



STRATEGY PAPER - What does value mean and how is it created, maintained and destroyed?

In this paper we suggest that 'value' has a different meaning for different stakeholders and that if the firm operates in line with investor interests, it acts as both customer and supplier and its motivations will reflect these roles. We then consider internal activities that reflect these motivations. Other activities maintain the firm, and some destroy value. Implications for the RBV are explored.

"The primary objective of the strategic management field in general and of the RBV in particular, is to explain firm profitability- and firm profitability is determined by the value captured by the firm." (Makadok and Coff, 2002:10).

Although the "notion of value creation lies at the heart of organisational success and survival" (Lepak, Smith and Taylor 2002:320), there is still some confusion surrounding various aspects of what is meant by value and the process of value creation. In this paper we focus specifically on the following questions: what does value mean to different stakeholders? How is value created? And how are value creation processes sustained over time? We also address the issue of value *destruction*, which we believe is central to any exploration of the processes of value creation within firms.

Our answers to these questions are informed by recent contributions to the *Academy of Management Review* and the *British Journal of Management* in which scholars have argued that despite being central to our understanding of competitive advantage we were still unclear about what value *means* (Barney, 2001; Bowman and Ambrosini, 2000, 2001; Makadok, 2001a; Makadok and Coff, 2002; Priem, 2001; Priem and Butler, 2001a, b). In this paper we propose that value means different things to different stakeholders of the firm, specifically its customers, suppliers, employees and investors. We begin by clarifying the terms we use, making a distinction in particular between *use value* and *exchange value*, and between *value creation* and *value capture*. We then consider the firm itself in the role of customer and supplier, and distinguish activities inside the firm that reflect the firm's motivations when these separate roles are performed. Five types of activity can be identified. Two types are involved with the process of value creation: one is concerned with the capture of *exchange* value from customers, and another with the capture of *use* value from suppliers. Two other activity types are directed at the maintenance of the firm, and the maintenance of its capital stock. The final category is activity that destroys value. We conclude with some suggestions as to how these different activities can be identified, and we explain some of the difficulties inherent to recognising sources of sustainable competitive advantage, i.e. resource-based view 'resources', within these categories.

Use Value and Exchange Value

Before we embark on an explanation of our approach, we need to be clear about our use of value terminology in the following

argument. This is necessary as it is "rather commonplace in the existing resource-based view of the firm (RBV) literature for authors to use the term value or even value creation to mean what Bowman and Ambrosini call 'captured value' or 'value capture'" (Makadok and Coff, 2002: 11).

Use values (UV) are properties of products and services that provide utility. Inputs into the productive process take the form of *inert* use values e.g. components such as flour or steel, and *human* inputs. Inert inputs are use value in the form of products, and human inputs are use values in the form of performed services or activities. The peculiarity of human inputs is their ability to create *new* use values.

Exchange value (EV) is a monetary amount exchanged between the firm and its customers or suppliers when use values are traded. Use values are converted into exchange value when they are sold in factor markets or product markets. Firms are established to generate a profit flow for investors. Profit is exchange value retained within the firm, which may be re-invested or passed on to these equity owners.

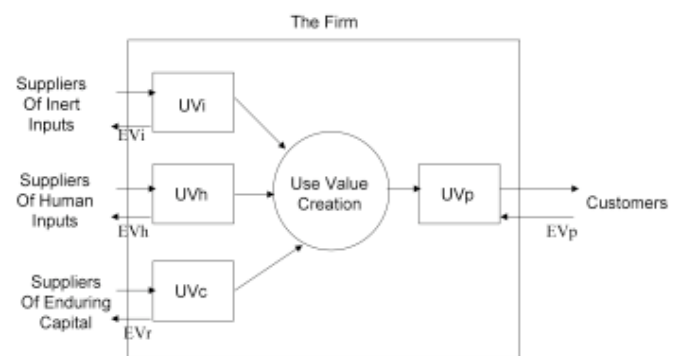


FIGURE 1: Use Values and Exchange Values in the Value Creation Process

Legend:

UVi: use values of inert inputs
 UVh: use values supplied by human inputs
 UVc: use values of enduring capital
 UVp: new use values created
 EVi: exchange value received by suppliers of inert inputs
 EVr: exchange value returned to investors
 EVh: exchange value received by suppliers of human inputs
 EVP: exchange value paid by customers



The firm contains the processes of *use value* creation (see figure 1). Within the firm inputted *inert* use values like components, ingredients, data etc (UV_i in Figure 1) are transformed into products and services by employees (UV_p in figure 1). Inert inputs contribute their fixed and usually known use values to the productive process. These inputs *are* use values; they have useful, primarily physical properties, but this stock of use values cannot self-expand. They cannot of their own volition create more value than they embody. These inputs cannot, therefore be the source of any additional use value, and subsequently of any additional exchange value accruing to the firm unless they have been transformed in some way (Bowman and Ambrosini, 2000). In summary then, inert inputs *have* use value, but they cannot *create* use value.

