Esipuhe

Käsillä oleva tutkimus analysoi suomalaisia ja englantilaisia kirjapainoalan yrityksiä ja niiden liiketoimintaprosesseja. Tutkimusote on saanut vaikutteita Suomesta ja Englannista; erityisesti Helsingin kauppakorkeakoulusta ja Kingston University:stä joissa työ suoritettiin.

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1. INTRODUCTION

Background

The service activities of small manufacturing firms have attracted very little research attention. This neglect is increasingly difficult to justify in the light of recent developments. There has been a significant expansion in service-intensive, small-scale manufacturing, which has been enabled by structural changes, new technology and the evolving division of labour. It has been argued that this development signifies the emergence of a new mode of production through which services, manufacturing and the relationship between the two are transformed (Hirschhorn, 1988; OECD, 1998a).

During the last 20 years, service and small-scale enterprises have become an increasingly important source of economic dynamism, innovation, growth and employment in developed economies (Scase and Goffee, 1987; Bryson and Daniels, 1998). The service sector alone accounts for 60 to 70 per cent of GDP in most OECD countries. Small and medium-sized enterprises (SMEs) represent an equally important part of the economy in OECD countries, their GDP share being 60 to 70 per cent (OECD, 1997a; 1997b). Although the resurgence in small firm and service activities is well documented, the economic and social processes behind these trends are complex. For instance, large firms have been seen to make an important contribution to the growth of the SME sector by down scaling and out-sourcing their activities (Harrison, 1994; Storey, 1994). However, expansion in service activities does not concern only this particular sector. There is also a marked increase in service tasks, functions and occupations in manufacturing and other areas of the economy (Burrows and Curran, 1989; Sayer and Walker, 1992; Bryson and Daniels, 1998). Overall, it is difficult to get a clear picture of this growth because there is no one official or universally accepted definition for 'service' or 'small business' activities (Gershuny and Miles, 1983; OECD, 1999). At present, there is only consensus that SMEs are businesses which are 'not large' and that services represent 'non-manufacturing activities'. Such wide definitions create a situation where both of these 'sectors' can be characterised as extremely heterogeneous residual categories (Bryson and Daniels, 1998).

The most recent thinking argues that researchers should re-conceptualise the boundaries between services and manufacturing. Instead of a binary division between services and manufacturing, economic activity should be construed around linkages and networks involving manufacturing and service functions (Bryson and Daniels, 1998). Statistics indicate that many services which are closely inter-related with manufacturing industry have grown rapidly (OECD, 1998a). There has been an upsurge in business services as firms have turned to external suppliers for formerly internal functions. More manufacturers are providing services with their goods and in many high growth areas goods and services are complementary.

In small manufacturing firms, services can be important for a number of reasons. The innovative use of services has been pointed out as a factor that can improve small manufacturing firms' growth potential (Storey, 1994:147-8). In addition, it has been argued that small businesses are more capable of delivering services than large ones (Stanback et al. 1983; Mills, 1986; Heskett, 1987; Lankinen, 1998). This has been linked to SMEs' ability to adapt rapidly to changing circumstances and respond quickly to customers' service requirements. In addition, SMEs are often more apt to be market rather than research driven in innovations[1], quicker to respond to new opportunities and more oriented to small incremental advances (OECD, 1997a). To summarise, service and manufacturing activities are becoming increasingly interrelated, which means new opportunities and challenges for management and small enterprises.

The research problem and delimitation's of the study

Although the prominent role of services in developed economies has been widely acknowledged, only limited attention has been given to their role in the context of manufacturing. By analysing service activities in small printing firms, this research aims to advance knowledge of the linkages between service and manufacturing activities. Such understanding can help to assess the added value[2] and other impacts which services can have on the business of small manufacturing firms. The purpose of this research can be expressed as follows:

> The primary purpose of this research is to understand how small printing firms incorporate services into their business and why some firms are more capable of doing this than others.

Essentially, it is argued that the role of services in small manufacturing firms is a complex, heterogeneous phenomena and different management strategies are appropriate in different situations. The main boundaries and delimitations of the research can be defined by specifying the area of investigation as:

> Small independent, owner-manager run, general printing firms which employ no more than 50 staff in Finland or the United Kingdom (UK) and operate within a 50 kilometres radius of the centre of Helsinki or London.

SMEs play an extremely important role in the printing, publishing and reproduction sector that has a long tradition in Finland and the UK (European Commission, 1998). The printing industry itself is an example of traditional manufacturing that is rapidly being transformed by information and communication technologies. This provides a fertile ground for studying the manufacturing and service interface in two different contexts. These countries and their printing industries are similar enough to facilitate comparisons, yet at the same time the differences in their economic scales, business practices and social context can reveal issues that otherwise would be difficult to detect (Whitley, 1996). By incorporating the views of managers, staff and customers, the comparative analysis can be taken further than would otherwise be possible. Such an approach provides a sound basis for the development of grounded theory and the discovery of basic social processes (Glaser, 1978), which are essential for service delivery.

Definitions for the study

Definitions adopted by researchers are often not uniform, so key and controversial terms need to be defined to establish the positions taken in this thesis. In qualitative research, respondents' own views and understandings are a key area of interest, which means that there is a need to avoid strong pre-conceptualisations. However, the aims of the research and problem definition necessarily introduce some conceptualisations and the adopted language will be value laden. According to Bulmer (1984) using definitive and sensitising[3] concepts can help to solve these problems. Five key concepts will be discussed in the context of this research project. Two of them, *small firms* and *general printing*, are treated as being definitive concepts. These definitive concepts are essential for sampling purposes, helping to focus the investigation on a specific group of businesses.

Services and *quality* are key sensitising concepts that follow from the aims of the research and thus carry some pre-conceptualisations. However, these working definitions will be left open enough to allow respondents' own meanings to emerge. A sensitising concept for services is based on the following broad statement adapted from Hirschhorn's (1988) definition:

> Services can be defined as: all supporting and value adding activities before, during and after the print production process and as a part of the outcome which is delivered to the customer.

Quality is a subjective perception and ultimately customers judge whether the supplier has met their requirements. The sensitising quality concept is based on the one presented by Feigenbaum (1983):

> Quality involves the total composite product and service characteristics of marketing, design, manufacture, delivery and after sales care through which the printed product and service will meet the expectation of the customer.

Service capability is a key sensitising concept:

> Service capability encapsulates the factors that contribute to the printing firm's ability and willingness to meet customers' requirements. Among such factors are buyer-supplier relationship, quality and availability of required products and immaterial elements.

Like the other four sensitising concepts, service capability will become more specific and operationalised as a result of inductive analysis (Patton, 1990:218-19).

There is no single universally accepted definition of a *small firm*, mainly because of the wide diversity of businesses. As a result, the EU and many governments have adopted a number of different ways[4] of specifying the characteristics of a small firm (European Observatory for SMEs, 1997; OECD, 1999). This research adopts the definition now used by the UK Department of Trade and Industry (DTI) (1998) where:

- a micro firm has 0 - 9 employees
- a *small firm has 0 - 49 employees (includes micro)*
- a medium firm has 50 - 249 employees
- a large firm has over 250 employees

Using this *employee-based* definition, small firms can be classified according to a maximum number of employees, which varies from one industrial sector to another (Bolton, 1971). Thus a firm of a given size could be 'small' in one sector where the market is large and there are many larger competitors, whereas a firm of similar size could be considered 'large' in another sector with fewer players and/or generally smaller firms (Curran et al., 1992). This research also follows the Bolton Report's *characteristics* definition. According to this, a small firm is an independent business, managed by its owner or part owners, and which has a small market share (Bolton, 1971).

As an industry, printing represents traditional customised manufacturing (Lankinen, 1998). The history of the printing industry reaches back for centuries and printed products have played a very particular role in developed societies (Intergraph, 1997). After Gutenberg first invented the printing press in Germany around 1440, the industry spread across central and southern Europe over the next 150 years. The first print shop in Finland was established in 1642 by the Academy of Finland to print doctoral dissertations (Willner-Rönnholm, 1992). In Standard Industrial Classification (SIC) investigated printing firms belong to sub category 22.22, 'printing not elsewhere classified' (Business Monitor, 1995). Such general printing may be defined as that sector of the overall printing industry not concerned with the printing, publishing and distribution of national, regional or local newspapers, nor with 'industrialised' printing processes attached to other manufacturing industries, such as the printing of wall coverings or textiles (Goss, 1988b). Traditionally, general printing is taken as covering commercial printing of sales brochures, catalogues, prospectuses and company reports; periodicals; books; greeting cards and in some cases the manufacture and printing of stationery. In addition to the above, the current research sample includes firms that produce overhead transparencies or are engaged in non-impact electronic printing. These reflect areas of printing which have developed rapidly in recent years as a result of changing technology (Intergraph, 1997).

In addition to the key concepts discussed above, the following phrases frequently appear in the text and a short explanation of their meanings is given below. *Product-market configuration / positioning* refers to the products the printing firm is producing and the market where the firm is selling its products. *Added value services* refer to the activities which printing firms offer to their customers in addition to the printed product. Most of these services are delivered before and after the printing process. Such services include graphic design, advice, print finishing (including cutting, folding, collating and binding),

quality enhancing tips and packaging options, to name some of the most typical ones. A key issue is that the customer needs these services and is willing to pay for them. *Pre-press* refers to work associated with page and film production and editing of the artwork the customer has supplied to the printing firm. *Proof reading* refers to the process where the text, images and lay-out of the printed matter is inspected before the it goes to print. *Delivery of products and services* refers to the process which starts when the customer places an order for the printed matter and continues until the completed order arrives with the customer.

Comparing Finnish and UK printing firms

The following section provides an overview of the comparative setting in Finland and the UK. It highlights the differences and similarities between the country-specific business systems[5] that are the contexts in which the firms investigated operate. The section starts with a brief presentation of the national economies and small business sectors in each country. The second section presents a comparison of the printing and publishing sectors in Finland and the UK.

Both Finland and the UK are developed economies where the manufacturing industry share of GDP is around 30 per cent (OECD, 1997b). Although the basic economic structures of the two EU countries are similar there are also differences. One of them is the overall size: the UK economy is about ten times bigger than Finland as the population and GDP figures in Table 1 indicate. However, the GDP per inhabitant in 1997 was 20,368 EUR in Finland, which is some 1,134 EUR higher than the corresponding figure in the UK. This difference is often explained by the more capital-intensive nature of the Finnish economy (Eurostat, 1999).

Table 1: Finland and the United Kingdom in comparison

	FINLAND	UK
Population mill. (1998)	5 147	59 084
GDP mill. EUR (1997)	10 468	113 403
GDP per ihabitant EUR (1997)	20 368	19 234
Number of enterprises (1996)	205 000	3760 000
Average size of enterprise (number of staff)	5	5

Source: Eurostat, 1999b.

The effectiveness of such a high level of spending on capital has been seriously questioned (Pohjola, 1996). More recently, especially in the late 1990s, Finland has been investing heavily in R & D: in 1998, 2,92 per cent of its GDP (1998). In 1997 the corresponding UK figure was 1,87 per cent (OECD, 1999). The aim of the Finnish policy has been to make the country a knowledge-based society where technical know-how can be turned into an economic asset (Toolan et al., 1998). Instead of offering tax benefits to domestic or overseas businesses, the policy in Finland is directed towards offering an attractive infrastructure and skilled workforce to high technology firms (Finnish Academies of Technology, 1999).

The SME sectors reflect the wider similarities and differences between the Finnish and the UK economies. In 1996, the total number of enterprises[6] in the UK was 3,760,000, and in Finland it was 205,000. The size distribution of Finnish and UK businesses is relatively similar[7]. In both cases the average enterprise employs five people, although the proportion of micro enterprises is typically larger in the UK economy (Eurostat, 1996; European Observatory for SMEs, 1997). According to the DTI, of the 3.7 million businesses in 1998, over 2.5 million were 'size class zero' businesses - those made up of sole traders or partners without employees (DTI, 1999). Also, the UK manufacturing enterprises are somewhat smaller than their Finnish counterparts. In the UK manufacturing enterprises employing 1 to 19 people account for nearly 83 per cent of businesses. In Finland, the corresponding figure is less than 51 per cent, which means that medium-sized manufacturers are more characteristic of the Finnish manufacturing sector (OECD, 1997a). In terms of employment, small and medium-sized enterprises have a central role in both economies. By the mid-1990s SMEs' share of employment in Finland was about 40 per cent and in the UK about 62 per cent (Ministry of Trade and Industry, 1997; Bank of England, 1998; 1999).

The printing industry in Finland and the United Kingdom

Investigated printing firms (SIC 22.22) are a part of a larger publishing, printing and reproduction sector (SIC 22) that encapsulates both traditional manufacturing and features of the modern information sector (GTL, 1998). Both Finnish and UK firms are part of the wider European Union markets where publishing, printing and reproduction industries (SIC 22) employ nearly 1.8 million people. SMEs that dominate these industries account for around 70 per cent of the jobs and over 60 per cent of the sector's turnover (European Commission, 1998).

In the UK, printing (SIC 22.22) is among the largest manufacturing industries but it is also among the least well documented (BPIF, 1999). In 1996 there were 15,450 printing enterprises which employed 159,000 people outside of newspaper printing. The structure of the sector reflects the diversity of its products and the fragmented nature of its markets. There are about 10 printing firms employing more than 500 people and around 55 which employ 50 to 499, people. Large and medium-sized businesses tend to specialise in a narrow range of products in national and international markets. The vast majority of printing firms, more than 12,000, are very small businesses employing fewer than 10 people. Most of these are general printers, which cater for a local market (Business Monitor, 1998; BPIF, 1999). Although fully comparable data for the UK is not available, the BPIF (1999) and Statistics Finland (1999) data indicates that in the 1990s, production in printing has continued to grow moderately at about two to three per cent a year.

Table 2: The printing industry in Finland and the United Kingdom

Printing SIC 22.22			
UNITED KINGDOM		**1996**	**1993**
	Businesses	15 450	14 708
	Employment	159 000	145 673
FINLAND		**1997**	**1993**
	Businesses	988	952
	Employment	10 753	13 433

Source: Statistics Finland, 1999; Business Monitor, 1998.

The printing and publishing (SIC 22) sector has an important role in the Finnish economy. In 1997 the Finnish graphic arts industry was the seventh largest sector in terms of gross production value (Statistics Finland, 1999). Ten of the largest enterprises, employed about

25 per cent of the sector's work force and accounted for one third of the sector's turnover (GTL, 1998). As in the UK, the Finnish general printing industry (SIC 22.22) is very fragmented; about 70 per cent of the firms employ fewer than five members of staff (Statistics Finland, 1999). In 1997, there were 988 printing enterprises which specialised in other than newspaper printing. They employed 10,753 people (Statistics Finland, 1999). The comparative data from 1993 shows that by 1997 the number of employees had decreased slightly[8] while the number of enterprises had increased moderately (Lankinen, 1998). Most of the small Finnish printing enterprises serve local markets just like their UK counterparts.

Researching small printing firms

Printing is an industry with a high concentration of small firms. It is characterised by high and low technology, high and low skill sectors, unionised and non-unionised firms, manufacturing and service market orientations and craft and non-craft employers (European Commission, 1997). Printing's long established industrial traditions and its perceived societal importance have attracted the interest of British social scientists. Much of the research has concerned industrial relations and the owner-manager's role in printing firms. Other research has focused on skills and training needs, trade union issues, local labour market conditions, product demand factors and technology (Goss, 1989; 1991). One conclusion which can be derived from the existing research is that internal relations within the small printing firm are complex and often in many senses, contradictory. The essence of such a dynamic and complex situation is hard to capture without a detailed, micro level investigation. In Finland the literature search did not produce any relevant social science based research on printing firms. Instead, a large number of technical research reports on the printing industry were identified (Byckling and Kaitera, 1995; Lindqvist, 1996; Guy et al., 1998). Typically, these reports were too technical to be used in the current research. However, the existence of these numerous technology reports as well as the large state-funded technology research programmes on the printing industry are indicators of Finland's technology-intensive industrial strategy (Lankinen, 1998; Steinbock, 1998).

Cannon (1967) was among the first to conduct research on printing firms. He interviewed one hundred compositors (typesetting staff) in London during 1959-60 to explore the relations between compositors and other print workers and their political views. Among

other things, this study highlighted the fundamental changes which had recently transformed printing, an industry which used to be characterised by long established traditions and stable working practices. Cannon quoted Moxon, who wrote in the 17th century, 'Every Printing-house is by the Custom of Time out of mind, called a Chapel'. In the 1960s these 'chapels' were still very much functioning, providing a formalised expression of the occupational community and laying down the customary working practices within the printing firm.

Over the last 30 years, these traditional practices have lost their significance because of advances in technology and significant changes in the labour market. Electronic typesetting has rapidly transformed the entire pre-press process and the required skills. From a labour market perspective, the chapel represented a highly developed form of trade union organisation in the workshop. The conventional view in the 1960s was that it served as a vehicle for confrontational and explicitly conflictual worker-employer relations (Sykes, 1967). In the current economic environment and small business context this seems inappropriate. Employees' informal, personalised relations with the management, coupled with the concern over firms' survival and jobs, no longer provide a fertile ground for this type of trade union activity (Goss, 1988a; Lankinen, 1998).

The industrial harmony thesis (Ingham, 1967) has been researched in the context of small printing firms, although it was originally based on a study made in the engineering sector. This view perceives internal relations as being more harmonious in small firms than in larger ones. The argument is based on the assumed personalised relations between employers and staff as well as the lack of bureaucracy in smaller firms (Ingham, 1970 and Bolton, 1971). Further, Ingham claimed that employees in small firms have a 'non-economistic-expressive' orientation to work. Instead of financial rewards small firm employees attached higher importance to non-economic rewards such as interesting work and satisfying social relations in the work place. Curran (1978), who investigated employees' attitudes and behaviour in small and large printing and electronic firms, challenged this view. Since then several other studies have demonstrated that even in small firms, internal relations are complex and not necessarily harmonious (e.g. Curran and Stanworth, 1981, Rainnie, 1985, 1989 and Goss, 1988b; Kitching, 1997). In his criticism of the enterprise culture Goss (1991) went further and argued that the appearance of industrial harmony in small firms is a consequence of an inherent power imbalance between employer and employed, rather than an indication of an absence of conflicts.

Scase and Goffee (1982), Felstead (1988) and Goss (1988a, 1989) have highlighted the owner-managers' important role and significance in a small printing firm's business capacity. Managerial orientation and vocational attachment are regarded as the two main attributes which influence the style and character of small firms' business activity (Goss, 1989). In particular, owner-managers' involvement in craft printing is suggested as influencing their managerial strategies. Despite their key role, owner-managers' actions have to be seen in the context of the overall business, which, among many other things, limits their choices and managerial activities (see Chapter Two p. 25).

Technological change was a fashionable research topic in the late 1970s when small firms were seen as particularly fertile ground for innovations (Felstead, 1988). Since then this view has been questioned and size determinism has been largely neglected in favour of more complex explanations (Burrows and Curran, 1989). However, technological change has had a major impact on small printing firms' business environment since the 1980s. New technologies, such as electronic typesetting and electronic printing, diffuse quickly, attracting newcomers with no previous background in the industry. These tend to operate in a different ways from long-established printing firms. Franchised high street printing shops provide an example of firms which are far more profit driven and willing to use less skilled labour than traditional craft based printing firms (Felstead, 1988). The precise impact of new technology has been far from uniform, reflecting the very different technical requirements within the printing industry. Emerging threats and opportunities are related to product ranges, output volume, production technology and labour requirements which can be quite different between the segments of general printing. So far research has revealed that new technology is changing the required skills and can have both deskilling and enskilling effects (Goss, 1988b; North et al., 1994, Lankinen, 1998).

In summary, research on small printing firms shows how the change from traditional craft based manufacturing is driven by both technological advances and the introduction of new forms of management and work practices (Bryson and Daniels, 1998). Although printing represents a traditional industry, it consists mainly of information processing and presenting, which provides an ideal platform for new technology based applications. Being in such a pioneering position means that printing can offer some valuable early indications of the wider changes which characterise the evolution of capitalist economies and organisations. Since printing firms supply customised products to order they are seldom

able to manufacture on stock as other industrial sectors can (European Commission, 1997). This type of direct link between demand and production is typical of services. Hence the printing industry provides a good opportunity to investigate the interface between services and manufacturing (Lankinen, 1998).

The plan of the thesis

Chapter Two offers a review of existing literature relevant to the discussion on small printing firms' service capability. Because the literature which explicitly addresses this issue is limited, much of the review looks at the wider body of research on marketing, customer relations, service and quality. A small business element relevant to the research is incorporated in each of these discussions. A series of weaknesses and omissions are identified which any adequate account of the role of services in small manufacturing firms needs to address. Chapter Three describes the methodology adopted and the research process in detail.

The following four chapters present the empirical material collected. Chapter Four provides evidence and arguments on the sample firms' customer relations and their significance for service delivery. Chapters Five and Six highlight the diversity of service and quality concepts, concerns and management practices in the sample firms. Chapter Seven offers further evidence on customer relations and their service implications by incorporating the buyers' perspective into the discussion. It also introduces a buyers' perspective to service and quality issues, adding another valuable comparative element to the analysis. The complex, subjective and interconnected nature of service, quality and price are further explicated in the service delivery process analysis. The variety of service offerings and their connections with the different types of customer relations are also analysed. Chapter Eight draws together and synthethises the analysis of the services' role in the small printing firms. It illustrates the linkages between different types of product-market configurations and the added value potential of manufacturing-related services. Further, it shows that service capability requires a fit between the environment, the firm's strategy and its internal processes. Finally, the concluding chapter summarises the argument and draws out the key implications for a broader understanding of small printing firms' service capability.

Notes

[1] According to OECD (1997), between 30 to 60 per cent of all SMEs can be characterised as 'innovative', but only a relatively small share, about 10 per cent is technology based.

[2] The added value concept is widely used in the literature and it refers to the value of the improvement made to goods or services at any particular and separate stage in their production. It is the difference between the price of a product or a service taken as the basis for improvement and the price at which the improved product or service is sold (Greener, 1994).

[3] The notion of 'sensitising concepts' calls to our attention the fact that the observer does not enter the field with a completely blank slate. While the inductive nature of qualitative inquire emphasises the importance of being open to whatever one can learn during fieldwork, some way of organising the complexity of reality is necessary (Patton, 1990:218).

[4] According to current EU definition (European Observatory for SMEs, 1997):

Small firms:

- employs less than 50 staff
- turnover less than 40 meuros, or;
- balance-sheet total less than 5 meuros

Medium size firms:

- employs no more 249 staff
- turnover less than 40 meuros or;
- balance-sheet total less than 27 meuros
- no more 25 per cent of equity is owned by a non-SME
- a venture capital firm which has no overall control, may have an equity which exceeds 25 per cent share.

[5] Whitley (1992) outlines business system concept as a tool which can assist comparative analysis. In his view the comparative analysis of business systems assumes not only that market's, firms and economic outcomes are socially structured and embedded phenomena, but also that they are significantly affected by variations in social institutions and structures so that paths to competitive effectiveness and economic success differ across institutional contexts. Thus, economic rationalities reflect differences in social institutions and there are variety of distinct ways of organising economic activities which are effective in different contexts. Business system based analysis takes 'seriously' the socially constructed nature of imperfect markets and focuses on the comparative understanding of how societies, markets and firms are mutually constituted and changed.

[6] These figures represent the size-class structure of non-primary private enterprises by country in 1996 (European Observatory for SMEs, 1997).

[7] This size structure represents non-primary private enterprises.

[8] The employment figures in Finland reflect the serious recession which caused printing firms to cut staff in the early 1990s (Lankinen, 1998).

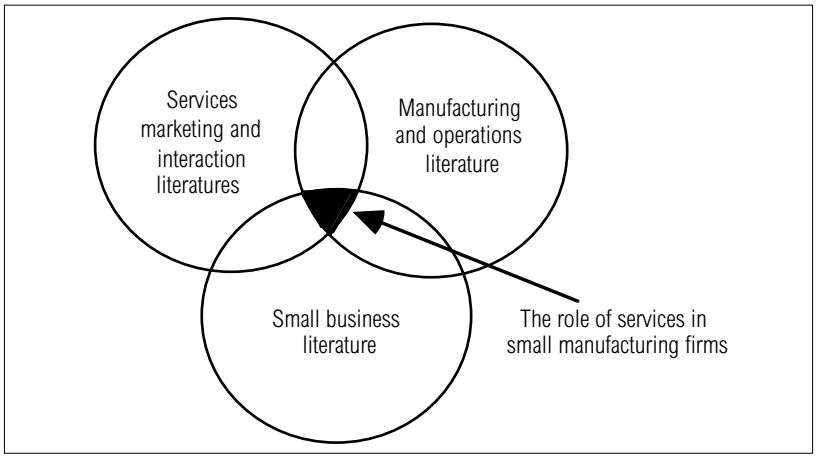
2. EXPLORING THE DETERMINANTS OF SERVICE CAPABILITY IN MANUFACTURING FIRMS

Introduction

This chapter examines critically the literature that is related to the basic research issue: the determinants of service capability in small printing firms (see Chapter One, p. 2). The aim is to identify the major weaknesses and omissions in existing accounts and to identify the key issues that any adequate account of the service capability of small manufacturing firms must address.

By reviewing the relevant literature this chapter presents a theoretical foundation upon which to base the research. Arguably, several bodies of knowledge have contributed to this area. These include the literature on services, marketing and buyer/supplier interaction as well as research on small businesses and quality. However, a number of important qualifications need to be made at the outset. The examination revealed that only a very limited amount of the services research has concerned services in a manufacturing context. In addition, the manufacturing, operations and interaction literatures pay only limited attention to services. Much of the literature focuses overwhelmingly on larger firms and it can be argued that it is of limited relevance in understanding the role of services in small manufacturing firms. Finally, the small business literature recognises service businesses but it remains mostly silent on service activities in the manufacturing context.

Figure 1: Research gap for the study



The black area (Figure 1.) indicates the research gap – the role of services in small manufacturing firms – which the current investigation addresses. Despite the limited amount of research, it has been recognised that services can be particularly relevant for small manufacturing businesses (Storey, 1994:147-8; Maclaran and McGowan, 1999). It has also been argued that small firms, in particular, are well able to deliver customer tailored products and services (Mills, 1986). These and numerous other issues around the basic research issue are addressed in detail later in this chapter.

The following section will first discuss the marketing management approach, followed by sections on buyer-supplier interaction and relationship marketing. The discussion of the second main body of literature examines the service concept and some views on services roles in manufacturing businesses. After this, quality issues are examined as a specific aspect of services. The final section identifies the key issues which any study on services in small manufacturing firms has to address in order to go beyond the existing, mainly large-firm based literature.

Relations between suppliers and customers

The critical review of the marketing literature shows how it has developed from transaction management towards an emphasis on long-term customer relations (Sinclair et al., 1996; Gwinner et al., 1998). Industrial buying behaviour and interaction research are the early contributors to this shift in long-term marketing focus. The relationship marketing represents more recent management research in this area.

Although marketing and customer relations are equally important for both large and small businesses, academic research into the marketing/small business interface was very limited until the 1980s (Davis et al., 1985). While the amount of small business marketing literature has increased, empirical evidence has been generated only in an ad hoc manner (Carson, 1985; Carson et al., 1995). As a consequence, knowledge about marketing in small businesses remains limited and small business marketing theory underdeveloped (Siu and Kirby, 1998). The work of marketing scholars tends to apply rigid normative concepts, which do not take into consideration the constraints and limitations of the small business (Möller and Anttila, 1987; Brooksbank et al., 1992). On the other hand, many small business

researchers adopt a simplistic approach to marketing because of their over-emphasis on small firms constraints and reactive behaviour. As a result, they do not build effectively on the knowledge developed in the marketing discipline (Scase and Goffee, 1987; Blackburn et al., 1997).

From marketing management to relationship management

The marketing management approach has its roots in the 1960s. By that time the 'marketing concept' had developed into an idea that firms exist to satisfy customers' needs at profit. To help businesses to achieve this goal, a management tool called 'marketing mix' was developed (Möller, 1992). According to this thinking, firms could satisfy customers' requirements profitably by developing an optimal product, place, price and promotion solutions for the chosen target markets (Kotler, 1967). In the 1980s criticism of this paradigm grew, mainly because it fails to cover many marketing related phenomena (Grönroos, 1978; Håkansson, 1982; Gummesson, 1987a; Christopher et al., 1991; Möller, 1992; Payne et al., 1995). Its basic assumptions were increasingly questioned because they seemed to offer a very limited understanding of what was happening in the markets. The stress on atomistic, largely passive customer markets – stimulus-response relationships between suppliers and customers made up of single transactions – did not seem to reflect reality.

The literature on industrial and organisational buying was among the first to highlight the importance of on-going relationships where both customers and suppliers have an active role (Bonoma and Johnston, 1978; Berry, 1983; Wilson and Mummalaneni, 1986). Robinson et al. (1967) developed a two-dimensional process typology of buyer behaviour patterns. This *'buy grid'* model classifies the buying situation into new task, modified rebuy and straight rebuy – depending on how novel the situation is for the buyer. Each one of these situations requires different types of decision making, risk taking and problems solving of the buyer.[1] Webster and Wind (1972) and Sheth (1973) developed a *'buying centre'* concept that examines participants and their decision-making processes in different buying situations.[2] In their model numerous individual, product, company and situation-specific factors converge in a 'black box' called the *'industrial buying process'*. All of these approaches share the same fundamental problem. On a detailed level the models are overly

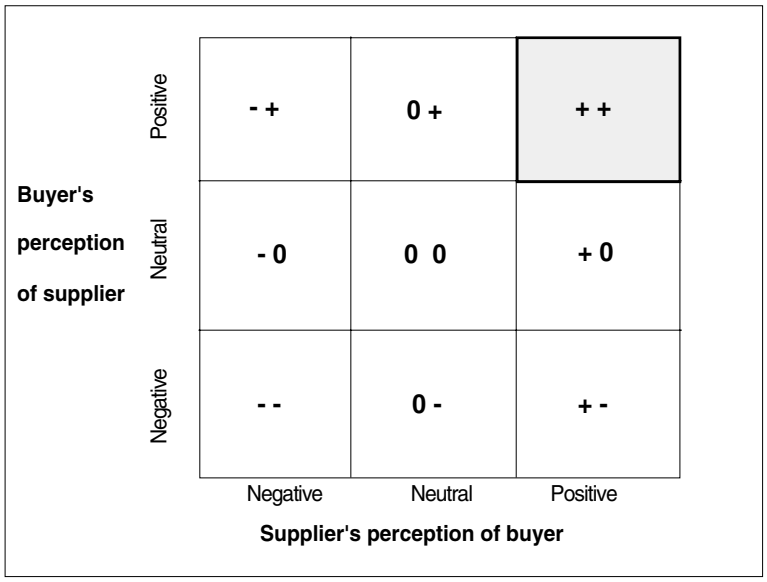
complex to apply, and, if made less detailed, contain so many 'black boxes' that they are hardly useful.

In response to criticism, Choffray and Lilien (1978) developed a more operational *'industrial market response'* model. In this model the buying process progresses from awareness to acceptance to individual evaluation and finally to a group decision on the supplier. Although less complex, this model shares the major weaknesses with other buying process models. The focus is on individual transactions and these models only concern buyer side processes (Ford, 1990:1-3). Their weak predictive ability implies that they do not capture the essence of the buying process (Moriarty, 1983; Eckles, 1990:51-8).

The industrial marketing and purchasing (IMP) approach was a reaction against seeing the business world as single transactions, separate marketing and purchasing activities, and buyer-seller confrontation. Instead it emphasises longer-term buyer seller interaction characterised by a reciprocal interdependence (Håkansson, 1982; Ford et al., 1986; Wilson and Muammalaneni, 1986; Dwyer et al., 1987; Ford, 1990; Möller, 1992). The interaction approach combined organisational aspects with marketing theory by recognising that extended relationships require multiple level interaction and its management. More recently the IMP approach has further expanded its scope from single relationships to networks of relationships. It has nonetheless retained a strong emphasis on variable based models, which are very complex and have a tendency to 'run ahead' of their empirical base (Ford, 1990: 541-2). Finally, none of the models addresses the issues specific to small firms. There is a need for further research in this area.

Interest in customer relations rapidly expanded in the 1990s, from industrial markets to services marketing. It has been pointed out that business-to-business markets and service delivery both share strong interpersonal elements and a relative lack of objective measures for evaluating quality (Czepiel, 1990). As a result, customer relations are a particularly important element in marketing and are now seen to represent the immediate context in which services and goods are delivered (Liljander, 1995). It is clear that customers and suppliers can have negative, neutral or positive attitudes towards each other (Campbell, 1985; Liljander and Strandvik, 1995). The situation, where both parties are satisfied with the relationship, is only one option among other less ideal situations (Figure 2).

Figure 2: Possible combinations of buyer supplier relations

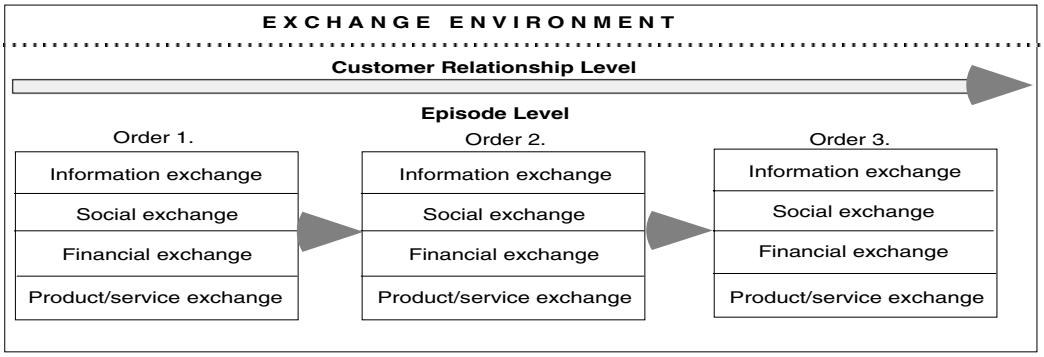


Source: Liljander and Strandvik, 1995.

Often only the lack of alternatives and high switching costs are the reasons why strained relationships continue to exist. For example, an asymmetric balance of power is typical of many situations and the outcome is a dependent type buyer-supplier relationship. When both parties place low importance on the relationship, it often develops into a market exchange situation where customers use several suppliers (Campbell, 1985; Sinclair et al., 1996). Such customers 'shop around' and even regular vendors will need to offer immediate reasons for continuing the relationship (Bund Jackson, 1985). As reasons for buyers' and sellers' different behaviour patterns, Campbell (1985) suggests a number of product, industry, company and individual-related attributes[3]. A key issue that these types of typologies are unable to capture is the complex dynamic nature of relations. Buyer-supplier relations do often involve several persons on both sides and these people represent a variety of dynamic views and perceptions of the transactions (Holmlund, 1996; 1997). In addition, most businesses are involved in different types of customer relations simultaneously. In such situations firms, in particular small ones, are unlikely to follow any long-term interaction strategy. Rather, their survival is based on the ability to adapt constantly to different types of situations (Carson et al., 1995).

Each business relationship can be seen as a two level phenomenon that consists of series of episodes (Håkansson, 1982; Liljander and Strandvik, 1995). In Figure 3. the top arrow represents the on-going customer relationship, and orders 1, 2, and 3 represent customers' purchases from the supplier firm.

Figure 3: Customer relationship and episodes



Adapted from: Håkansson, 1982; Liliander, 1995.

According to Håkansson (1982) each episode has four exchange elements: product and/or service, information, financial and social. Each one of these exchange elements is influenced by numerous external factors. In the current research these include Finland and the UK as the national contexts, printing as the industrial context and printing process as the technological element.[4]

Depending on customers' consumption patterns, relations can consist of frequent episodes that take place, for example, once a week or infrequent episodes that may take place once a year or even less frequently. Familiarity with the supplier and the perceived importance of the purchase are often linked to long-term relations and trust, which seem to be one of the key elements of inter-firm relations (Lane and Bachmann, 1996). It is claimed that trust can enhance organisational performance by reducing risk, uncertainty and transaction costs.[5] Besides trust there are many other ways through which buying firms seek to secure the supply of needed products and services (Ford, 1980; Ford et al., 1986). Buyers may simply choose the supplier that offers the lowest price among those who meet their functional requirements. As the economic importance or the uncertainty of the transaction increase, social and information exchanges tend to acquire a more important role in securing positive outcomes. It is argued that through the socialisation process, communications may become established to help the parties to complete exchanges successfully. Although social exchanges typically include both positive and negative experiences, they can encourage parties to make adaptations based on each other's requirements. As a result, the relationship may become so well established and responsibilities so routinised that neither party questions them.

To summarise, the interaction literature made significant research-based advances during the 1980s and 1990s. Like industrial buying, it has a tendency to develop rather complex

models that make the analysis and application problematic. This can easily result in an arbitrary selection of variables. For example, Campbell (1985:35-38), 'in the interest of simplicity', selects fairly randomly only some of the 'most relevant' variables into his model, without giving a clear explanation how each variable was selected. The inherent problem of the interaction approach seems to be the incompatibility of the complex research area and the chosen variable based modelling approach.

Relationship marketing

The theory of relationship marketing developed in the 1990s and it adopts many ideas originally developed in industrial and services marketing (Möller and Halinen-Kaila, 1997). However, relationship marketing has a more managerial approach than research based interaction literature. It claims to represent a shift from products and firms as units of analysis to people, organisations, and the social processes that can bind actors together in on-going relationships (Webster, 1992). In management terms, it refocuses marketing towards relationships and 'partnerships' which provide added value and increase customer loyalty (Christopher et al., 1991; Morgan and Hunt, 1994; Payne et al., 1995; Ravald and Grönroos, 1997; Gummesson, 1996; Clarkson et al., 1997). These types of idealisations are typical of relationship marketing and they fail to highlight that suppliers' primary aim is to generate profits. In the real world business relationships are complex and often characterised by buyers' and sellers' contradicting interests. In addition relationship marketing is largely based on wide generalisations that do not acknowledge the marketing implications of sectoral differences and firm size. The resulting loose rhetoric is hardly based on empirical evidence and it also lacks sound theoretical basis (Möller and Halinen-Kaila, 1997).

Due to its managerial perspective, relationship marketing tends to maintain a suppliers' perspective and it offers a less balanced view of the relationship than the IMP approach (Möller, 1992). The assumption is that by cultivating long-term customer relations both suppliers' and customers' profitability and competitive position can be improved (Berry, 1983; Reichheld, 1994). The added value to the customer is seen as a summation of all the positive effects that the supplier has upon the customer's business. It is claimed that in long-term relations suppliers have a chance to develop an understanding of the 'customer's value chain' and contribute more to it (Christopher et al., 1991). Integration between

marketing and other operations is claimed to be an essential feature of the business if added value is to be delivered to the customer (Heskett, 1987).

