

THE ROLE OF MANAGEMENT ACCOUNTING IN SERVITISATION

Exploring the potential role of management accounting in servitising manufacturing companies, where services are increasingly offered alongside physical products



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KEY CONCLUSIONS

- This research illustrates the servitisation trend underway in the manufacturing industry, with companies increasingly offering services alongside products to increase revenue and profitability.
- Less accounting information is available for services than for products, so accounting and control techniques are used less often in relation to them.
- There is significant potential for management accountants to have an impact in the services domain, enhancing the servitisation process by providing economic facts and calculations related to service business opportunities.
- Research & Development for services is at a much earlier stage when compared to product Research & Development in terms of identifying business opportunities arising from services and using new accounting objects.
- Services should be incorporated in manufacturing companies' overall business plans, with service prices set accordingly. In the past, service pricing decisions have mostly been left at the discretion of company salespeople.



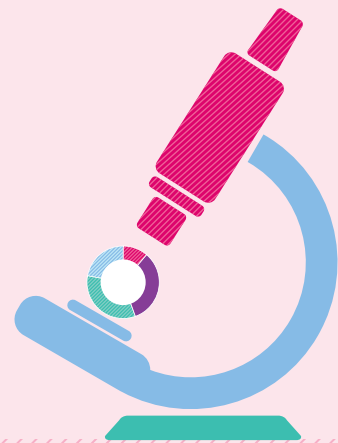
ABSTRACT

This paper reports the findings of an exploratory study on the role of management accounting in the servitisation of manufacturing companies, and its potential in this field.

The evidence from our case studies demonstrates that management accounting should play a more proactive role in servitisation (i.e. offering services jointly with products) as a major strategic initiative. Although services are becoming increasingly important for manufacturing companies, accounting and control functions have offered much less support in this area compared to traditional products, as services are still a relatively new systematic issue. Pricing and profitability management, for example, are currently less systematically managed in services than in products. Servitisation therefore requires companies to rethink and improve the accounting objects and control devices they are using in order to develop more comprehensive and advanced service offerings.

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INTRODUCTION

Servitisation in manufacturing companies has been defined as the trend of ‘the increased offering of fuller market packages or ‘bundles’ of customer focused combinations of goods, services, support, self-service and knowledge in order to add value to core corporate offerings’ (Vandermerwe and Rada, 1988).

Servitising companies, which offer services in addition to products, are distinct from traditional service companies operating in the healthcare, transport and welfare sectors.

The phenomenon is increasing as more and more manufacturing companies offer new services in addition to their products (Lay et al, 2010).

There is now a wide spectrum of innovation in service offerings that depends on the business model, the technology applied, or the type of service itself.

There are more traditional service offerings within traditional business models, technologies or types of service. For instance, General Electric (GE) sells gas turbines but also offers services such as repairs, performance upgrades and maintenance. In contrast, new business models, technologies or services have led to more innovative service offerings. Xerox, for example, has moved from simply selling photocopiers to offering a document management service where the customers pay according to the number of copies printed. Another example is Rolls Royce’s ‘power-by-the-hour’ contracting model for the service and support of its aerospace engines.

Although a number of papers have focused on servitisation and the management of servitising companies, there is a significant gap in the literature regarding the tools and techniques available to support servitising companies (Baines et al., 2009).

Research in management accounting, which deals with the provision of accounting information for management decision-making and management control, has focused separately on the features and challenges in manufacturing sectors, the service sector and public organisations.

It has not focussed on the role of accounting and control in the extension or shift of manufacturing companies towards the relatively new types of service offerings which lies at the core of servitisation. In terms of pricing, service costs, though they are not calculated, are often included indirectly in the product price. This can lead to a product being overpriced or to inferior service delivery, potentially reducing a product’s competitiveness. This can result in opportunities to develop a service business being missed (Lerch and Gotsch, 2014). There is thus a need for research into the role of accounting and control in servitisation.

It is here that management accounting could support the definition and calculation of service costs which will be investigated further in this study.

OBJECTIVES

Given that servitisation in the manufacturing industry is a familiar concept in management and marketing literature but not in management accounting, this study aims to attract the attention of accountants to the potential role they might play in such a context.

The objectives of the research were:

- to explore the role of management accounting in supporting manufacturing firms pursuing servitisation strategies

- to investigate if and how management accounting is (and could be) useful in the new service development process
- to investigate if and how management accounting can support pricing decisions on services.

