

# **Measuring Service Performance in a Shared Service Support Environment**

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This conceptual paper uses insights from the responsibility accounting literature to inform the Service-Dominant logic debate on ‘what is cost?’ and ‘what is value?’ Responsibility accounting, which is grounded in a user pays philosophy, allocates the cost of supplying products and services to internal organisational units so that the performance of different operational/functional areas can be evaluated. A common criticism of responsibility accounting relates to its focus on reducing costs rather than on creating value. Too often, important aspects of value – such as creating synergies, improving customer services, and promoting process and product/service innovations – are ignored. Also overlooked is the fact that the actual costs themselves are both difficult to determine and require the use of cost allocation schemes that many organisational employees view as subjective, if not outright arbitrary.

Unlike past research that focuses on the value creation process from an external customer perspective, this paper examines the issue through a shared service provider’s lens. While many firms create responsibility centres to promote efficient and effective intra-firm service delivery, this paper exposes some of the drawbacks under such an approach. This paper challenges management accountants, and the senior managers they serve, to draw upon the network perspectives on co-creation of value inherent in Service-Dominant logic.

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## INTRODUCTION

The Service-Dominant logic literature differs from goods-dominant logic of exchange in several ways. First, it adopts a broader approach, choosing to define ‘service’ as a process that benefits other entities, rather than the traditional focus on units of output (Lusch, Vargo and Wessels, 2008; Vargo and Lusch 2006, 2008). Second, it focuses on ‘dynamic resources’ such as knowledge and skills (called ‘operant resources’ by Vargo and Lusch 2006; Lusch et al., 2008). Third, it recognises that value is co-created through a collaborative process between providers and customers (Vargo and Lusch, 2006, 2008; Lusch et al., 2008). Compared to goods-dominant logic’s focus on manufactured output, Service-Dominant logic takes a much wider approach. It recognises and ascribes value to an organisation’s formation of partnerships, relationships, and networks (both internal and external to the firm) that help create and maintain intangible resources (e.g., organisational brands) and co-creating value opportunities. Therefore, under Service-Dominant logic the concept of what is ‘value’ is arguably more comprehensive and more complex.

The Service-Dominant (S-D) logic literature to date has focused on external customers. Concepts of ‘cost’ and ‘value’ relating to internal customers have been understudied. This is surprising for many organisations have adopted decentralised organisational structures that are organised around strategic business units (SBUs) and various internal shared support services (e.g., IT, HR, payroll, accounts payable, accounts receivable, etc). Since a major reason for creating decentralised organisational structures is to reflect better the performance of specific organisational operations (i.e., SBUs and support service departments), the measurement of internal service providers’ revenues and costs becomes an important management issue.

In general, the measurement of costs is a substantially easier task than the measurement of revenues (Merchant and Van der Stede, 2007). Many firms choose to measure the service provider’s shared services costs and then allocate them on a *user pays* basis. Sometimes this basis is measured as the percentage of the service provider’s costs that an internal customer causes and on other occasions it is calculated on the internal customer’s ability to shoulder the costs (e.g., the relative profitability of the various internal customers).

Measuring the value creation (the direct benefits) produced by shared service providers is a difficult issue. The problem is further compounded when the benefits are intangible in nature. While the issue of measuring shared service benefits are a major challenge for management accountants, as Vargo and Lusch (2006, p.51) note, the problem is also experienced by financial accountants:

*...financial accounting systems, by their very nature, are transactional, and financial accounting standards do not enable a firm to capitalize most marketing investments. Thus, the financial feedback a firm receives from the marketplace is a fuzzy signal and should be treated as lacking in substantive validity.*

This paper examines issues involved in the recognition of value and assignment of costs to internally transacting business units. It explores management accountants' propensity to focus on the quantification of costs at the expense of value, typically because the former is easier to quantify than the latter. The consequences of this fixation are also discussed, including missed opportunities for measuring and promoting value creation (e.g., potential synergies, effective delivery, and innovative solutions), as well as the detrimental impact on employee motivation (e.g., lack of motivation from feeling disempowered) and the dysfunctional behaviour this may cause (e.g., myopia, cost cutting, and reducing the value of the service).

## **WHAT IS VALUE?**

The issue of what is value and how it can best be co-created between internal organisational providers and customers has received little attention in either the S-D logic or wider literature. The disciplines of both marketing and accounting have traditionally adopted quite narrow approaches to the study of value and its co-creation. While marketing has been fixated on tangible products (Lusch et al., 2006), accounting has been fixated on the allocation of tangible costs to the internal department consuming the services (Merchant and Van der Stede, 2007).