Table 3: From marketing management towards relationship marketing

Transactional focus	Relationship focus
- Orientation to single sales	- Orientation to customer retention
- Discontinuous customer contact	- Continuous customer contact
- Focus on product features	- Focus on customer value
- Short time scale	- Long time scale
- Little emphasis on customer service	- High customer service emphasis
- Limited commitment to meeting customer expectations	- High commitment to meeting customer expectations
- Quality is the concern of production staff	- Quality is the concern of all staff

Source: Payne et al., 1995, p. 32.

Payne et al., (1995:32) have produced a typology (Table 3.) that in their view presents the main differences between traditional marketing management and relationship marketing. Orientation towards single sales and customer retention represents the alleged key difference between the approaches, although even basic level marketing management acknowledges the significance of customer retention (Kotler and Armstrong, 1994). Continuous versus discontinuous customer contacts are another key difference between the two marketing approaches. However, customer relations are not merely a reflection of a firm's marketing efforts. Various types of products, customers and markets develop different types of interaction, which in some cases are more continuous than in others (Bund Jackson, 1985). The same notion applies to other alleged differences; they are all dependent on numerous product, market and firm specific attributes (Kotler and Armstrong, 1994; North et al., 1998). Such variations also exist among small printing firms, which make use of different technologies and cater to numerous markets and industries (Intergraph, 1997).

Relationship marketing not only draws together elements of the marketing, customer service and quality management literatures, it also adopts an 'expanded market' concept, which suggests that besides customers and firms, firm's own staff and other interest groups should also be seen and treated as markets.[6] Although strongly advocated, the exact nature of the 'extended markets' concept remains vague. It is also debatable whether there is any real gain in stretching the marketing concept and applying it to areas such as recruitment and human resources management. Despite the differences, both relationship marketing and more traditional marketing share the belief that systematic marketing can have a significant impact on customer behaviour. At least in the case of small firms this may be less than obvious due to their scarce resources and lack of systematic

marketing efforts (Carson et al., 1995). The reviewed literature on relationship marketing addresses long-term customer relationships, which is an important issue for small printing firms (Intergraph, 1997). However, it is of limited use because it tends to be too oriented to large firms and generalistic in nature.

The service concept and service management

This section presents a critical review of alternative service conceptualisations and examines services in the context of small printing firms. This analysis relates the existing literature to the adopted sensitising service concept, which suggests that services include all supporting and value adding activities before, during and after the print production process and as part of the outcome which is delivered to the customer (See Chapter One, p. 4).

In management research, service-specific issues emerged first among marketing researchers (Fisk et al., 1993; Brown et al., 1994; Grönroos, 1994). Services marketing developed academically to fill a gap between marketing practice and a marketing discipline dominated by positivist and normative approaches to knowledge acquisition and use (Grönroos, 1978; Arndt, 1985; Bloom, 1987; Hunt, 1990; Morgan, 1992; Berry and Parasuraman, 1993). During the last 20 years academics have made efforts to conceptualise services, to establish that services are different to other products and that they represent special challenges for management (Grönroos, 1978; Gabbot and Hogg, 1997).

The first serious problem in discussing services lies in defining what they are (Foxall, 1985:2). Neither service management specialists nor economists have been able to develop a widely accepted definition for the term and the conceptual debate on services continues.[7] (Sayer and Walker, 1992; Gabbot and Hogg, 1997). Grönroos (1990) lists a selection of 11 definitions of the term dating from 1960, before, presenting what he describes as a blend of definitions suggested by Lehtinen and Lehtinen (1982), Kotler and Bloom (1984) and Gummesson (1987b):

> A service is an activity or series of activities of more or less intangible nature that normally, but not necessarily, take place in interactions between the customer and service employees and/or physical resources or goods and/or systems of the service provider, which are provided as solutions to customer problems. (Grönroos, 1990:27)

Such a nebulous definition leads to extremely 'fluid' boundaries between manufactured goods and services (Quinn and Paquette, 1990). The same applies to the Rust and Oliver (1994) definition, which claims that all business actions are 'services'. Their argument is based on the idea that all products, whether they have a physical content or not, deliver some form of service. Sayer and Walker (1992) claim that such theorists create confusion from the outset by failing to distinguish carefully between goods and labour. Their argument is that all goods provide a service in the sense of a benefit, or filling a need; that is the use value. Hence, the valid distinction between goods and services can therefore only lie in their material form, services being mainly immaterial in nature. Despite the difficulties in conceptualising the term 'services', the majority of the literature accepts that at least three basic characteristics distinguish services from manufactured goods. The service itself is physically intangible, it is more like a process than a thing, and production and consumption are to some extent simultaneous activities (Mills, 1977; Shostack, 1977; Grönroos, 1990). The following quote further highlights the problems in defining services:

> 'To illustrate, one typically cannot touch or hold service because it tends to be more of a performance than an object. Due in part to this performance nature, service production and consumption occur simultaneously. As a result of this inseparability the customer not only enters the "factory", but also becomes part of the production team. Likewise, most service performances vary from day to day, customer to customer and provider to provider, reflecting the heterogeneous nature of services. Finally, unlike goods, services cannot be inventoried and stored because of their perishability' (Swartz et. al, 1992:3).

Because of the mainly intangible nature of services, the essence of what is purchased is a performance during the service delivery process.[8] The inseparability of the production and consumption of services, as well as their perishability, are both related to their real time performance nature, which makes it impossible to store services. Thus it is important to mark the difference between the two principal components of services: the way they are delivered and the outcome which the customer can consume (Grönroos, 1990; Sayer and Walker, 1992). As a result of a comprehensive analysis Lovelock (1992) claims that service definitions attempt to answer at least one of the following questions:

- What is the nature of the service act?
- What type of relationship does the organisation have with its customers?
- How much room is there for customisation and judgement on the part of the service provider?
- What is the nature of demand and supply for the service?
- How is the service delivered?

The above types of questions also represent the main lines of inquiry in the current research. The focus is on capturing respondents' views of 'service' and understanding how they arrive at it.

The service sector represents a highly heterogeneous group of 'non-manufacturing' activities and businesses that can have very different operating logics. A typology by Silvestro et al. (1992) draws together the existing knowledge from the operations and service management literatures. In this typology the number of customers 'processed' per day per service outlet is suggested as a key determinant influencing the nature of a service operation. Six other dimensions used in characterising the service business process are presented in the Table 4.

Table 4: Service activity typology

Number of customers processed per day per service outlet				
LOW				**HIGH**
People focus				Equipment focus
Long customer contact time				Short customer contact time
High degree of customisation	◄	———	►	Limited degree of customisation
High degree of dicretion				Limited degree of dicretion
Value added in the front office				Value added in the back office
Process focus				Product focus
Professional services (e.g. consulting)	◄	———	►	Service Shop (e.g. retail banking)
	◄	———	►	Mass Services (e.g. retailing)

Source: Silvestro et al., 1992

As the daily number of customers increases, the service delivery tends to shift from being people-based to equipment-based. Some authors question the idea of so-called 'equipment based services' by arguing that all 'real services' work directly on or for the consumer and involve a unique transaction between buyer and supplier (Sayer and Walker, 1992). As the contact time per customer becomes shorter the degree of customisation also diminishes, the level of employee discretion becomes less important, added value creation moves from front office to back office, and the operation focus moves from a process to product orientation.

Based on their typology, Silvestro et al. suggests three basic types of service processes: professional services, service shop and mass services. To an extent these categories apply also to small printing firms. Highly specialised professional printing firms tend to offer their

services to a relatively limited number of customers and the contact time per each transaction is relatively long because the offers are highly customised and design oriented. Thus pre-press (front office) stage creates much of the added value by customising and designing printed matter that meets customers' requirements. Instant printing comes close to Silvestro's mass services category in being characterised by large numbers of customer transactions and a limited provision for customer specific variation. In such cases added value to the customer comes mainly from competitive prices, convenient access to the printer and a fast delivery of products. General printing businesses are often service shops that fall between the above extremes. Although the typology presents valuable ideas, it also leaves many questions unanswered. The process attributes are unlikely to be in linear relation to the number of processed customers and thus these points of discontinuity need further investigation. Moreover, both people and equipment focuses can be high simultaneously, as in the case of complex retail banking services and high end printing. In both cases a high personal service element is accompanied by very sophisticated information and/or printing technologies. These types of situations highlight how difficult it is to capture a complex reality into any two dimensional typology.

To date the management literature seems to have only a limited capability for analysing services, and many questions remain open. Thus, the division of labour approach offers valuable insights as it attempts to isolate services from other types of economic activities (Sayer and Walker, 1992; Bryson and Daniels, 1998). On the conceptual level the division of labour concept divides all economic activities into production, circulation, consumption and labour processes. Being a part of the labour process, services are inevitably also performed within production, circulation and consumption categories. For example, printing is a manufacturing industry but service activities are important within the production process, especially at the sales, pre-press and print finishing stages (Intergraph, 1997). As a result, it is very difficult, if not impossible, to make a clear distinction between service and manufacturing industries. However, labour services can be distinguished on the basis that they are personal, unique and irreproducible. Even if service outcomes in some cases are material, their personal, unique and irreproducible nature justifies their classification as 'services'. To name one, a haircut is an example of a unique material service outcome. The ever evolving division of labour complicates manufacturing processes and makes it ever more difficult to analyse the role of services. For example, current print production processes involve increasing numbers of staff engaged in indirect productive functions before, around and after products are actually manufactured. These intermediary inputs into the

production of other goods and services are not meant for final consumption although they are often labelled 'intermediary services', even if they are not unique, personal, immaterial or irreproducible (Stanback et al., 1983; Ochel and Wegner, 1987; Eckles, 1990; Quinn and Paquette, 1990).

In summary, the service concept analysis above has clearly demonstrated the complex nature of the phenomena. The labour service approach can help to produce a sharper definition for services than the management literature reviewed has been capable of. It also recognises services' vital role in manufacturing, circulation and consumption categories. Nevertheless, the labour service concept itself is complex and thus difficult to apply. Overall the discussion illustrates the complex, intertwined nature of services, manufacturing and other economic processes (Grönroos, 1990; Bryson and Daniels, 1998). The following section will examine services in the manufacturing context in more detail.

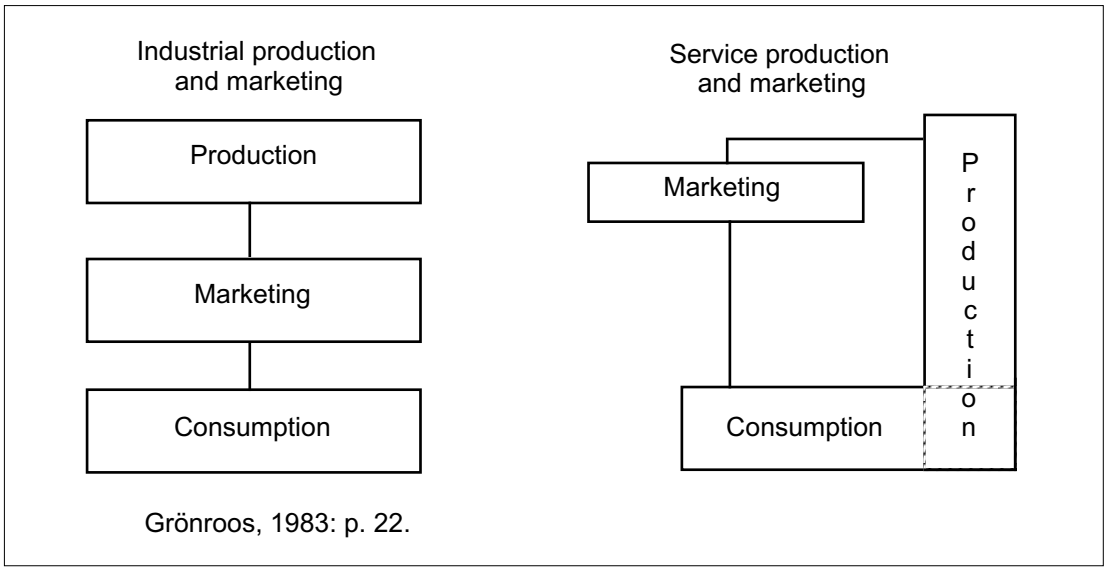
Services in the manufacturing context

It is a widely advocated idea that manufacturers may benefit if they provide better service to their customers (Chase and Erikson, 1988). This discussion has mainly taken place in the popular press and the more academic literature has not elaborated on the role that services have in the manufacturing context (Bowen et al., 1989). While the definition of 'services' remains elusive, it has become increasingly common to re-label existing industry sectors as 'services' (Quinn and Paquette, 1990). Information technology (IT) and advanced manufacturing technologies, which allow mass customisation, have further blurred the difference between goods and services (Sayer and Walker, 1992; Grönroos, 1990; O'Farrell and Hitchens, 1990). The problems in distinguishing services from other types of goods may seem rather irrelevant. After all, customers usually purchase a composite that involves elements of both services and goods (Ahtola, 1985; Foxall, 1985:2; Vandermerwe; 1992; East, 1997). However, the differences between goods and services mean that they should be recognised and addressed appropriately. From the management point of view the problem remains how to deliver effectively increasingly complex combinations of products and services (Heskett, 1987; Swartz et al., 1992).

The management literature does not seem very consistent in discussing the role of services in manufacturing industries. It tends to recommend that manufacturing firms adopt

service organisation strategies, practices and organisational arrangements (Bowen et al., 1989; Grönroos, 1994). However, the same literature also emphasises the vital differences between products and services (Shostack, 1977; Grönroos, 1978; Möller, 1992). In Grönroos's (1983) services marketing model part of services production and consumption happens simultaneously (Figure 4). In printing firms' case the pre-press stage shares many characteristics with services production mode – on the right – where part of the production/consumption takes place simultaneously in interaction between customer and supplier. The actual printing is closely similar to the industrial production and marketing situation – on the left – where production and consumption are distinctively separate activities. For instance, people who read a magazine have no contact with the printing firm.

Figure 4: Grönroos's service marketing model



Grönroos, 1983: p. 22.

The above demonstrates how difficult it is to separate service and manufacturing elements, for example in printing. However, there is evidence that services are important for manufacturing firms, because service components are often integral to the delivery, consumption and use of tangible goods (Bharadwaj et al., 1993). In such a situation, manufacturers need to manage both their own service activities and customers as a productive resource and contributors to quality. It is argued that effective customer participation can improve suppliers' productivity and increase the likelihood that the benefits the customer is seeking are met (Bitner et al., 1996).

Figure 5: Manufacturing and service orientations

Typical characteristics of service operations	Service orientations in manufacturing	Typical characteristics of manufacturing
- Intangible output - Customised output - Customer participation - Simultaneity of production and consumption - Labour intensive	Services as: - Component or element of the product - Service oriented goals in firm strategy - Adopt appropriate service organisation arrangements	- Tangible and standardised output - Technical core buffered from the customer - Inventory of goods consumed at a later point in time - Capital intensive

Source: adapted from Bowen et al., 1989.

According to Shostack (1977) there are very few 'pure' products or services, rather there is a continuum from tangible dominant goods to intangible dominant services. Figure 5. summarises some typical service operation characteristics on the left and the characteristics of manufacturing on the right. Small printing firms can be seen as services oriented manufacturing, bearing in mind that there are many firm specific variations. Sales and pre-press stages are typically the most service intensive parts of the printing business. They may include such service elements as consultative sales, design and delivery of the customised printed matter. Customised print is mainly produced to order and the lack of inventories means that there is a direct link between demand and production. Most customers are involved in print production by participating in proof reading and other forms of quality control. In addition, on-line connections tie customers and printing firms together closer than they have ever been before (Intergraph, 1997).

In manufacturing, the physical good is typically seen as the core offer which is supported by services. It is argued that services can also be used to augment a product for competitive advantage (Buzzell and Gale, 1987; Blois, 1991). In such a situation goods and services can be equal elements and it is often services which differentiate the offer to the customer (Porter, 1980; Gummesson, 1996). 'Augmented products' are claimed to have three dimensions that constitute the overall marketed good: the core benefit, the tangible product, consisting of features, styling and brand name, and the augmented product that includes various service elements. These can include acceptable delivery time, correct installation and a friendly attitude by employees who deliver the product or service (Gilmour, 1982). Other services which often accompany goods include credit, warranty, and after-sales support (Levitt, 1969). It has been suggested that especially in mature industries like printing, services rather than product innovations are likely to be a source of differentiation, competitive advantage and growth (Porter, 1980; Miller, 1987; Intergraph, 1997).

Another line of argument is that the basic choice for manufacturing firms is to emphasise customised production and customer responsiveness or the volume manufacturing of standardised products (Chase, 1978; Buffa, 1980; Bowen et al., 1989). Due to their limited production capacity, small printing firm's natural choice would seem to be a customer responsive strategy, accompanied by close customer contacts and strong relationships. According to this line of thinking, manufacturers that produce customised products and have high customer contacts can benefit if they move towards service organisation type practices. According to Vesalainen (1995), small manufacturers tend to find any such 'adjustments' not only risky but also that it absorbs too many resources, even to an extent which may render the day-to-day activities of the firm difficult. By adopting new business practices, manufacturers may also risk losing some of their existing customers who do not like the changes. This is a serious problem for a small printing firm that operates in a local market where the customer base is very limited. Finally, customers service requirements can be very dynamic which can make service-based specialisation problematic for small manufacturers.

Services and small manufacturing firms

So far, the role of services in small manufacturing firms has hardly been addressed in the literature. However, small firms' significant contribution to the activities of the service sector has been widely recognised in Finland and the UK (Bank of England 1997; Ministry of Trade and Industry, 1997). One suggested reason for SMEs' dominance in these activities is that their inherent characteristics favour them as service providers. Service management literature suggests that the successful delivery of services is linked to good internal relations between management and staff as well as the ability to attract highly capable and motivated employees (Grönroos 1990; Schneider, 1992; 1994). The above, however, may not be typical of all small firms. On the contrary, the small business literature provides some evidence of complex contradictory internal relations, skills' shortages and difficulties in attracting well trained staff (See Ingham 1967; Stanworth and Curran 1979; Felstead 1988; Rainnie 1989; Goss 1991; Ram 1991; Curran et al., 1993; Atkinson and Storey 1994; Holliday, 1995). There are also other characteristics such as a relatively undeveloped division of labour, informal employment culture, owner-managers personal, hands-on involvement and control which may contribute to small firms' capability to deliver services (Scase and Goffee, 1982, 1987; Goffee and Scase, 1995; Kitching, 1997). Moreover, it could be that the

characteristics of services favour small businesses. Services' intangible nature means that they cannot be stored and they must be delivered immediately to the customer. This limits the economies of scale and the size of any individual establishment (Heskett, 1987). The personal element of service delivery also makes it more efficient to administer the output in small units (Stanback et al. 1983; Mills, 1986).

Felstead (1988) and Goss (1988a, 1989) have highlighted the owner-managers' important role in small printing firms. It is argued that managerial orientation and vocational attachment are the two main attributes which influence the style and character of the business activity (Goss, 1989). In particular, owner-managers' involvement in craft printing is suggested as influencing their managerial strategies, which can be grouped into the technocentric-, marketeering-, traditional-, and isolationist style. In the markets which are characterised by increasing competition and rapid development of new technology, technocentric and marketeering strategies seem to be most able to meet customers' service requirements (Intergraph, 1997). The technocentric style involves high technical competence and early adoption of the latest printing technology. These owner-managers aim is to make use of the new technologies and develop the printing process beyond the limits of its present boundaries. The marketeering style is claimed to be typical of those owner-managers for whom business goals are essentially ends in themselves. This is most typical in instant printing, where the nature of the business in vocational and technical terms is less important than growth and profits (Goss, 1989).

The above typology argues that the owner-manager's character is strongly related to the small printing firm's marketing stance and level of technological sophistication among other things. This may be true, but such analysis offers only a partial view because it is based only on owner-managers' perspective. Despite their key role, owner-managers' actions need to be seen in the wider context. For example, the availability of highly skilled production and sales personnel limit owner-managers' ability to pursue technocentric and marketeering strategies. Research which also incorporates the views of sales and production staff into the analysis can offer a more complete picture of printing firms' ability to meet customers' product and service related requirements.

To summarise, the discussion illustrates how difficult it is to separate manufacturing and services at any level of analysis. First, the heterogeneous nature of services makes it difficult to define them specifically. At the same time the ever-evolving division of labour and

technology are making services and manufacturing activities increasingly interrelated (Sayer and Walker, 1992; Bryson and Daniels, 1998). Although there is some evidence that services can add value to manufacturing business, this complex process is not well understood. It seems that in terms of service delivery capability, their small size may place SMEs in a relatively strong position in comparison with larger organisations. However, it is also clear that small firms' inherent characteristics include both strengths and weaknesses, which influence their ability to deliver services. To achieve a better understanding of small printing firms' service capability it is necessary to examine the views not only of owner-managers but also of sales and production staff. The wider implication is that it is time to reconsider the way in which the terms 'manufacturing' and 'service' are used and to replace the binary division of economic activity with one which is constructed around economic linkages and networking involving manufacturing and service functions (Bryson and Daniels, 1998).

Quality and service quality issues in manufacturing

This section presents a critical review of the relevant quality and service quality literatures and relates them to the adopted sensitising concept. This concept suggests that quality involves total composite product and service characteristics of marketing, design, manufacture, delivery and after sales care through which the product and service will meet customers' expectations.

'Quality' became one of the major management issues in the 1990s and an area of keen interest for academic research[9] (North et al., 1998). Especially in management research, quality receives constant attention because it has been linked to better profits and customer retention (Buzzell and Gale, 1987, Reichheld, 1993). Service quality has become a major issue because services represent an increasingly important share of economic activities and their quality poses specific problems due to their unique, immaterial process character (East, 1997). This section addresses first the quality discussion in manufacturing and after that more specific service quality issues.

Like many phenomenon in social and management research, 'quality' is notoriously difficult to define. As a result, there are numerous different meanings and perspectives for this problematic concept. The quality movement started in US mass manufacturing in the early 1920s (Juran 1979; Crosby 1979: 1984; Deming 1982: 1983). Statistical methods were

adopted to ensure consistency in manufacturing specifications and to minimise losses through waste and poor final products. Subsequently, quality control has also been adopted in non-mass production industries and reactive quality control has been transformed to more proactive prevention of quality failures. In addition to the role it plays in manufacturing, the quality agenda has also become important in services, knowledge enterprises and in public sector organisations (North et al., 1998). There has also been a shift from internal management issues towards external relations with suppliers and customers and 'fitness for intended use' has become an important criterion.

Oakland (1989) examines a number of different conceptualisations and concludes that quality is often defined as the ability of a product or service to meet customers' requirements in terms of functional properties and other quality attributes which are associated with the satisfaction of ownership (Juran and Gryna, 1980; Deming, 1982; Feigenbaum, 1983). The resulting definition recognises the relativistic nature of quality perceptions and it can be applied to manufacturing and services. The implication is that a knowledge of customers' requirements is important and this should be disseminated effectively within the supplier's organisation (Roper et al., 1997).

Despite the lack of research, large-firm based formal quality management systems such as ISO 9000 and Total Quality Management (TQM) have been widely promoted to SMEs. It seems, however, that small firms are not keen to adopt them (SBRT, 1994; North et al., 1998). This is not because small firms are less concerned about quality than larger firms. Rather, the difference lies in their preference for more informal quality management practices (North et al., 1998; Wiele and Brown, 1998). Among small firms, formal quality management has been criticised for its bureaucracy, administrative burden and high costs. Formal quality management approaches also prescribe universal practices which largely ignore industry, market, firm and individual variations. Often such practices are not well suited to small firms because their management processes are informal and personalised (Jennings and Beaver, 1997). Instead, small firms seem to favour sector-specific quality strategies which owner-managers find more suited to their needs. Based on their research North et al. (1998) argue that in most cases small business owners have made the correct judgement. Informal quality strategies which vary depending on firms' organisational characteristics, size, sector, employee characteristics and management style work better than any universal, often bureaucratic formal quality management systems. Although this discussion of the research highlights important SME-specific quality management

characteristics, these findings tend to represent only the owner-managers' perspective. There is clearly a need for research that incorporates staff and customer perspectives into the analysis. Only then will it be possible to discover all the disparities which may exist between suppliers' and customers' quality perceptions (Rust and Oliver, 1994; Roper et al., 1997).

The discussion earlier in this section highlighted that 'quality' is a problematic concept. The same characteristics apply to service quality, which is an even more subjective concept due to the immaterial and often personalised nature of services.[10] The quality of individual service transactions on consumer markets has been the single most researched area in services marketing (Brown et al., 1994). As a result, a number of service quality models and measuring instruments has been developed. The most prominent of these tools is 'servqual',[11] which focuses on measuring the gap between customers' expectations and actual perceived quality (Grönroos, 1982; Lehtinen, 1982; Parasuraman, Zeithaml and Berry 1988, 1991; Gummesson, 1987a; Bitner, 1990; Bolton and Drew 1991; Liljander, 1995). Notwithstanding its popularity and widespread application, the model itself, as well as the gap concept, has been widely criticised as inadequate in conceptualising and operationalising service quality. It has also been argued that distinct types of services have different types of quality definitions and thus require tailored measuring instruments (Cronin and Taylor, 1992). Overall, there are many open questions which require a contextually sensitive and qualitative research approach to service quality (Buttle, 1996).

In their recent study Maclaran and McGowan (1999) argue that small firm considerations are largely overlooked in the service quality literature. They also question the servqual model and claim that it is not a suitable instrument in the context of small engineering firms. Instead, they suggest that service quality should be investigated from the relationship marketing perspective (Figure 3). Research on service quality has recognised the time perspective and started to advocate long-term relationships as a way of delivering quality and value to the customer (Grönroos, 1994). This line of argument claims that customers' expectations and perceptions are dynamic and develop over time as part of the customer relationship (Liljander and Strandvik, 1995; Halinen, 1996). Such a shift in the focus represents a major research challenge because it extends the already complex service quality analysis from the individual transaction level to a much wider customer relationship context. It is argued that in long-term customer relationships, suppliers' internal production focus can develop into a 'joint production' of products and services together with the client

(Mills and Morris, 1986; 1992). The alleged benefit is that over time suppliers learn to understand clients' perceptions, activities and processes (Strandvik and Storbacka, 1996). Although the emphasis on relationship quality introduces a customer perspective to service quality research, up to now this research has been concerned only with consumer markets (Holmlund and Kock, 1995). Due to its managerial focus, the perspective of employees has received only limited attention in this type of research, although the link between internal relations and service quality has been widely recognised (Schneider and Bowen, 1992; Schneider, 1994; Rees, 1995; Schneider et. al., 1998).

The IMP approach has been used in a lot of pioneering research in analysing relationships in industrial, professional and business-to-business markets (Ford, 1990). Potentially, it is well placed to examine service quality because it emphasises that buyer-seller relations between firms are handled by individuals and hence social and psychological factors are important (Håkansson, 1982). However, the quality concept has so far received little attention in the IMP literature. Instead, the IMP literature has widely used such concepts as 'trust', 'value', 'commitment' and 'relationship strength'. It is only recently that some studies, such as Halinen (1996), have addressed quality issues explicitly.

To summarise the discussion on quality research, it can be said that over the years it has widened its perspective considerably from reactive internal quality control towards firms' external relations and proactive quality management. These shifts in focus and the continuous interest in service quality have advanced the understanding of various quality issues. Still, there are a number of areas that require further research. Relationship quality in a business-to-business context has so far attracted only limited attention, as indeed has the quality research in the small business context and employees' perspective in quality management.

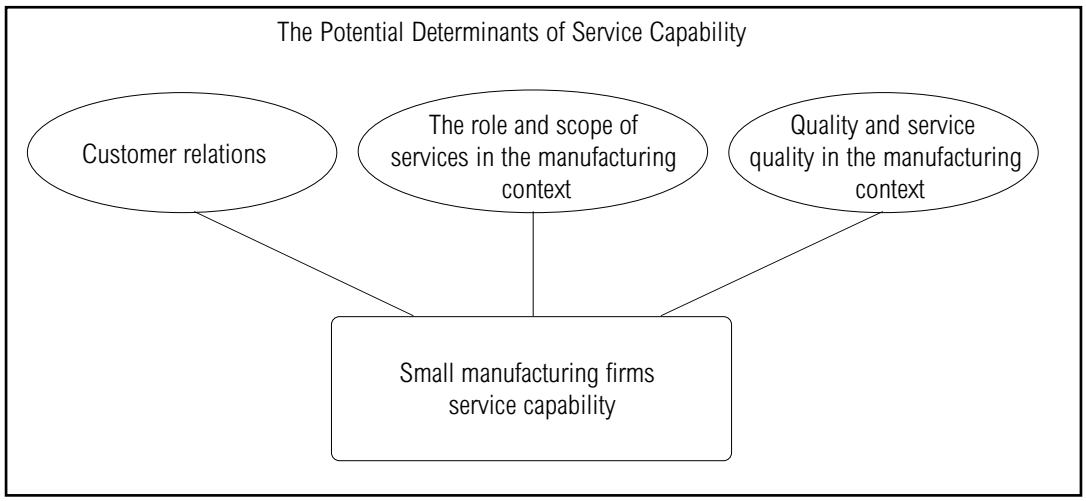
The service capability of small manufacturing firms: Key Research Issues

In this concluding section the aim is to summarise the important points of the previous research and to present some key issues which any research on small firms' service capability needs to address. The literature review has clearly demonstrated that there is a need for a marketing theory that is more sensitive to the specific characteristics of small firms and acknowledges that various factors influence their performance (Carson et al.,

1995; Siu and Kirby, 1998). A contingency approach provides a way to develop mid-range marketing theories that are not universal but hold only within a particular context or for classes of settings (Morgan, 1997:56-60, 1986; Zaltman et al., 1982).

Figure 6. presents the three main attributes that were identified from the literature as potential determinants of service capability. They include: customer relations, services role and scope, as well as quality and service quality in the small printing firms context. The analysis focuses on finding out what are the main attributes of service capability and how they influence it.

Figure 6: The key research issues



There clearly is a gap in the literature that concerns the role of services in small manufacturing firms. Whether the empirical findings and theorisations from service firms can be extrapolated to manufacturing firms is debatable. Moreover, most studies of buyer-seller interaction, services and service quality remain silent about the size of the examined firms. This is a significant omission, considering firm size has been recognised as an attribute of service delivery and most manufacturing and service firms employ less than 50 staff (Curran et al., 1999). One of the key questions is to what extent small manufacturers can benefit if they provide better services to their customers and under what circumstances such benefits can best be realised?

The alleged benefits of long-term relations between suppliers and customers are pronounced in the interaction, service management and relationship marketing literatures. It is suggested that they can advance firms' competitive position through improved service,

quality and profitability (Sinclair et al., 1996). However, it is also recognised that different products, buying situations and contextual factors can influence buyers' and suppliers' tendencies to engage in long-term relations (Bund and Jackson, 1985). In reality, many dyadic relations are less than ideal but they continue to exist because the lack of alternatives and the switching costs create barriers to change (Liljander and Strandvik, 1995). Such long-term relations may have positive outcomes, but they also create a less dynamic and less competitive market place, which may offset the benefits. By investigating buyers' and suppliers' views, the benefits, possible negative impacts and contradictions in different types of relationships can be revealed. This will help to explain why different types of relationships exist and how they influence service delivery, quality and the business performance.

Problems in theorising services and service quality have been well documented in the literature and the discussion on services and tangible good distinction continues (Sayer and Walker, 1992). Any research which examines services in the manufacturing context will inevitably have to address the issue of what attributes distinguish services from other types of goods and activities. By using both labour service and service management approaches, empirical research can lead to a better understanding of goods' and services' distinctive characteristics. The first task is to analyse how services are conceptualised among small printing firms' management, staff and their customers. Second, it is important to understand what are the main service elements in the small printing firms' business and how the service delivery process is managed.

Since quality, and service quality in particular, are subjective concepts it is important to analyse how quality is conceptualised at different stages of the process by the staff and management in the supplier firms and by customers (Roper et al., 1997). It is also important to understand how suppliers find out about customers' dynamic preferences and manage to meet them. Another area of investigation is the interplay and links between product and service quality (Parasuraman et al., 1988). The aim is to find out whether it is possible to make a clear distinction between product and service quality and to determine to what extent this happens on the supplier and customer sides. Finally, the analysis will focus on quality management practices in investigated small printing firms. More specifically, it will focus on what are the respondents' main quality concerns and how small printing firms manage the service and product quality components. The literature argues that long-term customer relations can improve the quality (Liljander and Strandvik, 1995).

This investigation seeks to find out what significance customer relations have on quality and service quality in the investigated manufacturing context. Since both long-term and short-term relations do exist, it is important to understand how quality is managed in different types of relationships.

Notes

[1] The three buy classes of the buy grid model are: new task, modified, and straight rebuy. A *new task* purchase is an extensive decision-making and problem-solving process because the organisation/buyer lacks any previous experience and any product use of this type of product. In the *modified rebuy* situation the buyer has some experience in the purchase of the product, but the infrequency of its purchase, or problems with the previous purchase relative to suppliers, or problems with the product's 'specs' can all necessitate a limited decision-making process. *Straight rebuy* purchases have become routine practice since the high frequency of purchase and product use have educated the buyers (Eckles, 1990: 52-3).

[2] Webster and Wind's organisational buying behaviour model involves a five stage process where the purchase decision is influenced by environmental, organisational, interpersonal, individual and buying situation variables (Eckles, 1990: 54).

[3] Campbell's view of the variables which influence the interaction between buyer and supplier businesses are summarised in the table:

Buyer's side	Interaction variables	Supplier's side
Product	Frequency of purchase Switching costs due to physical and human investments Product complexity	Product
Industry characteristics	Concentration Number of alternative partners Intensity of competition Rate of technical change Traditions and norms	Industry characteristics
Business characteristics	Relative size Preferred interaction style Relative familiarity Centralisation of purchasing	Business characteristics
Individual characteristics	Relative familiarity Preferred interaction style Perceived importance of the purchase/sale Risk aversion	Individual characteristics

SOURCE: Campbell, 1985.

[4] Other attributes that typically have an impact on the relationship outcomes include the parties' position on the markets, the types of products and services traded, the production technology and expertise in the area (Campbell, 1985).

[5] Trust can be defined as an expectation that the trading partner will behave in a mutually acceptable manner so that neither party will exploit each other's vulnerabilities (Sako and Helper, 1998). The literature identifies three different aspects of trust, which may exist at the inter-personal and inter-organisational level, and as a society norm, which may vary in different countries (Sako, 1992):

- contractual trust (the other party will carry out its contractual agreements);

- goodwill trust (the other party will take initiatives for mutual benefit and refrains from taking advantage) and;
- competence trust (the other party is capable of doing what it says it will do)

[6] The 'expanded markets' include: staff as internal markets, supplier markets, recruitment markets, referral markets, and alliance markets (Clarkson et al., 1997). Because there are so many markets, marketing is seen as a key cross functional activity which also involves the non-marketing personnel of the supplier firm (Doyle, 1995). In such situation marketing is claimed to be a key managerial activity which brings together the views from various interest groups and co-ordinates various business functions.

[7] Economists tend to classify services by industry, occupation or on the basis of the markets served, whereas management theorists base their classifications on the characteristics of the processes and service functions (Greenfield, 1966; e.g. Gershuny, 1978; Kumar, 1978; Burrows and Curran, 1989; O' Farrell and Hitchens, 1990; Blois, 1991).

[8] Since the customer's perception of service is based on performance rather than any physical evidence, the experiences tend to be rather subjective and abstract in nature (Sasser et al., 1978). Ownership characteristics have also been suggested as a distinguishing feature of services. A buyer normally obtains ownership to goods whereas a buyer only gets temporary access to a service. What is owned is the benefit not the service itself (Grönroos, 1978; Kotler and Armstrong, 1994).

[9] Among reasons which have influenced and given impetus to recent quality related research are the 100 per cent reliability concept introduced by NASA in the 1960s, the perceived high quality of Japanese products and IT based quality control systems (Reicheld, 1993).

[10] Service quality, customer satisfaction and customer value are often linked together in the academic discussion. The argument is that customers' satisfaction results from experiencing a service quality encounter and comparing that encounter with what was expected. In this connection, value includes not only quality but also price. Even if service quality is rated excellent it may be of poor value if its price is too high (1992; Holbrook, 1994; Rust and Oliver, 1994).

[11] The servqual model developed by Parasuraman, Zeithaml and Berry (1985; 1991) has dominated service quality research in marketing. The model uses a set of variables to measure the gap between customers' expectations and actual service quality experiences. These variables measure tangibles, reliability, responsiveness, assurance and empathy. Recently, the model has been increasingly criticised for being static and unable to recognise the great variety of services (McDougall and Levesque, 1996).

3. Methodology

Introduction

The purpose of this chapter is to present and justify the chosen methodology and to describe the empirical data collection and analytical procedures adopted.

The choice of methodological strategy reflects the character of the objects studied, what the researcher wants to find out about them, the philosophical assumptions about their reality and the ways it can be studied and, finally, the availability of resources (Hakim, 1987; Sayer, 1992). All the above influence the research design whether the researcher is aware of it or not (Hammersley, 1992). As such the research design ought to provide a logical progression from the philosophical assumptions, to the initial questions of the study, to the data to be collected and the interpretations which can be developed (Yin, 1989).

Besides ontological and epistemological commitments the subject area influences the methodological choices. The research at hand investigates small printing firms' service capability. As evolving interdisciplinary areas, small business and services research are particularly fertile areas for qualitative inquiry and grounded theory building. In contrast, they are not so useful for testing and verifying existing theories (Glaser and Strauss, 1967). The nature of the research task is important, since it determines to a large extent the research method that is to be used (Strauss and Corbin, 1990). According to Yin (1989), explanatory studies are the preferred strategy when 'how' or 'why' questions are being posed. The adopted research approach reflects not only the research task but also recent changes in social science. Realist philosophy and its ideas about knowledge started to influence social science in the early 1990s (Sayer, 1992). Other relevant developments that have influenced this research include diminishing disciplinary boundaries and the development of interpretative, qualitative approaches, which emphasise the perspective of the individuals studied (Bryman, 1989; Denzin and Lincoln, 1994).

The following sections of this chapter address the above issues in more detail. The first section examines the philosophical assumptions behind the chosen research methodology. The second section focuses on the research design, providing a detailed account of the

sampling and data collection procedures. The final section covers data analysis, interpretations, reliability and validity issues.