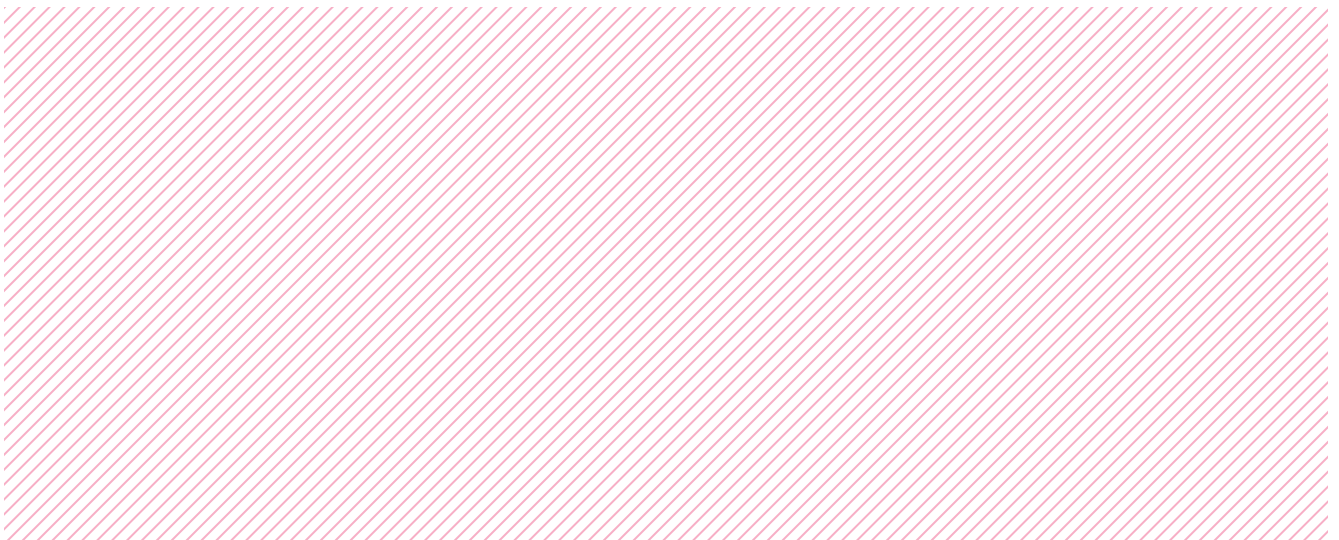
RESEARCH METHODOLOGY AND CONTEXT

Given the scarce focus on the topic from an accounting perspective, exploratory case studies were undertaken to provide greater insight into how management accountants can support servitising organisations. This will help to show whether there is potential for a larger study of this nature in the future.

This study focused on a single sector – machinery manufacturing – for two reasons. Firstly, servitisation has been implemented in this sector for a long time. Dachs et al. (2013) report how 'machinery & equipment' and 'fabricated metal products' were among the most frequently servitised sectors. This is also confirmed by Lay (2014) who reveals that an average of 17.1% of service sales were directly and indirectly invoiced by machinery manufacturers against an average of 13.0% in a sample of manufacturing companies. Secondly, the manufacturing sector is of particular strategic importance for the economies of Italy and Finland, on which this paper focuses. In 2011, the machinery manufacturing sector accounted for 29 billion euros of revenues for Italy and 30 billion euros for Finland, employing approximately 148,000 people in Italy and 145,000 in Finland.

A total of six semi-structured interviews with managers from three servitising companies were conducted. The interviews were digitally recorded and partially transcribed. The targeted interviewees were those responsible for, or 'providers', of firms' accounting information (i.e. management accountant, business controller, project manager or similar) and those responsible for the development and management of the service 'receivers' of the accounting information (i.e. R&D manager, new product/service development manager, service manager or similar). The investigation further benefited from analysing documents and information publically available or provided by the interviewees directly in order to triangulate primary evidence with secondary sources (Ryan et al., 2002).

Three companies were selected according to the differences in size and maturity of the services they offer (measured as a percentage of revenues from services and years of experience in the service offering).



MAIN FINDINGS AND THEIR IMPLICATIONS FOR PRACTICE

The key findings of the exploratory case studies are summarised below.