It is only fairly recently that accountants tried to take what can be broadly described as a value-based management (VBM) approach. VBM differs from more traditional accounting approaches in two main ways. First, it focuses on value creation and not simply cost reduction (Ittner and Larcker, 2001). Second, it adopts a much more strategic perspective, emphasising the identification, measurement, and management of key strategic drivers of customer value and innovation (Ittner and Larcker, 2001).

Value based management invariably considers value from a financial perspective (Ittner and Larcker, 2001). The focus is on maximising value for shareholders. For example, economic value added (EVA®), a commonly employed VBM technique, is calculated as accounting profit minus a charge for the assets employed (see [www.sternstewart.com](http://www.sternstewart.com)). EVA® proponents implicitly assume that the results of the strategies implemented by SBU managers and their intangible benefits will ultimately be recognised in the future by increases in shareholder value (Otley, 1999). While the EVA® rhetoric is around creating value for the shareholder, the reality is that EVA® remains focused on what can be counted. As EVA® is calculated based on past not future transactions, value creation is not recognised until a transaction occurs, and even if managers make a good research and development investment they still have to recognise some of the expense and are not allowed to report the creation of value (Merchant, 2006). As a

consequence, management accountants tend to ignore the intangible aspects of value, preferring to focus on the tangible benefits and what they can count (e.g. costs, profits, return on investment).

Porter considers the issues of trying to measure value, rather than focusing purely on cost. Using healthcare as an example, Porter (2010) points out that stakeholders often face conflicting goals, particularly when considering cost and value measurement. Porter argues that a wider and more holistic perspective should be adopted based on service value. That is the rigorous and disciplined measurement of the customer-centric service outcomes, rather than the financial results or non-financial inputs of the service delivery process. Furthermore, Porter suggests that if outcomes are measured in this way, then a value or efficiency ratio can be developed, whereby outcomes (the numerator) are considered relative to the cost of providing the service (the denominator). Porter's efficiency ratio, which combines S-D logic's understandings of customer value with the accountant's focus on cost measurement, provides a more comprehensive measurement of the performance of shared support services within a single SBU than is offered by traditional measurement approaches.

While there are different ways to value services provided internally within an organisation, typically the focus ends up being on some type of estimation of the 'cost' of the service.

## **ALLOCATING COSTS TO RESPONSIBILITY CENTRES**

A key issue for accountants is how to 'cost' and 'value' the internal services between shared support units (e.g., IT, accounting) and their internal customers (e.g., the SBUs). The reason accountants choose to allocate costs is so they can use financial, results-based control systems (Merchant and Van der Stede, 2007). Under results-based control systems, an organisation is separated into units called responsibility centres. Performance targets are then set for each responsibility centre, and each manager is responsible for his/her centre's performance. Often, rewards are linked to the level of performance achieved (Merchant and Van der Stede, 2007).

Responsibility accounting adopts a user pays approach, whereby the user (i.e., the SBU) pays for the services it consumes. Depending upon the types of responsibility centres used, the support services and SBUs can be cost centres (i.e., which are strictly evaluated on their costs), profit centres (i.e., which are evaluated on actual profits compared to budgeted profits), or investment centres (i.e., which are evaluated on profits relative to the assets employed) (Anthony and Govindarajan, 2007).

Regardless of the type of responsibility centre adopted, an organisation must devise a system for allocating costs (often called transfer pricing). There are, however, inherent problems with allocating costs. First, while the literature frequently encourages the use of a market price as the cost or transfer price between responsibility centres, it is often the case that the services

provided are unique and no reliable market price exists. As a second problem, the computation of transfer prices can become an all-consuming activity, with too little attention being paid to understanding the value of the service. Due to the often intangible, non-monetary benefits a service provides, it is necessary that more, not less, attention be given to identifying and measuring the value created by the service.

The effect of allocating costs to evaluate the performance of internal shared support units and the SBUs (the internal customer) creates what is called *pseudo* cost, profit or investment responsibility centres. Otley (1987) recognises that the impact of these cost allocations is to make these *pseudo* units appear as if they are independent cost, profit or investment centres, but the resulting financial picture of these units becomes far removed from being a fair representation of the SBUs' performance. Instead the financial performance of these pseudo centres becomes '... an accounting fiction that includes large sums allocated or transferred on an essentially arbitrary basis (Thomas, 1971 as cited in Otley, 1987, p.74). Consequently, the greater the amount of these arbitrary cost allocations or other transfers between the internal customers, the more unreliable the accounting performance measures become (Bierman, 1959). The result is that despite management accountants paying considerable attention to how to more accurately determine costs, the result is that these internal cost allocations are *always arbitrary*.