Philosophical assumptions

The research design, the definition of the problem to be studied, the methods of data collection and analysis as well as the resulting explanations all reflect choices between ontological and epistemological commitments. In research these relate to assumptions about the nature of the social world and about claims of valid knowledge. The approach of this research is broadly based on a realist approach. The following characterises the main aspects of the realist approach in social sciences (Bhaskar, 1989; 1998; Hammersley, 1992; Sayer, 1992; Guba and Lincoln, 1994):

The ontology, what is the nature of reality and what can be known about it?

The world exists independently of our knowledge of it. However, it is only imperfectly apprehendable because of basically flawed human intellectual mechanisms and the fundamentally intractable nature of phenomena. There is necessity in the world; natural and social objects have necessarily particular causal powers or ways of acting and particular susceptibilities. The world is differentiated and stratified, consisting not only of events, but objects, including structures, which have powers and liabilities capable of generating events.

The epistemology, what is the nature of the relationship between the knower or the would-be-knower and what can be known?

Our knowledge of the world is fallible and theory-laden. Concepts of truth and falsity fail to provide a coherent view of the relationship between knowledge and its object. Nevertheless knowledge is not immune to empirical check. Social phenomena such as actions, text and institutions are concept dependent. We therefore have not only to explain their production and material effects but also to understand, read or interpret what they mean.

Methodology: How can inquirers go about finding out what can be known?

The aim of social science is to represent reality, but this is not to say that its function is to reproduce it. Rather, representation must always be from some point of view, which makes some features of the phenomena represented relevant, and others irrelevant. Thus, there can be multiple, non-contradictory and valid descriptions and explanations of the same phenomena. In the analysis emphasis is placed on triangulation as a way of falsifying rather than verifying hypotheses. Inquiry takes place in natural settings, collecting situational information, reintroducing discovery as an element of inquiry, soliciting emic views to assist in determining the meanings and purposes that people ascribe to their actions. Qualitative techniques are often used as a way to generate 'grounded theory' (Glaser and Strauss, 1967; Glaser, 1978 and 1998).

The realism described above rejects pure relativism by claiming that the world exists independently of the observer. Positivist claims for objective truth and knowledge do not hold because realist approaches claim that knowledge is theory-laden and social phenomena are concept dependent. However, existing causalities make generalisations possible, although in the differentiated and stratified world their scope is limited (Guba and Lincoln, 1994). The following section will describe how the adopted ontological and epistemological commitments relate to the research design.

Research design

Ontological and epistemological commitments as well as the purpose of the study lead researchers to adopt particular research strategies. While a survey approach would facilitate data collection from larger populations, this would be at the cost of in-depth qualitative information (Patton, 1990). The scarcity of research concerning small printing firms' service capability suggested that it would be more desirable to adopt a qualitative approach, and investigate in-depth the chosen research area. The next sections explain how the chosen research designs are linked to the primary purpose of the current study, which is:

> to understand, how small printing firms incorporate services into their business and why some firms are more capable of doing this than others.

The methodology chosen for this study is a qualitative approach where data collection is based on interviews and some observation. This approach is more suitable for grounded theory generation than quantitative surveys, which are better for testing and verifying existing theories (Glaser and Strauss, 1967). Typically, these types of studies are particularly appropriate where 'how' or 'why' questions are being asked about a contemporary set of events over which the investigator has little or no control (Van Maanen, 1983; Yin, 1989). It is also common in such studies that the boundaries between phenomena and context are not clearly evident; and that multiple sources of evidence are used.

In the current research the printing firm sample consisted of 21 businesses (Table 5). By limiting the number of businesses it was possible to obtain several respondents' views from each sample firm, including the printing firms' owner-managers, sales personnel and production staff. In addition, print buyer interviews incorporated the customer perspective into the analysis. Since interaction between the printing firm's representatives and the

customer is an essential element of service delivery (see Chapter Two) sales staff and buyer perspectives make a valuable contribution to the service capability analysis. Obtaining multiple perspectives enables the research to capture the internal dynamics, conflicts and contradictions which can influence a printing firm's service delivery. The purpose of qualitative interviewing is to understand how respondents view the research problem, to learn about their terminology and judgements, and to capture the complexities of their individual perceptions and experiences. This distinguishes qualitative interviewing from the closed interview, questionnaire, or test typically used in quantitative research. Instead of using pre-determined categories, qualitative interviewing provides a framework within which respondents' own understanding and categorisations can be maximised (Patton, 1990).

Although the basic thrust of qualitative inquiry is to minimise the imposition of predetermined responses, the comparative elements of the study demand a more structured approach (Patton, 1990). To accommodate both these requirements the main research questions were formulated so as to make the purpose of the study explicit without limiting the respondents too much in how they expressed their views of the investigated phenomena. More specifically, the research task can be expressed through research questions:

How do customer relations influence service delivery and quality?
How do interviewees perceive service and service quality in a manufacturing context?
How do small printing firms incorporate services into their business?
How do small printing firms and customers co-operate in delivering services and quality?
Why are some firms more able than others to deliver services that customers require?

The above research questions indicate the facets of the empirical domain on which this research is focused (Miles and Huberman, 1984). They are also included in the main sections in the interview schedules, except for the last question, which draws together evidence from all the collected data. The following section describes how the empirical information on the above areas was collected and analysed.

Unit of analysis and generalisability

Decisions about sample size and data collections strategies depend on the unit of analysis specified in the research design (Patton, 1990). The definition of the unit of analysis is

related to the purposes of the research. In this research, the purpose is to analyse the service capability of small printing firms. Thus the primary focus of data collection will be on what is happening within the printing firms in their specific market setting (Patton, 1990). The boundaries between the phenomenon and the context are not clear because service delivery takes place jointly with the client (See Chapter Two). These issues have been addressed by obtaining views from the customers. Hence, the primary unit of analysis is the delivery process of print and related services in the context of customer relations (Yin, 1989). Although marketing literature widely acknowledges customer relations as the key factor influencing service delivery and quality, most of the empirical research does not include both perspectives in the analysis.

This research can be characterised as a primarily interview based multi-site study. In addition, observations were made during the visits to the printing firms and the available documents, such as company histories and promotional material, were collected. The data collection method is somewhat different to that used by Goss (1988), where he relied solely on interviews in his study of technological change in general printing firms. A problem with in-depth multi-site studies is that the resources required can be beyond the means of a single researcher. Hence, the researcher typically spends less time in each firm than those who study single cases and the contextual emphasis tends to be less pronounced (Yin, 1989). According to Bryman (1989) this can be a disadvantage if it indicates a lower degree of penetration of, and fidelity to, the perspectives and interpretations of those studied. In the current research these problems have been addressed by limiting the total number of printing firms to 21, and by interviewing up to four people in each printing firm. In this way the analysis could capture a range of different perspectives which reflect the interviewees' status in the job hierarchy and various work tasks in printing firms and print buying organisations. Such multiple perspectives can highlight the possible contradictions and tensions within the small printing firms and in their customer relations.

Interview-based and multi-site studies also carry their own special advantages. These include the greater opportunity for studying a number of organisations, the possibility for comparisons, and hence potentially greater generalisability (Bryman, 1989). Empirical generalisation from a small number of cases is a legitimate means of making findings generally relevant and does not necessarily require statistical sampling techniques. However, it does require reflection and clarity about the population and time period to which generalisations are to be applied (Hammersley, 1992; Glaser, 1978, 1998). Primarily,

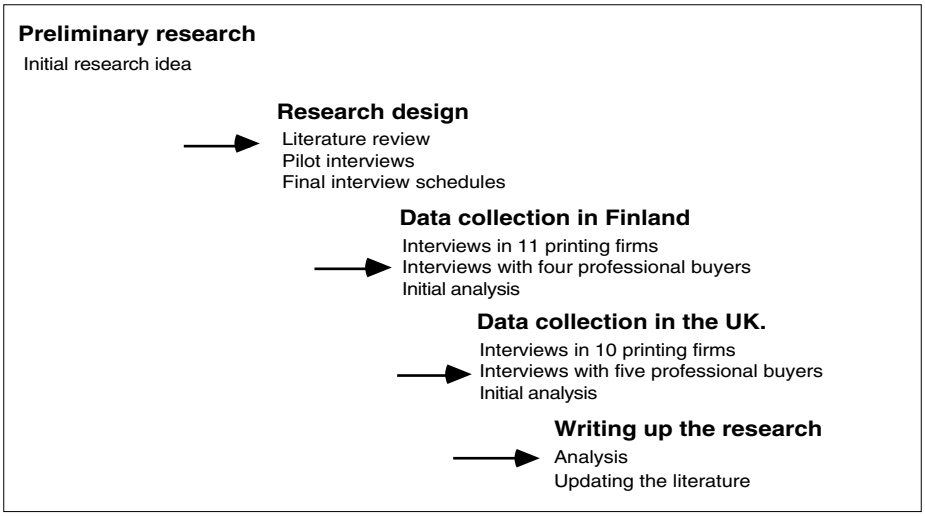
the findings of the current research may apply to small printing firms in Finland and the UK in the late 1990s. The theorisations arrived at may have wider implications for small printing firms in other countries, small manufacturing firms in other industries and the role of services in manufacturing context. In all the above cases, proper weight needs to be given to the local conditions, and any generalisation ought to be treated as a working hypothesis, not as a conclusion (Cronbach, 1975:124-25).

The research process

So far this chapter has presented the philosophical assumptions, the research design and the principles of the adopted multi-site study method. This section lays down an overall presentation of the stages of the research process.

The idea for the research at hand started to develop when the researcher was studying small printing firms' marketing and the use of new digital technology (Kuusisto, 1992; 1993). These studies indicated that the ability to deliver services was a key issue for these small manufacturing firms. The main stages of the research are presented chronologically from left to right in Figure 7. The preliminary research stage was followed by the research design stage which was specified on the basis of the literature review. The resulting research questions and data collection procedures were thus informed by existing theories as well as fresh empirical information acquired through the preliminary research (Yin, 1989).

Figure 7: The stages of the research process



The research design covers printing firms' entire service delivery process from sales, pre-press, printing and print finishing to the shipment of the completed order. In terms of data collection this translated into interviews with the printing firm's owner-manager, sales, pre-press and press staff. On the customer side, print buyers were included in the research sample. A separate interview schedule and procedures were compiled for each interviewee group on the basis of the preliminary research and literature review. Subsequently, a series of pilot interviews were conducted and minor changes were made to the schedules. After this the schedules were translated and the comparability of the Finnish and English versions was confirmed by a professional translator who did the final proof reading. The following sections present a detailed account of the data collection and analysis stages.

Selecting the research sample

The sampling logics highlight the differences between qualitative and quantitative methods. Typically, qualitative inquiry focuses in-depth on relatively small samples, or even single cases, selected purposefully. The logic and power of purposeful sampling lies in selecting information-rich cases for study in-depth. From these one can learn a great deal about issues of central importance to the purpose of the research. By contrast, quantitative methods tend to depend on larger samples selected randomly. The logic and explanatory powers of such samples depends on selecting a truly random and statistically representative sample which will permit confident generalisation from the sample to a larger population (Patton, 1990). What is important to recognise is that random probability samples cannot accomplish what in-depth, purposeful samples accomplish, and vice versa.

> The validity, meaningfulness, and insights generated from qualitative inquiry have more to do with the information-richness of the cases selected and the observational/analytical capabilities of the researcher than with the sample size (Patton, 1990:185).

There are no definite rules for sample size in qualitative research. However, it is suggested that the size of the sample is determined by information considerations so that the sampling is terminated when no new useful information is forthcoming from newly sampled units (Glaser, 1978). The sample size in this research was influenced by the following parameters: what the researcher wanted to know about the phenomena, the purpose of the inquiry, what would have credibility, and what could be done with the available resources (Patton, 1990). There are several different strategies for purposefully selecting

information-rich cases. Stratified purposeful sampling was considered to be the most appropriate method for the current research. It is a combination of average, above average and below average cases. This provides a sample (Table 5) which contains more variation than a sample of average cases but less variation than a maximum variation sample (Patton, 1990). Such a strategy also facilitates comparisons between sample firms (Miles and Huberman, 1984).

Services and business practices are subject to cultural, social, industry and firm level variations (Luthans and Waldersee, 1992; Riddle, 1992). In order to investigate these variations in services, the research sample was drawn from two different countries, Finland and the UK. According to Huberman and Miles (1994) such cross-country comparisons can strengthen the validity and robustness of the findings. Finland and the UK are both developed countries but the UK markets, printing industry and the English speaking population are much larger in scale (Tables 1 and 2). However, the printing industries of these countries are relatively similar structurally, making comparisons possible. In the Finnish business system taxation, strict labour regulation and industrial policy combine to encourage constant investments in technology, a skilled labour force and high value added production (Finnish Academies of Technology, 1999). Finland also has a long tradition of consensus politics where the labour movement works in co-operation with government and the national employers' federation. In the UK however, the national culture and search for industrial competitiveness has led to a business system characterised by a relatively short-term profit orientation and very flexible labour markets. Part-time employment is a norm for many and it is claimed to have an impact in an increasingly low-trust work culture that is characterised by employees' instrumental and cynical attitude to work. This is claimed to be one of the major barriers to Britain becoming a high-performing, knowledge economy (Scase, 2000). The comparison between Finland and the UK can reveal how the different business systems characterised by high- and low-trust work cultures influence the investigated firms' management practices, employees' attitudes, innovativeness and service capability.

The research settings in this study were small printing firms and the largest advertising agencies. The sample was designed to capture the key features of the printing industry in the UK and Finland, including the heterogeneous nature of the sector (BPIF, 1993; GTL, 1994a). Recruiting six, theoretically interesting printing businesses secured variation within the sample of 21 firms. Unlike most average small printing firms, the chosen six had

developed skills in special types of printing and/or market segments. The areas of specialisation were: overhead slide and label printing in the Finnish sample, and greeting card and label printing in the UK sample. According to the original research design, the printing firm sample included overhead slide and label specialists from both countries. However, such matching was not possible because only the two Finnish firms were able to produce offset-printed overhead slides and there were no UK firms capable of a similar type of production.

In the printing firm samples the mode of ownership, the number of staff and the minimum number of years in business were all controlled for. The choice of small firms as the subject of the research reflects the structure of the industry. The vast majority of printing firms employ less than 50 members of staff (Chapter One, pp. 7-8). The criteria for selecting printing firms were: each firm had to employ between 5 and 50 people; the owner-manager had to be personally involved in the business; the firm had to have been in business for at least five years by 1994; and the firms had to be located within 50 kilometres of the centre of London or Helsinki. The purpose of such detailed sampling criteria was to improve the possibilities for comparisons between the Finnish and UK firms. The Finnish sample was drawn from the members' list of the Finnish Federation of Graphic Arts Industry and The Employer Federation of the Finnish Printing Industry. In the UK the sources were the Richmond Business Directory and Print buyers directory 1995/96, published by the British Printing Industry Federation. The interviewed printers were also used to locate other firms that fitted the sample criteria. This 'snow ball' method was particularly useful in matching the UK and Finnish samples (Miles and Huberman, 1984).

Table 5. offers an overview of the characteristics of the printing firms which were investigated, in terms of the type of printing, turnover, number of staff, years in business and customers. It shows that the UK and Finnish samples consist of reasonably comparable groups of firms. However, there is a clear difference between the Finnish firms, with an average of 8 regular customers per employee, and the UK firms, which have about 19 regular customers per employee. In this connection regular customers are those that place at least three orders each year. This suggests that Finnish firms can, at least potentially, maintain closer customer relations and are thus better positioned to provide personalised services.

Table 5: The investigated printing firm sample

UK	Type of printing	Turnover GBP mill.	Number of staff	Years in business	Customer base	Regular customers*	Regular cust. per staff member
Pf1.Uk	Labels	1,0	20 [1]	65	600	na.	na.
Pf2.Uk	Greeting cards	2,5	50 [10]	15	◀ 6	6	0.1
Pf3.Uk	Business cards	1,0	15	50	300	20	1.3
Pf4.Uk	Digital/gen. printing	2,5	50 [18]	15	◀ 4500	2500	50.0
Pf5.Uk	Colour/gen. printing	1,5	25 [2]	25	150	42	1.7
Pf6.Uk	General printing	0,6	13 [3]	35	750	750	57.7
Pf7.Uk	General printing	1,5	22	14	300	27	1.2
Pf8.Uk	General printing	0,5	6	30	350	205	34.2
Pf9.Uk	Labels	0,5	8	12	400	6	0.8
Pf10.Uk	General printing	0,5	13	12	750	350	26.9
UK AVERAGE		1,21	22,2	27	811 (450)	434 (200)	19,3 (17,7)
FINLAND							
Pf1.Fi	Digital/gen. printing	0,8	15	26	200	20	1.3
Pf2.Fi	Colour/gen. printing	2,0	25	53	100	20	0.8
Pf3.Fi	Overhead slides	1,0	14	12	60	60	4.3
Pf4.Fi	General printing	0,5	12	55	200	150	12.5
Pf5.Fi	General printing	2,5	28	20	hundreds**	25	0.9
Pf6.Fi	General printing	1,0	16	19	300	240	15.0
Pf7.Fi	Labels	0,5	8	16	300	130	16.3
Pf8.Fi	General printing	0,75	14 [1]	116	250	150	10.7
Pf9.Fi	General printing	0,5	11	40	250	125	11.4
Pf10.Fi	Overhead slides	1,5	36	20	1000	500	13.9
Pf11.Fi	General printing	1,0	24	20	100	20	0.8
FIN AVERAGE		1,1	18,5	36	276 (187)	130 (98)	8.0 (7.7)

* A 'regular customer' places at least three orders every year.
The pointer indicates smallest and largest customer bases in the UK sample, see page 62-3. ◀
**One respondent was able to give only an estimate of the customer base.
In the UK AVERAGE and FIN AVERAGE rows, the numbers in brackets ( ) exclude the largest and smallest value in each column. These values indicate the influence of extreme cases on calculated averages.
In the NUMBER OF STAFF column the numbers in brackets [ ] indicate the number of part-time employees.

Considering that Finnish firms have to cope with relatively high labour costs, it is somewhat surprising that the customer employee ratio is higher in the UK. Either Finnish firms favour closer customer relations or it may be that UK markets favour larger customer bases. It could also be that the much smaller Finnish market may be less competitive and allows printing firms to charge higher prices. There are also several other possible reasons for this situation, such as differences in customer profiles, which will be discussed in Chapter Four. For example, higher labour costs may well be more than offset by higher productivity in Finnish firms. This could be caused by an extensive use of the latest technology, better management and/or more efficient work practices.

The customer sample consisted of professional print buyers and more 'ordinary' customers who were occasionally involved in print buying. These 'non-professional' print buyers were recruited by asking each printing firm's owner-manager to name two of their current customers who could be interviewed by telephone (see p. 52). The professional print buyers are well informed customers and thus theoretically interesting information-rich 'cases'. In both countries professional print buyers were recruited from the ten largest advertising agencies measured by their gross income in 1993 (The Advertising Association, 1994; Hannon, 1994; Mainosuutiset, 1994; Varhela, et al., 1994).

Table 6: The professional print buyer sample

	Print buyer	Focus of the agency	Print buying in 1993, mill. £
UK	B1.Uk	Business-to-business marketing	1
	B2.Uk	Direct marketing	17
	B3.Uk	Full service	0.5
	B4.Uk	Full service	0.35
	B5.Uk	Full service	3
Finland	B1.Fi	Full service	2.94
	B2.Fi	Full service	5.14
	B3.Fi	Full service	1.47
	B4.Fi	Full service	2.72
N = 9			

The characteristics of the professional print buyer sample are presented in Table 6. It shows that all but one of the interviewees had purchased printed matters worth half a million pounds or more in 1993. The variation in print buying value is larger among the UK buyers, mainly because the London based agencies were more specialised than their counterparts in Helsinki.

Data collection and interviewees

The analysed data were collected from 21 independent, owner-managed printing firms and 9 large advertising agencies. Such a sample is large enough to allow some generalisation, without loosing its scope for the qualitative focus of the research (Patton, 1990; Yin, 1989).

Standardised open-ended interviews were chosen as a data collection method since they can facilitate qualitative interviewing as well as comparisons and analysis. The data collection was more systematic, since all interviewees were asked the same basic questions, mostly in the same order. This improved the opportunities for comparisons and ensured that the collected data are complete for each person on the topics addressed in the

interview. The above type of data collection reduces interviewer effects and the data collection instrument is available for the outsider's examination (Appendix 2, 3, 4 and 5). A negative aspect of such interviewing is that it allows only limited flexibility in relating the interview to particular individuals and circumstances. Standardised wording of questions may also constrain and limit the naturalness and relevance of questions and answers. To overcome these problems, sensitivity to particular circumstances was increased by including conversational elements in the interviews. Interviewees could first freely express their views in each area of inquiry and more specific questions only followed afterwards (Patton, 1990). All data collection was completed in 1995-1996, first in Finland and immediately afterwards in England.

Before the interviews were carried out, a personal letter was mailed to each printing firm owner-manager and print buyer explaining the details and confidentiality of the research (Appendix 1). The letter was followed by a telephone call requesting an interview. In cases of refusal (Table 7, numbers inside parentheses), additional printing firms were selected so that the target sample of minimum 10 firms was achieved in both countries. All four owner-managers who were not willing to take part in the research gave the same reason: they were too busy for interviews. The relatively low number of refusals indicates that the adopted data collection approach worked reasonably well.

At the beginning of each interview strict confidentiality was emphasised and interviewees were encouraged to express their views and opinions freely. Each participant was interviewed at their workplace. To maintain confidentiality, each interview was carried out in a separate room so that outsiders could not overhear the conversation. The sequence of questions during interviews was designed so that they started with some relatively easy descriptive questions which encouraged the respondent to talk and created a positive atmosphere (Patton, 1990). To allow respondents to use their own unique way of describing reality, each section of the schedule began with broad open-ended questions (Silverman, 1985). More detailed questions and probes followed later on. At the end of each interview respondents were again encouraged to bring up any further issues which they found important. This opportunity produced some interesting accounts and some unanticipated issues were brought up in these conversations (Patton, 1990). To improve the reliability and validity of the research, all interviews were tape recorded and later transcribed in full (Silverman, 1985; Kirk and Miller, 1986; Peräkylä, 1997).

Interviews with the printing firms' staff were proposed at the end of each owner-manager interview. One owner-manager in Finland did not give permission for employee interviews, so the 11th firm was added to the Finnish sample. After access had been granted, a personal letter, explaining the details and confidentiality of the research, were delivered in advance to each interviewee. The majority of the staff were willing to participate in the research, except for one production manager in Finland and one sales manager in the UK (Table 7). In both cases, lack of time was given as the reason for the refusal.

Table 7: The Interviews in Finland and the UK.

Respondents			
Interviewed persons	**Finland**	**UK**	**Total**
Owner-managers	(1)11	(3)10	20
Sales managers	9	6	15
Pre press managers	7	4	11
Press managers	6	4	10
Production managers	2	6	8
Professional print buyers	5	6	11
Non-professional print buyers	20	16	36
	59	**52**	**N =111**

Notes: The first row indicates the number of interviewed owner-managers in both countries. The numbers in brackets indicate that one owner-manager in Finland and three in the UK did not want to take part in the research. Rows 2 to 5 indicate the number of managers in sample firms. One sales manager in the UK and one press manager in Finland declined to be interviewed. Line 6 shows the number of interviewed print buyers in the UK and Finnish samples. The data acquired in brief telephone interviews with non-professional print buyers were not considered sufficient to be used in the analysis. The column on the right shows the total number of interviews by each interviewee category.

Data from professional buyers were obtained by personal interviews using the same type of standardised open-ended interview schedules as in the printing firms. None of the professional buyers approached turned down the request for an interview.

Interviews with non-professional print buyers were done by telephone. After the initial analysis a decision was made not to use the telephone interview material, because the quality of the data was not considered sufficient for the analysis. In addition it turned out that owner-managers were rather biased in their selection of customers for the interviews. Nearly all of these respondents were highly positive towards their print supplier. Hence, the decision was made not to use this data. As a result, the views of the customers are only those of the professional buyers.

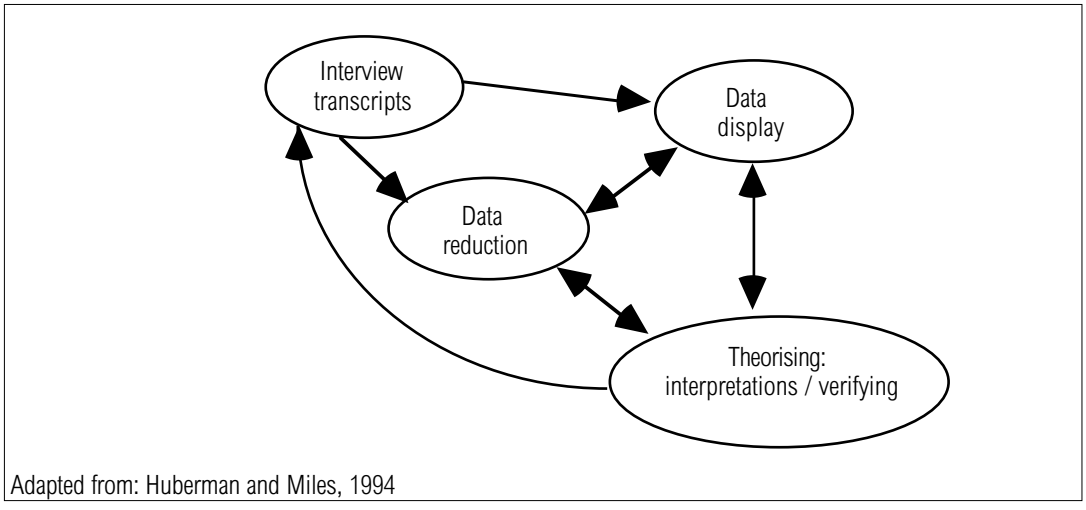
Data analysis and interpretations

The challenge of qualitative data analysis is to make sense of massive amounts of data, reduce the volume of information, identify significant patterns, and construct a framework for communicating the essence of what the data reveal (Miles and Huberman, 1984; Patton, 1990). This section explains how the above tasks were carried out, and in particular the use of grounded theory in the analysis (Glaser, 1978; 1998).

The initial analysis and probing of emerging themes started during the face-to-face interviews. On average, discussions with respondents took 45 to 60 minutes; the shortest interview lasted 27 minutes and the longest exceeded two hours. The researcher employed several methods in order to secure an information-rich account of each interview situation. During the interviews detailed non-textual information such as disruptions, emphases, laughing and overlapping conversation were observed. Impressions of the firm and respondent were recorded in research notes immediately after each interview. In addition, a photograph of the firm's premises was attached to each file (Fielding and Fielding, 1986).

Full transcriptions represent a massive amount of information which a researcher has to become familiar with. To do this in a systematic manner, the analysis started with comparisons between countries, respondent groups and sample firms. At this stage the data was reduced to summaries (Figure 8), coding and themes that contained the key findings of the interview material in a condensed, more manageable form (Huberman and Miles, 1994).

Figure 8: Components of data analysis: interactive model



Adapted from: Huberman and Miles, 1994

Data display follows data reduction and can be defined as an organised, compressed assembly of information that permits interpretations. Typically, the researcher needs to see a reduced set of data as a basis for thinking about its meanings. This was achieved by producing systematic summaries, diagrams and matrices with text in the cells. In addition, some quantitative tables, which included contextual and sample firm information, were produced.

Current software packages allegedly offer great improvement on manual systems that are based on cutting and pasting paper memos. According to the literature, software packages such as Hyperqual2 and Nudist offer a user friendly interface and allow more flexible coding and quicker searching than do manual filing and coding systems (Tesch, 1990; Glesne and Peshkin, 1992; Silverman, 1993). The analysis and theory development from qualitative data involve two fundamental and interrelated aspects: mechanical and conceptual processing. Mechanical processing includes recording, storing and manipulation of the data. The conceptual aspect includes the identification of meaningful segments of data, the development of concepts and categories to organise these segments, and the discovery of meaningful patterns to assist in theme building and theory development.

The analysis started with coding and sorting the transcripts. Hyperqual2 is an electronic index card system where the analyst creates several different types of card stacks: a *face card for the project* as whole, a *face card for the interview*, and a *data card*. Each one of these cards has several fields for data entry. For instance, the *interview card* has fields for interviewer's name, site number, research notes, responses and observational data. All the necessary information had to be copied from the interview transcripts to Hyperqual2 cards. This involved a significant amount of repetitive cutting and pasting so in terms of cutting down mechanical processing Hyperqual2 did not meet the expectations. During the data analysis Hyperqual2 produced more memo stacks, which included clippings and codes from the interview transcripts, memos and theoretical accounts. The outcome was a rather complex hierarchical system which was not transparent to the analyst. As a result it was rather difficult to identify the emerging concepts and patterns. Similar experiences have been reported by numerous other researchers (Glaser, 1998).

In the end, the researcher gave up using Hyperqual2 and created instead a system where coding and short research notes were generated with the help of a very familiar word processor and an office software package. These more commonly used word processing and spreadsheet applications offer powerful tools for data cutting, sorting, memoing and presentation. Hence, the researcher was able to create a system where coding and short research notes were generated directly from the interview transcripts without any extra set up work. Data could be copied from the transcripts to the memos by highlighting the desired area and dragging it to the memo document. Each of these memos was given a name that made identification easy and all files were stored in folders with appropriate names so that any information could easily be retrieved. This system is very transparent and is similar to using paper-based memos in that folders and documents could be seen on the electronic desktop, arranged freely and printed out at any time the analyst desired. The advantage is that in an electronic format, all documents, including transcripts, memos and diagrams, could be stored, edited, copied and sorted very effectively.

Figure 9: Computer assisted analysis

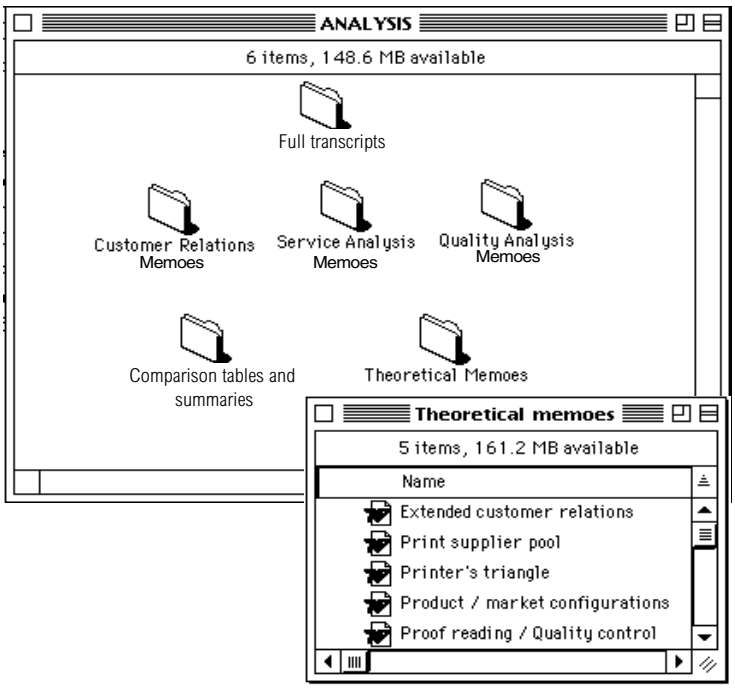


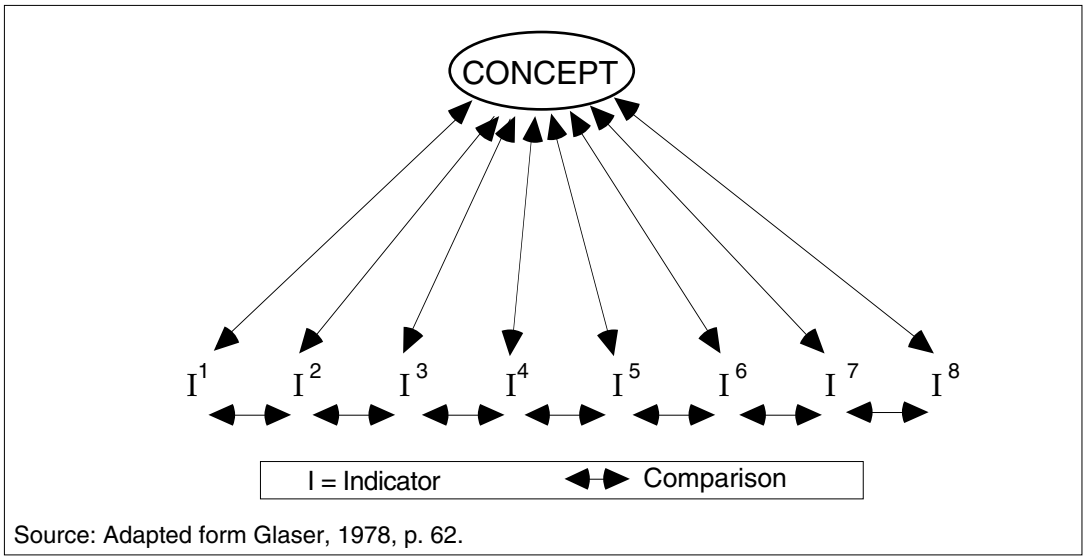
Figure 9. shows the desktop view that illustrates how the data was sorted and managed. Each of the pictured folders has a name that indicates its contents. For instance, the full transcripts folder contains all interview transcripts. Each transcript were assigned an easily identifiable name, such as O-M3.Fi which is Finnish owner-manager interview, from firm No 3. The smaller window in the Figure 9, called 'Theoretical memos', shows the contents of

the folder where all theoretical memos are placed. Within each folder, files could be sorted by date or name with a click of a mouse. Hence, each memo could be retrieved instantly and, if necessary, the researcher could easily go back to the original transcript files. The above system did the same tasks as specialist software packages, but it was perceived as more flexible, transparent and user friendly to the analyst. Thus all efforts could be focused fully on the analysis rather than learning to master a new software (Glaser, 1998).

At the beginning of the interpretation stage, all the material on the 21 printing businesses was drawn together, so that the investigation at the research unit level could begin. The objective was to produce profiles of each firm to facilitate inter-firm comparisons. These profiles included indicators of the firm's size, staff, production process, customer relations and any other specific features which were considered significant for analysing their service capability. In the following stage, respondent groups were used as a sorting criterion so that comparisons could be made between the views of owner-managers, sales staff and production staff. Finally, comparisons between Finland and the UK were made to highlight the similarities and differences between the countries at the firm and respondent-group levels.

The above procedures facilitated systematic analysis and produced useful summaries from the vast amount of data. However, the data remained descriptive and a grounded theory based coding of the data was required to shift the analysis to a more conceptual level. Coding gets the analyst off the empirical level by fracturing the data, then grouping it into concepts that then becomes a theory that interprets what is happening in the situation studied. According to Glaser (1978; 1998) codes provide an essential relationship between data and theory by conceptualising the underlying pattern of a set of empirical indicators within the data. Each code gives the researcher a condensed, abstract view within the scope of the data that includes otherwise seemingly disparate phenomena. At the first stage, coding produces a large number of indicators as the analyst goes through the transcripts and other available data systematically. These indicators are constantly compared, indicator to indicator, and after the conceptual code is generated, indicators are compared to the emerging concept (Figure 10). At the final stage theory is generated by developing hypothetical relationships between conceptual codes (categories and their properties) which have been generated from the data.

Figure 10: Constant comparative analysis



Source: Adapted form Glaser, 1978, p. 62.

The process illustrated above proved to be an effective way to free the analyst from endlessly describing the data. It allowed the researcher to transcend the empirical nature of the data, which it is so easy to get lost in, while at the same time conceptually accounting for the process within data in a theoretically sensitive way (Glaser, 1978; 1998).

Validity, reliability and triangulation

One purpose of this chapter is to report in sufficient detail the data collection and the processes of analysis to permit others to judge the quality of the results. Systematic reporting is important because qualitative analysis is a highly creative process and very dependent on the insights and capabilities of the analyst. According to Patton (1990) the credibility of qualitative research depends on three distinct but related issues:

- rigorous techniques and methods of gathering and analysing high-quality data, with attention to validity, reliability and triangulation;
- the credibility of the researcher;
- the philosophical assumptions.

Data collecting and analysis techniques as well as philosophical assumptions have already been reported earlier in this chapter. This section will present how validity and reliability were addressed through triangulation.

The literature presents a range of definitions for validity and reliability (Patton 1990). One of the most useful in this context comes from Brinberg and McGrath (1985) who see validity as integrity, character, or quality of the research project to be assessed relative to purposes and circumstances. Construct validity, which refers to correct operationalisation of developed concepts, was addressed in the data collection and composition stages by establishing multiple data sources and by presenting a chain of evidence from interviewees' quotes to developed concepts. In addition, informants had a chance to review and comment on the summary of their interview transcript. External validity refers to establishing the domain to which the study's findings can be generalised. This aspect of validity is particular to the research design stage. Instead of a single case study this research adopted the multiple-site strategy because it can increase the opportunities for generalisation. Although the limited sample does not allow statistical generalisations, some theoretical generalisations can be achieved by conceptualising the data and by developing grounded middle level theory (Glaser, 1978).

Triangulation was employed in this research because it can contribute to the verification and validation of qualitative analysis (Todd, 1983; Fielding and Fielding, 1986; Stake, 1994). It can put the researcher into a frame of mind to regard his own material critically, to test it, to make further comparisons and to identify its weaknesses (Fielding and Fielding, 1986). Thus triangulation can help the researcher to overcome the intrinsic bias that comes from single-method, single-observer, and single-theory studies (Denzin, 1970). This research made use of data, place and theoretical triangulation. The purpose was to minimise the risk that findings are simply an artefact of a single method, a single source, or a single investigator bias (Patton, 1990). Data triangulation was done by sampling firms from Finland and the UK. Person triangulation was conducted by introducing four different interviewee perspectives to the analysis. The adopted theory triangulation brought together relevant propositions from different research literatures. The appropriateness of these perspectives could then be assessed against the outcomes of the empirical analysis.

The researcher's credibility is an important issue in qualitative research since the validity and reliability of the study depend to a great extent on the methodological skill, sensitivity, and integrity of the researcher (Guba and Lincoln, 1981; Patton, 1990). The researcher had obtained skills in research methods and investigating small business as a part of graduate and doctoral training at the Helsinki School of Economics and Durham University. In addition, he was based at the Kingston University Small Business Research Centre, which

has substantial experience in qualitative research and small business studies. The researcher had obtained knowledge of the printing business in his previous work in desktop publishing and print buying. Thus the research context and the 'language' of the trade was fairly familiar to the researcher from the beginning. Prior to this research the preliminary research phase offered a chance to gain valuable first-hand experience in data collecting and analysis. Finally, financial considerations did not bias the integrity of the research since the necessary funding came from the university and several independent grant-awarding bodies (see acknowledgements, p. I).