Three companies were selected as case studies, however only two are reported here. The third was conducted in a Finnish machinery construction company, the main reason for the non-inclusion is related to the scarce evidence collected and the unbalanced data available compared to the other two cases.

Due to the unpredictable lack of availability of staff, only one interview was conducted. Unlike the other companies we were unable to interview the 'provider' of accounting information, therefore this case has been excluded from the report.

CASE 1 – A. CELLI NONWOVENS (ITALY)

A. Celli Nonwovens is a leading producer of complete downstream solutions for the nonwovens textile industry – including winding, slitting and roll handling equipment and packaging systems for processing non-woven fabrics with a special focus on hygiene and medical products. It is considered the global market leader with about 80-90% of the market share.

A. Celli Nonwovens offers a wide range of services in its customer care division – including: spare parts assistance, maintenance plans, winding school, online service (Mysp@re), baby sitting (new customer support and training) an upgrading offer service and financial services. About 20% of total revenues (€8m) come from services. This amount has increased four-fold in the last five years.

TABLE 1: KEY FINDINGS FROM CASE 1

COMPANY NAME (Country)	A. Celli Nonwovens (Italy)
TOTAL REVENUES (€m in 2012)	42
REVENUES FROM SERVICES (%)	Approximately 20%
NUMBER OF INTERVIEWS	2
PEOPLE INTERVIEWED	Financial Officer Customer Service Manager

	PRODUCT	SERVICE
ACCOUNTING AND CONTROL ELEMENTS	Tight control (budget and cash flow management on a quarterly basis)	Loose control (budget on yearly basis)
PRICING ELEMENTS	Cost-plus pricing approach	Direct cost knowledge and the skills of salesman

In A. Celli Nonwovens, accounting and control functions work differently for products (capital equipment) and services. The Company exercises tight control over capital equipment every quarter through the use of budgets and cash flow management tools. It can monitor order completion (on average five per year) easily due to its extensive product knowledge. However, the company has very loose control over services due to the wide variety (on average 2,500) offered every year. The budget check is carried out on a yearly basis where the 'actual' value frequently diverges from the 'budgeted' value. It is much more difficult to forecast service performance compared to products.

Differences in accounting and control are also illustrated by different ways in which the company sets prices for its products and services.

The full cost of a product is defined but with a mark-up; salespeople are well aware of the minimum level of margin they need to maintain when setting product prices.

The methodology for services is different. The company has an idea of the service costs (which are mostly direct). Salespeople know a minimum level to charge but are ultimately left to use their discretion and charge the highest possible price tailored to each customer. For this reason, the profit margin of services is three times that of products.

A. Celli Nonwovens is well aware of the potential of services to increase revenues and profitability:

'Our company, during its seventy years of operations, has installed more than 500 machines. This means we have an incredible potential consumer base for services [...] if we really improve our organisation we could reach up to 50% of revenues from services [...] and this is feasible in the future...' Financial Officer – A. Celli Nonwovens

The company's profits will increase and it will reach the break even point sooner if it takes the role of services and service revenues into account:

'[...] if you consider that our break-even point is about €19m, and if we reach the goal of increasing revenues from services from €8m to €12.5m, given the service margin, we will be able to reduce the break-even point [...] this would mean that in March each year we could reach our break-even point.' Financial Officer – A. Celli Nonwovens

CASE 2 – FASTEMS (FINLAND)

Fastems manufactures and supplies flexible manufacturing systems (FMSs) and robot cells to the metal cutting industry to automate manufacturing and finishing processes. It integrates products from all of the leading machine tool manufacturers.

Fastems provides services to help customers maintain and develop their production efficiency. These services include: start-up services, training, technical support, modernisation services, spare parts, fault service, periodic maintenance or service packages.

TABLE 2: KEY FINDINGS FROM CASE 2

COMPANY NAME (Country)	Fastems (Finland)
TOTAL REVENUES (€m in 2012)	85
REVENUES FROM SERVICES (%)	Less than 20% pure service revenues
NUMBER OF INTERVIEWS	3
PEOPLE INTERVIEWED	Business Controller Lifecycle Service Manager R&D Manager jointly with the Service Development Manager

	PRODUCT	SERVICE
ACCOUNTING AND CONTROL ELEMENTS	Centralised control by the Finance Department	Centralised control
PRICING ELEMENTS	Cost-plus pricing approach	Cost-plus pricing, towards customer value-based pricing

In terms of accounting and control, Fastems has traditionally been a 'project house'. Its reporting system focuses on product profitability although the interviewees suggested that anticipating and controlling customer profitability should be taken into account more proactively in the future, primarily due to extensions in lifecycle activities.