The arbitrary nature of costs impacts on accounting information as the cost allocations result in accounting numbers that are then used in the budgeting process for evaluation and reward purposes. There have been numerous criticisms of the budgeting process including that they are time consuming, constrain flexibility, focus on operations rather than strategy initiatives and other innovations, add little value, focus on silos and ignore interdependencies, encourage gaming and concentrate on cost reduction rather than value generation (Neely et al., 2001). Given the growing criticisms of accounting information, particularly budgets, one innovative idea is to abolish budgets and instead focus on critical performance indicators.

## **INNOVATIONS IN VALUE CREATION: BEYOND BUDGETING AND ABOLISHING THE BUDGET**

One recent innovation in accounting has been to abolish budgets. The Beyond Budgeting Roundtable Group, initially formed as part of the Consortium of Advanced Management, International (CAM-I) in 1997 (Hope and Fraser, 2003 a,b). Member companies, which total around 100, have claimed to have abolished their budget (Bogsnes, 2009). These companies have sought to avoid the dysfunctional effects associated with using budgets as targets for evaluation, forecasting and resource allocations by using separate approaches for each of these different purposes. The process to apply for resources needed to implement strategic initiatives is not reliant on the annual budget round, but fast tracked by making resources available when they are needed. Forecasts for a range of critical KPIs (key performance indicators) are constantly updated with recent events so they reflect expected performance. Rather than using budgets to

set standards for performance, performance evaluation is based on relative performance to internal or external benchmarks as illustrated in the Statoil case (a large offshore energy producer).

#### *Statoil and relative performance targets*

The Statoil case highlights how organisations can use information to generate value for a business (Bosnes, 2009; Merchant and Van de Stede, 2011). Statoil wanted managers to define KPIs and targets that measured relative performance, rather than absolute targets. As Statoil is an oil exploration company, the primary focus is on the number of barrels of oil being produced. Therefore, KPIs can include accounting measures such as cost per barrel. The KPIs are used to compare actual performance against internal and external benchmarks. This percentage achievement against the benchmarks is held to be robust, objective, and not needing to be updated continuously. Statoil acknowledges that there is no perfect KPI. For example, Health and Safety is held to be a strategic indicator and the relative benchmark is to be at the top 25% of the industry. The purpose of using KPIs is to ensure continuous improvement with a view of being excellence with regard to internal as well external benchmarks. The use of multiple KPIs questions the role of the traditional budget. Bosnes (2009), a senior executive in Statoil and an advocate of the Beyond Budgeting movement, argues that using the same target for evaluation, resource allocation and forecasting is going to destroy value. The Statoil case highlights that the purpose for which targets are being used needs to be considered when deciding a target's level of difficulty and its time horizon (e.g., short-, medium-, or long-term).

Interestingly, while Statoil abandoned budgets in 2005, budgets are still required by Statoil's external partners for large projects (Merchant and Van de Stede, 2011). This is confusing for managers. This requirement from external partners to use budgets means that Statoil managers had to prepare and rely on budgets for large and strategic projects, even though they are not required to use budgets for internal purposes. One senior manager notes, 'It is hard to be dynamic if our partners are not also dynamic' (Merchant and Van der Stede 2011, p. 5, footnote 5). The result is that most managers would prefer to have budgets for internal purposes as well. Clearly, Statoil's external partners relying on budgeting information has an impact on the implementation of innovations in management accounting.

Rather than abandoning the budget, another innovative approach focuses around improving the accounting numbers used in the budgeting by focusing on operational planning, and moving away from the financial focus of traditional budgeting (Hansen et al., 2003).

## **INNOVATIONS IN ACCOUNTING: ACTIVITY BASED COSTING AND ACTIVITY BASED BUDGETING**

Activity based costing (ABC) is an important accounting innovation developed by Cooper and Kaplan (1998). ABC adopts a much greater customer focus to the approach of costing services and products (Lemak, Austin, Montgomery, & Reed, 1996). Activity Based Budgeting (ABB) has built on ABC by identifying what processes, activities and costs should be in the future. To make it easier to introduce ABC and ABB, Kaplan and Anderson (2007) have suggested that organisations estimate the time associated with the activities, what they call a *time-driven* approach.

The focus of Activity based costing (ABC) is on activities and what drives the cost of these activities from a resource consumption model (Kaplan and Atkinson, 1998). The initial impetus for ABC came from the work of Miller and Vollmann (1985). These two scholars wrote about what they termed 'The Hidden Factory'. The purpose of their article was to point out how traditional cost accounting systems provide good insights into how to control direct labour and direct materials, but are woefully inadequate in helping companies to manage their overhead costs. Noting that overhead costs are forming an increasingly high percentage of a company's total value added, the authors encouraged companies to undertake a transaction-based analysis of overhead costs as a means of controlling such costs.