Concluding remarks

This chapter has provided a detailed report on the research methodology and analysis adopted in order to permit others to judge the quality of the resulting work (Patton, 1990). The adopted research design can be characterised as an in-depth multi-site study approach where comparisons between Finland and the UK, between firms and the different respondent groups play an important role (Yin, 1989; Stake, 1994). The methods by which the samples where constructed and the response rates provide a high degree of confidence on the findings. The investigated firms are much smaller than those in many other studies reflecting, in part, the focus on services in small manufacturing firm context. The sample composition incorporates print buyer, owner-manager, sales and production perspectives in the analysis. Such multiple perspective analysis has hardly been used in this type of research before and it alone can be expected to provide new information on the role of services in manufacturing. Various types of triangulation in terms of data sources, perspectives and theories contribute to the verification and validation of the qualitative analysis (Patton, 1990). The following four analytical chapters will present in detail the chain of evidence from data to theorising.

4. Printing firms' customer relations

Introduction

This chapter analyses printing firms' customer relations and the interaction that provides the context for service delivery. The focus is on the social and economic processes and their influence on small printing firms' ability to deliver required products and services to customers.

Customer relations attracted plenty of interest in the 1990s, based on the argument that extended relationships and suppliers' profitability are directly related (Reichheld, 1994). It has also been argued that 'customer value' is a summation of all the positive effects that the supplier has upon the customer's business. The creation of such positive value requires a sound understanding of the business and this can only develop over an extended period of time. It has been argued that a short-term transactional focus is particularly inappropriate for industrial and service businesses where long-term customer relations are inherently more beneficial for suppliers and customers (Payne et al., 1995). Stable customer relations are claimed to benefit especially those manufacturers whose products are customised according to buyers' requirements. In long-term relations the manufacturer is more capable of anticipating the customer's requirements and behaviour, and there is less chance of unexpected incidents which could interrupt the production process (Mills, 1986). Another line of argument is that in real life, situations may arise which make short-term customer relations appropriate or where long-term relations cease to be in the interest of one or both parties (Liljander and Strandvik, 1995). To summarise, the above discussion suggests that customised manufacturing such as commercial printing may benefit from long-term customer relations.

Customer relations are highly relevant to small firms because they represent the immediate context in which products and services are delivered (Liljander, 1995). It has also been suggested that small firms' survival is often based on their ability to deliver customer-specific product-service packages (Bowen et al., 1989; Hilbert and Sperling, 1992; North et al., 1998). Analytically, customer relations can be broken down into 'service delivery episodes' which, in the case of the current research, represent shipments of printed

matters and related services. Each episode consists of five main types of economic and social exchanges including product and service, information, financial and social elements (Figure 3). Customers' consumption patterns dictate much of the frequency of delivery episodes and thus also the nature of the interaction between buyer and supplier. For example, a customer that orders print on a weekly basis creates much more interaction than the one which places one order each year. It is acknowledged that the existing customer relations vary so that customers and suppliers can be negative, neutral or positive towards each other (Liljander and Strandvik, 1995). Thus, an ideal situation where both parties are satisfied with the relationship is only one option. However, less than ideal relations can be relatively stable because of the high costs of switching (Liljander, 1995).

The above discussion highlights a number of useful ideas but at least two main problems can be identified. First, in most cases, relations between buyer and supplier firms involve several people, such as owner-managers, sales and production staff as well as buyers and other decision makers from the customer firm. All these participants have somewhat different and dynamic perceptions of the situation. Hence, the same relationship can be perceived differently from transaction to transaction and different people may simultaneously have different views. Such complexity is extremely difficult to capture with typologies (Holmlund, 1997). Another fundamental problem is that the literature tends to address customer relations as a separate issue, largely ignoring the linkages to the wider business process and firms' product market positioning (Miles and Snow, 1988; Morgan, 1997).

The following section analyses how printing firms' product-market position can influence interaction with the customers. The next three sections elaborate on printing firms' customer relations by incorporating the views of owner-managers, sales and production staff into the analysis. Section five presents a typology of printing firms' business strategies and a synthesis of the analysis. The final section summarises and draws together the analysis on printing firms' customer relations.

Printing firms as service providers

This section provides an overview of the sample firms' business activities and customer relations. The aim is to show how different product-market combinations can lead to various types of customer relations within one industrial sector.

The UK sample offers a good example of how the number of customers served reflects the nature of the business (Table 5). The research sample includes two printing firms that each have 50 employees and turnovers of around £2.5m per year. The customer bases, however, are very different. Whilst the general printing firm which specialised in fast turnaround electronic printing has 4,500 customers, the greetings card printer has only six clients. The products and markets in which these firms operate are the main reasons for their differences. The firm with the larger customer base is selling directly to end users whereas the firm with six clients is selling only to six large wholesale businesses. The general printing firm had 20 of its staff assigned to various marketing tasks but even so the majority of the customers had very few personal contacts with the staff. Instead they were targeted by means of impersonal advertising and direct mail.

> They [customers] get a Christmas card from you or they get one of your brochures or they get one of your letters... We've got things like five types of rulers, three types of pens...five or six different types of calendars. There's no one thing that works ... so we'll [also] advertise. We've advertised on the radio, we've advertised in the Yellow Pages, local papers and we've done a lot of PR work and we've been in a lot of technical journals and after a while people have seen your name several times .... If you imagine a normal paper box is that high [A4 size], if you can imagine our logo on the side of it. Some of our customers ..got all our boxes stacked against one wall and it looks like we've papered the wall and all the people going into that building might say oh PR PRINT...So when we phone up they think, 'well it must be a proper company'. ....Telesales are [also] important and personal contacts, so ...there's no one answer and that's what I believe in. Most people go wrong. They think, 'well we've advertised in the Yellow Pages and we haven't got anything', or 'we've advertised locally and that didn't do any good', but what they don't realise is the cumulation of a whole batch of advertising. [O-M4.Uk]

Personalised customer relations were central to the business of the greetings card printer and the owner-manager himself took care of the six clients.

> We have no salesmen, we have no estimators. Everything is done on contract [with the regular customers] and we just expect to get work all the time. ...Well, none of them are actually legally binding contracts, they're just agreed prices for a year, normally with raw material increases to be considered separately, so we fix our costs for 12 months.... We don't have to quote for the work all the time, regular orders just keep coming in. That's why we have quite a small management

> team with only about six people in the offices in total....80 per cent of our turnover comes from these six customers, that also supply us with materials, so we don't actually have to buy any board or paper. They send it to us, the rest of the materials we have to buy ourselves. We are specialising, I mean for the last six years we've specialised 100 per cent in greetings cards and gift wrap, which is probably split 50 per cent Christmas and 50 per cent birthday and other occasions, valentines etc. [O-M2.Uk]

The above indicates that customer relations and the role of services in the businesses can be significantly different even within one industrial sector. Some types of printing involve more customer interaction and intangible service elements than others. Much of the relationship marketing literature ignores such variations and advocates long-term customer relations and added value services universally for all firms. In reality, management may have little choice in deciding the role of services because it mainly depends on the nature of customer relations and the overall characteristics of the business. It seems that management attempts to increase the service content of the business could, in many cases, be counter productive or virtually impossible if the attempted change does not fit firms' product-market position. This clearly is the case in markets where relations with customers are price-driven or favour transaction-type relations or customers are not willing to pay any service premium. For example, high street copy shops and general printing firms often operate in the above type of business environment. Such firms can increase the service content of their offer, but only if they re-position their business to the markets where customers require services and are willing to pay for them.

This section has demonstrated how printing firms' customer relations are influenced by a number of factors such as the characteristics of printed products and markets where they are offered. Some circumstances clearly favour a very limited customer base and close personalised customer relations. Such a limited customer base means that each customer will buy a relatively large proportion of printing firm's output and in most cases both parties will seek an extended relationship. The situation is different where a small printing firm has a large number of less frequent customers. Then each customer represents only a fraction of business volume and relations are often more transactional in nature. In both cases, printing firms and customers may be quite content, provided the existing relationship serves their purposes well. Hence customer relations, either transactional or extended, should always be evaluated within the exiting product-market context.

Owner-managers' perspectives on customer relations and marketing

The following offers an in-depth analysis of customer relations and marketing as seen by the owner managers. For most of the respondents, daily contacts with customers were an essential part of their work as well as more managerial marketing tasks. Although marketing and sales activities varied, the differences were more significant within the country samples than between Finland and the UK. However, the Finnish owner-managers emphasised customer visits and good personal relations with the clients much more than their UK counterparts. On the basis of owner-manager interviews the sample firms can be grouped into three distinctive categories (Table 8).

Table 8: Printing firms marketing activities in the UK and Finland

		Firms
FINLAND	Sporadic marketing: visits, telephone, mailshots	6
	Passive marketing: rely on existing customers	4
	Aggresive marketing: expanding customer base	1
UNITED KINGDOM	Sporadic marketing: visits, telephone, mailshots	5
	Passive marketing: rely on existing customers	4
	Aggresive marketing: expanding customer base	1
		N = 21

The majority of firms in both countries were rather passive, focusing their marketing mainly on existing customers. In a typical case sporadic marketing activities included occasional visits, phone calls and direct mail shots to existing customers. A significant number of companies were not engaged in any kind of sales work; they merely received orders from their regular customers. There were only two aggressive and growth oriented firms that were very active in pursuing sales and marketing. As most of these firms were not particularly growth-oriented, it appeared that their aim was to keep existing customers, a common feature of small firms (Carson et al., 1995; Blackburn et al., 1997).

> We have a full time salesman but since a lot of our customers are nationwide or even overseas and we rely a lot on telephone and recently the fax, it used to be [customer contacts] by post and telephone before. Also the girls in the office are highly motivated to give a good impression of the company on the phone to the customers who call in. [O-M3.Uk]

> Typically, our marketing starts by a phone call or a personal visit to our customer. Then we make a follow-up call or visit them. If we are lucky we get a chance to put in an offer for the next order. We tend to avoid things like mass direct

> mailings. Say you send out 10,000 letters, the response rate is nearly zero anyway. We only do very well targeted marketing, for instance, send out individual personal letters to our customers. Personally, I prefer to make a phone call or visit customers. If it has been a while since I have been in contact with a particular customer, I tend to organise something so that I can make a personal visit. For example, I telephone them and say, 'I have this proof ready, can I pop in and bring it to you'? [O-M6.Fi]

Finnish firms were engaged in a somewhat wider range of marketing activities, such as Eco-labelling[1] sports sponsoring, customer lectures and one firm even offered a 'media laboratory'[2] freely for its customers use. However, the above types of activities were quite exceptional and the majority of the Finnish firms relied on telephone sales and visits to their customers. Although half of the firms in Finland and the UK were not doing active sales work at all, it seems that increased competition was putting them under pressure to do something. Out of eight passive firms, five were recruiting sales staff or otherwise stepping up their marketing efforts.

> Our marketing activities... Basically the salesman going out to meet them [customers] or by phoning them. We have a history in this company of not really having salesman. We've developed without much sales activities. I think that times have changed, but it is difficult to find good salesmen in this industry. [O-M1.Uk]

In both countries some owner-managers were actually trying to avoid new customers because of the additional workload involved in first time orders. Another reason to avoid new customers was the relatively high risk of failures with new customers' orders.

> Absolutely, it takes more effort to work with a new customer. We have to visit them more and there is more need for service. We have to find out many things, all sorts of details of the work. In the case of a new customer, we have to deliver samples and be very careful with all sorts of details. [O-M8.Fi]

According to Finnish and UK owner-managers, personal recommendations were the most effective way of finding new customers. Such word of mouth marketing is a typical feature of small firms (Blackburn et al., 1997). Professional print buyers and graphic designers were another important source of new business. The advantage of working with these professionals was that one familiar contact person could attract business from many new customers.

> Yes, designers really, and small design groups are our most important customers. Their orders are a big percentage of the workload anyway, but we also do get other work through them. I would think it's about 60 per cent of our business. [O-M5.Uk]

> When print buyers change jobs, they tend to keep ordering from us. This is an important way to get new customers. Sometimes we send out personalised letters to our customers to inform them about the new things available. It is important that the sales persons inform customers of the new methods and possibilities that we can offer to customers. [Sal9.Fi]

Interviews in Finland took place shortly after a very severe economic recession, which partly explains why owner-managers were very keen to hold on to their regular customers. In the UK owner-managers did not consider regular customers quite as important, perhaps because of the large size of the markets in London and the surrounding area. Two of the Finnish firms appeared to be passive in their traditional marketing but this apparent lack of sales efforts was compensated for by the owner-manager's very active networking.

> Yes, I am the chairman of the Helsinki Chamber of Commerce local branch and also on the board of the Helsinki Chamber of Commerce. In the Employer's Federation, I represent SME's in the Graphic Arts Industry division. I have frequently been a speaker in the seminars on continuing education for teachers. Recently, I have given quite a few lectures at Helsinki University and also in several large firms as part of their in-house training. I have created a massive contact network and people frequently contact us because they have heard about me from their wife, daughter, husband, colleague and so on... I have been invited three times to give lectures on the use of overhead slides at the Institute for International Research Group (IIR). I got very good feedback there, in fact, I was rated the best lecturer of the two day seminar. Each time there were about hundred people, so it has been a really valuable contact network and image building process for the firm. ...Our auditorium is an important marketing tool for us. We help customers to test their overhead slides and this has brought lots of publicity for us. For example, articles about us have been published in trade magazines in seven European countries. [O-M10.Fi]

These two firms were exceptional, since such extensive networking was possible only because these owner-managers were not in charge of everyday business. As Curran and Blackburn (1994) point out, the literature often tends to overestimate the importance of networking by assuming that most SME's can benefit from it. In most of the sample firms owner-managers were fully occupied by daily business activities and they had little opportunities to engage in extensive networking. Owner-managers' individual preferences could also prevent their networking because some of them did not like the idea of constant socialising or mixing business interests with their private life. In addition, qualitative differences in owner-managers' networking were significant. Only the most active ones held positions in influential organisations, such as chambers of commerce, which put them in contact with many potential customers. Most respondents who were active in networking had less significant roles in local organisations which offered few if any opportunities for business contacts.

Only two owner-managers were aggressive in marketing their firm's products and services. In the case of the UK firm, this was a way to survive in a very competitive, short-run printing and photocopying business. The owner-manager of this firm was an exceptionally determined and sales-minded individual, who was very systematic in networking with other printing firms. His firm had two high street shops and according to the owner-manager, '120 partner printing firms', which were a regular source of 'trade work'.

> We do everything [in terms of marketing]. If anybody asks you what's the right form of marketing for printing, there's no answer because the truth of it is that, within this industry, you're dealing with 1000s of other 'industries'. Every individual person at that individual type of company is different so you have to approach them in different ways...I have a unique relationship in the industry, it keeps sounding like I'm patting myself on the back, but I stay in contact with over 120 printers and when I say 'stay in contact', I classify phoning them at least once a month as staying in contact..... I do get a lot of work from other printers because I'm very very honest and ethical. That's also helped because they know that if they give me work, I'm never going to poach their customers and also that I will give them a good price so that they can make a profit on it. If you build up a good relationship with other printers you can ask them for advice as well as them asking you for advice. There's nothing to be gained out of aggressive competitiveness. There's a saying over here, 'what goes around, comes around'. [O-M4.Uk]

Two Finnish directors, who had bought their business three years earlier, were pursuing growth through very intensive telephone sales and customer visits. For these individuals their own printing firm represented an opportunity to make more money than by being employed by somebody else.

> How do we get sales? We push really hard, we just don't give any chances for a potential customer to walk away. The way we approach customers depends on whether we are dealing with a new or existing customer. Normally, we get orders from our existing customers without any problems. With new customers it is not always that certain. In this kind of situation we visit customers very often, all the time actually. We go to their place or bring them here until we have got the order. We make it quite clear that the question is not whether we are gonna do it, it is just a question of time when we are gonna get the order and print it. [O-M5.Fi]

This section has demonstrated the spectrum of marketing activities amongst the printing firms investigated. Partly, marketing activities seem to reflect firms' products and target markets but owner-managers' personal strategies and skills are also significant. Although, nearly half of the firms in both countries are quite passive in marketing, they seem to be under some pressure to shift towards more active sales and marketing. The other half of the firms were involved in some sporadic sales and marketing activities such as telephone sales, visits to existing customers and word-of-mouth type of marketing. Only a small minority of these firms can be characterised as 'aggressive' in their marketing or

networking. In most firms lack of time seemed to limit networking because owner-managers were fully occupied by other everyday business activities. Owner-managers' personal preferences and skills seemed to be another barrier to marketing and networking activities. Although marketing was perceived to be important, it was subject to owner-managers' broader business strategies. Since only very few owner-managers were keen for their businesses to grow, marketing activities were confined to maintain the existing level of the business.

Sales personnel views of customer relations and marketing

From the sales personnel point of view, most of the sample firms had very limited resources for marketing. This forced sales personnel to focus on the most reachable market niches. The use of IT in sales management was the most visible difference between the countries. Even the most aggressive and sales-oriented UK firms had not adopted computerised sales management systems whereas three of the Finnish firms were using them extensively. This was despite the fact that IT-based sales management systems would have benefited the UK firms because, on average, they had larger customer bases. This can be seen as another indication of Finnish firms' propensity to invest in new technology (Chapter One, p. 7).

Limited resources and the firms' existing printing capacity rather than any marketing plan, largely dictated sales activities and target markets. The main task for sales staff was to generate enough orders to keep existing production capacity in full use. As a result, marketing was targeted at customers whose needs matched the existing production capacity. Another common way to define markets was based on geography. Most businesses operated in a very limited geographical area, typically within a 50 km radius of their location. This focus on local markets allowed sales personnel to maintain close contacts with their customers.

> Our main markets are first of all locally, the Twickenham area and greater London as a whole. I have also specialised in the chemical industry for 25 years, cleaning equipment manufacturers and the hotel industry. We don't really care in which industry our customer is in. More important is that they have continuous need for printed matters, such as stationery and advertising leaflets. [Sal4.Uk]

> Geographically, we do most of the business within a 15 km's radius from our plant, that is, around the Helsinki area. In terms of products, we seek customers who use catalogues, manuals, and booklets. I myself concentrate on small publishers, training firms and consultancies that require those products. Our digital non-impact printing[3] is very competitive in short run printing and the

> product can be updated easily, for example price lists. This is more or less a just-in-time production or printing-on-demand. [Sal1.Fi]

Proximity to their markets is often referred to as an advantage that small firms have over their larger competitors. However, some sales representatives complained that marketing and sales activities were insufficient even in the local market context and, as a result, some potential business was lost. Another typical complaint concerned sales promotion and advertising, which was often perceived as insufficient. All the above would seem to indicate that small printing firms' focus on local markets because of limited resources rather than from a genuine management choice. So far this 'strategy' has worked reasonably well. However, some interviewees voiced their concerns about the impacts of new technology. In their view small printing firms may find themselves in a vulnerable position as digital printing technology makes smaller market segments profitable for larger firms.

High volume customers, such as advertising agencies and designers, were targets for those firms that could handle larger orders. Selective targeting was also possible for more specialised businesses. For example, the UK business cards printer aimed at customers which employed more than 1,000 staff and could place bulk orders for business cards. Two Finnish printers who specialised in overhead slides also targeted large organisations, especially those active in training and education. These two specialised printers were exceptional because they also had significant export sales to several European countries. Their export success was largely based on their know-how and specialisation, which meant that they faced very little direct competition in these markets (Table 5).

Subcontracting was another important way to cope with limited resources for many of the sample firms. Most of them were active in subcontracting as buyers and sellers. A steady flow of orders from the main contractor did not require much marketing effort once the subcontracting relationship had been established. This was very obvious in label printing where trade work was an essential part of the business in both countries.

> [A] lot of our business is trade work for other printing firms that don't do label printing. We are working in the bottom end of the market, producing small quantities, orders that many other printers do not like to take. We also get work from the packaging firms that recommend us to new customers. [Sal6.Uk]

Subcontracting was not always an ideal solution from the salesperson's point of view because it prevented direct communication with end users. Such problems were often

compensated for by the many benefits of subcontracting. For example, it made sales possible to customers who would not normally buy directly from a small supplier.

> I know that there's a bigger market there, but it's difficult to get in to. One of our major customers is a big food group and there is more work there. We do work for other food companies via other printers, but it's very difficult to get in with these big people...We often see a product that's got our label on and we try to contact those people, but lots of customers have their own printers and they stick with them, even if, they know they're not producing the labels. They just stay because they want to keep that relationship going. [Sal6.Uk]

Another important aspect of subcontracting was the opportunity it gave to contract out some of the orders. By doing this small printers could offer their customers a much wider variety of products and services. For most of the firms, this was the only realistic way to expand their product range since the small scale of the business did not allow further investment in presses and finishing and re-production equipment. The benefits of offering a wide variety of products and services were obvious because many customers preferred to limit the number of their print suppliers. Alone, small firms did not otherwise stand much chance in competition against larger firms that could offer a single source of printed matter for the customers.

> Recently, the hardest competition would be the single source companies that have started up, facilities management. They do the whole thing for a company. They supply them with the paper clips, business cards, letterheads, everything. The customers sign a contract with them and I've found that impossible to break. I've never been successful with a company like that because I believe customers that sign it could jeopardise the whole deal by ordering cards from us. [Sal2.Uk]

To conclude, interviews with sales personnel revealed how small printing firms have adopted a number of ways to carve out a market niche where they can operate profitably. Such strategies seem to work well as long as the firms remain small and operate within local markets. Only very few of the sample firms were pursuing a marketing strategy that was likely to create significant growth opportunities. Those firms that had grown, or were aggressively pursuing growth, seemed to base their market success on specialisation and know-how. In most cases the perception of sales staff was that they were expected to improve or at least maintain firms' sales but were given insufficient resources to do their work properly. Sales staff work was typically confined by: overall lack of marketing resources, focus on local markets and existing customers, firms' small production capacity and limited product range.

The production personnel's view of customer relations

In both countries production personnel had limited direct contacts with customers. As a result, sales staff and owner-managers had the key role in passing customer information to production. A constant flow of accurate information has many implications for quality and also for the firms' service capability. The production personnel's ability to work with different type of orders was another important aspect that was closely related to service capability.

Generally, production staff were quite happy to leave direct customer contacts to sales personnel and owner-managers. This had both positive and negative consequences. It was an effective way of avoiding confusion, which several customer contact persons could cause in handling orders. In most firms production staff contacted customers directly only in the most urgent situations. Sometimes this lack of direct contact created problems in production. For one thing, sales staff was frequently criticised for incomplete and inaccurate order specifications. The production view was that they did not always have enough technical skills to be able to ask the right questions of customers. The creative elements of the work, such as graphic design, seemed to suffer most from the lack of direct contacts between production and customers. This indicates how important personal contacts can be for service delivery.

> I would prefer to meet customers in person, because it is much better to do the design directly with the customer. When the sales person is between me and the customer, they often tend to mess things up rather than help. Some of the sales staff have more of an eye for design than others, some just drive a company car and quote prices for the customers. It is like this children's game they have at the nurseries. A children whispers a sentence to the next one and this continues until the last child, who then says the sentence in a loud voice. Usually, these two sentences are quite different from each other. [Ppre6.Fi]

Production personnel believed that communication problems were sometimes caused by customers rather than by the sales staff. Such problems were particularly common with new customers, whose requirements and preferences were not familiar to production.

> Orders that come from regular customers are normally quite clearly specified, because they know that we have to go back to them and ask for more details if they do not provide a proper briefing in the first instance. With a new customer we nearly always have some problems. Instructions are not clear or they do not know what they really want. They only start to figure out what they want when we have already started the work. This means all kinds of extra work. For

> example, we have produced a proof using four different typefaces for customers who cannot make up their minds about the work. [Ppre5.Fi]

In most cases, the first order from a new customer involved additional work, which increased the production lead time. In addition, sales staff often won the initial first order by promising to turn it around very quickly. Since further business with the new customer was very much dependent on the successful delivery of the initial order, the production personnel came under great pressure. Such contradictory pressures caused problems and they were most evident with new customers. This partly explains why some printing firms were reluctant to attract new customers.

> The first difference [between regular and new customer] is settling a corporate norm. Once we've done the job once we know exactly what size, what typeface, point size, logo position and everything else. ...With a new customer you have to scan the artwork in. With an old customer you don't. You have to be quite fierce in price to get new customers so you very often don't make money on the first job. You can't charge extra for the new customer. Well, you can charge extra for scanning in artwork in some cases but if they are a big account you want to get them on a contract price. You can't then start billing another £100 for generating the first job. There's also a lead time problem [with new customers] because for the first time you have to design and proof the layout to make sure that you get the correct output, produce film, make plates and print them. Thereafter, if you need any more you can just get the plates out of stock and print. Its a very simple job. We also hold finished products in stock for most big regular customers, which makes things easier. So the extra work involved in the first order can add two days to your lead time. [Ppre3.Uk]

Problems inflicted by customers were often handled internally in order to keep their business. In a typical situation, sales staff had to accept inferior originals to win an order from the customer who was unable to supply better material. This put production personnel under pressure because they had to turn inferior material into acceptable printed matter.

> You may realise that very often sales have to accept something [customer's material] which is less than perfect. This involves a little more work at the production end, but it means that the customer will place the order straight away instead of giving them an opportunity to hold it back and place it somewhere else. [Ppre3.Uk]

Familiarity with customers and their requirements had a direct impact on production. It was much easier to turn around an order for a regular customer whose requirements were well known from previous orders. However, working with regular customers could also be very demanding, albeit the problems were different. Many regular clients realised their importance and tended to dictate quite strict terms to their print suppliers.

> We're still printing their Christmas stuff [greeting cards] at the moment [week 49] which is supposed to be going out for this season. They [major customer] had misjudged their stocks and so they came to us 'with a screaming urgent sheet', because many of the cards had run out of stock and we should try to turn round these for them in a week or whatever was their deadline. ...We're still receiving these orders at the moment and we've got a hell of a lot of work to do before next Thursday.....Sometimes they [customers] will give us a big launch of about 20 sheets [of different greetings cards] and they initially want proofs of each one and every card might have six or seven different finishes on them. So therefore we have to print about 1000 proofs of every card, with however many finishes it might have. Also they might not actually want the finished product until three months later. So we are buying everything for the whole job but we cannot actually get paid for the complete job until four months after we've done it, so that is a big outlay. [Ppre2.Uk]

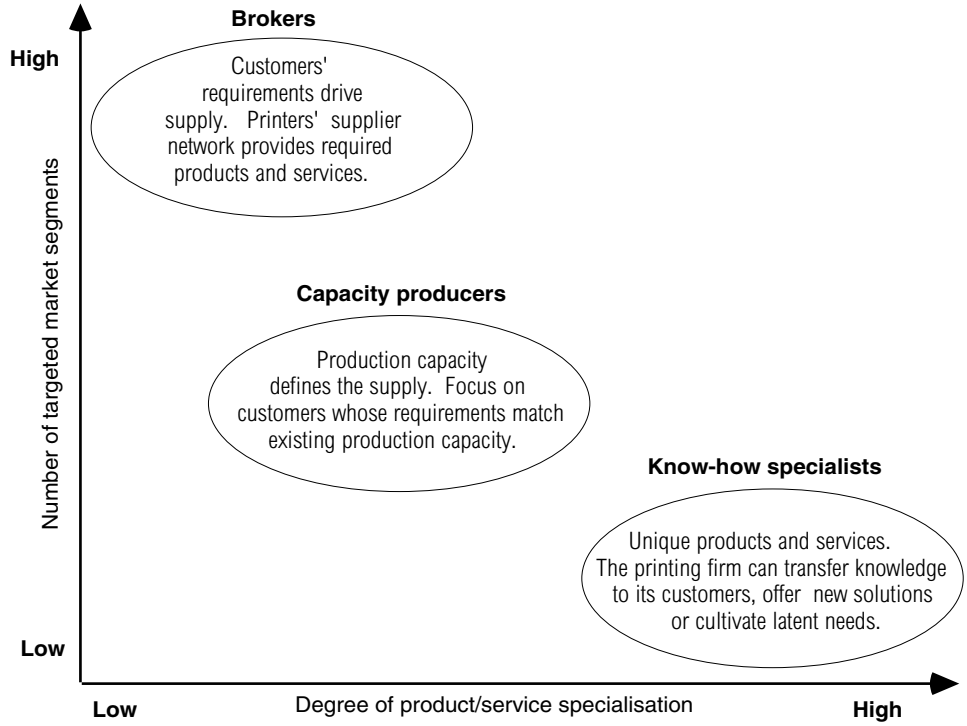
In summary, the views of production personnel highlight how customer relations influence not only the sales side of the business but also the actual production process. Lack of direct customer communication together with inconsistent quality of incoming artwork caused problems for the production staff. Under such circumstances, it was often difficult to turn out high quality products in a very short time. The following section analyses the strategies printing firms have adopted to be able to deliver high quality products and services.

A typology of printing firms' business strategies

The following typology draws together the sample firms' service delivery strategies. Figure 11 illustrates how the strategies adopted are largely dependent on two key dimensions: the firm's market focus and specialisation. The main characteristics of each strategic option are explained within the three ovals in the illustration.

About two-thirds of the sample firms belong to the production oriented capacity producer category (Figure 11). The remaining third can be divided fairly evenly in to brokers and know-how specialists. The most important country specific difference was that the broker strategy was more common in the UK, whereas the know-how strategy was more dominant in Finland. The large markets around London may explain the UK firms' stronger tendency to adopt the broker strategy. In Finland, high take up rates of the latest technology and good technical skills are reasons which favour the know-how based strategy (see Chapter One, p. 8).

Figure 11: Printing firms' business strategies



The above also shows how service delivery strategy, business process and target markets are related to each other. The essence of the *capacity producer* strategy is that these printing firms concentrated on selling their existing capacity. Firms which followed this production-oriented strategy, targeted segments that had a good fit with their existing production capabilities. The possible competitive advantage was based on a combination of production efficiency and targeted marketing.

> Four and five-colour printing are our main product. We have actually focused on this area for some time by cutting down on other types of work. I prefer colour printing myself, because higher added value products tend to yield a better margin. I really personally prefer colour printing, because the lower end of the market is such a mess. So, four-colour printing is what we offer really... We don't use subcontractors to do the actual printing, but in finishing, yes we have some subcontractors who do that. We prefer to work directly with the industry rather than with the advertising agencies, which give no room for our own input. When we are working directly with the industry, we can suggest new ways of producing their print and get more use of our expertise in printing. [O-M6.Fi]

Most of the sample firms followed such a 'middle of the road' strategy and they did not seem to have a clear competitive advantage. Often these businesses survived only because they traded locally in very fragmented markets, without any great growth ambitions and by staying in close touch with their regular customers.

Broker firms offered a wide variety of products and services to a heterogeneous customer base. These firms based their strategy on the customer's preference to buy print from a single familiar supplier. Often such a strategy seemed to offer a fertile ground for long-term customer relations. The broker strategy required flexibility and responsiveness to customers' requests as well as the capability to manage numerous subcontractors. Since small printing firms have limited production capacity, these firms had to out-source a considerable share of the orders that could not be produced in-house.

> It [service] is very important; we will never say 'no'. We have a very large database on our computer ...of all sorts of different things that are very loosely print-related and some that are very particularly print-related in terms of finishing operations or printing operations. When a customer comes or a potential customer comes to us on the phone and says, 'Do you know where I can get X Y or Z?' we'll always ask them to give us some time. Within half an hour, an hour or so, we'll come back with suggestions of where to get that product or service. …We basically make a decision then whether its worth while acting as the agent or whether we actually tell the customer or potential customer where to get the information or the product. That really comes down to a decision of how much of the work involved would come through this factory. If it's a straight forward, 'you can buy this in Nottingham', for example, then we would tell them the name and address of the company concerned and just ask them to mention our name when they put the order through but we wouldn't touch it ourselves as such. [O-M6.Uk]

In terms of market focus, broker firms were able to serve a wide range of different customer segments because of their extensive product and service portfolio. From a service point of view, this is in clear contrast to the capacity producer strategy where firms try to find customers for their existing production capacity.

Know-how suppliers represent the third strategic option. These firms specialised in certain type of products or production methods and developed leading-edge knowledge in these areas. Four of the sample firms can be classified in this category, three of them Finnish and one a UK firm. The Finnish firms had proprietary know-how on printing and the overall production of overhead transparencies. Originally, these firms had developed a unique offset printing method for acetate film. Over the years they had expanded their expertise to overhead transparency design and related consulting. The third Finnish firm had developed a special knowledge of very high quality printing for demanding customers such as major advertising agencies and paper manufacturers. Value added services, such as advice and knowledge transfer, were an important part of the business for this firm.

> We have created new opportunities for advertising agencies by introducing them to new ideas. For instance, new types of print media in addition to the commonly used white paper. We have had paper seminars where we introduce these new ideas to advertising agencies, for example, printing on wall paper, brown wrapping paper, corrugated cardboard, pulp and really anything you can imagine... This has built us a good reputation among advertising agencies. For example, the competition that we organised for graphic designers was quite a success. We were also the first one to introduce new printing methods such as dry offset and crystal screen[4] in Finland. This year we will have a seminar on creativity. We try to push the limits of printing this way. We've also got plenty of publicity from the Eco-label certificate that we received... One of my main targets is to get plenty of free, or nearly free, publicity, for our business. [O-M2.Fi]

One UK printing firm, as described earlier, had specialised in greetings card production. This particular firm was working very closely with its six clients. As a result it was able to offer highly customised, value-added services, for example, a wide range of print finishing options.

> We're almost self-reliant. We've virtually got everything we need here in-house. The only things we put out regularly are scanning of artwork. From the film stage onwards we do everything ourselves ... and we're unique in that respect. There's only probably one other printer in the industry... who can offer the whole range of services that we can offer and that's where the company's changed over the last five years ...because it's gone from being print oriented...now we convert everything ourselves and our printing capacity's restricted by the amount of finishing capacity that we've got and we have become far more print finishers than printers....We've just sold two presses and we are still keeping our finishing factory quite busy. Yes, there's more added value, and it seems to be the way printers have had to go... If you want to move forward from just a jobbing printer... someone just printing flat sheets, you have to offer these other services. And it is hard to find subcontractors who are reliable. [O-M2.Uk]

A common feature of know-how suppliers was that they rarely used subcontractors because it was difficult to find capable ones. In addition, these firms did not want to reveal their expertise to outsiders and, in particular, know-how related value-added services were kept strictly within the firm.

Summary and conclusions

This chapter has demonstrated the diversity of customer relations and patterns of interaction in the investigated sample of small printing firms. The frequency and nature of customer interaction was clearly dependent on the type of printing business each firm was engaged in. In terms of size, customer bases ranged from thousands to less than ten key clients. The average UK firms had larger customer bases than their Finnish counterparts

(Table 5). In the UK, each member of staff had approximately 18 regular customers to take care of whereas in the Finnish sample the ratio was eight regular customers per employee.

Printing firms' marketing activities were very similar in both countries and most firms seemed to put relatively limited effort into sales activities. A difference was that Finnish owner-managers put more emphasis on developing personalised customer relations than their UK counterparts. The smaller size of the markets offers one reasons why personalised customer relations were more important for Finnish owner-managers. In addition Finnish firms where more keen to use IT and computerised sales management systems, which helped some businesses to maintain close contacts with the customers .

It was possible to establish from the owner-manager interviews that most sample firms' marketing strategy was to maintain the business at its current level. Nearly half of the firms in each country relied on existing customers and the other half were targeting new customers only to an extent that they were able to compensate for lost customers. One firm in each country was clearly growth-oriented, marketing their products and services aggressively to new customers. Typical sample firms focused their marketing on existing customers in local markets. This facilitated personalised business relations that were often helpful for service delivery. Deliberate networking was relatively rare among the investigated business proprietors. Only three owner-managers, one in the UK and two in Finland, were very active in this type of marketing. Lack of time was given as the main reason why owner-managers were not more involved in networking. There were also owner-managers who were not keen on constant socialising or mixing business interests with their private life. Moreover, most interviewees had limited access to networks that could have significantly helped their business. The exceptional cases where owner-managers have time, motivation and capability for network marketing seem to get disproportionate attention in the literature.

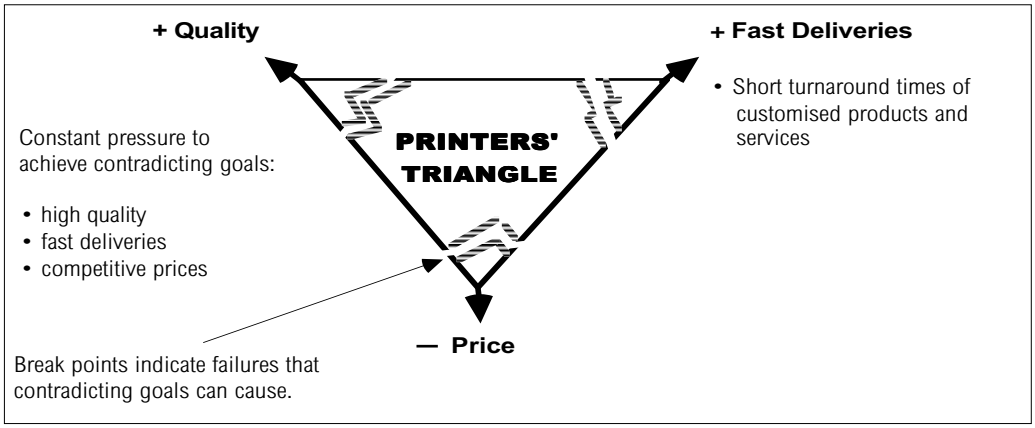
A main concern amongst the sales staff was how to win enough customers with the limited available resources. In most cases the solution was to focus on local markets and target sales efforts mainly at existing customers. Besides better margins, a focus on regular customers made work easier for the sales personnel. Sometimes the sales efforts were focused on those customers who were likely to place bulk orders. Sub-contracting was also an important way to cope with limited resources. As a subcontractor, a small firm could enjoy a flow of regular orders from the main contractor. By using sub-contractors,

firms could offer a much wider range of products than their own production capabilities would have allowed. This was crucial, because many customers required a wide variety of products from their regular print suppliers. As the owner-manager and sales personnel interviews indicated, most firms relied on personalised marketing and a relatively small number of key clients. The above type of marketing, dictated by scarce resources, has always been typical of small firms. In this light it is surprising that the marketing literature has only recently discovered the benefits of long-term customer relations (Liliander 1995; Payne et al., 1995). A reason for this is that so far the marketing literature has shown a very limited interest in small businesses.

The production staff had their own concerns over customer relations. In particular, the lack of direct customer contacts was perceived as problematic in both countries. Sales personnel, who relay the information from the customer to production, were frequently blamed for mistakes and incomplete product specifications. Sales personnel were equally unhappy in subcontracting situations where they had no direct contacts with customers. Orders from new customers were frequently problematic because of communication difficulties and the extra workload involved in such situations. In addition, uncertainty about customers' requirements and short delivery times made these orders a real challenge for production staff. Getting the order specifications right was also a major problem for production staff who had very few direct contacts with customers. To conclude, personalised interaction and communications have a crucial role in print production.