Human inputs are different (UV_h in figure 1). They are capable of creating new use values that generate a revenue stream. Employees working with inert inputs create new value (Lado and Wilson, 1994; Wright, McMahan and McWilliams, 1994).

UV_h also includes the enhanced productive capabilities of the employed labour that results from experience and learning (Argote, 1993; Nonaka and Takeuchi, 1995; Senge, 1990). Just as the use value of labour in action is its ability to create new use values, where human capital is created this is manifested in the *enhanced* use value creating capability of the employed labour. This category would include informal networks, and valuable aspects of organisational culture that are embodied and embedded in the workforce (Barney 1986; Bartlett and Ghoshal, 1993; Nahapiet and Ghoshal, 1998). Here we need to recognise that human capital may take the form of teams (Grant, 2000), and 'communities of practice' (Lave and Wenger, 1991) and that individuals and teams are likely to be more productive when they are combined with other complementary organisational assets. In all but the simplest firms there will be synergies between employees combined in networks, teams, functions etc. In other words this definition of human input encompasses the notion of social capital (Nahapiet and Ghoshal, 1998; Pennings, Lee and Wittelostuijn, 1998).

The fixed assets of the firm like buildings and machinery are enduring inert use values (UV_c in figure 1). Once a firm is a going concern additional forms of capital can be created. This would include certain aspects of relational capital like brand awareness, reputation, trust (Amit and Shoemaker, 1993; Brooking, 1997, Edvinsson and Malone, 1997, Sveiby, 1997). It would also comprise internally created inert resources such special equipment or software. These can be regarded as *intermediate* use values created inside the firm to improve the efficiency and /or effectiveness of the use value creation processes. These may well be RBV resources, that is resources that are simultaneously valuable, rare, non imitable and non-substitutable and that hence can be sources of sustainable competitive advantage (Barney, 1991, 1995; Wernerfelt, 1984).

The essential difference between intermediate use values (brands, systems) and the development of human capital described are that the former exist separate from the individuals that may work with them, whereas the latter developments in human capital are embodied in individuals and groups. These may take the form of tacit knowledge and tacit routines, knowledge assets that are attached to the knower (Nelson and Winter, 1982; Nonaka, 1991; Polanyi 1962). Clearly if tacit routines were to be made explicit, codified in some way, then this knowledge would exist in a form separate from the individuals or groups. In which case it could become an intermediate use value, able to be deployed into other parts of the firm. In terms of the RBV organisational and human capital are use values that have been 'built rather than bought' (Teece, Pisano and Shuen, 1997).

To simplify the exposition we label all these separable categories of enduring capital UV_c in Figure 1. However, distinctions between these categories of use value capital are important when we consider issues of competitor imitation of the firm's assets. Generally within RBV argumentation bought assets like machinery, land, buildings are rarely RBV resources as near identical assets can often be procured by competitors (Conner 1994; Quinn, 1992). On the other hand, internally created or 'built' assets like special systems, adapted machinery, brands etc. may well fulfil the criteria for a resource, they are more likely to pass the VRIN tests, be valuable, rare, imperfectly imitable and imperfectly substitutable (Barney, 1991, 1995; Wernerfelt, 1984).

We must however stress that we are making a clear distinction between *inert* inputs and *human* inputs. If managers are able to derive new ways of deploying inert inputs to create new forms of value, then it must be highlighted that this process of value creation cannot be attributed to the *inert* resources re-deployed. These use values may have greater utility in new deployments, but the act of value creation, the insight to spot the new deployment was a product of human inputs. The use values of the inert inputs are fixed, any change in their utility can only be effected by *people*. This argument is not novel in the sense that it emphasises that people is that matters most in organisations (Pfeffer, 1995; Pfeffer and Veiga, 1999). It is also in line with Penrose (1959) where she argues that "it is never the resources themselves that are the inputs to the production process, only the services that the resources can render" (1959:25). People determine how a particular input will perform a 'service' in a productive process not the inert input itself (Kogut and Zander, 1992).

We now address the question: what does value *mean* to different stakeholders in the firm?

What does 'Value' mean to Stakeholders?

