Basingstoke.

Grant, R. M. (1996). `Toward a knowledge-based theory of the firm'. *Strategic Management Journal*. **17**, 109-122.

Kogut, B. and Zander, U. (1996) 'Knowledge of the firm, combinative capabilities, and the replication of technology', Organization Science, 3(3): 383-97

Knights, D. (1990). 'Subjectivity, power and the labour process', in Knights, D. and Wilmott, H. *Labour Process Theory*. London: Macmillan.

Lado, A.A. & Wilson, M.C. 1994. Human resource systems and sustained competitive advantage. *Academy of Management Review*, 19(4): 699-727.

Lippmann, S.A. & Rumelt, R.P. (2003a). The payments perspective: micro-foundations of resource analysis. *Strategic Management Journal,* 24: 903-927.



Accepted Manuscript

ACCEPTED MANUSCRIPT

Lippman, S.A. and Rumelt, R.P. (2003b). 'A bargaining perspective on resource advantage'. *Strategic Management Journal*, **24**, 1069-1086.

Makadok, R. (2001). 'Toward a synthesis of the resource-based and dynamic capability views of rent creation'. *Strategic Management Journal*, **22**, 387-401.

Makadok, R. and Coff, R. (2002). 'The theory of value and the value of theory: breaking new ground versus reinventing the wheel'. *Academy of Management Review*. **27**, 1, 10-13.

Marx, K., (1954), *Capital* Volume III. Lawrence and Wishart.

Marx, K., (1978), *Capital* Volume II. Harmondsworth: Penguin.

MacDonald, G. and Ryall, M.D. (2004). 'How do value creation and competition determine whether a firm appropriates value'? *Management Science*, **50**, 1319-1333.

Miller, D. and Shamsie J. (1996). `The resource-based view of the firm in two environments: the Hollywood film studios from 1936 to 1965'. *Academy of Management Journal***.** **39(3)**, 519-543.

Nelson, R.R. & Winter, S.G. 1982. *An Evolutionary Theory of Economic Change*. The Belknap Press, Cambridge MA.

Nicholls, T. (1999). 'Industrial sociology and the labour process', in Beynon, H., Glavinis, P. (eds). *Patterns of social inequality: Essays for Richard Brown*. London: Longman.

Ouchi, W.G. and Maguire, M.A. (1975). 'Organizational control: Two functions'. *Administrative Science Quarterly*, 20, 559-569.

Penrose, E.T. (1959) *The Theory Of Growth Of The Firm*, New York: Wiley.



Accepted Manuscript

ACCEPTED MANUSCRIPT

Peteraf, M.A. 1993. The cornerstone of competitive advantage: a resource-based view. *Strategic Management Journal*, 14(3): 179-191.

Peteraf, M.A. 1994. The two schools of thought in Resource-Based Theory: Definitions and implications for research, Advances in Strategic Management, 10A, pp.153-58.

Pfeffer, J. 1995. Producing sustainable competitive advantage through the effective management of people. *Academy of Management Executive,* 9(1): 55-69.

Porter, M.E. (1980) Competitive Strategy: Techniques For Analysing Industries And Competitors, New York: Free Press.

Priem, R.L. & Butler, J.E. 2001. Is the resource-based "view" a useful perspective for strategic management research? *Academy of Management Review*, 26(1): 22-40.

Roslender, R. and Hart, S.J (2003), In search of strategic management accounting: Theoretical and field study perspectives, *Management Accounting Research*, Vol.14, No.3, pp.255-279.

Rumelt, R. (1984). Toward a strategic theory of the Firm. In R. Lamb (Ed)., *Competitive Strategic Management*: 556-570. Prentice-Hall, Englewoods Cliffs, NJ.

Selznick, P. (1957) Leadership In Administration: A Sociological Interpretation, New York: Harper and Row.

Sraffa, P. (1960). *The production of commodities by means of commodities*. Cambridge: Cambridge University Press.

Teece, D.J., Pisano, G. & Shuen, A 1997. Dynamic capabilities and strategic management, *Strategic Management Journal*, 18(7): 509-533.

Tinker, A.M. (1980). Towards a political economy of accounting: An empirical



Accepted Manuscript

ACCEPTED MANUSCRIPT

illustration of the Cambridge controversies. *Accounting Organizations and Society*, 147-160.

Toms S. (2006). 'Asset Pricing Models, the Labour Theory of Value and their Implications for Accounting' *Critical Perspectives in Accounting,* 17, pp.947-965.

Toms, S (2006b). Sustained competitive advantage and the modern labour theory of value. Working Paper, The York Management School, No.20.

Toms S. (2009a). The labour theory of value, risk and the rate of profit. *Critical Perspectives on Accounting* (forthcoming).

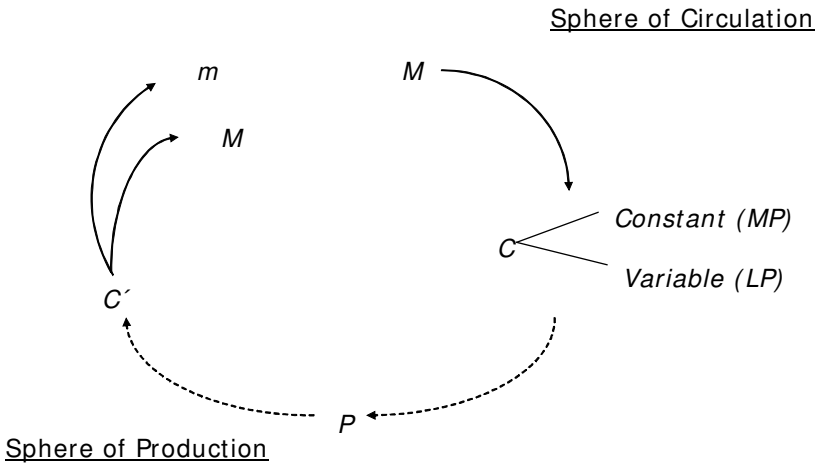
Toms, S. ( 2009b). 'The social risk rent thesis: A reply to Harney' *Critical Perspectives in Accounting* (forthcoming).

Wernerfelt, B. 1984. A resource-based view of the firm. *Strategic Management Journal*, 5(2): 171-180.

Accepted Manuscript

ACCEPTED MANUSCRIPT

**Figure 1: Circuit of Capital**




[i] Bowman and Swart (2007, p.1) define embedded capital as follows: 'Embedded capital exists where there is ambiguity surrounding the rent creating contributions of human capital. This ambiguity is due to the interactions in the processes of value creation between capital that can exist in a form separated from individual employees, e.g. a codified procedure, and human capital that is embodied in individuals. These interactions are difficult to disentangle, and as a result it is not possible to clearly attribute the creation of value to the component parts of embedded capital'.

[ii] Marx recognizes that only necessary labour time is relevant to the determination of the value of a commodity. So, for example, just because I was a really slow worker and took twice as long as the average employee to make a chair, that chair would not be worth twice as much.