Several owner-manager, sales and production respondents in both countries used the printer's triangle concept explicitly, and many more implicitly, as they time after time explained how difficult it was to maintain the balance between quality, fast deliveries and competitive prices (Figure 12). The printer's triangle concept captures a number of contradictions and tensions that exist within the printing firms. The aforementioned contradictions become very acute, especially when a printing firm is delivering products and services to new customers. In order to win the first order from the potential new customer, sales staff often have to quote highly competitive prices and short delivery times. When production starts to process such orders, it has to cope with the extra amount of work that orders from new customers involve. They have to find out very carefully all the details of new customers product specifications and requirements within a very short period of time. At the same time production needs to pay extra attention to quality, which frequently determines whether customer will place further orders with the firm.

Figure 12: The printer's triangle



An additional element of pressure comes from the owner-managers, who monitor that the production costs do not exceed the acceptable level determined by the quoted, often very low price. An essential feature of the printer's triangle is that it encapsulates the key contradictions and dynamics that exist between: printing firms' and their customers, and internally, between printing firm owner-managers, sales and production staff. In addition, the printer's triangle provides a method of theorising the way printing firms manage contradicting demands for high quality, services and low prices.

The business strategy typology of small printing firms synthethises the analysis and shows how they have adapted to cope with the available resources. Three main service delivery strategies were identified. These were related to the characteristics of production processes and the printing firms' target markets.

The businesses that followed a *broker strategy* were demand driven. They were capable of supplying a wide variety of products to different types of customers by sourcing from their extensive supplier network. The successful execution of this strategy demanded flexibility and the ability to manage a large number of subcontractors. For the customers, these firms offered a single source of printed matter and related services. This convenience facilitated the development of long-term customer relations.

The most common strategy among the sample firms was *capacity producer*. What these firms offer to their customers is limited by their existing production capacity. In many cases these firms were production-oriented general printers, whose main concern was to keep

their production capacity in full use. A lack of competitive advantage and limited customer loyalty placed these printing firms in a relatively weak position. Two out of three sample firms can be classified in this category. They survived by serving a limited number of customers in the local market place. Within such local niche markets, these firms were fairly well sheltered from competition but their growth potential was limited.

Know-how suppliers were the most specialised group among the sample firms. Such firms targeted relatively narrow customer segments and highly specialised products. Because of their specialist know-how, these firms faced only a limited amount of competition. Their high value-added products and services facilitated extended customer relations where these printing firms were able to act as problem solvers and consultants for their customers. Such services included knowledge transfer in terms of new production methods and product features and design. Rather than seeing themselves as printers these firms defined themselves as problem solvers in their special areas of expertise, for example in visualising presentations (overhead slides) or as an innovator of high end printed products.

This chapter has shown the spectrum of different types of customer relations amongst the printing firms investigated. It has also demonstrated how products, production process and markets can influence customer relations. The interrelated nature of industry context, business process characteristics and customer relations in a small firm context has not so far attracted much attention in the management literature. Instead, this literature offers universal concepts which have had limited value because customer relations and service delivery depend on numerous dynamic factors which are largely beyond management control.

Notes

[1] The main purpose of the Ecolabelling program is to help consumers select products that will be less harmful to the environment than alternative products. Another target of the programme is to stimulate companies to develop products and production methods that will have less hazardous impacts on the environment. Ecolabelling is linked to the Finnish Standards Association (SFS), which is an independent, non-profit making organisation co-operating with trade federations and industry, research institutes, labour market organisations, consumer organisations, and government and local authorities. SFS runs the Finnish ecolabelling body which is part of the joint Nordic environmental labelling programme.
See: http://www.sfs.fi/summary.htm and http://www.sis.se/miljo/ecolabel.html

[2] A Finnish firm had an auditorium where customers' overheads could be tested. The audience filled in special forms which were then analysed. As a result, customers could develop their overhead slides to make a more informative and effective presentation. A research assistant who could run the research process, was part of this service offered free to customers. According to the owner-manager, the key contribution of this firm was to help customers to visualise their information for presentations more clearly.

[3] Digital non-impact printing is based on an electronic process where colour is transferred on to the paper in a way which is closely related to photocopying.

[4] At the time of the interviews, crystal screen represented the latest technology in the production of four-colour films. The advantage of this method is that it can produce a better quality printed image than the previous screen production methods. According to the Heidelberg printing press manufacturer (http://WWW.heidelberg.com), the key benefits of such new technology include:

- Near photo-realistic quality in offset printing.
- Excellent for reproducing difficult, regularly repeating patterns, such as wood grain.
- Smoother graduated tints are possible.
- Faster imaging due to lower resolution requirements for equivalent quality output.
- Improved sharpness and detail rendition.
- Ability to print up to 7 colours (HiFi Colour).

5. Delivering services in printing

Introduction

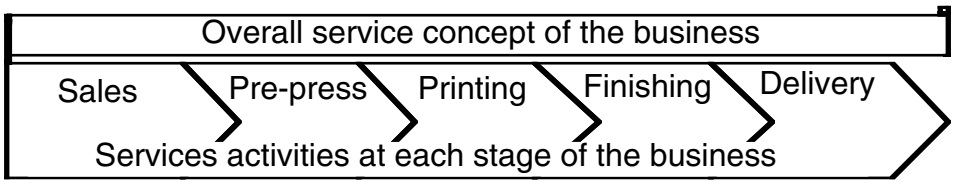
There has been a long-running debate about what service activities are and in what ways, if any, they are different from manufacturing. An underlying assumption has been that services should be distinguishable from other kinds of economic activity, if only the nature and a definition of services could be identified (Bryson and Daniels, 1998; Mills, 1986). In practice, such a definition remains elusive and the recent developments in information technologies and advanced manufacturing have further blurred the difference between manufacturing and services (Sayer and Walker, 1992; Grönroos, 1990; O'Farrell and Hitchens, 1990). Customised manufacturing, such as general printing, has traditionally incorporated service elements. The recent argument is that due to rapid technological development and increasing competition, value-adding services are becoming a crucial element of business for an increasing number of printing firms (Lankinen, 1998).

Although the management literature acknowledges that services are important in a manufacturing context, a very limited amount of empirical research has been done in this area. Much of the analysis remains at a very general level, suggesting that manufacturing firms should increase the service content of the business and adopt service management practices (Bowen, Siehl and Schneider, 1989; Grönroos, 1990). Another line of argument is that small firms' inherent characteristics make them good service providers. In addition, the characteristics of services may favour small unit size because as an immaterial activity, services cannot be stored and they must be delivered to the customer. This debate also contains an argument that the personal element of a service delivery system makes it more efficient to administer in small units (Stanback et al., 1983; Mills, 1986). The above type of considerations also apply to commercial printing firms whose products are customised and where the production process often involves a substantial amount of personal interaction.

Most of the above arguments have not been validated through empirical research. The following analysis seeks to provide a new research-based perspective on small printing firms' service activities and management practices. Thus the focus of investigation shifts from customer relations to the service delivery process. Figure 13 is a schematic

presentation of the key stages of the print production process and the overall service concept of the business. During the analysis, service activities are investigated at each stage of the process and also as a more conceptual business strategy issue. By incorporating owner-manager, sales and production staff views into the analysis it is possible to build a more complete view of the entire service delivery process. The comparisons across two countries help to discover variations in printing firms' service delivery strategies.

Figure 13: Investigating services in the printing business



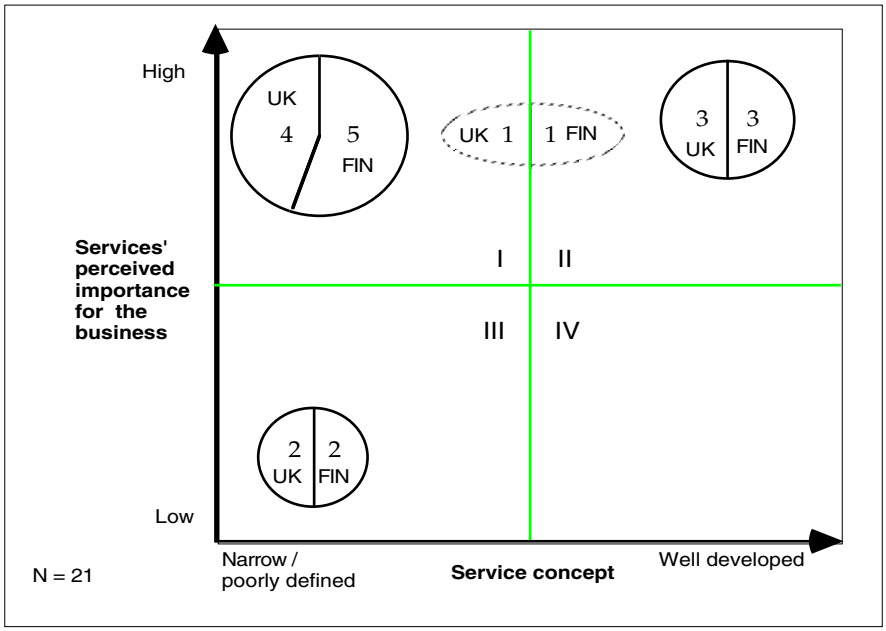
The following sections, two, three and four, analyse the views of owner-managers, sales and production staff on services and services' significance for small printing firms. Section five examines the internal flexibility and other key factors which contribute to sample firms' service capability. Section six draws together and synthethise the analysis.

The owner-managers and their views on service concepts

Interviews with owner-managers produced information on their service concepts and the role which they assigned to services in their businesses. Interviewees' service conceptualisations ranged from very specific, to vague ideas, to an inability to articulate what services are in any coherent forms. Typically, specific meanings were attached to products or production process related services whereas more customer-centred service concepts were often expressed in vague statements such as, 'we never say no to the client'. Services' perceived importance and role in the business varied from being insignificant, to an extra burden, to an important source of added value. The most sceptical view was that services represent only an extra cost factor and that they have a negative impact on production efficiency.

The following typology brings together owner-managers' views of services and classifies Finnish and UK interviewees into four groups (Figure 14).

Figure 14: A typology of owner-managers' service conceptualisations



The numbers within the circles indicate how many owner-managers in each country belong to quadrants I to IV. Owner-managers who considered services an important part of their business activities are located in quadrants I and II in the diagram. Although most owner-managers perceived services as important, their service concepts tended to be rather 'narrow'. Typically, such a narrow service concept involved mainly product and production elements such as graphic design of the printed matter or fast and prompt deliveries to customers. In the diagram such perceptions are located within quadrants I and III. The ability to offer a wide portfolio of products, pre-press and finishing options, were often cited as printing related 'services'.

> Well, they [services] are important, we've just installed our own Barco graphic design system which is fairly well known. This was quite a big step for a small company, but as we are on an expansion programme, we felt this was an essential part of the expansion. We have got to give service, which is what this industry is all about. [O-M1.Uk]

In many cases owner-managers' limited service concepts became evident from their short answers to service related interview questions. It was also common that owner-manager's had difficulties in articulating their notion of 'services'. The excerpt below provides an example of the difficulties that owner-managers had in explaining the services their firm offered.

How important are printing related services to your firm?

> Not too important really, we can offer some graphic design, but it's not internal ['service' was produced by a subcontractor]

How about non-material things? Are they important for the company or is it just something you do when needed?

> No, those types of services are not important because most people provide us with roughly camera-ready artwork. We just make the films and print their order. [O-M10.Uk]

Despite the initial difficulties, the meaning of services and their role in the business started to emerge as the discussion continued.

What do you think is most crucial in winning customers' orders?

> Service and quality, quality control.

And when you talk about service could you define what it actually includes?

> Yes, well I think its being able to react to the customer's wishes reasonably quickly and, following that, provide a good sample of the work and also to lead them in the right direction because quite a lot of people don't know what they want, so we can actually give them the benefit of our experience. [O-M10.Uk]

The analysis indicates that less than a third of the owner-managers had a well-developed service concept for their business (quadrant II in Figure 14). Typically, these owner-managers spoke about various value adding services such as: advice to customers on products; production methods; design; cost effective ways of producing printed matters; and responsiveness to customers requirements.

> Printing related services are very important for us. Our advertising motto is that customers can get anything from us, as long as it is somehow possible and they are willing to pay the costs involved, for example the entire production of printed matter, taking photos, producing texts, sketches and everything else until the customer has the final product delivered in the specified time and place. [O-M11.Fi]

Those who offered a more elaborate service concept, emphasised that it was important to make printing 'easy' especially for those customers who did not have a good knowledge of the process. Two owner-managers in each country, located in quadrant III (Figure 14), were not at all convinced that services could benefit their business. A Finnish owner-manager argued that services were becoming less and less important in the printing business. His view was that printing firms were better off if, instead of services, they concentrated on improving their production efficiency.

> Over recent years we have cut down quite a bit the number of services we offer. If a customer wants a design service we can give them a place to turn to. I have the gut feeling that the services share of this business is becoming less important all the time...people have their contacts and they know how to order printed matter...though, sometimes we do deliver and pack products according to customers' special instructions. [O-M6.Fi]

Such views were typical of the four owner-managers who were production oriented. They seemed to believe that the need for services was limited because the products were relatively simple or customers were professionals who required few if any advisory services. In some cases, the owner-managers' experience was that customers were unwilling to pay the premium which would have justified the extra cost incurred by services. Finally, there were owner-managers who believed that the services they offered could have both positive and negative consequences for the business. For example, one owner-manager felt that under certain market conditions customer services could be counter-productive for the firm.

> We've got a full-time help line. As far as I'm aware, I'm the only company of my size that has education facilities for the customer full time. It's got its own telephone number, its own people...Although in time I'm going to stop it. The more you educate customers the more they think they know and the more they shop around. For argument's sake, in the early days we educated the customers to present the discs in the correct way. Then they could go to another printer and say these discs are totally correct and how much for the job. So we're actually doing ourselves a disservice. It's best to keep them in ignorance. If they want education they should go and pay for it elsewhere, not get it from us for free and then go elsewhere. For the most part, customers should be kept in the dark and I don't mean that in a nasty way. I mean, if I go in to have surgery, I don't say to the doctor can you tell me the technique and can you just give me a run down on your 10 years of training. You would trust in the doctor to do a good job. I believe that if a printer's doing a good job you should also put your trust in them to help you find your way through the system. That's part of the service. I mean can you imagine sitting in the back of taxi being a back seat driver, saying, watch out for that car, the taxi driver will stop and throw you out. [O-M4.Uk]

The emerging pattern shows that similar services can be an essential part of the business for one printing firm, but at the same time offer little, if any, added value for another. In some cases services may even have a negative impact on manufacturers' business. For example, by offering graphic design services some printing firms end up competing with advertising agencies, which are their important customers. But at the same time, other printing firms may find that graphic design services are the most profitable part of the business.

> Our graphic design company has proved very, very worthwhile. You find that people look less at what they're being charged for design and artwork than what they do for print....

So you mean it is possible to charge for design as well?

> Yes, oh yes, design is a very difficult area to say what the value of it is, whereas you can get six people to quote a print job and they'd be within a fairly even percentage. Design is very difficult to guess how much it's worth and what is its value. I don't think people actually know what they're spending, anyway. As long as they get the product that they want at a reasonable price, they're happy with it. [O-M7.Uk]

In summary, owner-manager interviews demonstrate clearly the complex interrelated nature of services. The service concept itself is sometimes perceived as nebulous, to the extent that some owner-managers were unable to specify or articulate the type of services their business offered. In both countries nearly all owner-managers considered services as an important part of their printing business. However, only three owner-managers in each country could clearly define what services their firm offers. It appears that owner-managers' perceptions of services and firm's product market positioning are the main factors that influence service capability. These two factors are related so that a firm's product-market configuration sets the broad limits within which the role and scope of services can develop. Within these limits owner-managers' preferences and service related skills could influence firm's ability to deliver services. So far the service literature has barely recognised such linkages and limitations. In order to produce more useful advice for small manufacturing firms' owner-managers, the service literature needs to address firms' product service configurations as well as managerial issues.

The sales staff's view of the role of services in printing

The views of sales staff illustrate how deeply interrelated service delivery and customer relations are. Although sales staff valued regular customers very highly, new customers were also important. Even if the business has no growth aspirations, it needs new customers to replace those who no longer continue to buy from the firm, for one reason or another. Establishing the first contact with a new customer was generally viewed as a very demanding and time consuming task whereas working with regular clients was described as much easier. As one sales person put it, 'it is like calling a friend'. The following analysis shows how customer relations and services were linked together and how this was reflected in the sales staff's work.

Credibility was often the first issue that sales staff had to tackle when seeking orders from new customers. According to several Finnish interviewees, the latest pre-press technology and digital printing gave credibility to the small printing firm which was seeking new customers. Some of the UK interviewees used 'name dropping' as a way to assure potential customers that even a small printing firm is able to deliver their order. This was done by showing potential buyers a list of existing customers and pointing out well known firms amongst them. Some interviewees emphasised 'services' as a sales argument. A short delivery time, in particular, was regarded as a key element of service and an effective way to win orders from the customers.

> Competition is pretty sharp at the moment. I mean everybody these days has got the equipment that can produce the quality work. There are very few people in the market place who produce work that is substandard. So, you have to be absolutely sharp and on the ball with the delivery. Mainly competition is price oriented, it is really a buyers' market place. ...I think there are three main elements – I call it the *eternal triangle – it's price, service and quality*. Not necessarily in that order, it depends on the clients you're talking to. Sometimes it's service and quality above price but the price has still got to be reasonable at the end of the day. [Sal5.Uk]

Even if numerous other services and improved quality were considered important, they were not seen as a very effective way of attracting new customers. Many interviewees described how difficult it was to convince new customers with quality and service arguments alone. Lack of previous experience and the immaterial nature of services made it very difficult to demonstrate the benefits to new customers. As a result, price and delivery times were important sales arguments for new customers whereas other more intangible service promises could convince established clients.

> Customers make up their mind on the basis of *price, delivery time and services*, but it is really difficult to say exactly what 'services' are, it is such a wide concept. You must be very flexible and a thing that is good for one customer may not be suitable at all for another customer. It is difficult to say; you must be sensitive enough to realise what each one of the customers wants. [Sal9.Fi]

> Service I think would be the most important. Matching what the customer wants, meeting their needs, leaving no doubt in their mind that you can provide the service. They need to be convinced that the buyer is going to look good, not bad by using our services. I think price plays a part here but you have to get the service part right. ... If you haven't convinced them of that then why should a client pay for that? [Sal2.Uk]

As soon as an order had been secured, sales staff were keen to identify the new customer's service needs by gleaning information on the customer firm, its requirements and staff preferences. Whenever possible they also tried to explain their firm's print

production processes, time tables and available services to the new customer. These were ways of getting to know the customer, increase understanding and consolidate the business relationship at an early stage.

> It is different. For the new customer we have to explain carefully the production method, our production turnaround times and the requirements for customers' material. Regular customers know all this and we don't need to explain all the basics to them, just update them from time to time. For the new customer, we also have to explain how cost effective digital printing is, for example with a publisher who is trying to decide whether to order 2000 or 3000 copies of a book. With this method we can print 1,000 copies to start with and another 1,000 whenever it is necessary. In traditional printing you were not able to do this. [Sal1.Fi]

Good service and consistent quality provided a basis upon which the buyer-seller relationship could develop. Print buyers were often held personally responsible for getting the order completed successfully. Thus sales persons and buyers both had a strong incentive to establish a good working relationship right at the beginning. Other important aspects of service were responsiveness to customers' requirements, good personal chemistry and advice to customers.

> Flexibility, the fact that we can meet their requirements. We don't...say, 'No the delivery date is three weeks and that's it and you stand in line.' We would do everything we could to give them what they wanted, so we hope. We've been able to keep our customers, which speaks for itself really. [Sal6.Uk]

> Other things being equal between two printing firms, personal relations and price will decide which one gets the order. Small differences in prices will not matter, the one who has the better relationship will pick up the order. If the difference is more than 10 per cent, the price will be decisive. [Sal6.Fi]

In a well established relationship the sales person would develop a sensitivity for customers' design, quality and price preferences. As the social, psychological and knowledge-based bonds developed, price often became less important as a purchase criterion and a 'service premium' could be added to the mark-up.

> A number of the guys that I've known for years say to me, 'Jack, I've had to put this out for three quotes and I want to give you this, but you know you're £20 too expensive. Can you do something about that?' So I came back and talk to the lads and invariably we do something about it, but that by and large would be with clients who are long standing, from whom we've got a lot of work. We certainly wouldn't do that for everybody. [Sal4.Uk]

> We are able to charge slightly higher prices than other printing firms because customers know we will always keep to the agreed delivery time and our quality is always high. We have this reputation for being reliable in terms of delivery and quality. Print buyers in the ad agencies are in a difficult situation. They have to keep the agreed delivery date, no matter how many unexpected changes customers

> make on the way. There is no way of extending the agreed delivery date. [Sal2.Fi]

Good communications were in many senses essential for the successful completion of orders. For example, sales staff could help buyers by reminding them of the printing-related tasks that they were responsible for. While the order was in print, sales staff were often requested to keep customers informed of the progress of the order, in particular to inform them if any problems were about to cause delays. In several cases printing firms offered 'customer care' where the sales person was in principle available 24 hours a day to solve customers' printing-related problems. Sales staff were often proud of the service they were able to offer to the regular customers whom they had learned to know very well over the years.

> I'd like to think we offer a service that is a personal service, which is not always available in this day and age. I would term us as 'caring'. We actually care for the client. Now if they give us some specification that we feel won't work we won't just willy nilly quote it and then just give them some figures and say well there you are. We'll actually point out from the start, 'look this is not the best way to do it'. It's a caring process. [Sal5.Uk]

> I mean, a number of our clients we've had for so long, they pick up the phone and just talk to people here and it honestly doesn't matter if they're talking to myself, James or Tim ...it's just a case of really sort of knowing what they want and acting accordingly. They're not difficult people, you know, and you wouldn't have them [as clients] for this length of time, 25 or 30 years; somebody must have been doing something right. [Sal4.Uk]

The importance of customer relations is highlighted in sales staff's perspectives, which indicate that the role and importance of services increase as the customer relationship matures. In such situations personal level relationships, good communications and gradually developing trust represent principal elements of 'service'. The benefits of such service elements were best realised in the context of well-established customer relations where clients often became far less price sensitive.

To summarise the sales staff's view, most services, except short delivery time, were not an effective way of attracting new customers. This 'weakness' was related to services' intangible nature, which is difficult to explain to a customer who has no prior experience of working with the print supplier. Hence more tangible sales arguments about competitive prices, short delivery times and the use of the latest technology were considered better in attracting new customers. To some extent small printing firms seemed to lack credibility among potential customers and sales staff had to provide solid evidence of a firm's

capabilities before they could expect an order from a new customer. Sales staff are in a key position between customers and printing firms' production staff. Besides selling printing firms' production capacity, the task of sales staff is to interpret customers' requirements and act as a link which communicates customers' requirements to the printing firm's production staff.

The production personnel's view of services

Perceptions of service capability by production staff were influenced by their own limited customer contacts. Typically, customers gave their briefing about the product and service features they required to sales staff who then passed the information to production more or less accurately. Production staff's view was that sales people did not always have sufficient technical knowledge and hence they had problems in communicating the orders accurately to production staff.

> The sales staff feed all the work related information to us. In a way it is good because if too many people have got their fingers in the pie things go wrong... Still, our biggest bug bear is that we don't get enough information from the customers, full stop. We tend to do things wrong because we get input sheets that are meant to include all the needed information. I think this happens partly because the sales people don't ask the questions that I would ask of the customer because they don't know my job. I would say most of the office staff and sales staff would need to be trained in some sort of way to ask the right questions from customers. Most of the time sales staff are helpful but on occasions very unhelpful to the effect that we think sometimes they are deliberately unhelpful. [Ppre1.Uk]

> I think basically, I think it is very important to maintain the communication between the two companies. You must talk to your customers all the time. You can't afford not to return calls or not be available for the customer, that's quite clear. Probably the major complaint that a customer will have is that they're not talking to people with the knowledge to answer their questions. I think it's a very frustrating thing to talk to somebody [a sales person] who is only really passing messages all the time. [Pres2.Uk]

Incomplete briefings were another example of communication related problems; they caused extra work and were easily misinterpreted during production. Nearly all production interviewees in Finland and the UK admitted that indirect customer communications caused some frustration and tension between them and sales staff. However, interviewees also pointed out that despite the problems and existing tensions, sales and production were most of the time working quite well together and helping each other. Customers' requirements for quality, service and delivery time were understood, so requiring that joint

efforts to meet them. Thus external pressure, which caused many of the problems, could also be a factor which united a printing firm's staff.

The production staff ranked short turnaround time, flexibility and a 'full service' as the most important customer services. In production terms, 'full service' refers to in-house pre-press and finishing capabilities, which allow the entire production to be completed within the same firm. The average production cycle among the sample firms in both countries was between 24 hours and seven days. Finnish respondents put more emphasis on fast production turnaround times, whereas a full service was considered more important by UK interviewees. This difference may reflect Finnish respondents' stronger trust in their subcontractors, whereas for the UK respondents in-house reproduction and finishing were clearly the preferred option. Integrated production was perceived as faster, more flexible and easier to control than subcontracted production.

> There are very few printers that can offer the full facility right from origination through to the finished article. I mean that's a very rare commodity that we offer, all on one site. Most printers who offer full service end up sending parts of the production to other companies. We're very much an under-one-roof company. There's very, very little we can't produce on site and we've got very experienced workers. A lot of the people have been with us five, six, seven years or more, which makes us a very knowledgeable company within the industry. [Pres2.Uk]

Besides increasing production speed, the latest reproduction technology could produce high quality print, even if customers supplied sub-standard artwork. This was seen as an important service to many customers.

> About 10 per cent of customers supply artwork, and 90 per cent will only supply copy for us to typeset. They'll also supply artwork, sometimes in the form of high quality films, sometimes rough printed images, and sometimes even a fax copy, which is then scanned in, cleaned up and turned into something useful. So we are expected to build and make a decent image regardless of the customer's original. It is not very often we're given a decent image to start with. [Ppre3.Uk]

The transition to new pre-press technology did not happen without any problems. It was very common for the material supplied in electronic format to require time-consuming re-processing before it could be used in production. However, only two of the printing firms were charging customers for this 'cleaning work', mainly because most customers were not willing to pay for such services.

> The kind of service customers need varies a great deal, depending on how sophisticated they are and how much they know about printing. Some arrogant advertising agencies send us very bad material, real garbage bags. They think that we will sort it out anyway. Some of them simply do not know enough about desktop publishing. They think that anything that looks OK on the screen will do.

> In reality it is often impossible to print films from their files and we have to do a lot of work before printing. However, if we make any mistakes advertising agencies tend to punish us immediately, so we need to be very careful. We make detailed notes of all the corrections we have to make to their files, record the time spent with their order, etc. Only in this way can we charge them for the extra work. It is really the only way to work with some of the customers. [Ppre6.Fi]

> Many customers supply their artwork on a computer diskette which contains a file that they have produced with their own computer. We are then expected to print out the film from this file. The fact is that there are often problems with doing this. Either the customer's software is incompatible or they have no competence in graphic design. The result is no good at all, unless we do them a favour and edit their work for free. [Ppre2.Fi]

As pointed out earlier, other services which could attract customers' orders were reliable and prompt deliveries. The Finnish respondents in particular considered quick delivery as an important way to win orders. Some firms were deliberately looking for orders that required extremely short turnaround times because such situations offered them a chance to charge a premium price to the customer. In order to cope with such fast deliveries, production staff were doing overtime work on a frequent basis. To some extent the latest pre-press and printing technology could also help to cut down production turnaround times.

> We are under pressure to complete the order in the agreed time no matter how tight the delivery time is....It is common for us to get a disc from a customer where the films need to be ready and on the way back in two hours time.... New technology makes such short turnaround times possible and we push this further by working during the nights. Staff do not have much choice really. The golden days are over in the printing industry and there seems to be no going back to the eight-hour working day, not in this firm anyway. I think every member of staff knows that they have to try very hard all the time. [Ppre3.Fi]

Although many production interviewees seemed to accept that short delivery times were part of customer service, there was a feeling that sometimes sales staff went too far in pleasing the customers by promising unrealistic delivery times. Most production interviewees in Finland and the UK were willing to try new things for customers so long it was technically and commercially feasible. Such trials were mostly accepted by the production staff because they brought some change to the daily routines. In addition, professional pride seemed to motivate interviewees to 'test' the limits of their skills. Also customers' direct involvement in the production process was welcomed, because such situations allowed direct communication that made production work easier.

In summary, lack of indirect communication seems to influence production staff's views of their firm's service capability. In both countries sales staff were criticised for incomplete

and incorrect product briefings, their lack of technical skills and promises of unrealistic order delivery times. All these caused some tensions between sales and production staff. However, even the production staff appreciated their dependence on orders and the information that the sales staff brought in and so good co-operation and joint efforts were considered a necessary part of the work. The production staff perceived flexibility as an important element of customer service although it clearly put them under pressure. Such flexibility involved the ability to meet customers' requests for delivery times and product features as well as the ability to handle various types of incoming artwork. New digital production technology had both positive and negative effects on printing firm's ability to meet customers' requirements. By increasing production speed the latest technology helped production to meet customers' demands for short delivery times. In addition, digital pre-press could produce high quality print even for those customers who supplied sub-standard artwork. During the transition stage new technology caused problems in print production. These problems were often related to insufficient skills and software incompatibilities.

Internal flexibility and service capability

Flexibility and the ability to respond to customers' requirements emerged as major factors in small printing firms' service capabilities. This section incorporates mainly the views of owner-managers and production staff, which show how printing firms were organised internally[1] to meet customers' requirements for service.

Most sample firms had relatively large customer bases. Even the average number of regular clients was relatively high, around 100 in Finland and 200 in the UK (Table 7). Such a large number of customers represents a wide range of requirements for products and services. Thus it is not surprising that the sample firms did not always find it easy to deliver all the required products and services. Because it is not possible to produce customised printed matter from stock, printing firms have to cope with significant work flow fluctuations. Such a direct link between customers' demand and production represents a challenge for the printing firms' internal organisation. Extremely short production turnaround times did not make the situation any easier.

To cope with the these pressures owner-managers and staff had developed practices that increased printing firms' internal flexibility. In most cases owner-managers and staff accepted flexible working practices as a necessity, dictated by the competitive markets in which the firms operated. However, printing firms in Finland and the UK had different approaches to achieving internal flexibility. The most common way to cope with temporary production peaks and time table problems was by working over-time; this was a regular practice in both countries.

> Well, we have to phone them and say there's going to be a delay and we actually do it as soon as we can. We do overtime work, what ever it takes. Our philosophy is to put something right. We don't argue about fault, we put it right and then we argue. We're in a weak position but this is all part of our service to the customer. [O-M1.Uk]

However, at its best overtime work was only a partial solution since it put staff and profit margins under pressure. Another way to increase capacity in the short term was to hire temporary staff. About half of the firms in each country hired casual staff more or less frequently, particularly for the less skilled and labour intensive print finishing and packaging tasks. Due to labour market differences, a considerable share of the UK firms' staff (34 out of 222) were part-time employees, whereas only one person in the Finnish sample worked on a part-time basis (Table 5). Strictly regulated labour markets and influential labour unions are the most likely explanation for the limited amount of part-time work in Finnish firms. In the UK liberal labour laws and weak unions created a situation where the share of part-time staff is considerably higher (Lilja and Tainio, 1996). It can be assumed that part-time staff feel less attached to the printing firm than do full-time personnel. This may have a negative impact on their willingness, efforts and skills to provide services.[2]

A major difference between Finland and the UK could be found in management structures and practices. Most Finnish firms attempted to increase flexibility by encouraging staff to be more self-managing. Such practices were developed and promoted jointly by the Finnish labour unions and the employer federation (Lankinen, 1998). In the UK owner-managers tended to demand flexible working practices from their staff on the basis that it was seen as a way to improve the cost efficiency of the business. Finnish firms had fewer staff dedicated to managerial tasks and three of the firms had no middle management at all.[3] Three Finnish owner-managers felt no need to have managerial positions.[4]

> Since the head of production retired we haven't had any middle managers in this firm. We have worked like this for about a year. I establish broad targets and employees can work towards them in the way they think is most appropriate. All

> our employees are, in a way, 'entrepreneurs' within the firm; they know what the criteria are. Of course, some employees need to be monitored more than others. [O-M9.Fi]

These three owner-managers shared a firm opinion that self-managing staff were more willing and able to meet customers' requirements in a highly competitive market. The key issue, these owner-managers pointed out, was that staff needed to have enough information available so that they could organise their own work effectively. For example, in one Finnish firm each member of staff received a daily up-dated personal production schedule for the next seven days. In addition, staff had on-line access to all production information. This allowed them to plan their schedules so that they were better able to cope with the workload and customer requirements.[5]

> I feel it is essential that staff have all work related information available from the computer and from their weekly schedule. Because you provide staff with enough information about their work they can organise themselves; middle management would only hold back information. Staff need to have all the information because the technology is changing rapidly and production speed is increasing all the time. Such knowledge can sometimes be stressful because you know that you will be very busy and so on. On the other hand our staff can plan their time themselves for the week as long as all the work gets done. It is only a limited freedom, but I feel it is important. When the scheduled work is done, there is no need for them to pretend be working. They can read a novel, play darts or do crosswords or take the afternoon off if they like. [O-M10.Fi]

In most of the sample firms the important role of information and communications had been recognised by all interviewee groups. However, only a few firms were managing information very systematically (see the above quote). Many of the smallest firms seemed to do fairly well without sophisticated internal information systems because staff could rely on person-to-person communication between themselves and with the owner-manager. However, there were two Finnish firms where relations between sales staff and owner-managers seemed to be quite tense. In both cases sales persons complained that they did not receive enough information from the owner-manager and were thus unable to achieve their sales targets. Whether the lack of information was the origin of the problems remains unclear. Nevertheless, the resulting tensions and lack of open communication had a negative impact on internal relations and possibly on these firms' ability to deliver services to their customers.

Multi-skilled staff were another important source of internal flexibility. In most cases owner-managers' expected production employees to be able, and willing, to carry out several different types of tasks. This helped firms to secure undisrupted production

because other members of staff could back-up those who were unable to cope with their work. This was an important source of flexibility for the smallest printing firms where even one absent member of staff could cause serious production problems. Only one Finnish owner-manager complained about employees' unwillingness to 'float' between different tasks. Other Finnish owner-managers were particularly pleased because their perception was that the 1990s recession and high unemployment had made their staff and unions more willing to adopt flexible working practices. In the UK, a willingness to do flexible hours and various tasks was considered so important that new recruits often had to accept flexible work as a pre-condition for employment. In both countries, owner-managers saw flexible work as a necessity dictated by increasingly competitive markets. 'Customers pay our salaries and we need to do what ever it takes to keep business going and save our jobs', was the frequently offered rationale. The erosion of labour union power in the UK and liberal labour laws are the underlying reasons for the flexible work practices in the UK firms.

Even if most employees were willing to accept flexible work practices they were not always happy to do so. The main concern expressed by many employees was that they did not feel that they had sufficient skills to do other than their own tasks. In the investigated firms, only about half of the employees were multi-skilled. Typically, staff were able to switch from one task to another within pre-press, press and finishing departments. In most cases they were also able to do some semi-skilled tasks in other departments, for example, press minders could do less demanding print finishing and pre-press tasks. The staff who were working in print finishing were an exception because they were not considered skilled enough to do any other production tasks. Paradoxically, in most firms the same print finishing staff were in charge of the final quality control before the printed matter was shipped to customers.

Besides production-related skills, knowledge of the firm's specific management practices was considered one of the key competence areas for the staff. Nevertheless, in most firms new staff were introduced to the company only in a rather superficial manner. Less than half of the sample firms had any systematic way of familiarising new employees with the firm. In the UK, three firms had a 'company bible' or some other documentary material available, otherwise new members of staff mainly had to use their own initiative in getting to know the firm. The situation was similar in Finland where only two of the larger firms had a systematic way of familiarising new staff with the firm.

Continuous work related training was not very common. Only one firm in each country provided such opportunities for their staff, and both of these firms had more than 35 employees. The Finnish firm was encouraging employees to undertake training by giving them a free choice of formal courses, permission to study during the working day and by covering the costs of a successfully completed course. In the UK firm staff had a more limited choice of work related training but the incentive was that those who took the courses had a better chance of being promoted to more demanding tasks. In both cases the training provision existed largely because of the owner-managers' personal interest in training.

> [We offer our staff] structured training facilities and excellent opportunities to achieve whatever they're capable of achieving. From my point of view, the reason is that I started out as a press operator and I'm now running the company. So I assume that anybody else can do it, given the right incentives, given the right training and as long as they're capable. It is our responsibility to bring them to their full potential. I think we're fairly successful at that by the nature of having so many long-standing employees. [O-M4.Uk]

In the smallest firms staff training was very limited in scale and it mainly consisted of on-the-job assistance form more experienced employees. Training in smaller firms was also less systematic than in larger printing firms. There were exceptions, however. One of the smallest Finnish firms was offering systematic on-the-job training. Also in this case the training provision was mainly available because of the owner-manager's personal interest.

> I hired a young man who has been unemployed since he was released from national service a couple of months ago. He's got press minder training, but we will make him familiar with the entire firm by rotating him through different work tasks. His main job will be printing, but it is good for him to learn to do, and hopefully also to appreciate, other work tasks. [O-M7.Fi]

Overall, formal training was more common in Finland[6] than in the UK. As a result most of the staff in Finnish firms had a formal degree for two printing related tasks. In the UK, nearly half of the staff had a less structured apprenticeship type of training. In both countries some interviewees expressed the view that the 'traditional' on-the-job apprentice ship was the best way to achieve good skills in printing. However, it was also pointed out that due to changing technology experienced staff also need re-training to be able to use new equipment (CEEDR, 1997; Lankinen 1998).

This section has demonstrated that printing firms have to manage significant work flow fluctuations, which are mostly absorbed internally. To cope with this situation, printing

firms' management and staff had developed various strategies. The most typical ways of coping with production peaks included flexible working time and employees' ability to switch between different tasks. The underlying assumption of many UK owner-managers was that survival in competitive markets requires cost competitiveness and sometimes sacrifices from all parties. For the staff, in the UK firms in particular, this could mean few if any work related benefits and often part-time or short-term employment contracts. Another strategy, adopted by several Finnish firms, was based on the premise that skilled, self-managing staff was more capable of meeting customers' requirements and deliver competitive products and services. This approach was based on the assumption that staff will perform more effectively if they are given enough information and independence to organise their own work.