Cooper and Kaplan (1988) encouraged firms to move away from the simple cost classifications of fixed versus variable and to begin tracing costs to the activities and processes of the business. Cooper and Kaplan devised a four-level cost hierarchy: unit, batch, product sustaining, and facility sustaining. If a cost (or resource consumed) can be traced to a given unit (product or customer type), such a cost is called a unit-level cost. Examples can include direct materials and direct labour. If a cost can be traced to a batch such a cost is called a batch-level cost. Examples include machine set-up and inventory movement costs with the production of a given batch. If a cost can be traced to the support of a product line, it is called a product sustaining cost. Examples include costs incurred at the product design stage and advertising costs for the given product line. Batch-level and product-sustaining costs are initially accumulated in separate activity pools and subsequently traced to product or services using relevant activity cost drivers.

The facility sustaining costs of corporate head office overhead, being far removed from the underlying product or customer, are more difficult to trace. The problem faced by many corporations is that the facility sustaining costs can be substantial, often over 15% of the total cost structure of the business. Therefore, one approach used is not to trace facility-sustaining costs but rather regard these costs as below the line for business units. Any tracing of costs is clearly arbitrary and makes the ultimate product or customer seem more costly than what the competitor would offer. Rather than trace these facility sustaining costs, the focus shifts to managing these costs by restructuring/reengineering business activities, delegating the responsibility back to the decentralised business unit, or choosing to outsource to a third party.

ABC development is an example of industry practice leading academic thinking. The academic community has been challenged to rethink what is relevant to value generation. ABC implementation and use, though offering many advantages, features its own set of challenges, including difficulties mapping out the cost pools, problems with finding valid drivers, and the time-consuming nature in implementing an ABC system (Kaplan and Anderson, 2004).

To overcome some of these problems, a *time driven* approach to ABC is recommended as it enables managers to easily develop forecasts for required resources based on historical estimates for sales, employees, plant and equipment, and facilities (Kaplan and Norton (2008)). The benefits of time-driven ABC are that it is a more simplified version of ABC and easier to develop as there is less involvement of lower level employees to specify their activities and more estimates by senior managers. The emphasis of time-driven ABC is to get better estimates, recognizing that accurate costing is not possible until after the period being analysed. Kaplan and Anderson (2004) provide three important steps managers can use to estimate the time taken for activities:

1. Estimate the time employees spend on various activities, focusing on practical capacity (typically estimated around 80–85% of the time).
2. Estimate the time involved in completing one unit of each of the activities.
3. Calculate the cost driver rates by multiplying the result in steps 1 and 2.

The use of time driven ABC allowed a new form of budgeting to arise, namely Activity Based Budgeting (ABB). A case study, Sierra Trucks, highlights the benefits of ABB (Brimson and Antos, 1999). When Sierra Trucks implemented ABB, the benefits were improved operational reporting, better understanding of the relationships between costs and work flows, improved costing, and the ability to evaluate the impact of various scenarios (e.g., volume, pricing, and sales mix). The company stated that converting the activity-based costing model to activity-based budgeting was the most technically challenging part of the process. Clearly, mastery of the principles behind activity based management was warranted before a costing system could be developed to identify value.

Accounting information, by identifying the resources consumed to the product type, geographic zone, or customer type, was just that, a model to identify resources (Kaplan and Atkinson, 1998). This accounting model does not predicate strategic decisions, but instead enables business unit and corporate managers to evaluate whether to continue with the product line or customer type as a strategic decision. An activity that consumes a large amount of resources does not predicate shutting that activity down. Rather, an understanding of value from the customer perspective would form the basis of a strategic decision.

ABC has changed the way organisations think about and cost products and services and has lead to new thinking such as life cycle costing for projects (Gupta and Galloway, 2003), target costing which examines value as perceived by external customers (Cooper and Slagmunder, 1999; Ansari and Bell, 1997; McNair et al., 2001; Yoshikawa et al., 1993), and customer profitability analysis (McManus & Guilding, 2008).

What does the customer want and is prepared to pay for? The ABC/ABB approach is not related to what the customer wants, needs or is prepared to pay for (McNair et al., 2001). Rather the ABC/ABB focus is on enhancing value added activities and eliminating non-value added activities. Several attempts have been made in the past to address this issue. One idea to bridge this gap has been the development of attribute-based costing (Ittner, 1999; Walker, 1992). Another approach, by Ansari et al. (1997) is ‘a “ValueIndex” for determining how well quality-related spending matches the relative importance customers place on each quality attribute or activity’ (see Ittner, 1999, p.498). Another approach that is related to the ABC model is estimating the cost of quality by calculating the cost of the lost sales as used by Polaroid (Ittner, 1999). Product attribute costing is a related technique that examines usage functions (e.g., performance, reliability, easy maintenance, innovative design, availability, brand image, price) and the relative costs of these to meet customer needs (McNair et al., 2001; Walker, 1992). The technique uses a profit potential concept, which is calculated as revenues less value-added costs (McNair et al., 2001). While these ideas have been discussed in the management accounting literature, they have received little traction in recent times.