There are four primary stakeholders in the firm: its customers, the suppliers of inert inputs, the suppliers of human inputs, and the owners of the firm (Clarkson, 1995; Freeman, 1984) and in



what follows we argue that *value* has a different meaning for each of these stakeholder groups.

While the terms we employ can be associated with the transactions costs and agency literature we would like to comment that when forming our propositions we have employed the term *optimise* to reflect the fact that it is likely that stakeholders will seek to optimise relationships over time, rather than attempt to *maximise* or 'gouge' other parties for short-term gains. So although we believe the underlying stakeholder motivations are properly reflected in the following propositions, we would not assume entirely opportunistic behaviour on their behalf, particularly if there is a perceived need to maintain relationships over time.

What Does 'Value' Mean to Customers?

To the customer value can be argued to mean consumer surplus, or colloquially 'value for money'. This is a subjective judgement of the use value of the supplied product or service, and the price charged for it, its exchange value. In making these judgements customers factor in their knowledge and evaluations of competing product offers. If we assume the customer is interested in optimising 'value for money', then we could state that the customer would strive to optimise the ratio of use value acquired for exchange value paid (price):

Proposition 1 Customers aim to optimise the ratio of Use Value acquired for the Exchange Value Paid

We have labelled these EVp and UVp as they refer to produced outputs of the value creation process. Use value, being a subjective assessment, cannot be compared directly with any exchange value amount. Consequently the relationship between UVp and EVp cannot be expressed as an algebraic fraction (UVp/EVp) as these two quanta are not commensurable. One can however assume that consumers would aim to optimise the *amount* of use value acquired for a given sum of exchange value, where *amount* could refer to a qualitative or a quantitative improvement. UVp then can be understood as reservation price. If the customers choose to attach a monetary estimate to the perceived use value of the product (\$UVp) then one can suggest that customers are interested in optimising the difference between \$UVp and \$EVp. This consumer surplus could be measured as: \$UVp - \$EVp.

In the instance of a monopoly supplier, who is cognisant of the customers' valuation, and who can price discriminate, the price the customer actually pays will approach the price the customer is prepared to pay. There would then be no discernable difference between the customer's monetary expression of perceived use value (\$UVp) and the price paid (\$EVp) and hence no consumer surplus would result. In all other circumstances, the price paid will be *less* than the total monetary value perceived by the customer.

What Does 'Value' Mean to Suppliers?

Suppliers of inert inputs to the firm have a different view of value. They are not *acquiring* use values, rather they are providing them in return for exchange value. So value to the supplier is the inverse of value to the customer:

Proposition 2 Suppliers aim to optimise the Exchange Value received for the Use Value supplied

In the case of a supplier of inert inputs the use value supplied is *fixed*. Moreover, as the point of creating use value is solely as a means of generating exchange value, the use value of the product to the *supplier* is probably close to zero (bakers have no personal use for the hundreds of loaves they bake). Thus it can be argued that supplier exchange value is increased where the price received for a fixed amount of use value is optimised (optimise $EV_i:UV_i$).

Suppliers of human inputs, whether as employees or as service providers, have a different conception of value to that of the supplier of inert inputs to the firm. The use value they supply is their capacity to work. This capacity is the only source of *new* use value, because as we argued earlier the contribution of inert inputs is *fixed* at the point of sale. The use value of labour in action combines with inert inputs (UV_i) and capital assets (UV_c) to create new use values (UV_p) (see Figure 1).

We might expect the suppliers of human inputs to contract with the firm in the same way as suppliers of inert inputs, seeking to optimise the exchange value (EV_h) they can capture for a given amount of use value, or work, supplied. This assumption of a calculative involvement with the firm (Etzioni, 1988) may only have limited validity. Great efforts are often made by both employees and firms (which presents itself to employees in the form of hired managers, co-workers, etc.) to shift the nature of the relationship away from this purely calculative involvement. Individual employees may prefer to view their working lives as something more than a simple exchange relationship, and firms may wish to have employees engage more fully with the firm, where they commit not just their hands, but their brains and their hearts too. This suggests that the firm necessarily has a much more complex relationship with these suppliers than it would have with suppliers of inert inputs.

What Does 'Value' Mean to Investors?

The owners of the firm again have a different notion of what value means. Investors supply capital, a monetary sum. This sum is invested on the assumption that more money will flow to the investor, that there will be a 'return' on this investment. The investor therefore provides exchange value, to capture *more* exchange value. The investor seeks to optimise return on the capital sum advanced (optimising $EV_r:EV_i$).