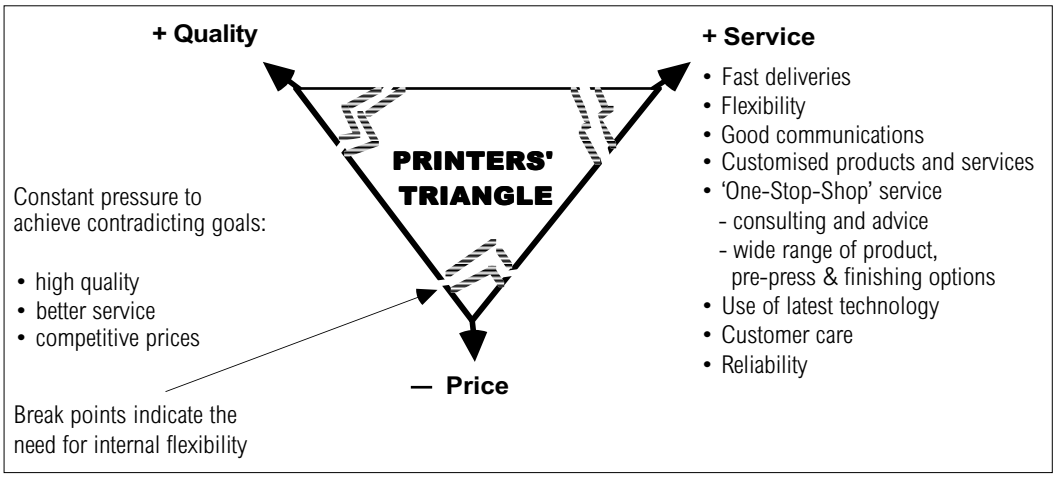
Summary and conclusions

This chapter has demonstrated the complex nature of services and their numerous linkages with other elements of the business process. Service itself is a vague concept and both owner-managers' and employees' had difficulties in articulating exactly what 'services' mean in their business. A number of reasons, external and internal to printing firms, makes it very difficult to specify anything like a universal 'printing service'. First, the scope, role and importance of services varied to a great degree between the sample firms. Such variation was mainly related to interviewee's different views, skills, product characteristics, types of production process and markets. Second, these variations mean that services' potential contribution to the printing firm' s business could be very important, insignificant or even negative. Under these circumstances universal service management practices appear to offer only limited value. In the short term, management can have only a limited influence on the role that services have in the business because it is largely dependent on factors external to printing firms. In addition to external boundaries, a number of internal issues, such as employees' attitudes, could prevent the full realisation of services' added value potential.

In the following sections the printer's triangle (Figure 15) will be employed to create a synthesis of owner-managers', sales- and production staff views on the key issues around service delivery. The printer's triangle provides a method for theorising the way in which printing firms manage contradicting demands for high quality, services and low prices. It

crystallises the point that there is no panacea to resolve this issue but printing firms can manage the situation, some of them better than others.

Figure 15: Managing services under competitive pressure



Customers' simultaneous demands for low price, good quality and service put printing firms under significant pressure. The following discussion focuses on the service element on the right hand side of the triangle (Figure 15). Most service attributes are labour intensive and time consuming; they are in inherent conflict with the requirements for short delivery time and low price. Since it is not possible to produce customised printed matter from stock, small printing firms have to cope with significant work flow fluctuations. Such a direct link between customer demand and production represents a challenge for the printing firms' internal organisation. Even if owner-managers, sales and production staff work jointly to deliver good service, it is problematic because they have to make constant compromises, co-operate in difficult situations and tolerate tensions within the firm.

The service component is quite complex because it contains elements that can contradict each other. Fast delivery of the order emerged as a key service attribute. However, emphasis on production speed tended to compromise many other service attributes such as reliability, customisation, good communications and customer care. There are ways to cut down delivery time; these include use the latest technology, one-stop-shop type integrated production and flexibility. However, the use of latest technology tends to involve problems with reliability and most small firms are unable to offer a comprehensive one-stop-shop service. During the analysis printing firms' internal flexibility emerged as a key service attribute. It helped printing firms to achieve short delivery times without compromising too

many other aspects of service, quality and price. In Figure 15 the broken points of the triangle highlight the problems printing firms face while they seek to meet contradicting targets simultaneously. Firms' internal flexibility creates 'elasticity' which can prevent these 'breaks' from happening even when the process is pushed to its critical limits.

Although most owner-managers did not have a very clear service concept for their business they had developed quite elaborate strategies to increase their firm's internal flexibility and ability to deliver services. Being in overall charge of the business owner-managers played a 'moderator' role, seeking to negotiate balance between customers, sales and production views of service, quality and prices. This was not an easy task since price levels were often set by the markets and the offered services had to accommodate customers' requests. As a result work force flexibility, in terms of working hours and the use of part-time staff, became essential in delivering the required products and services profitably. In such a situation printing firms' staff created an internal 'cushion', which absorbed much of the variation in the workload. This caused some tension between owner-managers and staff. Although flexible labour was essential in both countries, owner-managers' strategies were somewhat different in the UK and Finland. Part-time staff were an important source of flexibility for many UK firms, whereas in Finland owner-managers had a tendency to favour self-managing staff as a way to increase firms' flexibility and ability to deliver the required services. In both countries staff were multi-skilled to a degree that they were able to move between tasks and this ability was an essential source of flexibility. Such task flexibility created a need for work related training, which was not widely available in the smaller firms. Overall, most Finnish owner-managers were inclined to seek flexibility through co-operative management practices whereas the UK owner-managers were more cost conscious.

From the perspective of sales staff, regular customers were easier to work with than new customers, who typically required a lot of time and effort before the first order was confirmed. However, typically sales staff were under some pressure because they had to cope with very limited resources and owner-managers expected them win some business from new customers. Many factors of service, such as trust, good personal chemistry, responsiveness to customers' requirements and effective communications, take time to develop and can best be achieved in long-term customer relations. Such well known customers were easier to do business with and sales staff could rely on more consultative sales. As it comes to new customers, the situation is different because they require solid evidence of a new print supplier's ability to cope with their order. Since it was difficult to

convince new customers with service and quality arguments they were often promised very fast deliveries and highly competitive prices. Although low prices were an efficient way of winning the order sales staff also had to bear in mind that the pricing must not compromise a firm's profit margins. Otherwise they could expect a confrontation with the owner-manager. Short delivery times put production under pressure and sales had to negotiate an acceptable compromise between customers' request and production capability to turn around the order. Sales staff are in a key position between customer and production, interpreting customers' requests and passing the specifications on to production. However, sales staff have to meet their targets and so cannot spend too much time preparing each customer's order. This is not an ideal situation and it caused frequent problems in production in terms of inaccurate and incomplete order information.

In the end printing firms' internal flexibility is very largely dependent on production staff's ability to cope with short turnaround times and customisation of customers' orders. Hence the production staff were frequently very much under pressure when sales and owner-managers were making promises which were very difficult to deliver within the given time. From production's point of view delivery times were often unrealistic leading to frequent overtime work and situations where quality was easily compromised. In this situation production staff often complained that sales personnel did not have sufficient technical skills to specify customers' orders with such accuracy that it could be produced within the given time. Another set of problems was related to the inconsistent nature of the incoming material. As a result production staff could never be sure how long it would take to turn around a customer's order. Although digital technology helped to cut down production time it also caused problems because rapidly developing equipment and software were not always reliable. Such problems caused delays which increased the work pressure that production had to cope with. All the above caused internal tensions that printing firms had to contain in order to deliver services to their customers.

The following chapter investigates quality and service quality issues, providing further information on small printing firms' service capability.

Notes

[1] Subcontracting, which is another way to increase flexibility and service capability, is discussed in Chapter 4.

[2] In most cases graphic design was provided by self-employed people on a needs basis. Such outsourcing was an economic necessity for printing businesses with 20 or fewer staff because there was not enough demand to support full or even part-time staff.

[3] In the 11 Finnish firms, 17 people were working in management positions whereas the 10 UK firms had 25 people engaged in similar tasks.

[4] These Finnish firms with no middle management employed 11, 16 and 36 members of staff.

[5] Those owner-managers who favoured self-managing staff appeared to be self-confident and content with the way their businesses were developing. They allowed their staff to operate independently as long as it was helpful in achieving their business targets. However, it is not clear whether these businesses were thriving partly because of their self-managing staff or whether the staff are more likely to win some autonomy in certain type of businesses.

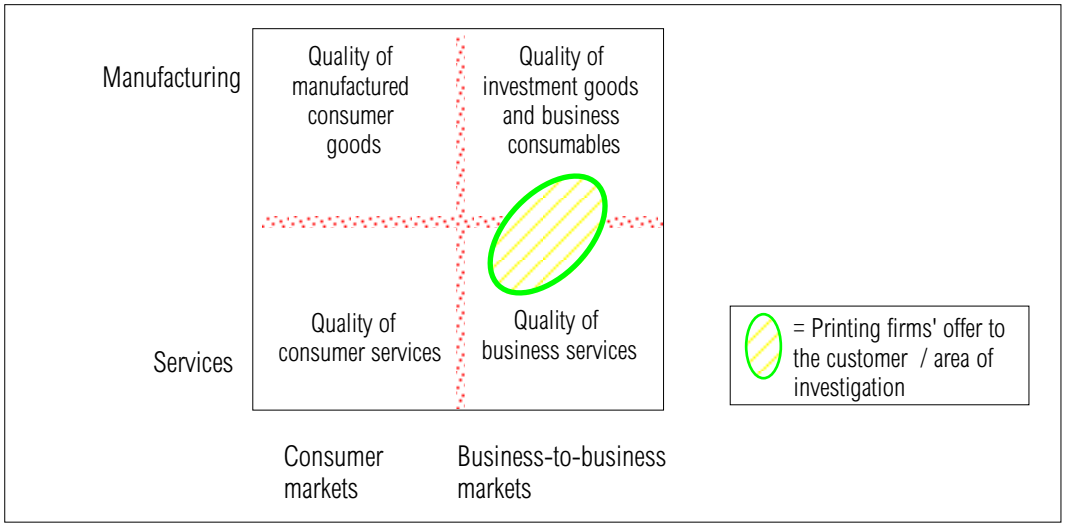
[6] Since the interviews were completed, training in Finland has increased significantly. Between 1995 and 1998, 11,000 employees have participated in re-training which is designed to alleviate the impacts of technological and structural changes in the printing and publishing industries (Lankinen, 1998).

6 Delivering quality in printing

Introduction

Although, it is widely accepted that there are hardly any 'pure' services or manufactured goods, the linkages between product and service quality have attracted limited research attention (Ward, 1997). Another characteristic of service quality research is that it has mostly concerned consumer markets (Brown et al., 1994). The following analysis will add to the literature by investigating linkages between product and service quality in printing firms. The area encircled (Figure 16) shows graphically the focus of the analysis. It illustrates that quality depends on the nature of the business, so that manufacturing and service firms tend to have different quality agendas. It also shows that consumer and business-to-business markets raise somewhat different quality issues.

Figure 16: Product and service quality in different markets



The focus and scope of the quality movement has evolved significantly since it started in the 1920s (Juran, 1979; Crosby, 1984; Deming, 1983). In those days statistical quality control was adopted to ensure consistency with specifications in a mass production environment. Subsequently, quality control has been adopted in customised production where 'fitness for intended use' is a key criterion. There has also been a shift from internal management issues towards external relations and quality control has shifted towards a proactive

prevention of failure. Most recently the quality agenda has also become important in small firms, services, and in public sector organisations (North et al., 1998).

Total quality management (TQM) and ISO 9000 derivatives are typical examples of the recent quality movement[1] that has its focus mainly on the supplier's production processes. TQM is mainly an attempt to generate a management philosophy and a set of quality management practices. ISO 9000 and its derivatives have a somewhat different focus; they concern documentation, quality records, process control and training. In both cases, the aim is to control and standardise production processes for product improvements, ensure more satisfied customers and employees, reduce costs and better financial performance (Oakland, 1989; Holmlund, 1996).

Standardisation of production processes in customised manufacturing, such as printing, does not seem a very sound idea. The above type of formal quality management has also been criticised for being too cumbersome and costly for small firms (Chittenden et al., 1998). Another line of criticism claims that formal quality management tends to prescribe uniform practices that largely ignore industry, market, firm and actor specific variations (North et al., 1998). Research on quality in the small business sector has attracted relatively limited attention. Although formal quality management systems have been widely promoted to the SMEs, so far the adoption rate has been low. According to North et. al., (1998) small firms' owner-managers favour more informal, sector-specific quality strategies which they find better suited to their needs.

Customer relationship quality is one of the areas which has recently attracted increased attention. The principal idea is that closer long-term links can benefit both buyer and supplier through improved communication, increased trust and commitment, which can lead to better quality and higher profits (Arndt, 1979; Berry, 1983; Levitt, 1983). The industrial marketing and purchasing (IMP) group and the so-called Nordic school of services marketing, have placed particular emphasis on human interaction in exchange situations (Ford 1990; Grönroos, 1991). The IMP approach in particular, has analysed customer relationships in industrial, professional and business-to-business markets (Ford, 1990). This body of literature emphasises that buyer-seller relations between firms are handled by individuals and hence social and psychological factors are important (Håkansson, 1982). However, so far, the IMP literature has not explicitly addressed quality.

Instead it has focused on relatively narrow concepts such as 'trust', 'value', 'commitment' and 'relationship strength'.

The quality of individual service transactions in consumer markets has been the key area in the literature on services marketing (Brown et al., 1994; Rust and Oliver, 1994). Much of this research has focused on measuring the gap between customers' expectations and perceived quality (Liljander, 1995). Only in the 1990s has service marketing started to strongly advocate, long-term strategic relationships as a way of delivering quality and value to the customer (Grönroos, 1994). It has also been recognised that consumers' expectations and perceptions are dynamic and embedded in customer relations (Halinen, 1994; Liljander and Strandvik, 1995).

The following analysis will contribute to the services and interaction literature discussed above by focusing on product and service quality in the context of printing firms' customer relations. Like services and many other phenomena in social and management research, 'quality' has no universal definition. To address this issue, the following sections elaborate quality related dynamics from three different perspectives by incorporating views from owner-managers, sales and production staff. These all have divergent, though overlapping, objectives, which influence their perceptions and behaviour. Quality issues are discussed in three main spheres: customer relations, individual shipments to customer and quality management within the firm. The objective is to identify and analyse key product and service quality attributes and linkages between product and service quality. The analysis starts with an examination of owner-managers' and sales and production staff's views and quality concerns. The summary section draws together the analysis and employs the printer's triangle concept in discussing quality related complexities and contradictions.

Owner-managers and quality

Business level issues were at the top of the owner-managers' quality agendas but on a more detailed level they had difficulties in making a clear distinction between product and service quality. However, quality concerns were an issue which interviewees found easy to discuss in depth. The responses revealed three main areas of quality concern which were equally important for the Finnish and UK interviewees: delivery of the order within the agreed time, customer relations and the firm's reputation. In addition, technical quality

concerns were a distinct concern among the UK owner-managers. Finnish owner-managers' quality concerns were more holistic in nature partly because they were very confident of their technical quality.

> Quality involves everything from the moment we get the order from the customer until we have delivered the goods. The product needs to be fit for the purpose it is intended for. That's how we see the situation. It is a waste to print a product on extremely good paper if it is intended to be used only for a very short time. [O-M11.Fi]

> We have very good printing quality here in Finland. Presses and other equipment are of a very high standard, partly because Finland is a test market area for many manufacturers. Finland is a very good test market because it belongs to a small language group and it is quite an advanced place in many ways. [O-M6.Fi]

In the UK technical and print quality, such as colour and image consistency, were a much more common cause of quality concern.

> I suppose one of the biggest problems we would have is matching colours, keeping [them constant] when you've done the same job perhaps 10 or 20 times. You can always go back to the sample from the first time you did it and see there's a massive colour variation. That's the biggest problem....It's always the biggest part of educating the production people. You know they think, 'Well, red's red!' but its very important that it remains the same red all the time, even if we might use a slightly different quality of paper. You've got to adjust it so that it looks like what they expect to get as opposed to just being the right mix from the pantone chart. It's always a problem. [O-M9.Uk]

As a small developed country Finland is used as a European test market for many products, including printing equipment. In addition, tax regulations and high labour costs favour investments in the latest production technologies (Pohjola, 1996).

One of the owner-managers' key tasks was to make sure that the quoted quality, price and delivery times at least matched the possible rival offers. Since the variations in product quality and pricing were not considered significant, short delivery times were believed to be the best way to win orders. This often caused 'service quality problems' because the printing firm was not able to keep to the quoted delivery date.

> If [a] customer wants to get the work done by Wednesday there is no point in saying that you can't do it. They will find someone who will promise that they can do it by Wednesday, even if, in fact, they can't. We do not want to let customers down. We try to negotiate the delivery time so that it is acceptable to the customer and that we can keep our promise. There is no point in promising things that you can not keep. [O-M6.Uk]

> Most of the quality problems that crop up are because of the tight deadlines. There is not enough time to check and there's not enough time to stop and re-configure something. For instance, if a customer wants a job tomorrow and you've got 10

> hours work on it and you really need to go back and re-set it because the quality isn't as good as you want it to be, there isn't the time. So you are faced with a choice. Do you let the customer down on the time or do you let the customer down on quality? [O-M4.Uk]

Due to unrealistic delivery times many orders were doomed to be late right from the beginning. Should any problems come up during production there was hardly any time for adjustments without delaying the shipment. An owner-manager who runs a business specialising in fast deliveries and short run printing, had a very realistic view of the situation:

> Quality is relevant to what people are prepared to pay and the service they want. There is something called the *printers' triangle*. On one corner it's got speed and the other one has got quality and the third side it's got price. The only way you can survive in business in printing is to do any two of them. If you try and do three you'll go bust, so you let the customer choose what area of quality they want [O-M4.Uk]

The above quote indicates a number of important issues that the printer's triangle encapsulates. It shows that printing firms cannot resolve this problem in any absolute sense. They can only try to find a balance between the contradictory objectives to the best of their abilities. To overcome short production cycle related problems, printing firms could try to negotiate some extra time for production or permission for a partial delivery of the shipment. Overtime working during weekends and at night were common solutions to cope with timetable problems. However, such working hours involve extra costs, which printing firms often absorbed in order keep customers business.

> We liaise with the customers. We are always honest with them. We try and tell them what's happening and we really, really, really, really do try to put it right even if it's an outrageous cost sometimes. We do it to keep the customer happy. In other words we do whatever it takes. [O-M4.Uk]

Apart from timetable problems, owner-managers were quite confident that they could meet quality requirements if only customers knew what they wanted and their brief for the order was sufficiently clear.

In both countries the quality of customer relations and interaction was recognised as an important quality attribute (see also the discussion in Chapter Four). Typically, quality problems were far more significant when printing firms were working with new customers whereas in well-established customer relations, previous experience and familiar patterns of interaction helped to maintain quality. Incomplete briefings and communication problems were common but good personal relations could help printers to understand and interpret customer's orders correctly.

> We have noticed that we may not always have enough time and patience for customers. ...We just get the order in and move on to the next customer. To maintain closer contacts with the important customers we have hired a new salesman who will have more time to spend with them. [O-M5.Fi]

Since each contact person can maintain only a limited number of personalised relations, owner-managers had to hire more sales staff if they wanted to expand the customer base. In most cases owner-managers preferred not to grow their business. Instead they relied on repeat orders from well-known regular customers. In cultivating good personal relations, some owner-managers had gone a step further as they tried to match their sales staff and customers on the basis of personal chemistry.

> We want to treat all of our customers equally well or badly, however you want to put it. For example, my wife and I have very different characters and we deal with quite different types of customers. I would go crazy if I had to deal with my wife's customers all the time and vice versa. The customers I work with are fairly technically oriented and we do not spend much time talking to each other. My wife, on the other hand, has quite different customers and it is a pain when I have to deal with them when she is not here. Every phone call with her customers lasts at least 15 to 20 minutes! It takes about one minute to talk through the business and 19 minutes small talk about everything possible. [O-M4.Fi]

Customers' own mistakes, limited understanding of printing and inferior print originals were typical reasons for quality problems. Artwork delivered on computer disc, or otherwise in electronic format, tended to be riddled with unexpected software-related problems. To avoid awkward situations, where customers blamed printing firms for their own mistakes, some printing firms requested customers to sign off the proofs.

> We inform the customer politely, but firmly, that this correction is due to their mistake. We take care of our own mistakes. We have a code 'OM' which means that it is our own mistake. Customer's mistakes we call 'CMs' and if they make a mistake, they will pay for it. We are very precise about what is our mistake and what is the customer's mistake. [O-M10.Fi]

By signing off the proofs, customers confirmed their responsibility for paying for the cost of any subsequent changes. By specifying their respective responsibilities carefully, printing firms could focus customers' attention on proof reading and other quality issues. Even if it was essential to maintain quality, this had to be done without compromising the customer relationship. For this reason, printing firms sometimes chose to absorb costs from quality failures although they could have been charged to the customer. This was done because it was important to keep a customer's business.

> We had a case, for instance, today where the colour is slightly off on a job and the customer doesn't like it. We're going to reprint it for them even though it was

> really within the parameters of what you could get away with in a colour match scale. But, they're a regular customer and we're willing to go along with it to a certain degree. Obviously, if it happened every week we would not do so. [O-M10.Uk]

The reputation of the firm was an important element of quality according to three Finnish owner-managers who were mainly doing business with advertising agencies and large firms. These owner-managers claimed that any aspect of their business could influence the firm's image and the customers' quality perception. Thus high quality sales literature, offers, invoices as well as good personal appearance and communication skills were seen as essential.

> How we present ourselves to the customer is very important. The proofs should be sent out to the customer with a neat letter which provides all the information that is needed plus names and addresses written on it. Anything that presents us to the customer is important, for example good looking delivery vehicles painted in company colours. The delivery has to be in the right place at the right time, packed in a way that reflects the high quality of the product. [O-M2.Fi]

On the whole, premises, delivery vans and offices tended to be more 'elegant' in Finland than in the UK. This appears to reflect wider cultural differences and strict Finnish regulations that require constant investment in premises and vehicles.

Owner-managers' quality management strategies

Owner-managers in the investigated firms had developed various types of internal quality control practices. Most of them were content with the traditional, informal quality management which was based on a combination of trust and close control. In small printing firms owner-managers could exercise control effectively by being personally present in the production shop area as much as possible. The UK owner-managers tended to emphasise the control aspect more than their Finnish counterparts, who saw their personal presence more as an opportunity to communicate directly with their staff. Without exception, the proactive prevention of quality failures was considered essential.

> Every person in fact is responsible for the quality. Whatever they produce, that work is checked by the management and it's also checked up in the line. ….On the production side, each job is cross checked before it goes on the press by other departments to spot any mistakes before the job starts. Not afterwards. It's too late then. The printers then have to check it themselves ... Once they've done their first proof they have to check it with the manager, who signs before the job gets produced. After this it goes into finishing, who check it again, then the job gets weighed to ensure the right quantity's there and then it gets boxed and shipped out. [O-M4.Uk]

Two firms in each country had adopted more complex informal quality controls by requiring managers' signatures on the internally accepted proofs. Thus the work was first signed off internally and only after this by the customer. One step further was a detailed checklist that managers in the UK firm signed at each stage of the process.

> We have a checklist procedure that goes with every job and at every stage that has to be signed by a manager before it can start ...[the] printing stage, cutting stage, gold blocking stage… [at] any new stage any operator has to have their piece of work checked and approved before it can go to the next station. [O-M2.Uk]

Essentially, signing-off made it possible to locate where things had gone wrong and who was responsible for the mistake. Most owner-managers were satisfied with their existing informal quality control practices and only three respondents considered that it was not sufficient. The important role of customer feedback was widely recognised in quality control and as a way to maintain staff motivation. However, only two of the larger firms had organised a systematic flow of customer feedback to their staff. The UK firm had developed a system where a 'personal production index' was calculated for each member of staff. This index produced quality feedback information so that any defects lowered individually calculated scores. According to the owner-manager, his staff did overtime on a 'voluntary basis' without extra pay to keep up their score. A Finnish firm had also developed a systematic way to collect, analyse and disseminate customer feedback information.

> We have a weekly meeting on Friday where sales and production staff meet and discuss what has happened during the previous week. In the meeting we go through the customer feedback, both positive and negative. Our sales staff are obliged to call the customer after each delivery and find out whether the customer was happy with the product. We produce minutes of this meeting and make sure that every staff member receives them on the following Monday. [O-M10.Fi]

In addition to weekly customer feedback, staff received a daily up-dated personal production plan for the next five days and this helped them to plan and organise their own work. As a result, most of the staff took Friday afternoon off if they had completed their scheduled tasks. In this firm, systematic customer feedback and good internal communications had replaced middle management, which increased staff autonomy. According to the owner-manager, a well informed, self-managing staff was better able to maintain quality and meet customers' requirements. But owner-managers in Finland and the UK had adopted somewhat different strategies for motivating their staff. In Finland most owner-managers had adopted co-operative management methods, such as quality

meetings and discussions. In contrast, the UK owner-managers emphasised staff responsibility and accountability. In both countries staff were expected to produce quality without any extra financial rewards. Although it was widely acknowledged that financial rewards are very important for staff motivation, none of these firms were running a bonus system because they were considered too difficult to administer.

Formal quality control was not widely used in the sample firms. One UK firm had an ISO 9000 certificate and two other firms, one from each country, were working towards the certificate. The firm which had the ISO certificate had acquired it mainly because its owner-manager was very enthusiastic about formal quality control. Although most owner-managers recognised that staff skills and motivation are the foundation of quality, relevant training was offered in only two Finnish and one UK firm. To keep training needs to a minimum, key production tasks were frequently given to skilled, experienced people who could start working immediately.

The analysis indicates that the UK owner-managers' quality concerns were more product and technology-related than those of their Finnish counterparts, who emphasised more holistic quality issues. Finnish owner-managers also seemed to endorse more co-operative management practices than their UK counterparts, who saw individual employees as responsible for quality. A major quality management task in both countries was to maintain a balance between production speed, quality and prices. This was partly achieved by negotiating prices, quality and delivery terms with customers. Often the printing firm's internal flexibility was also a crucial way of internalising some of the quality related problems. In particular, flexible working hours and lower profit margins were frequently negotiated internally so that customers' needs could be met. Many quality failures can be traced to short delivery times, which were also a key service attribute and an effective way of attracting customers' orders. Printing firms were mainly relying on informal quality management practices, in particular proof reading, which has developed over the years to be an integral part of the printing process. Typically, owner-managers' quality control was based on trust-based relationships and close personal control whereas formal quality management systems such as ISO 9000 had gained little ground among the investigated firms.

Sales staffs' views of quality

This section elaborates on sales staffs' views of quality and their role in quality management. It highlights the pressures that characterise their position as an intermediary between the printing firm and its customers. The quality impacts of changing technology are analysed in the final part of this section.

Being an intermediary between customers and the rest of the printing firm was not always an easy task for sales staff. Pricing and settling customer complaints were situations were they had to negotiate a solution that was acceptable to management and customers. Typically, customers' wanted lower prices whereas owner-managers who were concerned about profit margins, insisted on higher prices. In these situations prices were negotiated in two stages, between sales staff and customer and, within the printing firm, between sales staff and business owners. Another essential element of sales staff's work was to negotiate a workable timetable which was acceptable to customers, who required short delivery times, and production, which required lead times which did not compromise quality.

> We always worry about delivery too much,... because ... sometimes it's to the detriment of the quality. Well, we're doing a calendar at the moment where we had only a week to do it while normally you'd want at least two weeks to do it. You can't go back to the client and say, 'Well, you didn't give us enough time,' after you have taken the thing on. I mean, I shouldn't have actually taken it on in the first place, if they didn't give me enough time to do the work. [O-M5a.Uk]

If sales agreed to too short delivery times they were risking service quality because shipments could be delayed. Numerous other external reasons, largely out of the printing firms' control, could cause delays and quality problems in production. These included technical and software failures, problems with transport and materials as well as human errors. Whatever the reason, it was common that sales staff were held responsible when something went wrong. Thus sales staff tried to make sure that all parties were working according to a timetable that did not cause unnecessary delays.

> I think the major problem that we probably entail is late news. You know, late arrival of the copy such as artwork ...because they've been held up down the line [by the customer]…..Those are sort of normal things. Customer says I must have the job by then so you sit down and work out a schedule for them, and then of course that goes straight out the window, because they say, oh I can't work to that you know, we won't have the material in time. [Sal5.Uk]

Despite all these efforts it was not always possible to keep production to the agreed timetables and it was mainly up to sales staff to negotiate a way around these situations. If delays were expected, it was essential to notify the customer early because it allowed both parties to contain the potential damage.

> As soon as we notice that something is not going to work as we have agreed with the customer we need to contact them. This is the situation: we are not going to meet the delivery date. We need to talk with them as soon as possible, explain what went wrong and how it influences the timetable. For example, later on this afternoon I need to contact Argus, which is one of our large customers, and explain we are not able to keep to the timetable. Friday will be damn tight, so how about delivery on Monday? [Sal8.Fi]

In their liaison role, sales staff were trying to prevent customers from causing any quality problems and they had to find subtle ways to communicate the situation to them. Such a diplomatic approach was required, for example, when the quality of a customer's artwork was not good enough.

> One of the major problems we have with customers is that they're sending in inferior artwork. I'll phone up and tell the customer it's inferior artwork and they'll say. That's OK, run it. But we're not happy to do that because it's inferior. If the customer says run it generally I'll fax back to them details of the conversation and ask them to sign to that. ...So if they've produced a bit of artwork and they don't really care how good it is and ... so we get a lot of bad artwork. [Sal1.Uk]

Finding out about a customer's quality expectations was a precondition for successful shipments because customers had numerous different and often very specific requirements. Some customers only gave a very broad, unspecified brief and expected various services from the printing firm's staff. These could include a discussion on costing the order and perhaps some tips on the graphic design. Other customers provided very detailed production specifications and expected them to be implemented to the smallest detail.

> Really, there are two different kinds of customers so we have to work accordingly. Some customers want us to advise them on selecting the paper and many other issues that influence quite a lot the printed outcome. Then there are customers who want to make all the decisions themselves. With customers like these, quality means that we do every detail of the work precisely according to their instructions, for example with the layout. We also have many customers who give us only a rough layout and we give the work the finishing touch, trying to make it look as good as possible. In these cases we have more freedom to make changes to the layout and graphic design. [Sal9.Fi]

Typically, professional buyers gave printing firms very detailed and demanding briefs for the product, quality and service required. However, from the printing firm's point of view,

inexperienced customers could be more challenging because they were unable to be specific about their orders or had rather unrealistic expectations. It was much easier to meet regular customers' quality expectations because sales staff were well aware of their expectations, preferences and ways of communicating. This sensitivity to 'weak' signals was an essential element of service, because it could save time, prevent mistakes and lead to better quality printed matter, for example in terms of graphic design. Often sales staff also felt that they could not let down regular customers even if they had to sacrifice profit to maintain service quality.

> I think that they do not take customers' complaints seriously enough in this firm. Personally, I think that a customer's letter of complaint is nearly as important as the confirmation of an order. It needs to be taken care of immediately and in such a way that the customer will have no hard feelings afterwards. When I show a customer's complaint to the owner-manager here, he just don't want to know about it or give the customer any discount. I think it is difficult to handle these things in a small firm like this. They look at any discount as taking money out of their pocket. Worse still, they are not keen to take care of the customer but the first thing they do is to start looking for the guilty ones. [Sal1.Fi]

On the technical side, the transition to digital pre-press and printing technology involved problems as well as benefits. This new technology increased production speed and it could also improve print quality. However, besides the above benefits new technology also involved numerous technical and quality problems. In addition, it was very difficult to keep staff skills up to date with the rapid development of new technology. These types of quality problems were common, particularly at the pre-press stage where digital technology was rapidly replacing traditional production methods.

> I remember the time when customers' artwork started to come in on computer discs; it was terrible quality-wise. As soon as somebody told you that they had their work on a disc, you felt the nightmare start. You knew there would be a lot of problems with this order... Luckily the situation is much better nowadays and there are no longer so may problems. Still, we always check that the work is OK, before we print it. [Sal9.Fi]

In conclusion, sales staff provide a crucial link between printing firms and their customers. In this position they inevitably face tensions and contradicting pressures which the printer's triangle concept elaborates. Sales staff were charged with a demanding task when they had to find a balance between contradictory requirements for short deliver times, quality, competitive prices and sufficient margins. It was often difficult, and sometimes impossible, to find a solution which was acceptable to the customer as well as the owner-manager. Since the owner-manager had the final word in conflicts, sales staff

felt that they were not always able to give customers as good a service as they would have liked to. In addition, they had to cope with new printing and pre-press technology, which involves numerous quality problems as well as significant benefits. In their intermediary role, sales staff had to interpret and communicate customers' needs to production personnel, solve problems and conflicts, control the quality of customers' inputs and negotiate prices for the printed matter.

Production staffs' views of quality

A production staff perspective illustrates how quality is maintained during print production. The first part of the analysis focuses on the print production process and the key attributes that influence product and service quality, including interaction and communications between production staff, sales and customers. The second part of the analysis focuses on production staff behaviour and quality management practices. Special emphasis is given to proof reading, which represents the traditional informal quality management strategy in the printing industry.

Short delivery times and communication problems were the principal reasons for quality concerns among production staff. On a daily basis, production staff faced situations where short production turnaround times tended to compromise product and service quality. Although printing, finishing, paper and colour quality were essential, they were far less problematic than inaccurate product briefs. Any unspecific or unexpected external inputs had a direct impact on production where they caused delays and other quality problems. Under such circumstances the production staff often had difficulties in maintaining both quality and high production speeds. Customers and sales staff were crucial because they specified the delivery terms and communicated them to production.

> So you've got four key areas which influence the quality. a) The job is taken correctly in the first instance so that there can be no possible mistakes, and you are exactly aware of what the customer wants. Now that's one key area. You also need to get the right stock [of paper] that it's printed on. b) The other key area is the quality of the printing. c) The next one is the quality of the finishing after the printing and lastly, d) what is very important to the customer, if not more important than a lot of the other bits, is that the job is on time. [Prod1.Uk]

> It depends how busy we are. Sometimes it seems that we just have too big a work load for one working day. People may lose their temper and this results in ridiculous mistakes in production and the result can be a lousy product. [Pres8.Fi]

> We tend to get quite devilish requests from the customers, and the sales staff pass them on to us, for example terribly short delivery times or requests for products which are virtually impossible to print. [Pres6.Fi]

From the production staff's point of view, customers and sales staff often caused late deliveries and quality problems. In particular, poor proof reading and inferior artwork caused extra work, production delays and quality problems. Some production operatives were clearly frustrated with this situation. They felt that customers and sales staff were always demanding high quality and increasingly short delivery times although they were, at the same time, causing many of the delays and quality problems. According to production staff, 'outsiders' often did not even understand that their actions were causing any problems. An example was customers who unexpectedly changed their order specifications in the middle of the process and thus caused large amount of extra work in production. Another difficulty was that outsiders did not understand that the lead-time for some products is longer than for others. For example, complex products and slow drying colours could extend production time considerably. In some cases production staff protested strongly against demands which, in their perception, were jeopardising quality. Such a craftsman's sense of pride in their work could mobilise production operatives to defend quality, as one of the owner-managers explained.

> Yes, oh yes. I think they're very proud of their work and they're very hurt if anything goes wrong. It upsets them. One of the things is that a lot of people who are not designers are producing work on computers and they're using desktop publishing packages which produce a reasonable result, but it isn't a high quality job and the printers hate it. ... Whoever's originated that on disk doesn't know the process well enough to know the areas of difficulty that we can get into. So we sometimes are printing work that we don't think is very good quality because a) it hasn't been designed very well and b) the information the person has given on the disk isn't sufficient for what we need. ... Things like that, the printers really don't like at all. They hate working on that kind of thing. We also help out other printers from time to time. We did a job for a local high street company and just, you know, it was just terrible and they just didn't like printing it. They'd rather not do it and we've done it as a favour, but because the quality's not there it's rubbish, as far as they are concerned. So there is a high degree of expectancy in terms of quality. [O-M5.Uk]

It seems that craft values and perceptions of quality are very real in print production and they sometimes clash with commercial reality. Although such attitudes are extremely important for quality management, they had only limited influence on wider business decisions that had a direct impact on quality. For example, staff could do very little when important customers' orders were prioritised and less important customers' deliveries were delayed.

> We always do our best to meet their requirement and as I say I've turned a job round in hours. I've even surprised myself but sometimes it's at the expense of another client who is very quiet and patient. Those that shout the loudest tend to get their work first. [Pres3.Uk]

Incomplete briefings were brought up as a common cause of quality problems. They caused extra work and unspecific instructions were easily misinterpreted in production. In addition, a piece of missing information, such as a word or a sentence, was often much more difficult to discover than other types of mistakes. However, generally, production operatives were quite satisfied with existing proof reading practices. The procedures were flexible enough to allow variations in timing, frequency, formality, responsibilities and in the number of people involved. Thus the intensity of control could easily be adjusted on a needs basis.

> We have developed our own routines for proof reading over the years. Press minders always check the plates before they put them in the press. Depending on the job, we pay attention to different things. It really depends on the type of work, how much and what aspects you have to pay attention to. [Ppre2.Fi]

> We literally check each other's work so, if I make a set of plates, John would check them. If he plans a job, I would check his job. If I plan a job he will check mine and, obviously, if one of us isn't there then we would probably get someone in production just to check it's to the specified copies. [Ppre2.Uk]

Proof reading required constant accuracy from the staff and double-checking each other's work was a common way to discover mistakes. New IT based production technology created a serious problem because it made existing proof reading practices obsolete. This resulted in significant changes in the production process and the division of labour. In the new production method, film production and printing could be done directly from customers' disks and so the traditional type of proof reading no longer happened. As a result, customers became responsible for their own proof reading and much of the quality control. Most customers could not immediately cope with their new responsibilities, and as a result, quality control suffered. Formal quality management did not seem to be any better equipped to cope with the rapid changes in the production process. Those few respondents who had experience with the ISO 9000 system were rather sceptical of its benefits.

Another acute problem was that proof reading stops when printing is completed and most firms did not receive any systematic feedback after the customer had received the shipment. As a result printing firms received information only when customers took the initiative,

which mostly happened when they complained about quality. However, customers do not always complain about problems and then printing firms could loose the business without knowing what had happened.

> Quality complaints normally come in the form of a phone call, letter or a fax from a customer. We don't ask for any response and we assume that every non-response is a good sign ... It means that there's no problem. However, it may well be that there is something festering that we never find out about. That did come up with one very major oil company who we've been printing for 10 years or so. Their buyer was told that if he couldn't do anything about the print quality of the business card, then he'd have to find a new supplier ...[before the buyer received this complaint] he knew nothing about this and neither did we. The problem that they had with our quality was that we were using a lot of ink, so it was just a case of changing the process. [Ppre3.Uk]

Systematic and more balanced customer feedback would have been valuable not only for the production staff but also for the entire business. This dominance of negative feedback was common in both countries and it could have a negative impact on work motivation.