## RESPONSIBILITY CENTRES: 'THEM' VERSUS 'US'

Some organisations prohibit SBUs from sourcing services from outside suppliers. This prohibition may lead to feelings of being a conscripted or, what the literature more commonly calls, *captured customer* (Anthony and Govindarajan, 2007). Even when SBUs are free to choose their supplier, it is sometimes the case that the service is so unique that no outside service provider exists. SBUs may feel the lack of competition makes them targets for high costs and/or poor service. It is also the case that the creation of responsibility centres encourages shared service units to take a short-term focus that concentrates on reducing costs at the expense of understanding and promoting service value.

Responsibility accounting systems sometimes require SBUs to buy products and services from internal business units. This requirement may occur in spite of SBU managers' preference to source services from outside vendors, due to the manager's ability to negotiate better prices, service levels, and/or value. A firm would generally mandate an internal sourcing policy if it believed the variable costs of its internal support service was cheaper than the outside vendor, or it wished to cover infrastructure costs (Anthony and Govindarajan, 2007). As noted above, a potential problem with creating captured customers is that the SBUs may feel they are being overcharged, provided poor service, and/or receiving poor value. The use of ABB or time-based ABC allows the internal customer to know the resources consumed. Knowing how much is used does not inform the downstream business unit whether or not the internal service providing department is efficient. Rather, relative benchmarking of the support department is required (Stringer and Shantapriyan, 2011). If there is no pressure on the shared services unit, the downstream business unit can view the shared services as non value-added, and services may be outsourced because the *value* of the support services is not recognised.

The experience of a large multi-national steel maker's introduction of a new software system poignantly illustrates the captured-customer syndrome. The organisation was structured into responsibility centres, with its IT Department considered a core corporate support unit. The IT Department provided services, and charged for these services, to various SBUs that linked from the warehouse to the ultimate customers. The SBU managers sensed the new inventory system was under-reporting inventory and decided to search the warehouses to find the missing inventory.

Subsequent investigation of the inventory problem revealed the inventory software had failed to recognise the units as they were produced, hence producing unrecorded units sitting 'lost' in the warehouse. When this situation was reported to the IT managers, they replied 'it's not my business'. The SBU managers were incensed, demanding to know 'how can this be as we are paying you \$500,000 per year?' In this instance, the IT department viewed itself as a corporate support unit that did not need to meet SBU needs. However, this corporate view was myopic as the costs of the IT were charged to the SBUs, who in turn became the intermediate customers. Clearly, the \$500,000 per year was not a cost in the eyes of the SBU manager but rather a reflection of the customer-oriented view of 'where is the value'? If the SBU managers balked and insisted on outsourcing the IT function which would meet their needs, the centralised IT unit would no longer exist. Therefore, not only was the IT unit not addressing the co-creation of value from a value chain perspective, the department was jeopardising its very existence.

SBU managers in a large networked service organisation, also felt that as captured customers they were at the mercy of the internal shared service unit (Stringer, 2006). There seemed to be a ‘them’ versus ‘us’ attitude in the dealings between the SBUs and the support units. The SBU managers felt they had to accept the service they were given and had little input into the process, as they could not buy the services from outside the entity. These two examples highlight missed opportunities. In particular, where is the evidence of value being co-created here?

Some shared support units may be good at controlling their costs. However, unless this approach is linked with a strong emphasis on creating value, sub-optimal outcomes can occur. As an example, when this large networked service organisation changed its shared IT support unit from a cost centre to an investment centre, the change in organisational structure was accompanied by a change in the transfer prices charged. The IT shared support unit, which was now responsible for generating profits commensurate with its asset base, decided to raise the prices it charged the contracting SBU managers.

The SBU managers rebelled against the new transfer prices, and a battle of charges and counter-charges broke out between the SBU and shared support unit managers. The SBU managers claimed the shared support unit had created prices that were uncompetitive with outside suppliers, had used an arbitrary method to set its prices, was providing an inferior service to what outside suppliers offered, and had enacted charges for services that had in the past been free. The SBU managers further noted that the shared support unit’s high performance relative to its financial targets was a strong indication that SBUs were being over-charged.