Proposition 3 Investors aim to optimise the exchange value returned for the exchange value invested

There are two primary ways of 'investing' in firm. One is to provide equity or risk capital, for a legal claim on the surpluses



generated by the firm, which will vary as surpluses vary. The other is to provide debt capital for a *fixed* claim on these surpluses. In either case it is essential here to emphasise that the investor provides no use values as such to the firm, and acquires no use values from the firm. Investors supply a homogenous input: money. The use value of money is its role as a store of value, and its function as a medium of exchange. Money *qua* money cannot function as *capital*. The only way money can function as capital is if it is converted from its money form into specific, definite, concrete use values. Where investors supply cash for specific projects this conversion process is transparent. Where investors acquire stocks or shares there is no addition to the value creation process. What is being traded here is partial ownership of a value creating system that is the firm. Investors exchange cash for property rights, which then allow investors to capture a proportion of the exchange value the firm captures from customers.

In summary we have argued that value means different things to different stakeholders. We have also established that, not only is there an obvious difference between suppliers and customers as to their motivations when contracting with the firm, but also that within the category of suppliers there are three distinct stakeholder types who have particular motivations and relationships with the firm. Suppliers of inert use values have an 'arms length', primarily calculative involvement with the firm, whereas suppliers of human resources have a qualitatively more intense involvement, and investors have no use value involvement at all.

The question that needs now answering is: what does value mean to the firm?

What Does 'Value' Mean to the Firm?

The firm as an economic actor and a legal entity is both a customer for use values and a supplier of use values. Thus we would expect the behaviour of the firm to reflect the motivations set out above for these two stakeholder groups. So in acting as a customer, the firm would seek to optimise the use value of inputs acquired, for the minimum exchange value given up to suppliers. As a customer the firm acts to optimise consumer surplus.

As a supplier, we would expect the firm to aim to optimise the exchange value captured from customers for a given use value supplied. Firms must therefore differentiate their product offerings in ways, which are valued by the customer. Firms must deliver more consumer surplus than competitors. This can be achieved by either offering equivalent perceived use value at a lower price, superior use value at equivalent prices to competitors, or indeed a combination of these. The availability of close substitutes will reduce prices, and thereby increase consumer surplus, but this will reduce firm's ability to capture exchange value.

The firm performs the roles of supplier and customer for an ultimate purpose: to return an expanding stream of exchange

value to investors. In other words the firm is fundamentally a system for the continual expansion of exchange value provided by investors. Therefore we are privileging the interests of the investor over those of other stakeholders. While probably debatable for some this is based on the assumption, that within a capitalist economy production is undertaken in the pursuit of profit. Firms that don't 'make' money go 'out of business'.

Proposition 4 Firms operate primarily in the interests of the investor, so value for the firm means retained and/or returnable exchange value

The expected motivations therefore with respect to the roles of customer and supplier should be in line with the aims of the investor.

We would expect that if the firm behaved as a customer and a supplier that the optimum exchange value would be captured from customers, the minimum exchange value passed back to suppliers, and thus the optimum profit returnable to the owners of the firm. Due to agency problems resulting from the divorce of ownership from control, information asymmetries, bounded rationality and so on firm behaviour towards customers and suppliers may not however result in the *maximising* of profits.

Building on the argument, and viewing the firm as a customer on the one hand and a supplier on the other, we can identify activities inside the firm that are involved in optimising exchange value capture from customers, and activities directed at optimising use value capture from suppliers. These activities combine to form the 'value creating' activities of the firm. 'Value' in this case being value from an investor perspective i.e. profit flow, the exchange value captured by the firm.

In the next section, we explore these different types of activities involved in the process of value creation.

Value Creating Activities

Having explored the issue of what value means to different stakeholders, we can now turn our attention to the question of how value is created. We have already established that inert inputs contribute a fixed and usually known quantity of use value to the productive process. To restate the argument, inert inputs have use value, they cannot self-expand the use value they possess or embody, and new use values can only be created by the human inputs into the process (UVh). Our argument also indicates that, in line with Priem and Butler (2001) and Barney (2001) exchange value is determined by exogenous factors. It is a function of perceived use value acquired and supplied. Moreover it shows that exchange value is only realized when a sale takes place. Use value is perceived by the customer at a point in time, it is assessed at the point of decision to purchase. The product at the time of sale has both an *exchange value* and a perceived *use value*. So, to reiterate there is no firm value creation i.e. profits, until a sale takes place.



There are two categories of activity that can have a positive impact on the flow of profits, and three that have a negative impact in the short term. We first explore activities that reflect the firm first as a *supplier* of new use values, and our second type of activities are associated with the firm as a *customer* of use values. Both these activities can be identified in March's (1991) terminology as knowledge exploitation.