Do you frequently receive feedback on quality?

> It is not often that we get any positive feedback on quality. Any negative feedback or complaints come here very quickly. I think that customers telephone the office upstairs and then they tell us straight away what has happened. We also discuss these problems in our staff meetings. [Pres6.Fi]

> Yes, we do. Certainly, if there's a problem we receive an immediate feedback but you very rarely get a comment on producing a good product. When it's a new design there's quite often feedback from the sales department. On a reprint design you very rarely get any comment other than, 'There's a problem. Please can you sort it.' I can't remember a call where somebody phones up and says, 'That was a lovely job you just delivered!' It's human nature I suppose. [Pres2.Uk]

In summary, quality concerns and management problems seem to be similar in both countries and they typically culminated in situations where short delivery times compromised product and service quality. Another typical reason for quality problems was inconsistent quality of incoming artwork and incomplete product specifications. Craftsmanship and professional pride were important sources of motivation for production staff, who had a challenging task to maintain quality under contradictory pressures. Lack of frequent and balanced quality feedback from customers was evident and this could damage work morale among production staff.

The production staff interviews illustrated how integral to the production process proof reading was. As an informal quality control method it was very flexible and could be adjusted according to needs. Rapid technological change caused some unexpected quality

problems. It could potentially create significant benefits by improving print quality and cutting down production lead times. However, numerous software incompatibility problems and a constant need for staff re-training regularly accompanied these benefits. As soon as digital technology caused changes in the production process and division of labour, quality problems followed. At the time of the interviews both informal proof reading and more formal quality management practices had problems in coping with such rapid changes.

Summary and implications

This chapter has argued that in printing, quality is dynamic and constantly negotiated between buyers, suppliers and, within the printing firms, between sales staff, production staff and owner-managers. The analysis demonstrates how closely linked product and service quality are and how they may compromise each other. Quality in printing is an outcome of print suppliers' and customers' joint efforts and ability to balance the contradictory objectives mentioned above. Printed matter, such as advertising material, is often an important element of a customer's marketing campaign with a carefully planned timetable. Thus timely delivery of printed materials is a crucial element of service quality. At the same time, customers' requirements for short production turnaround cycles made timely delivery difficult. Technical development is also creating pressure towards shorter delivery times. Digital printing and photocopying, which have much shorter production lead times, are starting to compete with traditional offset printing. The fragmented nature of the printing industry means that there is plenty of production capacity available and hence a constant downward pressure on prices. The following sections will first draw together the views on quality of owner-managers, sales staff and production staff. After this the printer's triangle will be employed to highlight the constant contradicting pressures which printing firms have to manage in order to deliver high quality products and services effectively.

Major quality concerns in printing included: delivery of the order within the agreed time, holistic process quality, customer relations, firms' reputation and technical quality. Delivery in time was the most important service quality concern in both countries. Otherwise Finnish owner-managers were more concerned about holistic quality throughout the process whereas the UK interviewees were more anxious about technical issues, quality

control and the firm's image. Printing firms often internalised quality and other management problems even if their causes were external. For example, profit margins were sometimes sacrificed for short delivery times, which were perceived as the best way to win orders from customers. Consequently, printing firms' staff were frequently doing overtime to meet the delivery times. Although quality-related problems were in many ways similar in Finnish and UK printing firms, the management responses and quality control strategies were different. The UK owner-managers were more focused on internal and technical issues, whereas in Finland holistic quality was a more serious concern than technical details. Finnish managers also emphasised joint quality management efforts such as regular meetings and discussions with staff. In contrast, the UK managers insisted that employees should take more individual responsibility for quality and some of them were using rather coercive quality management practices such as personal quality indexes. Almost all owner-managers agreed that it was essential to hire the 'right kind of people' because, in the end, quality was dependent on the staff.

Staff views in Finland and the UK were rather similar and often the differences between the views of owner-managers, sales and production staff were more obvious than differences between the two countries. It appears that the quality concerns in printing firms were much the same even if there were some differences in the country specific contexts. The sales staff valued loyal long-term clients, partly because they were a constant source of orders, but also because it takes time to develop a good understanding of customers' needs, preferences and ways of communicating. After the relationship had been established, it was much easier to work with regular clients and maintain good quality of print and related services. The sales staff are in a key role because they interpret and communicate customers' requirements to print production staff. During the proof reading process sales staff had to control customers' inputs into the production. The essence of proof reading is that the printing firm staff and customer together identify and correct quality failures before the order goes to print. This was easier to do with well established customers, in a situation where each party knew what it was expected to do. The informal nature of proof reading seemed to accommodate the creativity, customisation and personalised business relations that are typical in printing. Overall, sales staff have a role where they negotiate a balance between suppliers' and buyers' contradictory requirements for quality, services and prices. In this position sales staff had to sustain and manage contradicting pressures on a daily basis.

Production staff's responsibility is to transform product briefings, which varied from very specific designs to rough sketches, into printed matter that meet customers' quality requirements. In addition to page making, pre-press staff in particular have an important role in proof reading. The majority of the interviewees were satisfied with this traditional, industry-specific, informal way of managing quality. Flexibility and proactive quality failure prevention were perceived as clear strengths of proof reading. The level of quality control could be adjusted order by order depending on how demanding each work was. A problem with proof reading was that it did not provide any systematic customer feedback. As a result, production personnel who did not have direct contacts with the customers received mainly negative feed back. Over time this could have demoralising effects on staff and their ability to maintain high quality. Sales staff and owner-managers kept production staff under constant pressure by demanding short production turnaround times. Regardless of the efforts of production staff, such extreme production speed could easily compromise print quality.

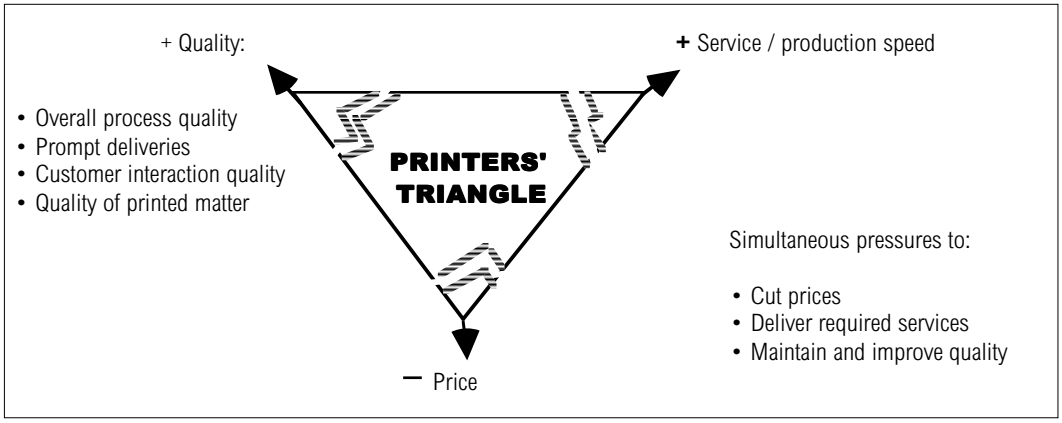
Quality issues in printing reflect the characteristics of batch manufacturing and the particularities of the industry itself. Typically, each production run is unique and its parameters are negotiated with the customer. In addition, in each distinct situation quality management needs to accommodate continuous variations in product attributes, design and delivery times. In printing, proof reading is a quality management and control method that meets these requirements. As a method it has developed gradually over many years and it has distinct industry specific characteristics. Although printing is manufacturing, much of the quality is created before the work goes onto the press during product briefing, proof reading and other episodes of interaction between the printing firm and its customer. The printing itself is a technical process and quality control during this phase is focused on relevant parameters such as colour control and constant image quality.

New technology changes the print production process rapidly and all types of quality management systems had problems in coping with this situation. At an industry level, digital printing technology has a tendency to intensify competition and pressure for shorter delivery times. This has significant implications for quality management in printing firms because long established proof reading methods became obsolete as soon as digital technology replaced traditional pre-press and printing. The new production technology caused fundamental changes in the division of labour which meant that previously developed quality management responsibilities and skills were no longer effective. As soon

as quality control did not reflect the evolved division of labour, a new wave of quality problems emerged.

The printer's triangle is a respondents' construct that they used during the quality discussions and it can be expanded theoretically for analytical purposes. It shows (Figure 17) schematically the complexities that surround product and service quality issues. The printers' triangle construct illustrates these problems by showing how printing firms may compromise product and service quality by offering low prices and short delivery times. The upper left corner of the triangle shows the main attributes of quality. These include the overall process quality; prompt deliveries according to an agreed schedule; quality of customer interaction; and printed matters. Often quality problems in the above are rooted in the simultaneous pressure[2] for short delivery times and low prices.

Figure 17: Managing quality under contradicting pressures



A failure at any one point of the triangle tends to create a domino effect where one problem triggers numerous others. For instance, it takes time to correct quality defects. This causes delays in production, and extra production time means diminishing margins, which in turn creates pressure for price increases. Even if a printing firm could prioritise all three aims of high quality, extreme production speed and low prices simultaneously, it could be offered only on a temporary basis. In the end, competitive prices will not cover the costs of an extreme amount of service/production speed and quality. The printer's triangle demonstrates that it is virtually impossible to maximise both quality and production speed simultaneously. These goals tend to contradict each other and resources devoted to one necessarily limit those devoted to another. For example, short production turnaround

cycles allow very limited time for customer briefing, colour setting and calibration. Thus there is hardly any time for quality control or corrections, which, inevitably, increases the chances of failures in quality.

The printer's triangle demonstrates that printing firms cannot resolve this problem in any absolute sense. They can only try to find a balance between the contradictory objectives to the best of their abilities. In finding the balance it is important not to compromise either price, quality, services or production speed to an extent that customers find it unacceptable. Short delivery time, for example, is a key dimension of service but over-emphasis on high production speed often caused numerous quality problems. A common situation was that a customer's order was won by promising a very short delivery time (see Chapter Five) but a quality failure followed because the printing firm was unable to meet the agreed delivery date. All owner-managers were aware of this type of problem, but their strategies to cope with the situation were different, as discussed earlier on.

This chapter has elaborated some challenges that quality management in printing firms has to cope with. Although it is clearly impossible to eliminate all quality problems they can be managed. New technology provides an example of changes that eliminate some quality problems; they emerge in new forms. Thus organisations and quality management should evolve continuously, although this hardly ever happens. Constant change poses serious challenges for any quality management systems but especially for externally codified formal quality systems. In contrast, informal quality management practices can be more flexible and have a greater potential to develop in harmony with new production processes.

Notes

[1] Besides total quality management (TQM) and ISO 9000 derivatives, statistical process control (SPC), product verification, supplier certification, and the Deming management method are examples of quality assurance procedures and certificates. See http://www.qsinnovations.com

[2] The arrows pulling away from the centre of the triangle illustrate competing pressures for lower prices, better quality and service.

7. Buyers' perspectives on printing firms' services

Introduction

Industrial and organisational buying has been subject to fairly intensive research during the last decades. Much of this research has been quantitative and modelling oriented (Webster and Wind, 1972, Sheth, 1973). The problem with such an approach is that when applied to complex phenomena like the buying process, detailed models become overly complex and less detailed models contain so many 'black boxes' that they are rarely useful. Besides uncovering the complexity of industrial buying, this literature has identified a number of significant individual, product, company and situation-specific factors which influence buyer behaviour. Two of the main weaknesses of this approach are the focus on individual transactions and the fact that the models only concern buyer side processes (Ford, 1990).

The industrial marketing and purchasing (IMP) approach offers a more balanced approach to buyer-seller relations because it emphasises the interaction between two active parties (Ford, 1990). For instance, Campbell (1985) analyses buyer-seller relations as an outcome of the interplay of marketing and buying strategies. Buyer and supplier firms can each have competitive, co-operative or command-type approaches to the relationship. Independent, transactional types of buyer-seller relations are typical whenever either or both firms have adopted a competitive strategy. Long-term interdependent relationships and domesticated markets can develop only when both buyer and seller have adopted a co-operative approach. In dependent-type relationships, either buyer or seller has enough power to dictate terms of the trading (see Chapter Two, pp. 17-19).

According to Bitner et al., (1996) customers' level of participation in the service delivery process depends on the standardisation or customisation of the product and service. Standardised products or services require only a low level of customer action and involvement whereas slightly customised outcomes require some input from the customer and in fully customised products and services clients co-create the outcome. Printing firms' product and service outcomes can fall into any of these categories, which makes the situation dynamic and challenging from a service delivery point of view.

While increasing attention has been paid to finding the means of holding managers and service employees accountable for quality, the reciprocal role of the customer has been less emphasised (Modell et al., 1996). Nevertheless, in customised manufacturing, customers can be regarded as an important sources of information and of various other process inputs which have a direct influence on product and service quality (Mills and Moberg, 1990). A number of studies show that customers themselves often cause service quality failures (Edvarsson et al., 1994; Johnston, 1995). It is suggested that in the case of customised, high value professional services, buyers and suppliers are both motivated to take part in service design and quality control (Larsson and Bowen, 1989). In the case of less customised products and services, suppliers may find it difficult to motivate customers to play their part in service design and quality control. Printing firms' products can be more or less customised and they have to cope with customers different levels of motivation, skills and preferences. Such a variation means that printing firms have to be very flexible to be able to meet customers' requirements for products and services.

Another line of argument is that effective customer participation can improve suppliers' productivity and increase the likelihood that the benefits that the customer is seeking are met. Thus customers contribute to their own satisfaction and the ultimate quality of the product or service (Bitner et al., 1996). As a productive resource, customers can take care of some tasks, such as proof reading, and thus be helpful to the print supplier. Customers can also be competitors for the supplier, for instance graphic design is an area where advertising agencies and printing firms may end up competing with each other.

This chapter incorporates customer perspectives into the analysis of buyer-supplier relations, printing related services and quality issues. Print buyers' views provide an important additional comparative element into the analysis and this added triangulation enhances considerably the credibility of the overall analysis and interpretations (Patton, 1991). The next section will first discuss the sample of interviewed print buyers. This is followed by an analysis of buyers' purchasing and interaction strategies and their views on printing service and quality. Finally, the last section draws together the analysis.

The print buyer samples in Finland and the UK

This section gives an overview of the analysed advertising agencies and of the nine professional print buyers interviewed. Five of the interviewees were from the UK and four from Finland. They worked for leading advertising agencies, which were sampled on the basis of their yearly gross income[1] (See page 50). Because of the large volume of their buying, all of the professional buyers were very important customers for the printing firms. Table 12 shows interviewees' work experience and the amount of money they spent on print buying in 1993. These professional buyers may be characterised as very well informed and demanding customers. Hence their views represent a valuable contribution to the analysis.

Table 9: Print buyers' work experience and yearly buying volume

	Print buyer	Focus of the agency	Print buying in 1993, mill. £	Years in print buying
Finland	B1.Fi	Business to business marketing	1	17
	B2.Fi	Direct marketing	17	21
	B3.Fi	Full service	0.5	14
	B4.Fi	Full service	0.35	›6
UK	B1.Uk	Full service	3	›15
	B2.Uk	Full service	2.94	15
	B3.Uk	Full service	5.14	›22
	B4.Uk	Full service	1.47	13
	B5.Uk	Full service	2.72	32
N = 9				

All but one of the interviewees had been working as a print buyer for more than ten years. Each buyer was personally responsible for the price, quality and timely delivery of the printed products purchased by their employing firm. The purchasing strategies of these print buyers will be addressed in the following sections.

Professional buyers' purchasing strategies

Buyer-supplier relations provide the immediate context for the purchase, production and delivery of print and related services. Print buyers in Finland and the UK had adopted a very similar purchasing strategy, which seemed to lead to a particular type of buyer-supplier

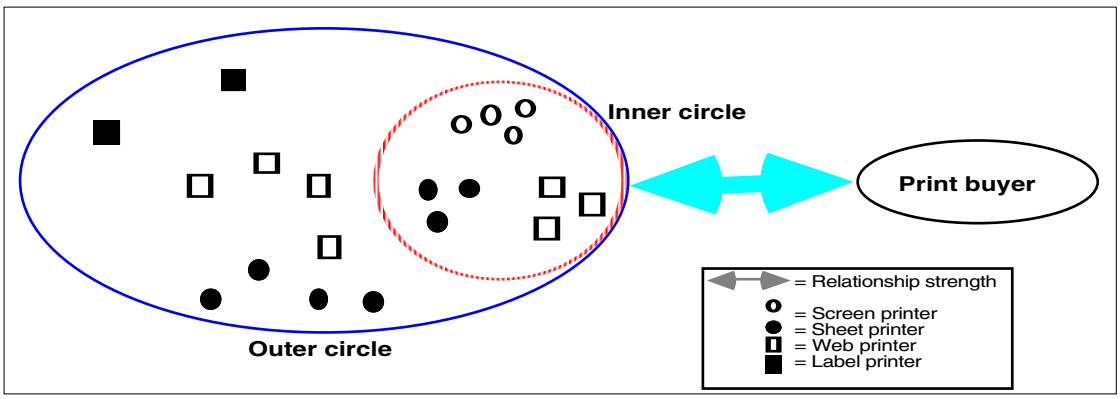
relations. Instead of shopping around, buyers preferred to do the bulk of their business with a very limited group of printing firms. A number of reasons for this strategy were discovered but they were mainly related to securing reliable deliveries.

Table 10: Print buyers and their suppliers

	Print buyer	Focus of the agency	Printers in the supplier pool	Inner circle suppliers
Finland	B1.Fi	Business to business marketing	10	4
	B2.Fi	Direct marketing	65	20
	B3.Fi	Full service	2	2
	B4.Fi	Full service	6	6
UK	B1.Uk	Full service	5	5
	B2.Uk	Full service	20	20
	B3.Uk	Full service	10	5
	B4.Uk	Full service	‹ 20	10
	B5.Uk	Full service	20	5
N = 9				

Professional print buyers did a lot to avoid any risks that could have compromised the successful processing and delivery of the order. This was not least because they were personally responsible for the successful completion of the orders. If buyers failed in their task, the advertising agency could easily lose the customer's account. By placing their orders frequently to a very limited group of suppliers, buyers felt that they were more in control of the production and delivery of the print and related services. Those printing firms which received most of the orders constituted a 'print supplier pool' which contains 'inner' and 'outer circle' suppliers.

Figure 18: Professional buyer and print supplier pool



The inner circle within the print supplier pool had a very strong relationship with the buyer with whom they worked on a daily or weekly basis. Those suppliers who received orders

less frequently were members of the outer circle of the supplier pool, which will be addressed later in this section.

Because of the professional buyers' purchasing strategy, only very few orders were given to non-members of the supplier pool. Consequently, pool members had to be able to supply almost everything the print buyers needed. In a typical case the supplier pool consisted of three to four subgroups of similar types of printing firms, for example, four sheet printers, four screen printers and four web printers.[2] As a result, similar printing firms were forced to compete against each other for every order.[3] Another outcome of this arrangement was that buyers always had reserve capacity available in case any supplier was unable to deliver an order. The limited size and stability of supplier pools meant that it was very difficult for an outside print supplier to gain access to such a group. Without exception, all print buyers emphasised their commitment to working with their regular printers and once a printing firm had been accepted into the inner circle, it could expect a constant flow of orders from the buyer.

> This pool of 20 printing firms has been selected on the basis of previous years' experience. We pretty much rely on this group as our sole source of printed matter. [B4.Fi]

Even if it was rare, outside printing firms did occasionally get orders from buyers, who were always scanning the market for novel ideas and technical solutions.

> A new print supplier is always a risk; you never know how things will work out. There is a certain difference between working with a new supplier and a regular one, even if the price is the same. Still, you need to try new printers from time to time. That is how you get information and get to know about the way they work. [B2.Fi]

Because the number of regular print suppliers was strictly limited, potential members had to add something new to the supplier pool's capacity, or replace a firm which had left the pool. Print buyers examined all potential suppliers carefully in two stages. The initial selection criteria were tangible in nature and service was barely mentioned among the key issues. For the sake of control and production speed, in-house pre-press and print finishing facilities were considered an advantage. New technology could yield cost benefits, but also helped a supplier to meet strict quality criteria and fast turnaround times. Thus the early adopters of rapidly developing digital pre-press and printing technology had a better chance of being accepted into a supplier pool.

> Sometimes new technology matters. One sales representative came to show us their new colour printing method, which is suitable for very short run work from

> 50 to 200 copies. Just one day after this presentation we were given a job which exactly suited this kind of colour printing. The presentation of this new production method resulted in an order straight away. This printing method cost us £340 instead of £8,800, which would have been the cost of using conventional printing method. The quality of the print was also OK for the purpose. [B3.Fi]

From time to time print buyers had to turn to outside suppliers even if they were reluctant to do so. In a typical case, an advertising agency was working for a client who wanted to use his own printer. Working with these outside printers was often difficult and for the buyers, they meant an extra workload and increased risk of quality failures.

> Yes, you must be prepared to spend more time with the repros and printing firms that are not your regular suppliers. The advantage of using a group of regular printers is that we know each other very well and it makes communications easier. [B4.Fi]

> Well, I think it's important that you do build up a relationship with any supplier that you use, even if you only use them on an ad hoc basis. I think it's more important to build up a relationship with those who you're using on an ad hoc basis, so that when you do use them you can get the service that you want and the quality that you want. So it's worth putting that extra effort in, otherwise they could sort of turn round and say, 'Well, I can't do that job for you'. You know it's sort of more important sometimes to have a better relationship with them. [B3.Uk]

When the buyers had to work with an 'outside' supplier they preferred printing firms which employed at least one person they knew from previous dealings. These personal contacts were perceived as highly important because they gave the buyer a feeling of some security while working with an unknown printing firm. For Finnish buyers this was a less acute problem because they seemed to have a somewhat better knowledge of the country's printing industry than their UK counterparts. This was because the Finnish market is relatively small and over the years, buyers had learned to know it inside out. A willingness to work 24 hours a day and proximity to the print buying firm were also considered strengths when potential suppliers were evaluated. Those candidates who met the buyer's initial criteria could expect a trial order at some point. This was the crucial second stage of the evaluation process. Any failure could prevent further business going to the printer and the blocking of the printer's access to the supplier pool. Buyers monitored candidate firms' quality, work practices and staff very closely during the initial order. Their first impressions of working with the printing firm staff were very important when buyers were considering the candidate's suitability for becoming a member of their supplier pool.

Although buyers were often giving very large orders to their suppliers, there were hardly any formal contracts between the parties except agreements on yearly volume discounts.

Instead of formal contracts, close personal relations and trust based on each others' goodwill and competence created a bond between the parties. The strength of personalised relationships was demonstrated when print buyers changed their job from one agency to another. According to several interviewees, they continued to work with their 'own' supplier pool even after they had moved to a new advertising agency. Similarly, buyers often changed their supplier when their contact person moved to another printing firm. Personalised business relations could also work against a printing firm because buyers were unwilling to work with a supplier if they had any doubts about the personal chemistry between them and the print supplier's staff.

> Whilst I might not like all the printers and reps that I use, but if their work is good then fair enough. However, if I found out that I couldn't get along with the printer because of a personality clash then I wouldn't use them because it could lead to miscommunication and all sorts of things why a job could go wrong. So, if there were a serious personality clash then I wouldn't use that printer or that supplier. Producing an advertisement and a print job is hard enough without having the added problems of supplier relationships. [B3.Uk]

> The chemistry between people is one of the most important things. It is maybe the first thing that comes up when you meet a representative of a printing firm. This personal relationship influences co-operation all the time. The second important aspect is the level of professional knowledge of the printing firm's representative. [B4.Fi]

Although personal relations were important, this was mainly because they helped print buyers in their work. Thus friendships and social relations had a fairly instrumental role in print buyers' work. The economic realities of the trade were claimed to be the key priority and 'friendship' had little influence on purchase decisions.

> Honestly, I don't give an order to somebody just because I happen to know him. I have good friends who work in the printing firm, but still, it is an economic decision. Good quality, turnaround time and price will be decisive. I have so much work going on that everything needs to go smoothly and there is very little room for personal favours. I have worked for years with the same people and of course, you develop good relationships with these people. These relationships, however, develop as we work together successfully. We even speak our own special language, and we understand each other's. So, a good personal relationship is an outcome of a successful working relationship. [B3.Fi]

Those printing firms which were in the inner circle of the supplier pool were in the best position to develop and benefit from the strong personalised relations. While working together on a daily basis, buyer and supplier got to know each other's work practices and staff very well. This created mutual confidence, good communications and an understanding which where considered an important asset.

> You know your regular supplier so well – their way of work, capabilities and equipment. You know the kind of output they produce and you can trust their quality because it has been proven so many times ....The fact is that we tend to stick to our regular printers ...Yes the trust develops as you get to know the person well, also the people on the production side. In this kind of relationship, when you end up in a tight situation the other person can tell from the tone of your voice that this is the real thing now, and they will absolutely do their best to make things work for you. This works well, when you have such a good relationship with the other person. [B1.Fi]

> They understand the quality of work that you produce and you get a better understanding of the printer's in-house staff, a better relationship, which will hopefully translate into a better creative product too. This can happen because a printing firm's people get to know our art directors and our clients, the way they work and how they like their work to be produced. They also have a better feel for cost as well. [B5.Uk]

Print suppliers' loyalty, which often developed in long-term supplier relations, was also perceived as important. Regular purchases from the same supplier made the advertising agency a key source of income for the printing firm. This was a strong incentive and it encouraged suppliers to do their best with every order they received from such an important client. Most of all, the members of the print supplier pool served the buyers' prime interest in securing reliable supplies of high quality printed matter under all circumstances.

> The difference is that if you buy purely on the basis of price all the time you've got no loyalty to your supplier. Also, they've got less incentive to help you out because they know they may not get another job, whereas if you use your regular people, for whom you're a reliable source of income, they are more inclined to put themselves out on your behalf. [B2.Uk]

The outer circle of the supplier pool consisted of printing firms that were less regular suppliers to the advertising agency. However, print buyers knew outer circle firms, their quality and their ability to meet delivery times. This was a clear advantage over using printing firms that did not belong to the supplier pool. There were various reasons why printing firms were left in the outer circle of the supplier pool. In many cases the advertising agency had very limited demand for the particular type of printed matter that outer circle suppliers produced. Some of the outer circle firms were treated as a reserve capacity and buyers used these firms only when the inner circle printers were not able to do the work, e.g. due to a machine break down or because their capacity was in full use. Outer circle suppliers were also useful because they kept inner circle firms constantly aware of potential competition. Frequent quotations from the outer circle and outside printers gave buyers information on prices and thus prevented regular suppliers from inflating their prices.

Although supplier pools were relatively stable, sometimes suppliers were dropped from the pool. The two main reasons for this were print buyers' dissatisfaction with the supplier and a lack of demand for a supplier's products. The match between a printing firm's capacity and the existing demand for printed matter was evaluated regularly. Buyers also monitored printing firms' performance constantly and, typically, all suppliers were reviewed at least once a year. Delayed deliveries or an inability to meet required quality standards could terminate the supplier relationship at any time.

> All suppliers are as good as the last job that they do. ...I wouldn't fire any supplier if they did one job really badly, but if I they had say, two or three jobs that went really badly, then you would have to question why should we continue using them. But most suppliers are sort of judged as good as their last job and you forget all the good things that they've done before. You remember all the bad things and it's easy to forget the good things that a supplier has done. [B3.Uk]

Even regular suppliers were under constant pressure because they were expected to produce very high quality and deliver the orders precisely according to the timetable. Advertising agencies themselves had to satisfy their customers, who required perfect timing and quality in return for the substantial fees they paid for the agency's services. This put pressure on print buyers and their suppliers.

> Quite recently, we got an order in the afternoon for a four-colour brochure which was designed to be folded in the form of a telephone. We started by doing the colour separations, took films to the printing firm at 10 pm and they did the printing at night. At 1 am we took the work to a chap who made the folding tools, at 5 am we started folding and at 8 am the work was done. We got the product to the customer at 8.30 am and he was complaining bitterly because the product should have been there at 8.00 am sharp. He was bargaining for a discount because of the late delivery. [B3.Fi]

> Yes, it has to work, otherwise we just cannot go on with the printer. Timing and quality are definitely things that have to work. We need to be able to trust that the work will be properly done. As soon as we have given the work to the fellow he is fully responsible for it and he must take care of it. If this doesn't work, he won't be working for us anymore. [B2.Fi]

Under pressure, any communication problems could easily create distrust between buyers and their print suppliers. Typically, this type of problem materialised when the buyer and the printing firm's representative did not get along well at a personal level.

> The only way to find out whether the supplier will work OK is by trial, really, and only then will I get to know whether I like the person that's handling the account. Also, I cannot bear a contact person who doesn't really know the industry in and out. There are so many people who know very little and I can't deal with that kind of person at all. [B4.Uk]

A lack of skills and industry knowledge, particularly among sales staff, irritated many of the professional print buyers. As experts in printing, buyers were frustrated if printers' representatives did not have at least the same level of skills and knowledge they had.

It can be concluded that professional print buyers in Finland and the UK had adopted very similar purchasing strategies that combined well established customer relationships and intense competition between suppliers. In this way professional buyers were able to purchase good quality products and services at competitive prices. By using a limited number of regular suppliers, buyers could establish strong, personalised relations with their supplier pool. The resulting close co-operation, trust, loyalty and understanding of each others' businesses helped buyers to achieve high levels of quality. This purchasing strategy was a way of limiting their exposure to quality failures and other problems such as late deliveries. In addition, it maintained competition within the supplier pool, kept prices under control and motivated printing firms to perform up to their limit.

Professional buyers' views of printing related services

The following analysis investigates how professional buyers perceived printing related services and printing firms as service suppliers. Many buyers found it difficult to articulate what constitutes the service element in print production. Often these buyers gave answers that were rather short, unspecific and full of contradictions. Many interviewees felt that they did not get many services from their print suppliers but the services received were quite sufficient for their needs. The importance of printing related services only started to emerge when buyers were asked which services were helpful for them. At this stage buyers brought up numerous examples of what they saw as very important services. As a whole, the analysis revealed the esoteric nature of services and their complex linkages with manufacturing activities.

Table 11: Buyers' views of the services they receive from printing firms

Finland	B1.Fi	• Printers do not offer many services, they should have in-house repro, inform us about the work in progress and introduce new ideas
	B2.Fi	• Not much really, mailing, finishing, e.g. packaging according to customers instructions
	B3.Fi	• Very few services are offered, only some firms have the capability to produce finishing and mailing services
	B4.Fi	• Not many, printing firms are passive and they just wait until they get an order to print something
United Kingdom N=9	B1.Uk	• Different types of finishing
	B2.Uk	• I can't think of anything off the top of my head
	B3.Uk	• None at all
	B4.Uk	• Full service, everything in-house: repro, bindery, printing, finishing
	B5.Uk	• They deliver on time, understand creative people, and ask if they are uncertain about anything that concerns the work in progress

As the above quotes indicate (Table 11), more than half of the print buyers perceived they did not receive much service from their print suppliers. Notably, all Finnish buyers perceived that they receive few if any services from their print suppliers. At the start of the discussion, interviewees brought up services which were closely related to production such as different types of finishing, packaging and mailing options. Intangible service elements were clearly more difficult for them to articulate and were brought up at later stages in the interviews. Buyers clearly favoured printing firms which could offer a fully integrated in-house production from pre-press to print finishing. Such 'full service' provision was considered superior because buyers perceived that it meant better control over the work in progress. This was not necessarily the case when work was subcontracted to several suppliers.

> If the customer asks about something which is not an everyday matter, many printing firms tend to subcontract such orders out. If anything goes wrong printing firms are in a difficult position because they have a big responsibility. The work needs to be produced within the scheduled time and I feel quite uncomfortable because I really cannot have proper control of the order, which has been partly subcontracted to firms I do not really know. [B1.Fi]

Print buyers in Finland and the UK were generally content with their suppliers especially regular ones which had learned to respond to buyers' requests. Buyers felt that other printers could have improved their position considerably had they found out in advance, before contacting the buyer, what type of products and services they were interested in.

Buyers always welcomed new ideas and they hoped that printing firms would be more pro-active in presenting new product and service concepts.

Table 12: Buyers' views of the most useful printing related services

Finland	B1.Fi	• Information on new product ideas and samples of new types of paper, advice when needed.
	B2.Fi	• Advice on design and technical matters such as materials, files, finishing and mailing.
	B3.Fi	• Good variety of finishing, packaging and delivery options, especially deliveries to to international customers.
	B4.Fi	• Our end product is a file and printing firms task is to take care of the work from then onwards
United Kingdom	B1.Uk	• Delivery time is the most important issue in poster printing
	B2.Uk	• I can't think of anything off the top of my head.
	B3.Uk	• None really.
	B4.Uk	• Finishing in various ways, special colours, abiity to print on heavy paper.
N=9	B5.Uk	• Printing firms should run their businesses in a more professional way

Table 12. presents printing-related services which buyers considered most useful. For the Finnish buyers, printing firms were an important information source on developments in printing, pre-press and print finishing technology. Overall, punctuality and accuracy were very important attributes of service in both countries.

Could you specify what you mean by services?

> Service means that the printing firm is punctual when they're asked to come in. When you want a quote then you provide a quote in time. It means good attention to detail when you get the artwork from us. Looking at the proofs, commenting on the proofs and the delivery times, that's quite a critical one. When a job comes in, advising us of any extras that were incurred and anything else that has some relevance. And that's normally down to people rather than the company. If a person has a service attitude then they can work for almost any printer because they will ensure that they will supply that service. So, one printer may supply the service and when they put a different person in you don't get it, so it's all down to people. [B4.Uk]

The most important service activities were linked to the sales, pre-press, finishing and delivery. Some business level service attributes, such as the image of the firm, were also considered important. For example, a UK buyer hoped that printing firms would be run in a more professional manner.

> They should be more professional. Certainly, printing has got such a bad reputation, I think, you know, the sort of garage printing, press in the garage. It needs to be elevated to a sort of higher level. We're not like that any more. This is an old fashioned idea of print buying. We don't like to go for loads of drinks with garage printers, crawl in pubs and things like that. [B5.Uk]

Although there were not very significant differences, Finnish buyers seemed to be somewhat more satisfied with the service they received from their suppliers and their perception of the printing firms were more positive than their UK counterparts.

The hierarchical nature of the printing related services

During the discussions the buyers identified a wide range of service attributes. These perceptions can be organised into a service hierarchy where each service attribute is attached to business, production or personal interaction level processes.

Figure 18: The hierarchy of the service attributes required by print buyers

Figure 18 draws together a range of key meanings that interviewees attached to services at different levels of activity. In its widest sense, the service concept was attached to the characteristics of printing firms' business as a whole. More detailed attributes of service were attached to the production process and personal interaction. At each level service attributes can be divided into three main categories related to communications, responsiveness to customers requests and professionalism.

Communication related issues at the business level included informative marketing and sales staff who could provide accurate information on products and services. Buyers were keen to receive timely information about their orders throughout the process from the initial briefing until the final invoicing for the printed matter. Hence, instant access to production

information and the ability to trace the order in process were important communication related services at the production process level. On the personal interaction level, a regular customer contact person, personal chemistry and the ability to listen carefully were rated important service skills. These were crucial especially at the stage where buyers were providing the initial briefing on the order to the printing firm. Unless sales staff was able to interpret customers' briefings absolutely correctly, they inevitably passed on inaccurate order details to production. Accurate ordering required both skills and good concentration. Sometimes sales staff were considered to be too talkative and unable to pay enough attention to buyers' briefings. Instead of small talk, buyers valued sales people whom could listen carefully and were able to provide them with useful work-related information. Good personal chemistry between buyer and sales person was considered a fertile ground for a good service.

> ...Service is very important and we need to have one constant person dealing with us. If one or two representatives left our supplier, I suppose I would seriously think about following them to another company if they were that good. Provided they were going to a good company, then I think I would follow them. [B5.Uk]

A regular contact person was normally able to interpret the buyer's briefings more accurately and proof reading was also easier because of good mutual understanding. Some buyers indicated that such a relationship could also translate into better creative quality, which is highly important in the advertising industry.

Responsiveness-related service attributes can also be traced down from business to personal levels. In its widest sense interviewees attached responsiveness to problem solving abilities and sufficient flexibility to meet customers' requirements. At the business level buyers seem to wish for an idealised, customer friendly printing firm which exists only in management textbooks. In reality, several buyers complained that many printing firms behaved as if their part of the work was done as soon as the paper came off the press. These firms saw their business as strictly printing and they were unwilling to supply customers with any service they considered peripheral to the business or outside their core competence area. However, several buyers indicated that the situation was improving as printing firms were increasingly offering a more comprehensive range of services. Smaller printing firms were seen among the leaders of this service-driven business approach, whereas larger firms were believed to be slower to change their practices. In both countries, the early 1990s recession was seen as a turning point after which printing firms adopted a more service-oriented business approach. Since then most print suppliers had

managed to raise their service levels even though price competition remained intense. A buyer claimed that without value adding service elements, print suppliers were in danger of being marginalised to a position where they were treated purely as a source of printing capacity.

> There are certain clients [of the advertising agency] who do not expect to pay for print when they spend half a million pounds on media and they expect us to throw the print in for nothing. This is very unfair because you've still got to buy material, ink, paper and everything and you've got machines to run and they're looking for very cheap prices all the time, very cheap prices. [B1.UK]

It seems that strong customer relations and personal level connections may help printing firms to maintain their profit margins, but only if price is not customers' main buying criterion. Buyers' perceptions were that all printing firms had not realised the links between pricing, services and customer relations. An indication of this, in their view, was that many printing firms were not actively promoting their services to the customers.

At the production level, responsiveness-related service attributes were associated to segments of the production process, such as a wide range of finishing, packaging and production options. In-house repro facilities were also considered an advantage because they enabled faster turnaround times, better reliability and lower production costs. The common view among buyers was that they could not fully trust repro subcontractors because they did not know these firms personally. Several buyers complained that many printing firms treated pre-press, finishing and delivery-related services as peripheral and paid little attention to this type of service. However, there were cases where printing firms did go a very long way to meet a buyer's requirements.