The IT shared support unit managers accepted that certain parts of their IT services could be sourced more cheaply and even at a higher level of service, but claimed that only they were capable of providing the full range of IT services ultimately needed by the various SBUs. With pressure mounting on the shared support unit managers, they soon decided that reducing costs was the quickest and easiest way to meet their short term financial targets while placating the SBU managers. Such a reaction, though quite a common organisational occurrence, is fraught with risks. As Porter (2010, p. 2477) warns, cost reduction ‘without regard to the outcomes [value] achieved is dangerous and self-defeating’.

## **THE NETWORK APPROACH TO CREATE VALUE**

When considering the S-D logic concept of co-creation of value by collaboration between providers and customers of non-related organisations (Vargo and Lusch 2008; Lusch et al., 2008), it is useful to begin by examining the potential for value co-creation between internal networks and internal customers. S-D logic highlights how suppliers can become actively involved in co-creating value with customers (Grönroos, 2008). In relation to shared support services (e.g., IT), there are opportunities to work together with the internal customers (the SBUs) to co-create value for both entities (Grönroos, 2008). This means a change in the relationship from an ‘us’ versus ‘them’ approach that often occurs when ‘cost’ is the focus, towards actively engaging and understanding how to enhance value. In addition to joint value creating, value can be created for the entity itself and for the other party (Grönroos, 2011). While S-D logic argues that ‘value is always determined by the customer (value-in-use)’ (Vargo

and Lusch, 2006, p.44), it is sometimes the case that customers do not know what they want or what is possible.

Organisational managers are best advised to focus on understanding the *process* of generating value, rather than being too concerned with trying to estimate and quantify costs and value. Many of the leading quality management approaches, such as lean thinking (Womack and Jones, 2003) and Six Sigma (George, 2003; Breyfogle 1999), focus on the processes by which value is delivered to customers. Both lean thinking and Six Sigma interpret value in terms of how it is perceived by the customer, and both attempt to improve the delivery of this customer value by enhancing operational efficiency and placing greater focus on key aspects of the process which positively affect this value.

Perhaps the most important factor for promoting value creation is to understand and try to identify some of the intangible and subjective benefits for the wider networks (e.g., customers, beneficiaries, and partners). Shared support services are increasingly important for managing processes across the diverse network, both internal and external to the firm (Lusch et al., 2010). For example, value from IT can come from ‘the synergies that are available from carrying out the integration, eliminating unnecessary duplication, and supporting new forms of information and practice sharing’ (Demirkan et al., 2008, p.368).

Too often organisations fail to adopt a network approach to value creation and instead rely on a silo approach. IBM, for example, organised its IT processes in silos, which placed major constraints on the company when it tried to improve services to customers in an integrated way (Demirkan et al., 2008). The silo approach was also reported to be a major problem in a hospital (Grabau, 2008; Lodge and Bamford, 2008). Medical clinicians are highly trained within their specialist fields of care and their natural focus is on applying their particular field of speciality to the care of the patient. While a clinician may believe he/she is delivering an excellent outcome, a patient may hold a very different view. For example, the length of time waiting for treatment may be extremely important to the patient and may define part of what the patient defines as ‘value’, but is not always considered by the attending clinician. According to Porter (2010), a comprehensive understanding of the customer’s (or patient’s) concept of value will inevitably require the consideration and definition of holistic outcomes. Only then can service delivery performance be sensibly measured and acted upon.

Internal shared support services (e.g., IT) can help create a unique competitive advantage for an organisation, an advantage that cannot be easily replicated by competitors. An important step is to get internal customers to identify the critical internal processes before working together with internal customers to co-create value (Radhakrishnan et al., 2008). Stringer and Shantapriyan (2011) offer a useful example on how this can be achieved. They recount the experience of a brewery that chose a large software provider to oversee an upgrade to its IT system. The IT provider wanted to import the system it had implemented at other breweries, but the brewery was determined to do this in-house as it wanted to protect its uniqueness (e.g., specialty beers, customer preferences). This objective required IT to work together with its internal customers (e.g., operations, logistics and marketing) to ensure the internal customers’ needs were met.

Walmart provides a further example of value being co-created through the mutually supportive actions of internal and external customers. In particular, Walmart’s success with its newly

adopted IT distribution system was less the result of the system's innovation and more the result of how it used the new distribution system to change the way it worked with suppliers and operated its internal business processes (Farrell, 2003; Radhakrishnan et al., 2008). The experiences of Walmart and the brewery are indicative of the opportunities that exist for co-creating value with internal and external customers, which can lead to and support the creation and maintenance of a firm's competitive advantage.