Activities that Capture Exchange Value

These activities are involved in the production and *sale* of products and services, and would include the primary activities of a value chain (Porter, 1985) i.e. inbound logistics, operations, outbound logistics, sales and service. These activities combine to make use values or provide services that produce a revenue stream to the firm. This activity reflects the firm's motivation as a supplier and it aims to optimise the sum of exchange value captured for a given amount of use values supplied (optimising $EVp:UVp$). Hence,

Proposition 5 Profit seeking firms will optimise the sum of exchange value captured for a given amount of use value supplied

These activities can only be identified in retrospect as unless the activity leads to a sale i.e. it ultimately results in the capture of exchange value from customers, the activity cannot be judged to be productive.

Activities that Capture Use Value

These activities are directed at the capture of *use value* from input suppliers i.e. the aim of this activity is to optimise the flow of use values into the firm for a given amount of exchange value given up. So these activities reflect the firm's motives as a *customer*.

These value capture activities would include procurement, supervision (to capture human use value inputs), as well as activities designed to increase production efficiencies, like process engineering. So these activities aim to optimise the inert use values and the human inputs procured: optimise $UVi:EVi$ and $UVh:EVh$. Hence,

Proposition 6 Profit seeking firms will optimise the amount of use value captured for a given sum of exchange value

The effect of these activities is therefore to moderate the *cost flows* incurred by all other activities. For instance artful procurement can result in a cost advantage where the firm pays less than rivals for equivalent use value inputs, the activity of 'resource picking' (Makadok, 2001b). One should note that the acquired inert inputs are only RBV resources because of the artful way they have been procured. A resource created by 'picking' delivers a greater use value:exchange value ratio than a rival firm's inputs. Also excessive zeal in performing value capture activities can be ultimately counter-productive. For example, if planned maintenance schedules are ignored, or if safety is compromised.

We have explained so far that the firm therefore contains the processes of use value creation. The objective of these processes is exchange value capture which provides an expanding stream profits to the shareholders. The flow of profits is the difference between the flow of revenues (EVp) and the flow of costs (EVi , EVh). Whether one treats the returns to the owners (EVr) as a surplus or as an input cost is the crux of a debate between neo-classical economists and those of a more classical persuasion. As this point does not affect the thrust of our argument we shall note it but not engage with it here.

We now turn our attention to activities that create new capital. These activities can be described as exploratory activities (March 1991), they are about creating and building the stock of capital.

Capital Stock Creating Activities

These activities have to be funded out of current streams of exchange value captured from customers, and would include market research, R & D, and training. They help to *preserve* the capital stock of the firm by, for example, ensuring that the firm adapts to changes in the environment, and they hopefully extend the capital stock through the creation of new resources.

These activities are intended to generate *future* streams of firm value. The dilemma is that this activity incurs costs *today* for unknowable *future* benefits. Hence in the short term these activities reduce the exchange value retained by the firm. However they help to preserve and *expand* the stock of human and organisational capital into the future.

These activities can produce intermediate use values i.e. use value created by the firm for its own usage and not for exchange, like systems, new product concepts etc. that can turn into built RBV resources if they are unique, valuable, non-imitable and non-substitutable. They preserve the capital stock by ensuring that the activities are updated and refreshed in line with changes in the firm's environment, and they can expand the firm's capital with the introduction of new value creating activities. These may be discrete and deliberately managed support activities like R&D, technology development, and training (Porter, 1985) or they could be co-produced with ongoing value creating activities. Co-produced activities would include learning from reflection or from interactions with clients (Argote 1999; Argyris, 1970; 1990). Some capital creation activities may be undertaken without official sanction from management as individuals experiment with new ideas and approaches to their tasks. *Dynamic capabilities* directed at the creation of future resources are capital stock creation activities (Eisenhardt and Martin, 2000; Makadok, 2001b; Teece et al, 1997). However, these activities are typically vulnerable to short-term pressures to trim costs as the value created by them can only be assessed *ex post*. Here the proportion of revenues used to fund these essentially speculative investments would be returned to investors in the form of dividends. Hence,



Proposition 7 Expenditure on capital stock creating activities is vulnerable to short-term pressures to cut costs

Clearly, given that the future behaviour of the market is unknown, persisting with these cost creating activities is to some extent an act of faith. Managers that choose to devote expenditure to these activities do so on the assumption that they will generate future profits, and that these profit streams will either add to the current volume of profits, or replace them. Whether these costs can be justified to investors is an empirical question. Some may prefer to have the cash to invest elsewhere, rather than assume that this management team can organise the creation of future profitable schemes within the constraints of this particular firm.