The company is currently seeking to extend its services by allocating additional funding for service development. Traditionally, a minority of the company's Research & Development staff have worked on lifecycle business development. However, the company could use measurements of customer relationship profitability for management purposes. This would require changes to two areas at least: within the company itself, and Fastems' active fleet (the machinery in use by customers).

First, the lifecycle service manager must focus on the centralised planning and control of the product offering, especially the company's lifecycle service offering. Service management was previously decentralised or organised as a matrix; however, the new service development and service product management has been centralised:

'Now we have changed this whole organisation quite radically... All local service managers now report here [to the centralised service management]. Previously they develop[ed] the service option on an ad hoc basis for the customers. Now we develop new things together and we [those at HQ] coordinate [those] new things...' Lifecycle service manager – Fastems

This should lead to more proactive management of the new offering and its profitability. Customers may benefit from the 'Fastems way of working' in the long term as the business will become more secure and professional.

Second, the proactive management of customer relationships and profitability requires a better understanding of the customers themselves (and the condition – active, critical or obsolete – of their machinery) and their interplay with Fastems' product/service offering. Actively monitoring any changes in these conditions would enable the company to offer customers the right product/service at the right time. This is a win-win solution in the form of modernising a relatively old piece of machinery or a proactive maintenance plan. This fits well with the idea of a centralised system for service product management and new service development.

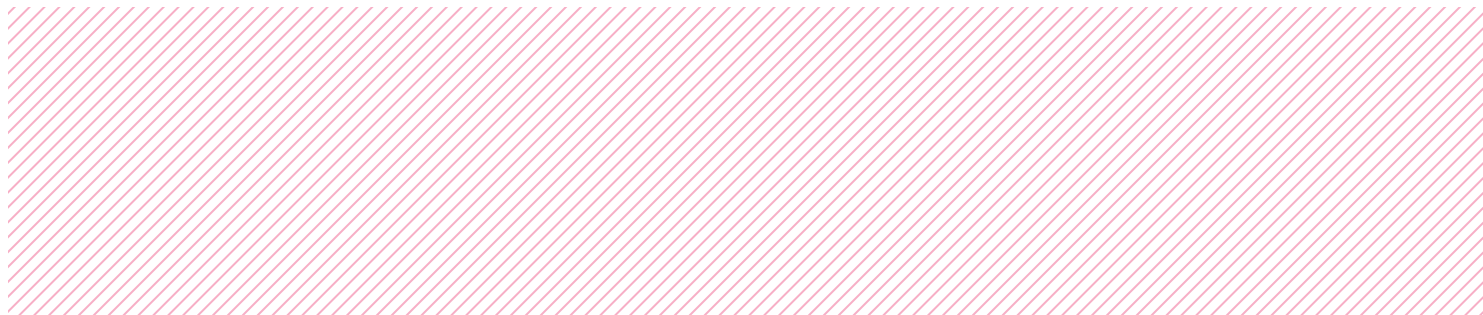
Organisational changes and new requirements may also have implications for pricing principles. The new approach to providing service contracts is similar to the provision of comprehensive machinery systems, where increased value and productivity are discussed jointly with customers. Another aspect of contract-based services is the more stable revenues for the company itself.

'Our target is to increase [the provision of] contract-based services. [If we provide] more teleservice contracts then we are guaranteed a certain amount of turnover. We want to develop our services more, so that they are more based on yearly fees. In this way we can stabilise service revenues.' Business controller – Fastems

When service development initiatives are finally converted into practice, new metrics and controls are required. For example, the company representatives interviewed emphasise customer and service profitability analysis as a better method of accounting and control:

'What we want from accounting in the near future is to provide customer profitability analysis and service contract profitability analysis...' Lifecycle Service Manager – Fastems

Service revenues were previously small-scale contracts and transactions, with managers sometimes surprised to actually generate any revenue and profit in this way. The overall level of service revenues has, however, increased over the years. The company is currently in a new phase in its servitisation management, with more systematic yet proactive accounting and control practices in place to support the development of service business initiatives.