## CONCLUSION

This paper discusses the implications of creating user pays responsibility centres and assigning cost allocations to measure each responsibility centre's performance. While management accountants may claim that they both cost and value transactions between various internal units, the emphasis is almost invariably on costing. Costs may be easier to determine than value; but the former's allocation, though seemingly precise, belies what is customarily acknowledged by management accountants as an arbitrary process. In spite of this reality, organisations all too often become mesmerised by the illusion of cost precision. The consequence is that cost measurement dominates the organisation's activities and value creation is largely ignored.

Even when value is considered, such as when applying value-based management techniques, the measurement of value is all too frequently narrowed to an assessment of tangible attributes. An assumption is commonly made that eventually the *intangibles* will result in improved financial performance. However, this assumption is both dubious and has the potential to communicate a dangerous message. In particular, organisational members may come to believe that since tangibles are counted and intangibles are not, then the former must count and the latter do not. Surely such a view of performance is impoverished. Furthermore, this view fails to recognise the opportunity for the co-creation of value.

Within a service context, the identification and measurement of value is crucial to customer satisfaction, and in the majority of cases cannot be fully defined by financial or simply tangible metrics alone. Defining value often challenges our ability to think beyond purely conventional metrics to a more holistic view of the service and customer requirements. In order to define value, a customer-centric view is required, which then allows the true added-value aspects of the service to be identified and understood by the service provider. Practitioners and scholars, especially those from the management accounting discipline, need to rethink the role of the internal customer. It is time to recast the internal customer from being *captured* to being a strategic partner in the co-creation of value.

## REFERENCES

Anthony, R. and Govindarajan, V. (2007) *Management Control Systems*, 12th Edition, Irwin, Singapore.

Ansari, A. and Bell, J. (1997) *Target Costing: The Next Frontier in Strategic Cost Management*, New York: McGraw-Hill.

Ansari, A., Bell, J., Klammer, T and Lawrence, C. (1997) *Measuring and Managing Quality Costs*, Version 1.0, Richard D.. Irwin, Homewood, IL.

- Bierman, H. (1959) Pricing Intracompany Transfers, *The Accounting Review*, 34 (3), 429-432.
- Breyfogle, F.W. (1999) *Implementing Six Sigma*, John Wiley, New York.
- Bogsnes B. (2009) *Implementing beyond budgeting: Unlocking the performance potential*. Hoboken, NJ: Wiley.
- Brimson, J. A., and Antos, J. (1999) *Driving value using activity-based budgeting*. Wiley Cost Management Series. New York: Wiley.
- Cooper, R., and Kaplan, R. S. (1988) Measure Costs Right: Make The Right Decisions, *Harvard Business Review*, September-October, 96-103.
- Cooper, R., and Kaplan, R. S. (1998). The promise— and peril— of integrated cost systems. *Harvard Business Review*, 76(4), 109–119.
- Cooper, R. and Slagmulder, R. (1999) Develop Profitable New Products with Target Costing. *Sloan Management Review*, 40 (4), 23-33.
- Demirkan, H., Kauffman, R.J., Vayghan, J.A., Fill, H-G., Karagiannis, D. and Maglio, P.P., (2008) Service-orientated technology and management: Perspectives on research and practice for the coming decade, *Electronic Commerce Research and Applications*, 7, 356-376.
- Farrell, D. (2003) The Real New Economy, *Harvard Business Review*, 81 (10), 104-112.
- George, M.L. (2003) *Lean Six Sigma for Service*, McGraw Hill, New York.
- Grönroos, C. (2008) Service logic revisited: who creates value? And who co-creates? *European Business Review*, 20 (4), 298-314.
- Grönroos, C., (2011). *Value co-creation – towards a conceptual model*, Otago Forum 3, University of Otago, 6 December, 2011.
- Graban, M. (2009) *Lean Hospitals*, CRC Press, Francis and Taylor, New York.
- Gupta, M. and Galloway, K. (2003) Activity-based costing/management and its implications for operations management *Technovation*, 23 (2), 131-138.
- Hansen, S.C., Otley D.T. and Van der Stede, W.A. (2003) Practice Developments in Budgeting: An Overview and Research Perspective, *Journal of Management Accounting Research*, 15, 95–116.
- Hope, J., and Fraser, R. (2003a) *Beyond budgeting: How managers can break free of the annual performance trap*. Cambridge, MA: Harvard Business School Press.
- Hope, J., and Fraser, R. (2003b) Who Needs Budgets? *Harvard Business Review*, February, 108–115.