Firm Maintenance Activities

These activities are those necessary for the maintenance of the firm in a particular social context, including infrastructure activities (Porter, 1985) like finance, company secretariat, health and safety, legal etc. These activities are necessary to conduct business, but they do not contribute to present or future profit streams. Efforts will be made to perform these necessary activities at lowest cost. There are related expenditures, which are not activities, but they have a similar impact. These expenditures include tax, social welfare payments, training levies etc. Some stakeholders' models of the firm include a catch-all 'society' stakeholder category (Freeman, 1984; Clarkson, 1995). These expenses are necessary and it could be argued that maintenance activities, and maintenance expenses are a response to societal pressures, but profit seeking firms will act to reduce the impact of these expenses. Hence,

Proposition 8 Profit seeking firms will seek to minimise expenditure on maintenance activities

Value Destroying Activity

There are in all firms activities that *destroy* current value. They do not contribute to the capture of exchange value or the capture of use values. These activities also do not have any link to future profitability nor are they necessary maintenance activities. These inefficiencies are likely to exist because of poor management. They do not add to revenues, nor do they help reduce costs, therefore the expenses they incur actually destroy shareholder value. These are liabilities in the true sense of the word. Hence,

Proposition 9 Profit seeking firms will seek to eliminate value destroying activities

We need to point out that although value-destroying activity is a theoretically credible construct, it is unlikely to be present in an obvious or discrete form. If it were we would expect that these costs would be identified and steps would be taken to

eliminate them. Value-creating activities are likely to contain some unproductive elements intertwined with their valuable elements. These elements would not necessarily present themselves in straightforward ways, and it may be difficult to eliminate the unproductive elements without having a detrimental impact on the productive aspects of the activity.

In Table 1 we have set out a simplified numerical example to illustrate the approach.

Firm Status	1 Reservation Price \$UVp	2 Revenues EVp	3 Consumer Surplus \$UV - EVp (1-2)	4 Cost of Inert Inputs EVi	5 Value Created by Human Input EVp - Evi (2-4)	6 Value Captured by Human Input EVh	7 Value Captured by Investors EVr (5-6)
Average Firm	100	80	20	20	60	30	30
Firm well endowed with resources for UV Capture	100	80	20	10	70	20	50
Firm well endowed with resources for EV Capture	120	90	30	20	70	30	40
Firm well endowed with unproductive Activities	100	80	20	30	50	40	10
Firm well endowed with EV resources but unproductive	120	90	30	30	60	40	20

TABLE 1:
Examples of Resource Endowed Firms

Reading from the left in column 1 we have 'Total \$UV', the amount the firm's customer would be prepared to pay for the product, its 'reservation price'. In column 2 we have the amount actually paid, which is the exchange value captured by the firm. Subtracting column 2 from column 1 gives us the consumer surplus captured by the customer (column 3). Column 4 is the sum paid to suppliers of inert inputs into the production process. As we have argued that all value is created by human inputs, by subtracting column 4 from column 2 we can see the exchange value created by organisational members, column 5. Then by subtracting the wage costs of column 6 we can arrive at the total exchange value captured by the firm. This sum could be paid out to investors in the form of fixed interest on debt capital, or dividends on equity capital or some or all of it might be retained to fund capital *creating* activities. In the first row of Table 1 we depict the situation of the 'average' firm in the industry, which retains a surplus of \$30. In the next row we assume a firm that is endowed with *use value* capture resources (i.e. the firm excels in its role as a customer). The advantage of these resources is to lower the relative procurement costs of bought in human and inert inputs. Here the firm's employees create more value than the average firm (\$70) but they capture less value in the form of wages (\$20). These resources may consist of skilled procurement activities, more efficient processes, or lower maintenance costs.

In the third row we have the case of the firm endowed with *exchange value* capture resources (i.e. the firm excels in its role as a supplier). Here, due to product excellence or skilled



negotiation skills the firm is able to generate a greater perception of the use value of the product and can capture more value from customers than the average firm (\$90 rather than \$80). So the value captured from customers that has been created inside the firm increases to \$70. Moreover because inert and human input costs are the same as in the average firm i.e. these skilled employees are unable to bargain up their share of the value they create, the firm retains more exchange value than the average firm ($\$40 > \30).

In the next row we have the case where the firm incurs significant costs due to poor control of input costs. The firm uses too many inputs for the same output: it is unproductive and relatively inefficient. Hence it captures less exchange value than the average firm.

In the last row is the case of a firm endowed with exchange value-capturing resources, but it also suffers from an excess of unproductive activities, the result being below average value being retained by the firm ($\$20 < \30).