CONCLUSIONS AND INTERPRETATIONS

The findings of our exploratory study highlight a number of areas where management accounting may support the servitisation process.

Servitisation among manufacturers has changed dramatically and is continuing to affect companies' profit-creation strategies. Indeed, profit may no longer solely stem from sales of machinery and parts but can be linked to the lifecycle performance of the machinery used by customers. This changes the overall logic of companies' revenue, cost and profit centres. Management accounting should develop and guide such changes. It should help to translate the complex and partly unknown business consequences of servitisation into the common language of business (numbers) to facilitate the managerial work required for successful servitisation.

Management accounting should be used to develop new – or improve existing – analysis tools, cost, revenue and profit objects, and pricing methods to meet companies' servitisation requirements and guide further progress. For instance, examining the lifecycle of services/products could help companies to gauge their overall profitability better.

A. Celli Nonwovens has opted for the development of new decentralised services by exploiting customers' needs and requirements. This could be viewed as an exploratory strategy to find new areas for its service offering.

Fastems, on the other hand, has adopted more of an exploitative strategy. Rather than explore new business avenues, it hopes to take advantage of the existing customer fleet and increase the value and profitability of the services it already offers through a more centralised business model with greater control.

Both A. Celli and Fastems are conscious of the importance of keeping their services separate from their products in terms of billing. In this context, managerial accounting could also help to define costs better and provide a basis for price calculation. It could also provide some insight into more innovative business models and business opportunities.

Accountants are expected to be aware of servitisation and the impact it poses to businesses in terms of adding on services. This represents both a challenge and an opportunity for both the accounting profession and academia.

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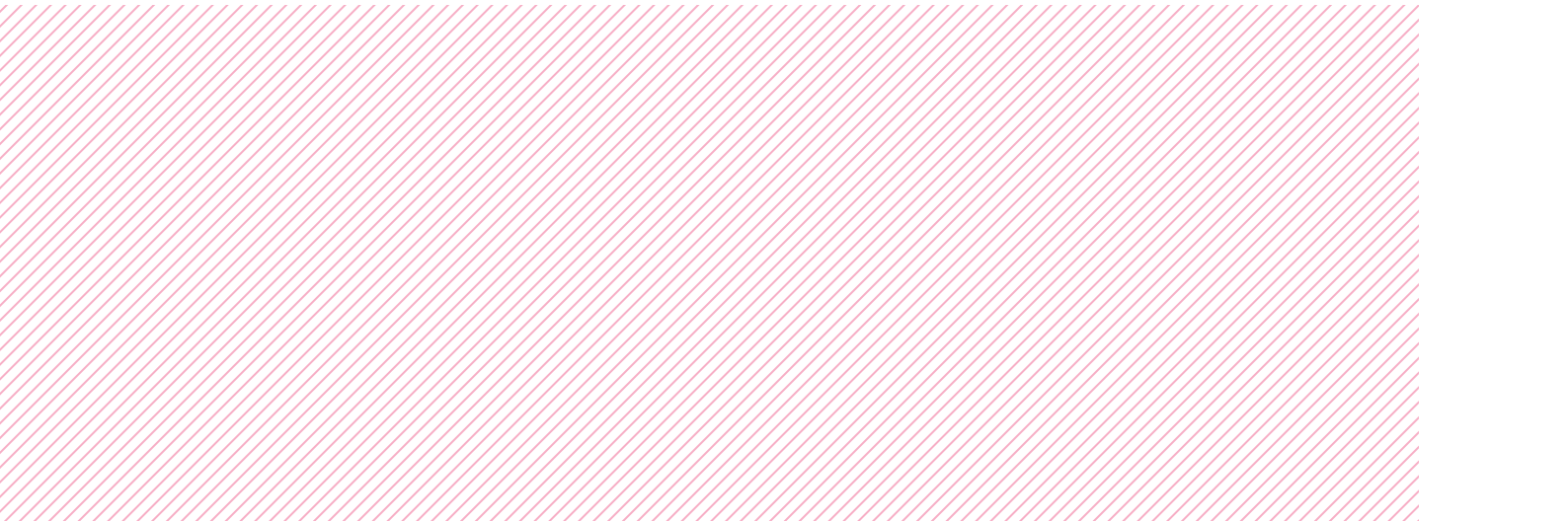
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