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## **VALUE CHAIN MANAGEMENT: KEY TO PROCESS OF ADDED VALUE**

### **Introduction**

The following submission by the Centre for Value Chain Studies located at Macquarie University identifies ways and means by which value may be added to Australian outputs.

The Centre has been formed with the purpose of conducting research and consulting activities into value chain management which will identify best practice management and promulgate examples for the benefit of Australian industry. There is considerable evidence to confirm the value chain as a viable management discipline. It is the logical extension of supply chain management in that it is “customer centric”, working from customer requirements through distribution, production and R& D. It is in fact demand chain management rather than supply chain management, an approach which attempts to optimise the costs of identified customer satisfaction rather than minimise the costs of selective customer satisfaction. Successful *value chain management* can be defined as:

A coordinating process in which all of the activities (and their suppliers) involved in delivering customer value are integrated such that customer satisfaction is maximised and the objectives of the stakeholders involved (the suppliers of activities, processes, facilitating services, etc) are optimised such that no preferable solution may be found. It is the successful integration of knowledge management, technology management and relationship management.

### **What is “Value”**

Changes, both recent and ongoing, have impacted upon the Australian manufacturing sector. Notable among these are; globalisation, falling tariff barriers, the expansion of information technology, over capacity in low value product manufacturing and the erosion of pricing power. The response by some

companies has been innovative. Innovation has not been restricted to R&D, but has included activities outwith their traditional field of operations, such as; logistics, marketing, customer relations and service and maintenance issues. To do this effectively requires a clear view of what “value” is to customers.

How value is defined, and particularly how it is measured, are not easy to resolve. Indeed many suppliers in business markets share this difficulty. Anderson and Narus (1998) confirm this. However, the ability to do so and to pinpoint the value of a product or service for a customer is clearly becoming important. Anderson and Narus have offered a workable definition:

“Value in business markets is the worth in monetary terms of the technical, economic service and social benefits a customer company received in exchange for the price it pays for a market offering”.

The authors continue by discussing *customer value models*, which are: “..... data driven representations of the worth, in monetary terms, of what the supplier is doing or could do for its customers”. Customer value models are based upon assessments of the costs and benefits of offering in a specific customer application. For both costs and benefits it is possible to identify generic features.

#### **VALUE ADDED AND ADDED VALUE: MORE THAN SEMANTICS?**

Typically these terms appear interchangeable. However, if a rigorous approach is taken differentiation is necessary.

*Value added* is an accounting view of value. Until recent years value added statements were popular, they now are quite rare. Value added represented a company’s sales income during a period less bought-in materials and services. It is the wealth the company has been able to create by its corporate efforts. In a broad sense, value added measures more than operating productivity, it is also a function of good design, efficient purchasing, effective technology, good industrial relations, effective marketing and distribution. Clearly value added measures are very useful in assessing financial and operational performance. Marketing performance requires additional data, often qualitative, such as that offered by an added value approach.

*Added value* is used to indicate the benefits received by customers/end-users. The added value approach is a philosophy used by advocates of value-in-use pricing, a market or customer based approach to pricing. Value-in-use (or economic value based pricing) considers the *total cost* of purchase: this includes installation costs, maintenance, operating costs and possibly disposal costs. When these additional aspects are included into the pricing decision it is often found that their costs may be reduced at the product design stage and when comparisons are made with competitors' outputs significant differences may be found and greater economic value (added value) may be delivered. Some customer benefits are more difficult to quantify in terms of economic added value, yet have an important perceived value. Thus an alternative approach to added value pricing is built around perceptions and costs. Many benefits (and costs) are "*perceived*" by customers and difficult to translate into economic benefits, yet they are strong enough to influence purchase behaviour. Given researched perceived advantages (relative to competitors) a reliable pricing differential can be calculated.

#### **VALUE ADDED AND THE VALUE CHAIN**

Kay (1993) applied the accounting perspective of value added to strategy decisions. By considering the relationship of input to output Kay develops a similar approach to Stewart (1991) who uses the term 'economic value added' to describe the concept.

Kay describes value added performance as the difference between the market value of a firm's output and the cost of its inputs and suggests:

"It is a measure of the loss which would result to national income and to the international economy, if (the firm) were to be broken up and the resources it uses deployed in other firms. Adding value (note Kay prefers this to value added), in this sense, is the central purpose of business activity. A commercial organisation which adds no value – whose output is worth no more than the value of its inputs in alternative uses – has no long term rationale for its existence".

However, it incurs an opportunity cost because the resources typically cannot be used in an alternative process, at least not concurrently. This may have significance for scarce resources, which may have long term implications for the development of industry sectors.