In these examples we have taken value creation to mean, as far as the firm is concerned, exchange value captured by the firm. As previously mentioned this reflects the argument that economic activity is primarily instigated and motivated by the pursuit of profits. However, the rows could be reworked to reflect a stakeholder view where value created would be the column 1 version i.e. exchange value + consumer surplus.

Discussion

Identifying RBV resources

The argument we have developed above has some implications for the resource-based view, particularly in relation to what 'valuable' means in the 'VRIN' criteria (Barney, 2001, Priem and Butler, 2001a, b) and in terms of identifying these valuable resources. There are differing positions within the RBV with regard to the extent to which resources can be understood. Resources that are socially complex and causally ambiguous can be argued to be difficult to understand (Reed and DeFillipi, 1990; Rouse and Daellenbach, 1999). It is however possible for resources to be *internally* known about, and for them to be deliberately managed and nurtured while still being causally ambiguous from a rival firm's perspective (Mosakowski, 1997; Wilcox King and Zeithaml, 2001). What is certain is that some resources may emerge through un-managed processes; they are the products more of luck than managerial judgement. This should not however prevent the development of an ex-post understanding of the resource.

The more fine-grained definitions of value we have set out can help us understand what exactly we mean by valuable resources. There are however further issues that need to be addressed before we can be confident that we have an

operationalizable approach to valuing resources. In particular, we need to consider how value-creating activities can be empirically distinguished within the complexities of a firm. Barney and Arikan (2002) can be seen to give us some indications about how this can be done. Indeed, when they argue that "to the extent that a firm's attributes enable it to develop and implement strategies that have the effect of reducing a firm's net costs or increasing its net revenues compared to what would have been the case if those attributes had not been used, those attributes can be thought of as strategic resources" (Barney and Arikan, 2002:143), they suggest that resources can be identified through a process of *internal* benchmarking. Resources defined in this way are valuable in that they contribute to a stream of profits. They do this either through lowering net input costs i.e. the cost of the resource is outweighed by the cost reductions it can effect, or increasing net revenues i.e. the revenue increment the resource generates more than offsets the cost of the resource. These definitions suggest that *all* the exchange value creating and use value capturing activities we have explained would be classed as VRIN resources.

However, even so the presence of these profit-generating activities may not result in the firm showing an overall profit due to the presence of maintenance costs, capital creation costs and unproductive activities. The collective costs of these activities can overwhelm the contributions from value creating activities. As highlighted by Peteraf (1993) to be valuable a resource must not only generate rents but ex-ante limits to competition need also to be present in order to prevent costs from offsetting the rents.

Later in their chapter, Barney and Arikan (2002) consider the problems of parameterizing the RBV. They qualify their initial definition of valuable strategic resources thus: "firm attributes are intrinsically neither good nor bad, neither valuable nor non-valuable. Rather, their value depends entirely on their ability to enable firms to conceive of and implement strategies that generate superior performance. These observations suggest that resource-based explanations of superior performance cannot be developed independently of understanding the market and competitive context within which a firm operates" (2002:144).

It is clear here that 'superior' performance does not mean an improvement on the *firm's* past performance (as indicated by their earlier definition), but superior to *competing* firms. We take up the challenge of operationalizing the RBV by drawing on both the internal and external benchmarking processes indicated by Barney and Arikan (2002).

Benchmarking Activities

To summarise, valuable resources are valuable to the *firm*, not to the resource owner or supplier. From proposition 4 we argue that firm value is equivalent to value from the investor's perspective. Thus valuable resources are valuable if they contribute to a profit stream, which the investor has property



rights over i.e. where the revenues from the activity exceed the costs of the activity. Where the supplier of inputs to the productive process is able to fully appropriate the revenues the activity generates, revenues are matched by the costs of the activity, and no profits accrue to the firm.

On this basis value creating and capturing activities can be benchmarked internally i.e. the most efficient production unit, the most effective sales team. They can also be benchmarked externally against activities in comparable, usually competing, firms. This benchmarking may reveal that some of these activities may be candidates for RBV resources, if they are involved in helping the firm achieve product differentiation or lower unit costs and if they are difficult to replicate (Barney, 1991; Castanias and Helfat, 1991).

Benchmarking may also reveal activities that are necessary for the production of use values, but they are not special or particular to this firm. These activities may be performed commonly across a set of competing firms, but they may be special to the *industry*, where the industry is the collective of competing firms. These could be considered to be industry resources, and if firms within this industry gain a profit premium compared to other firms in other industries then it would be attributable to these industry resources. These resources could be regarded as barriers to entry to the industry. So an industry resource would be an activity that generates a per unit profit at an industry average rate. Where a particular firm's activities deliver a profit stream above this average rate then we could regard these activities as RBV resources.