- Ittner, C. (1999) Activity Based Costing concepts for quality improvement *European Management Journal*, 17 (5), 492 – 500
- Ittner, C. D., and Larcker, D. F. (2001). Assessing empirical research in managerial accounting: a value-based management perspective. *Journal of Accounting and Economics*, 32, pp 349-410.
- Kaplan, R. S. and Anderson, S. R. (2004). Time-driven activity-based costing. *Harvard Business Review*, 82(11), 131–138.
- Kaplan, R.S. and Atkinson, A.A. (1998). *Advanced Management Accounting*, Prentice Hall, USA.
- Kaplan, R.S., and Norton, D.P. (2008) Mastering the Management System, *Harvard Business Review*, Jan, 63-77.
- Lemak, D., Austin, W., Montgomery, J., and Reed, R. (1996) The ABCs of Customer-Centred Performance Measures, *SAM Advanced Management Journal*, 61(2), 4-10.
- Lodge, A., and Bamford, D. (2008) New Development: Using lean techniques to reduce Radiology waiting times, *Public Money and Management*, 28 (1), 49-52.
- Lusch, R.F., Vargo, S.L., and Malter, A.J., (2006). Marketing as Service-Exchange: Taking a Leadership Role in Global Marketing Management, *Organizational Dynamics*, 35 (3), 264-278.
- Lusch, R.F., Vargo, S.L., and Tanniru, M. (2010). Service, value networks and learning, *Journal of the Academic Marketing Science*, 38, 19-31.
- Lusch, R.F., Vargo, S.L. and Wessels, G. (2008). Toward a conceptual foundation for service science: Contributions from service-dominant logic, *IBM Systems Journal*, 47, 9(1), 5-14.
- McManus, L., and Guilding, C. (2008) Exploring the potential of customer accounting: a synthesis of accounting and marketing literature, *Journal of Marketing Management*, 24 (7-8), 771 – 795.
- McNair, C.J., Polutnik, L., and Silvi, R. (2001) Cost management and value creation: the missing link, *The European Accounting Review*, 10 (1), 33-50.
- Merchant, K.A. (2006) Measuring general managers' performances: Market, accounting and combination-of-measures systems, *Accounting, Auditing & Accountability Journal*, 19 (6), 893-917.
- Merchant, K. A., and Van der Stede, W. A. (2011) *Statoil*. London School of Economics and University of Southern California, teaching case (A211–01).
- Merchant, K. A. and Van der Stede, W. A. (2007). *Management control systems, performance measurement, evaluation and incentives* (2nd ed.). London, England: Prentice- Hall.

- Miller, J.G. and Vollmann, T.E. (1985) The hidden factory. *Harvard Business Review* September-October, 142-150.
- Neely, A, Sutcliff, M. R., and Heynes, H. R. (2001) *Driving Value Through Strategic Planning and Budgeting*. New York, NY: Accenture.
- Otley, D. (1987) *Accounting Control and Organizational Behaviour*, Heinemann Professional Publishing Ltd: Oxford.
- Otley, D. (1999) Performance management: a framework for management control systems research. *Management Accounting Research*, 10, 363-382.
- Porter, M.E. (1985) *Competitive advantage: creating and sustaining superior performance*, New York: Free Press.
- Porter, M.E., (2010) What is Value in Health Care? *New England Journal of Medicine*, 363 (26), 2477-81.
- Radhakrishnan, A., Zu, X., and Grover, V. (2008) A process-orientated perspective on differential business value creation by information technology: An empirical investigation, *OMEGA The International Journal of Management Science*, 36, 1105-1125.
- Stringer, C. P. (2006). Performance management: An empirical study. Dunedin, New Zealand: University of Otago. Unpublished PhD Thesis.
- Stringer, C. and Shantapriyan, P. (2011). *Setting Performance Targets*, Business Expert Press, New York.
- Thomas, A.L. (1971) Useful Arbitrary Allocations, *The Accounting Review*, 46 (3), 472-479.
- Vargo, S.L. and Lusch, R.L. (2006) Service-Dominant Logic: What It Is, What It Is Not, What It Might Be, in Lusch, R.L. and Vargo, S.L. (eds.) *The service-dominant logic of marketing: dialog, debate and directions*, New York, 43-56.
- Vargo, S.L. and Lusch, R.L. (2008) Service-dominant logic: continuing the evolution, *Journal of Academic Marketing Science*, 36 (1), 1-10.
- Walker, M. (1992). Attribute Based Costing. *InTheBlack*, 62 (2), 42-45.
- Womack, J.P. and Jones, D.T. (2003) *Lean Thinking: Banish waste and create wealth in your corporation*, Free Press Business, Simon & Schuster, London.
- Yoshikawa, T., Tanaka, M, Innes, J. And Mitchell, F. (1993) *Contemporary Cost Management*, London: CIMA.

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