Value added is calculated by Kay in a similar way to the accounting method. Inputs include; wages and salaries, capital costs, the depreciation of the capital base, and a reasonable return for investors. Value added is less than *operating profit* – the difference between the value of output and the value of material and labour inputs. **Figure 1** presents the approach graphically. The measure of value added is expressed as a percentage of input/gross output. The successful business, shown on the right, converts its inputs effectively and a surplus results, whereas the unsuccessful business' results are such that input costs exceed revenues.

Kay develops his model to explore the value added opportunities of the value chain. In **Figure 2** a hypothetical value chain is shown. It identifies, for each stage of the value chain, the input costs and the output achieved. Clearly with some additional research the nature of the required inputs can be established and the relevant competencies, etc also required for success.

For a company, or for that matter a country, with interests at one specific stage of the value chain it is useful to know the nature of the activities of organisations upstream and downstream. An investigation into value chain economics, reinforced with data concerning capabilities and capacities, can identify (and clarify) a number of issues. Not only can we identify value chain stages which might be integrated and result in synergistic effects on profitability, productivity and cash flow; we might, alternatively, identify partner organisations downstream or upstream with whom formal working relationships can be established. There is also the opportunity for investment in downstream/upstream organisations which will result in either increased profits etc, improved control of 'markets' or increase the employment of resources elsewhere within the value chain.

There is evidence that this occurs. *Ford Australia* is forming joint-venture companies with its dealers from which a number of benefits will emerge. Such partnerships will benefit from improved IT applications, lower inventories, improved margins (from the "no-haggling" pricing systems) and greatly enhanced customer data bases. The "virtual company" becomes attainable: Pacific Dunlop is approaching a situation whereby: "..... in three years the company will be manufacturing only about 30% of its products" (Kavanagh: 1999) and a quote from the CEO suggests that the company's business could no longer be described as the manufacture of consumer goods. Chadwick is quoted as saying:

“The added value and growth in the business we want for shareholders will come without growing or fixed assets or increasing the number of factories ..... Our key assets are our brands, our processes, our knowledge and our people”.

This is precisely what adopting a value chain perspective is about.

The approach is not outwith the reach of government and “quango” structures. The Irish government is organising its activities such that they identify and manage the value chain to which they belong for their food production activities. So too are the New Zealand government. The Australian Wheat Board is also active in value chain management; it has taken equity holdings in a number of downstream activities.

#### **AN INTEGRATED VALUE MODEL**

**Figure 3** illustrates an approach by which value added (a corporate perspective) might be combined with added value (a customer perspective). As **Figure 3** demonstrates the value added by a company’s activities is the result of revenue generating decisions and cost management.

Revenue generation decisions are based upon careful selection of markets. Marketing theory tells us that customer expectations differ across markets for quite similar goods. Hence the value/price response will differ between price sensitive customers to, say, service or quality sensitive customers: their value/price responses differ markedly. The decision on where to engage in a market therefore is influenced by both its size and the ability (or the competence of the firm) to meet the product specification and capacity requirements. The combination of volume and price results in revenue produced.

Optimal cost management is an emerging issue for value chain management. Traditionally cost management was internal to the firm. In recent years the growth of outsourcing (eg, Toyota) has resulted in considerable transparency with respect to cost management. The result has been for much more disclosure (open book accounting) and cost/contribution partnership agreements. This in turn has resulted in an approach to value chain management in which specialist expertise and resources are coordinated by the ‘brand owner’.

The result as described by Kavanagh (1999), is a value chain in which the brand owner manufactures very little but coordinates production and distribution and communicates with the end-user directly and with distributors through a sales force.

## CONCLUSIONS

The world is changing rapidly. Many of our manufacturing companies and commodity producers are aware of these changes and are responding (see Kavanagh), but many are not.

If government is to become involved in this process it should take a prospective view. The New Zealand government has identified these changes. It has initiated a research program which integrates science, technology and information developments in selected areas. A quotation from a 1997 document: *Science Technology, Volume 8, Number 1*, suggests some direction:

“We are entering an information age that will bring change, the likes of which no one has experienced for centuries. All that we produce, all that we earn and all that we do will be changed by this age. And this information age takes no heed of distance. That is, sheep carcasses wrapped in cheesecloth have supported New Zealand for a hundred and twenty five years. Granted we have added value to them in many ways in recent times, but we must now grasp the knowledge and skills that will carry us through the next hundred and twenty five years”.

“Rewards in a fast changing society go to those who recognise opportunities and exploit them. Bigger rewards accrue to those who can cast aside older ways of doing things and grasp new opportunities, only to discard them when better ways of doing things are discovered”.

“I want to see a thrust in research into the tools that will drive the information age. I don't see that at present. I see a gradual dawning in some people's minds but in other countries (the USA and Singapore, in particular) it's already mid-morning and they are up and running”.

## **REFERENCES**

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