There is a third category of activity, those that are nevertheless necessary for the production and delivery of use values, but these are *generic* i.e. they are not special to the firm *or* the industry. For example, the transport of finished goods to the customer might be such a generic activity. Generic activities may therefore be prime candidates for outsourcing.

It would therefore seem that benchmarking against competitors would reveal that some activities are better than those in competing firms. But are they RBV resources? Though these activities are relatively excellent, their ability to positively impact on profit flows may be moderated by the presence of relatively inferior, say, sales activity. Can a firm only possess resources if it earns super-normal profits? Or might there be rent-generating resources that are present in firms producing average or indeed below average profits? Our view would be that resources may exist in firms earning average or below industry average profits if their profit impact is overwhelmed by the costs of maintenance and unproductive activities.

To empirically identify value creating resources it is necessary to identify the costs of the activity and compare these to the incremental revenues the activity generates. The costs of the activity are probably fairly easy to identify, but it is probably very difficult to allocate a portion of a revenue stream to a particular activity. However, it may be more feasible to

identify value capture resources as it is probably more obvious the effect of removing the activity would have on cost flows.

If we return to Barney and Arikan's (2002) first quote above this may give us a suggestion about how to empirically identify resources. If we can identify the impact on profits if the activity was *subtracted*, withdrawn from the production process, we can identify its contribution. For example, in the case of a sales person it is fairly straightforward to identify their contribution (volume of sales generated, less the costs of putting the sales person in the field). We could then compare productivity across sales people within the firm. This may be perceived to be 'fair' as long as like was being compared with like i.e. all sales staff had the same products to sell, to similar markets etc.

Comparing sales effectiveness across a group of competing firms is, however, more difficult because more variables are introduced. Products may differ, some firms may have stronger brands, prices may vary etc. Like for like comparisons are unlikely to be feasible.

Once we move beyond the relatively clear-cut case of evaluating sales activity things become much more complicated. How can we apportion parts of a revenue stream to activities involved in production or design? The 'subtraction' approach becomes inoperable where products can only be considered as a gestalt. For example, how much revenue should we attribute to the people who put the wheels on the cars? What is possible is to continue the *internal* benchmarking process, but only if we focus on relative *costs*, not revenues. It is possible to estimate the relative efficiency of internal activities, because this does not involve any arbitrary allocation of revenues. As argued above this would suggest that it is probably more straightforward to identify cost saving resources, rather than revenue-generating resources. Consequently, we should not be surprised if most managers concentrate their attention on cost reduction activities that have measurable results.

An alternative approach to resource identification would be to interrogate every activity in the organisation against the different types of activity we have set out. The following questions could be asked of each activity:

- 1) Does it contribute to current sales?
- 2) Does it help reduce current costs?
- 3) Does it help create future sales, or lower future costs?
- 4) Is it essential for the maintenance of the firm in this social context?

If an activity exists, but it cannot be judged to contribute to any of the four categories tested above, then we must conclude, by a process of elimination, that this is an unproductive or value destroying activity.

As explained earlier activities that are directed at the creation of *future* resources could best be regarded as *dynamic capabilities* (Eisenhardt and Martin, 2000; Teece et al, 1997).



Where firms have been able to minimise the costs of firm maintenance activity they could be considered to have created cost reducing resources. Firms that have been able to develop systems or cultures that lead to below average wastage on unproductive activity could be regarded as having dynamic capabilities that create cost saving resources.

Conclusion

In this paper after arguing that 'value' has a different meaning for different stakeholders, we have explained that if the firm operates in line with investor interests, in dealing with external stakeholders the firm itself acts as both customer and supplier, and its motivations will reflect these different roles. We have also argued that there is only one source of new value creation within the firm: human capital. Then we proposed that five separate types of activity can be discerned within a firm. The two value creating types reflect the firm's role as supplier and customer. There are activities that are undertaken with the aim of optimising the capture of *exchange* value from customers, and there are others that aim to optimise the capture *use* values from suppliers. The three other categories reduce current investor returns due to their impact on costs combining with no compensating positive impact on the *current* revenue stream. We have suggested firm attitudes to the five types of activity if we assume the firm operates in the primary interests of investors.

Finally, we explored some problems in operationalizing the RBV, particularly the problem of identifying resources. We concluded with some practical suggestions for identifying resources.

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Paper presented at the Academy of Management Meeting, Seattle, USA

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