> I find that finishing is very bad with a lot of British printers. Often, printers farm finishing out to another company and I think the quality is very, very poor and that can ruin the entire job, it really can. If, for example, lamination is not properly done or creasing is not properly done, or whatever, that can really ruin the job and you'd have to start again. [B3.Uk]

> Things can go wrong at any stage of the process. In some cases, after everyone has done their very best to get the order printed within the agreed time, the goods are shipped out using a slow method of transport, which will inevitably be late arriving with the customer. ...only some printing firms have realised how important prompt delivery is. On one occasion, a printing firm sent a member of their staff by taxi to deliver a single piece of printed matter to our sales meeting more than 200 kilometres away, because it was urgently needed. [B2.Fi]

Some print buyers offered a very narrow definition of service, including only those types of services which were delivered person-to-person. In these cases service capability was very

clearly down to the people. As a result, employees' positive attitude towards services and their possession of the required skills were considered essential.

At the business level professionalism was typically attached to a printing firm's reputation, image and ability to convince buyers of the quality of their work. Reputation and convincing credentials were important especially when buyers were considering a purchase from an unknown printer. These were perceived to be relatively high risk situations and a print supplier's track record and reputation among other buyers influenced the buying decision. At the production level professionalism was attached to accurate estimates, invoices, written order confirmations, proof reading skills and use of new technology. According to one Finnish buyer, printing firms were slow to invoice and their documentation was not accurate enough. As a result advertising agencies were unable to invoice their own customers promptly and accurately.

> There are also problems on the billing side; some printing firms include more than one of our orders in the same invoice. This can be quite a problem, since some of our customer's demand that we send them a copy of this invoice. The irrelevant information that is printed on the invoice can confuse our customers. Generally, printing firms are slow to invoice; it normally takes one to six months to get the invoice from them. [B4.Fi]

'Paper work' seemed to be a problem especially in Finland where printing firms were not always familiar with pro forma invoices[4] and the required export documentation. These problems and a lack of experience became acute when exports to Russia soared in the mid 1990s. The consequences of such problems varied from a buyer's slight irritation to major quality failures. Quality control and proof reading are largely based on good communications throughout the print production process. Also buyers perceived new technology as an important source of communication and other quality problems. Software incompatibilities in particular caused frequent problems. Nevertheless, buyers valued those printers who could make good use of the latest technology.

Finally, at a personnel level professionalism was attached to technical and service related skills. Buyers' perceptions were that staff did not always have the necessary skills. In particular, the technical skills of sales staff were often perceived as insufficient and it was felt that production operatives could also have improved their service-related skills.

> When the company is successful, it is up to the staff, and they have no training for services. The ability to realise what service is and to be able to provide it to the customer, that is the driving force, the lifeline of the company. [B4.Fi]

Most production staff had a technical training background, which did not prepare them for customer service situations. Press and pre-press training does not seem to address customer interaction issues sufficiently considering the basic role it has in service delivery and quality management. As for sales personnel, the buyers' view was that the technical skills of sales staff had improved over recent years. In a very competitive market, 'sales staff just can't earn their keep without good technical knowledge', was a comment from one professional print buyer.

This section has analysed printing related services on three different planes, starting from the business level, which refers to printing firms' overall approach to serving customers. The following two levels highlight services as activities within the production process and, finally, as a personal interaction between printing firms and their customers. The analysis shows that service is a multi-layered concept which has many meanings even within a relatively homogenous respondent group such as the professional buyers who were interviewed. By deconstructing the multilevel nature of services it is easier to show how different types of service attributes are linked to the corresponding level of business activity. Such analysis can also help to throw light on the significance of various types of services and their role in different parts of the manufacturing process.

Print buyers' perspective on quality

The following section analyses professional buyers' quality concerns as well as their perceptions of quality control and printing firms' ability to deliver quality. Although quality was a somewhat nebulous concept among print buyers, they did not have any problems in expressing their quality concerns. Quality concerns were relatively similar in both countries (Table 13), covering issues throughout the print production. Some respondents emphasised process quality, including all stages between initial briefing and delivery of the completed order. Others paid attention to a specific stage of the process, such as packaging, or other specific service activities during the process. The technical quality of the print did not seem to be a very serious concern for the buyers. This is interesting since the UK owner-managers were especially concerned about the technical quality (see Chapter six, p. 111-13). Finnish buyers, in particular, emphasised that print quality was exceptionally

good in their markets. Most quality problems seem to be related to pre-press, finishing and the delivery of printed matter.

Table 13 Print buyers' rankings of main quality concerns

Finland	B1.Fi	• Packaging and transport
	B2.Fi	• Quality of the overall process
	B3.Fi	• Overall process, confirming the orders in particular
	B4.Fi	• Overall process, pre-press in particular
United Kingdom	B1.Uk	• Not many problems really
	B2.Uk	• Overall process, paper, timely delivery
	B3.Uk	• More attention to detail and service
	B4.Uk	• Pre-press
	B5.Uk	• Pre-press, print quality, paper
N = 9		

Concerns about the process quality highlight the fact that failure at any stage of the process can be detrimental to the final outcome. For example, inferior originals or reproduction determine the quality of the printed matter at very early stage of the process. Similarly, wrong packaging or delayed shipment can ruin quality at the very end of the process. Several respondents emphasised that careful proof reading had become increasingly important since digital pre-press technology had been introduced. New technology related problems were serious because it could take more than 20 proof readings before all possible problems were spotted in a digitally produced film. Finnish buyers were particularly aware of these problems. According to them, pre-press was going through a transition period that involved many unexpected problems, mostly due to software incompatibilities. Among the UK buyers, paper-related quality problems were relatively common, partly because of the great variety of papers available. In contrast, a small group of strong domestic paper producers dominates Finnish markets, causing different types of quality concerns. One Finnish print buyer explained the situation.

> If the quality of a certain type of paper is bad, my printer will warn me about using this particular paper as long as the low quality shipment is around. After the factory has managed to put the paper quality right, I can start to use this type of paper again. This kind of advice from my printer is extremely useful. It seems that the better quality paper goes for export and the problematic shipments are dumped in the domestic market where the paper industry has a very strong market position. [B1.Fi]

On average, buyers were not happy with print finishing quality. Most of the quality problems were related to a lack of skills and/or short production turnaround times. For example, products were frequently destroyed at the folding stage because there had not

been enough time for the colour to dry. It was also common that the printed product was damaged while being transported because of insufficient packaging. Apart from finishing, buyers were relatively satisfied with production staff skill levels.

Would you say that printers' personnel are very competent?

> Yes, usually they are, because if they're not you don't use them again [B2.Uk]

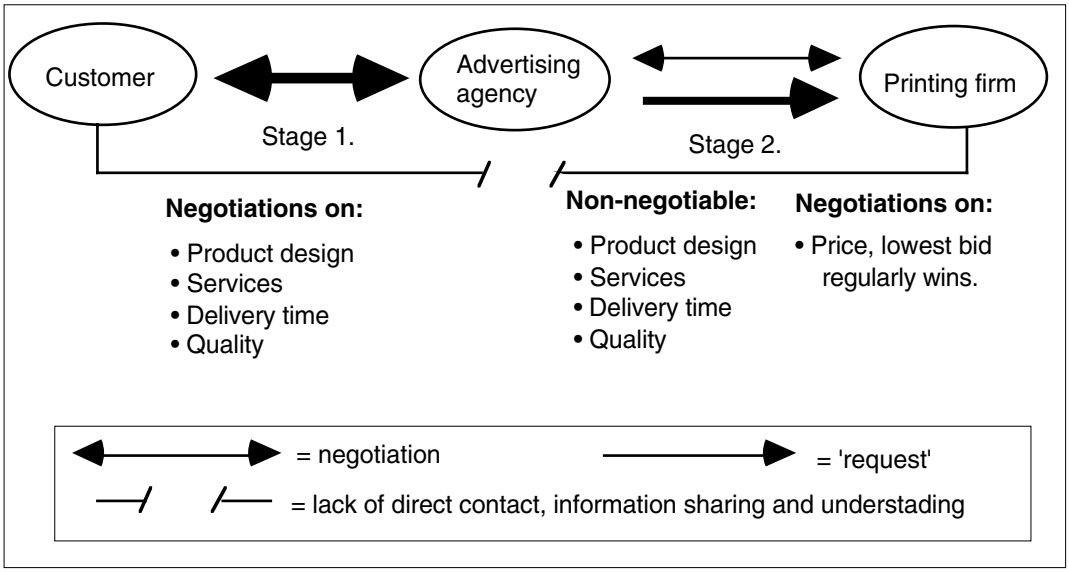
To find out about people's skills and work practices, buyers visited printing firms regularly. The UK buyers' perception was that staff skills had improved in recent years, partly because of intense competition. According to Finnish buyers, nearly all members of staff had four years of formal training in printing and it guaranteed sufficient skills. However, some Finnish buyers pointed out that skilled mono- and two colour printers were increasingly difficult to find. The reason was that training was no longer available for printing with these types of presses, which were considered technically obsolete.[5]

Printing firms had to meet very high quality expectations when they were supplying print through an advertising agency. In such a situation, quality is negotiated between the advertising agency and the end customer (Figure 20). During the process, customer and advertising agency agree product design, services, delivery time and quality before printing firms have even been asked to quote for the work. To please their customers, advertising agencies were tempted to suggest highly creative designs that were often very difficult to print. In addition, other terms of the delivery were frequently specified so that they were very demanding of the printing firm.

> When customers are buying through an agency, they pay for us and for the printing firm. Thus they expect a level of service and quality that they don't necessarily expect when they're buying it themselves. You know, they complain to us bitterly about something if they don't like it, whereas they may not do it if they're buying it themselves directly from the printing firm. [B2.Uk]

Moreover customers had high expectations of quality because printed matter is part of an expensive professional service delivered by a major advertising agency. The negotiation process between customer, advertising agency and printing firm is presented schematically in the Figure 20.

Figure 20: Negotiating quality and terms of delivery



Lack of direct communication between end customer and printing firm is one reason for the problems that printing firms experienced. Typically, the advertising agency and its customer agree between themselves product, service and quality specifications, which are then given to the printing firm. In this situation print suppliers have little choice but to comply with the terms the advertising agency has agreed with the customer. In addition, the print supplier has to quote competitive prices to win the order. Otherwise the order would be given to the printing firm that was willing to comply with the given terms.

Because of the end customer's high expectations, professional buyers are very keen to maintain consistent high quality. However, most respondents were not totally convinced that printing firms did their best to maintain such high levels of quality. The perception was that printing firms could have done more in terms of proactive quality maintenance. The UK buyers seemed to be more sceptical about printing firms' commitment to quality than their Finnish counterparts. However, buyers trusted their regular print suppliers and gave them good marks for their commitment to quality.

Do you think printing firms always take quality concerns seriously?

> Our suppliers must take quality seriously. All orders need to be treated equally in terms of getting the quality right. Those printers who do not have this attitude are not really good ones and we will not use them. Our suppliers must have a responsible attitude to quality. [B2.Uk]

> Some do. I like to think that all mine [printers] do. Obviously, sometimes they are in a position where they have to get it printed despite the timetable problems. They've got to get it in by AM that day. If we don't get it done in time, we're going to let John [the buyer] down, right? [B1.Uk]

Short production turnaround times were seen increasingly as a factor which tended to compromise quality. Both technical and economic factors seemed to be behind this development. Traditional printing was increasingly being challenged by digital non-impact printing, which has much shorter turnaround times. Economic reasons were also putting pressure on delivery times because by booking media space as late as possible advertising agencies were able to increase their profit margins significantly. As a result, there was very little time left for the printing.

> One of the things they're doing now is that they are booking the space very late upstairs [media buying department], because if you book late you get a better deal. An order that should go in maybe a month or two before, they leave it to the last few weeks and see what kind of deal they can do then, and they can get incredible deals upstairs. It is really because clients are saying we want more for our money, so the media department are saying well, we'll book it late, and they get better deals. The media department just does their job because they're doing what the client's asking them to do, saving them thousands of pounds. At the same time, this has created problems internally because we have to produce the job in far too short a time. [B1.Uk]

The result of all this was that late delivery was perhaps the most common type of quality failure. As delays happened, it was very important that the printing firm informed buyers as soon as any problems were discovered. This gave the buyer time to react, and the opportunity to re-negotiate the delivery date with the end customer. Several buyers claimed that printing firms did not always manage to give such an early warning to their customers.

> They don't have guts, they just don't have the guts to tell us the bad news and they keep saying that everything is in order although they have problems in their production. I just wish they would be brave enough to tell us the bad news. It is not just their problem, because we are in the same boat. As soon as we get to know about the problems, we can together figure out the best possible solution. They should not just keep things to themselves. This is co-operation – you can always do something when things go wrong. You can postpone the mailing date or we can ask our customer how strict the delivery date for the printed matter really is. Sometimes it is enough for us to print only part of the order as soon as possible and deliver the rest by a later date. The trust in this business is most important, most important. [B1.Fi]

Quality control was very much the print buyers' personal responsibility and they visited printing firms regularly to inspect work in progress. After the order had been completed, many buyers continued their monitoring by acquiring feedback from the customer.

> Quality control checks – well, we go to the press passes [check the work while it is being printed]. We check samples that are delivered to us, we contact the people who they are being delivered to find out how they were delivered, whether they were in good condition, etc., etc. And finally we check that their final costs relate to their estimate, which is important as well. [B5.Uk]

Proof reading was the dominant form of quality control in advertising agencies. It was considered labour intensive but also the most flexible and well proven way to maintain the quality. In most advertising agencies proofs were circulated between numerous people, who cross-checked them. Only after they had been approved in the printing firm and in the advertising agency were proofs sent to the customer for final approval.

> Approval process, yes, when the proof comes in, it's stamped with a stamp which we then put our comments onto and sign it. Then it goes through to the art director who designed it. He then approves it and marks it up. It then goes through to the head of art, who again has to approve it. The copy writer will read it once more on the type side and if it's a particularly big job even the creative director will have a look at it. Once that's all happened the client will obviously see it but the client doesn't normally see it until we've approved it. If we're not happy with it, it normally goes out again for re-proofing and the client only sees it once we're happy with it. [B4.Uk]

Just two of the buyers mentioned ISO 9000 as a tool that could improve quality, but none of the nine major advertising agencies had adopted this type of formal quality control. Most respondents were sceptical of the usefulness of ISO 9000 and instead trusted their personal experience and their print supplier pool. To an extent, ISO 9000 and the Nordic Environmental Certificate were expected to be useful in marketing but the print buyers' view was that so far their significance had remained very limited.

This section has analysed the major quality issues from the print buyers' perspective. The main quality concerns seem to be very similar in Finland and in the UK. Every stage of print production is equally important, although the bulk of the problems tend to materialise at pre-press, finishing and delivery stages. Personal level trust, reliance on regular suppliers and minimising the risks of quality failures, were important for professional buyers. To a large extent quality management was based on personalised control throughout the process and buyers' co-operation with print suppliers and end customers. The essential role of direct customer contacts was demonstrated in many ways. The lack of contacts and a chance to negotiate the terms of the delivery directly with the customer could put print suppliers in a very difficult position. This materialised frequently when advertising agency and customer agreed highly demanding product specifications and delivery terms without consulting the printer, who then had an uphill task to meet these requirements.

Summary and conclusions

This chapter has incorporated the professional print buyer's perspective in to the analysis and produced new insights on customer relations and other attributes of service capability. The print supplier pool concept adds a new element to the discussion around relationship marketing. It shows that professional buyers have established a practice where they can benefit simultaneously from close long-term relations and intensive competition between their suppliers. Supplier pools consist of a limited number of printing firms, which work regularly with the professional buyer and receive the majority of orders. Those firms which receive the bulk of the orders and are in constant contact with the buyer belong to the inner circle of the supplier pool. Such long-term relationships provide a context in which the parties can develop personal level trust as well as a thorough understanding of each other's capabilities and requirements. At the same time, these print suppliers are competing against each other for every order. This keeps prices competitive and suppliers motivated to try their best all the time. The outer circle of the supplier pool get orders only occasionally, mainly because buyers have only limited demand for the type of products that these printing firms are offering. Moreover these firms provide reserve capacity for buyers and an element of competition in the print supplier pool. Professional buyers' supplier pools can combine the benefits of extended relations, constant competition and co-operative behaviour. So far, this type of purchasing strategy has barely been recognised in the interaction and relationship literatures.

Initially, professional buyers had problems in articulating what 'services' meant for their business. However, during the discussions the concept started to emerge as a hierarchical construct. The buyer's service attributes were related either to printing firms' business as a whole, the production process or the personal interaction between buyer and printing firms' staff. At each of these levels service attributes can be grouped into three main categories related to communication, responsiveness and professionalism. At the business process level, service attributes appear to be relatively abstract expressions such as informative marketing, print supplier reputation and problem solving capability. At a production level service activities were closely attached to production activities at different stages of the process. For instance, buyers valued a service which allowed them to track the progress of their order while it was being processed in the printing firm. At the

personal level service attributes were closely linked to personal interaction as well as skills and the positive service attitude of the printing firms' staff. Although the service literature contains many attempts to create service typologies, such as Lovelock (1992), it has largely failed to capture the hierarchical nature of the concept. By acknowledging that service activities take place at different levels even within an individual firm, the examination can be taken a step forward. The analysis can now make a clear link between different level service activities and wider management issues at the corresponding levels. As a result, it becomes possible to unravel the role and significance of service activities in different parts of the process. For example, at the business level image enhancing marketing is important when a printing firm seeks to persuade a potential new customer to make a purchasing decision. Once the order is in production, personal level communications become important when the customer briefs the printing firm staff with the product details. By establishing these key service processes it is possible to further theorise the role of services in the manufacturing context.

Ensuring the right quality is very important for the professional print buyers, not least because they are personally responsible for the successful delivery of very large and valuable orders. Typically, buyers were concerned about the overall process quality, pre-press quality, finishing and delivery. Significantly, the actual print was a less important quality concern among professional buyers than among the print suppliers (see Chapter Six, pp. 111-13). Overall, print buyers' quality concerns were very similar in Finland and the UK, although Finnish buyers seemed to be more confident about their print suppliers' competence and ability to deliver quality.

When printing firms work for an advertising agency they seldom have direct contact with the end customer. Often this seems to be a disadvantage because the print supplier does not have a chance to participate in the negotiations when the order specifications are agreed. Subsequently, suppliers have to cope with specifications that are often highly demanding and almost impossible to deliver in time. As a result, late deliveries were among the most common service quality problems. To overcome quality problems and to minimise the number of failures, print buyers tended to rely on close personalised relationships with their regular suppliers. Quality control was largely based on personalised control, which print buyers exercised throughout the order cycle from the initial briefing to invoicing. Proof reading was the single most important and preferred quality control method. It was a flexible method and an effective way to engage customer, advertising agency and printing

firm staff in the quality control. Buyers recognised that digital technology was causing many unexpected problems and it posed serious challenges for printing firms' quality management. On balance, new technology could improve quality by speeding up the production and by increasing the image manipulation capability.

Notes

[1] Some of the sampled UK advertising agencies were part of a larger corporation. The given figures are for the division where the interviews were conducted.

[2] Sheet fed printing press takes in single sheets of paper as opposed to a web press which takes reels of paper. Typically sheet fed printing presses are used in relatively small runs of print whereas web presses are more suitable for volume printing. Screen printing is a process where a design is inked through a fine screen part of which are covered by a stencil to prevent the ink passing through. This type of printing is used in poster production and printing on various types of non-paper objects such as plastic rulers, mugs etc. (Collin, 1989).

[3] Several professional buyers from Finland and the UK explained how they made their final purchase decisions purely on the basis of price. First, they asked two to four members of their print supplier pool to quote for the order. Knowing that any one of these printing firms was capable of delivering the order, the final buying decision was based only on price. Sometimes a one pound difference in price could decide which printing firm got an order worth tens of thousands of pounds.

[4] Pro forma invoice is an invoice sent to a buyer before the goods are dispatched, so that payment can be made in advance. Such payment method is typical in expert sales and commonly in use when printed products are sold to Russia (Collin, 1989).

[5] Many smaller printing firms were using two colour presses to print four-colour work. This was done by running the paper through the press twice. Such printing was more time consuming than printing with modern four-colour presses. However, in this way printing firms could significantly extend the use of their exiting press capacity.

8. Conclusions and implications

Introduction

The primary purpose of this thesis has been to increase understanding of how small manufacturing firms – in this case printing firms – incorporate services into their business and why some firms are more capable of doing this than others. This concluding chapter brings together the interpretations of the linkages between service and manufacturing activities and further develops the theoretical arguments concerning small manufacturing firms' service capability.

The chapter has been organised so that the first section outlines the usefulness of the adopted epistemological approach and grounded theory. The following section provides some interpretations of interviewees' service and quality perceptions. The third section brings together interpretations on analyses of the similarities and differences between the Finnish and UK firms. The key findings concerning buyer-supplier relations and interpretations of their influence on service delivery are discussed in the fourth section. Section five presents a conceptual interpretation of printing firms' product-market configurations and the ability of services to add value to the business in different situations. Section six offers a more detailed interpretation of the character of services in the manufacturing context, demonstrating the hierarchical nature of the concept. Section seven draws together the interpretations of the printer's triangle concept, highlighting the dynamics and contradictions between service, quality and price competitiveness. In addition this section draws out some key implications for service capability in a wider context. Finally, some possible avenues for future research are suggested in the last section.

The epistemological approach of the thesis

A realist approach to studying social phenomena attempts to discover the underlying social processes which possess causal powers over actual events and human agents' experiences of those events (Sayer, 1992; Kitching, 1997). A key assumption of the realist approach is that different human actors can experience the same phenomena in different ways. By

relating owner-managers', employees' and customers' interpretations of the structures and processes, this research achieves a better interpretation of the key determinants of small printing firms' service capability. The task of analysing such a variety of perspectives from two countries is challenging. However, the potential benefits of this approach are also significant. Management and staff views as well as buyers' assessments inject diverse perspectives into the analysis. By comparing these different perspectives in two different countries, the analysis can highlight differences and contradictions which otherwise would not have been identified. Another contribution to knowledge is the way current research has analytically isolated and theorised services in the manufacturing context.

The analysis in this research is based on the grounded theory approach, which is a way of 'building' an explanation and interpretation through a series of theoretical propositions and testing stages. In this process theory building takes place in phases so that initial theorisations are repeatedly re-built on using newly acquired data and perspectives. The resulting interpretations of the role of services in the investigated manufacturing context are presented in this chapter. Such middle level theory includes conceptualisations developed for a substantive or empirical area of applied sociological inquiry – in the current research, services' linkages with manufacturing activities. Such an inquiry provides a fertile ground for substantive theory based interpretations because services are complex phenomena and existing theoretical conceptualisations remain insufficient (Johns, 1999). Grounded theory based on conceptualisations such as the dynamic role of services, the print supplier pool, the printer's triangle and the hierarchical nature of services contribute to the existing theory but they also help in organising the complex reality and structuring of the thesis. Although these theoretical constructs do not lend themselves to statistical generalisations, they do capture basic social processes which have wider significance for service research and management.

Some comparative findings and conceptual interpretations

Before further theorisation, some key interpretations of interviewees' service and quality perceptions and the comparative analysis are brought together. The following findings were clearly manifested in numerous interviews and although sample sizes are limited, these issues are likely to have wider implications.

The dominance of informal management and learning practices in small firms is well established in the literature (Scase and Goffee, 1987; Goffee and Scase, 1995; North et al., 1998). This research has also highlighted what an important role tacit knowledge has in small manufacturing businesses, especially during service delivery and at different stages of quality control. The interviewees' tacit knowledge consists of beliefs and perceptions so ingrained that they are often taken for granted. Such knowledge is highly personal and the acquisition hard to formalise (Nonaka and Takeuchi, 1995; Baumart, 1999). This explains why most interviewees had some difficulty in articulating what type of services their business delivers to customers. However, the same interviewees often produced quite elaborate accounts of the nature and role of services in their business. In the end, many interviewees' accounts displayed quite sophisticated service concepts and ways of delivering services to the customers. The role of tacit knowledge was well illustrated in relation to quality systems such as proof reading. This industry specific quality control practice has developed over the years and it is largely based on tacit knowledge, shared between colleagues and collaborators who have a common experience. The resulting quality management system is very flexible and well integrated into the printing firm's business process. This is in contrast to formal quality management systems such as ISO 9000, which is based on a detailed set of published rules and certificates. Taking into account small firms' informal management style and the important role of tacit knowledge, it is not surprising that the take up of formal management practices is low among small firms.

Service activities were an important element of customised manufacturing in most of the investigated printing firms. However, the service concept itself and service linkages to manufacturing seem to be very complex and even contradictory. The analysis also accumulated evidence of the cultural differences between Finland and the UK. The UK business system seems to be characterised by relatively low levels of trust, short-termism and a higher level of power asymmetry than the Finnish system. This was reflected in the management and business practices and to some extent in supplier relations.

The overall finding, in both countries and among all respondent groups, was that service, quality and service quality were rather esoteric concepts and need further theorisation in the context of manufacturing (see Chapter Five). The specific meaning of the service concept remains elusive among practitioners as well as academics (Bryson and Daniels, 1998). Many of the interviewees encountered problems when they were asked to explain what 'services' are and what their role is in the businesses with which they were engaged.

In part, these difficulties are rooted in the complex, interrelated nature of service and manufacturing activities, and many interviewees did not make a clear distinction between the two. Moreover, the content of the service concept varied and was largely dependent on respondents' skills, job positions, work tasks and ways of thinking.

The esoteric nature of the concepts caused various types of problems. For example, a key objective for the print suppliers is to achieve an understanding with the customer and then deliver the product service package according to the agreed parameters. This was not always easy because printing firms' owner-managers and sales and production staff did not share the same view of customers' desired outcomes. As a result service and quality conceptualisations were dynamic and constantly negotiated between buyers, printing firms' owner-managers, sales and production staff. Hence, there is no uniform service concept nor best practice to help to manage such situations. What does exist is a need for service research-based understanding which can help customers, owner-managers and printing firms' staff to cope with the complex reality (Johns, 1999).

Finnish firms operated in much smaller markets and tended to have closer relations with customers than their UK counterparts. In most cases Finnish firms' customer bases were smaller and their wider use of IT helped them to make more systematic use of customer information. There were also differences in attitudes. Finnish owner-managers were keener to maintain personalised relations with their clients than their UK counterparts. These tendencies were mirrored in Finnish buyers' attitudes. They trusted their regular suppliers more than the UK buyers. To summarise, the 'trust culture' and Finnish firms' greater proximity to customers had positive effects on their service delivery capability. On balance, such close customer relations mean less intensive competition and less choice for the Finnish customers. Moreover, the total number of Finnish speaking people is less than six million. This creates a language barrier that places Finnish printing firms in a more sheltered position against foreign competition than their UK counterparts.

The UK firms' customer contacts were constrained not only by the larger customer base but also by owner-managers' cost consciousness, which limited the number of designated customer contact personnel. Both of the above issues can be seen as a reflection of the large and competitive UK markets, especially in the greater London area. In quality management the UK owner-managers focused more on internal and technical issues, whereas in Finland all aspects of the production process and customer interaction received

attention. Owner-managers in the UK emphasised employee responsibility in quality management and sometimes coercive practices were used to ensure that staff did their best all the time. In contrast, Finnish owner-managers tended to favour meetings and discussions, which were used to mobilise management and staff into joint efforts to improve quality. Finnish owner-managers also had a tendency to favour a more egalitarian organisation than the UK firms where the power-asymmetry between management and staff was more pronounced. Several Finnish firms had very few if any supervisors and trend was increasingly towards self-managing staff. This development took place in co-operation with the influential labour union, which opposes the increasing use of part-time and temporary staff. In addition, strictly regulated Finnish labour markets discourage the use of a peripheral labour force such as part-time and temporary staff. Under the circumstances, Finnish owner-managers perceived that they had hardly any other choice if they wanted to develop their firms' service capability. Although the sample is small, it shows clearly that in the UK firms part-time staff and temporary workers were a more important source of flexibility and service capability than in the Finnish firms.

The above type differences reflect the characteristics of national business systems which are addressed in the international marketing literature. For example, under competitive pressure the UK and Finnish printing firms behaved rather differently. In the UK, firms tend to focus on cost efficiency whereas in Finland firms put greater emphasis on the joint efforts of management and staff and the use of latest technology in seeking flexibility and raising competitiveness. Because extended customer relations are an important element of service capability in printing, the above discussed employment practices and customer relations have a negative influence on the UK firms' service capability. As customers become more aware and able to make international comparisons, these firms may find themselves in a weak competitive position because of their short-term focus. For the Finnish printing firms increasing foreign competition may cause some concerns, although the language barrier is likely to give them a more protected position than the UK firms. However, Finnish labour markets are very inflexible.[1] This can cause problems for the printing firms which are unable to make use of latest technology, training and self-managing staff.

Perspectives on long-term buyer-supplier relations

The benefits of long-term customer relationships are eloquently proclaimed in the literature. The main argument is that by engaging in extended collaborative relations both buyer and supplier can benefit and develop their competitive advantage through improved service, quality and profitability. Much of the marketing management literature contains this assumption and is loaded with tentative prescriptions for how to improve customer loyalty and retention. This section increases understanding by incorporating both buyer and supplier views into the analysis. Such multiple perspectives can provide a more adequate account of the numerous issues which influence the development of buyer-supplier relations. As the discussion in the earlier sections has elaborated, the reality of buyer-supplier relations can often be complex and full of conflict. Also, long-term relations are not always the preferred option for buyers or suppliers. Instead, short-term transactional relations may be a more realistic and preferred option. Moreover, growing enterprises need to find new customers to be able to expand their businesses. Bearing the above in mind, this section will discuss long-term business relations by combining the perspectives of print suppliers and professional buyers.

The professional print buyers who were interviewed worked under considerable pressure because they were expected to secure an uninterrupted supply of high quality printed matter in less than ideal circumstances.[2] To succeed in this difficult task, buyers had developed a conscious way of controlling their print suppliers. This strategy can be characterised as a sophisticated way of combining the benefits of low-risk long-term supplier relations and intense, price sensitive competition. Instead of shopping around, these contradictory goals could be achieved by buying print outputs from a regular supplier pool. By organising and managing their purchases buyers were able to minimise their exposure to risks in terms of quality failures and delayed deliveries. While working together over extended periods of time, buyer and supplier could develop mutual trust and loyalty. Regular customers were an important source of income for the print suppliers, producing a strong incentive to serve such clients in the best possible way even in the most difficult situations. Print buyers had good reason to avoid risks because they were personally responsible for large orders which were often a crucial part of carefully planned advertising campaigns. In order to feel in control, buyers normally worked with a supplier pool that consisted of about 20 printing firms they knew very well. Within the pool, three to four

similar printing firms were competing for each order and the one which offered the lowest price won the contract.[3] From the buyers' perspective this was a way to secure a competitive price and prompt delivery without compromising quality. Hence, buyers placed nearly all their orders with firms in their supplier pool. These were perceived as being more reliable and able to meet given requirements than other less well-known printing firms. The print supplier pool also represented a reliable back-up capacity in case any pool member was unable to produce the order. Essentially, the buyers' strategy created a situation where long-term buyer-supplier relationships, intense competition and co-operative behaviour co-existed.

To the buyer the benefits of competition in extended buyer-seller relations are clear: it keeps prices under effective control and suppliers highly motivated. Intensive competition is also an effective way of avoiding the complacency which easily develops in long-term relations, where various bonds develop and influence behaviour. However, it was in the buyers' interest not to expose their suppliers to extreme forms of price driven competition. Instead, it served their interest if suppliers were able to generate enough profits to invest in production capacity. In this way they were able to maintain the high quality of printed output and services as well as reliable deliveries. In the relationship marketing literature these contradictory objectives and benefits of managed competition are often neglected. However, the evidence suggests that a balanced combination of competition and co-operation can benefit buyers and suppliers.

In small printing firms owner-managers and staff had developed their own strategies and they had a number of reasons for favouring long-term customer relations. Most owner-managers did not have ambitions to grow their businesses and they were content to work with the exiting customers in local markets. Under these circumstances, print suppliers could develop a very thorough knowledge of their regular customers' requirements and buyers were equally well aware of their print suppliers' skills and capabilities. Overall, such extended business relations were based on trust rather than formal contracts, which rarely existed. This created an environment conducive to the successful delivery of printed matter and related services. In addition, well-established communications and a thorough understanding of each other's requirements facilitated proof-reading based quality management. In some situations these types of relations were seen as a chance to improve the quality of high value added design and creative services. From the service capability

point of view, extended customer relations create good opportunities for small manufacturers to include added value services in their offer.

There were also other process-related reasons for selling customised printed products to existing rather than to new customers. From the sales and production staff perspective regular clients were easier to work with than new customers. First, it often takes a considerable amount of time and the efforts of sales staff before a supplier can expect to receive the first order from a potential customer. Second, to attract new customers sales staff often offered very competitive prices and terms of delivery, which regularly resulted in extremely short delivery times. This and the extra work[4] involved in first time orders put production staff under significant pressure. As a result, one of the most typical reasons for quality failures was a production speed which was too high to allow sufficient quality checks or controls. Both sales and production staff were well aware of the relatively high risk of quality failures when they were working for new customers. Problems in such situations were mainly caused by the uncertainty about the customer's requirements and misinterpretations in communications between customer and printing firms' staff.

Besides benefits, regular customers could also cause problems for the printing firms' owner-managers and staff. In particular, professional print buyers were in such a dominant position that they tended to dictate the terms of delivery to the small printing firms. Because of this imbalance orders from professional buyers were prioritised and deliveries to less important customers were often delayed. Typically, printing firm owner-managers made these types of decisions and such re-scheduling caused frustration in production and especially among sales staff, who had to explain the situation to those customers whose orders were delayed. Although the power imbalance between professional buyer and supplier caused problems, printing firms were rewarded with regular orders. In such situation small printing firms could easily become dependent on professional buyers, who were an important source of income. However, most owner-managers accepted the situation and considered that the benefits exceeded the negative aspects of such customer relations.

So far the focus on local markets and mainly existing customers has been a way for small printing firms to survive. The question is how long this can last if rapidly developing technology makes increasingly smaller market niches reachable and profitable for larger competitors. Together, the focus on local markets and existing customers also creates an

effective barrier to these firms' growth. For most owner-managers this is not a problem, because their growth ambitions, if they have are any, tend to be very limited. The data presented suggests that any significant growth could offer a significant risk for most small printing firms. Many of these firms would not survive in larger markets where they could not rely on customers' proximity and their informal, personalised marketing.

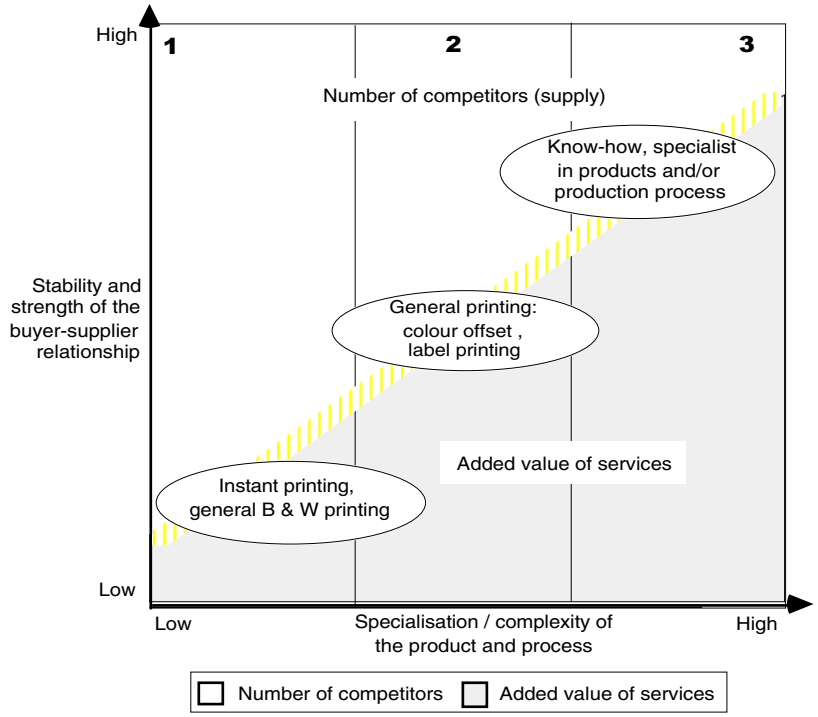
Services' added value potential in different product-market configurations

This section draws together and further theorises the analysis to show how the role of services in small printing firms is related to the products and markets where the business operates. The analysis indicates that while many firms and their customers can benefit from the added value which services can produce, there are also instances where services add no value to the business. This notion contradicts much of the service literature, which contains an implicit assumption that services do make a positive contribution to the businesses' performance. The literature remains silent about the possibility, that services may not benefit the business, or that they may even have a negative impact on it because of the extra costs they involve (Heskett, 1987; Swartz et al., 1992:3-5; Grönroos, 1994), (See Chapter Two, pp. 28-32).

The previous chapters have demonstrated how interrelated service and manufacturing activities are. Understanding of these complexities requires an in-depth knowledge of the firm's business process and its customers' service requirements. One way to generate such an analysis is to investigate the customer relations which provide the immediate context for service delivery. This analysis has already revealed that similar sized printing firms operating within the same region can have very different types of customer relations. For example, one of the investigated firms had six regular clients and it based its business on personalised, long-term relations whereas the other firm had transaction type relations with its 2,500 customers (Table 5). Such a difference indicates that the business processes and the product market configurations of similar size printing firms can be fundamentally different. Although the above is only an indicative and industry specific example, it shows clearly that further analysis is required. The following theorisation contributes to service literature by addressing the complex links between printing firms' product market positioning, customer relations and ability to deliver value added services.

The data presented suggest that direct contacts between printing firms' staff and customers are important in securing successful delivery of high value added services. However, the linkages between personalised customer relations, cost effectiveness and ability to maintain required levels of service are complex and contradictory. For example, for the sake of production efficiency printing firms are constantly under pressure to keep down the number of their staff. At the same time, they can be under pressure to hire more staff to be able to deliver the added value services which customers require. The following provides a conceptual presentation which explains why some firms experience more contradictory pressures and problems than others in delivering value added services.

Figure 21: Added value of services for different types of printing firms



Product-market configuration is a concept which can explain important characteristics of a firm's business process by analysing its products and position in the market. Each configuration also has implications for buyer-seller relations and service delivery. Printing firms' product market configurations were similar in Finland and the UK. However, the Finnish firms' more personalised business relations and extensive use of new technology give them some advantage in terms of service capability. Figure 21 provides a schematic presentation of the analysis presented in the previous chapters. It also theorises the way services' role and added value varies depending on the complexity of the product, production process and the characteristics of buyer-supplier relations. The conceptual

presentation is built on the assumption that services' added value potential depends on supply and demand. As products and production process become more complex customers tend to need more advice and help (section three in Figure 21). On the supply side, the number of 'know-how specialists' is much smaller than that of less specialised printing firms.

The shadowed area covering parts of sectors 1, 2 and 3 indicates the added value potential of services in different product-market configurations. The white area covering parts of sectors 1, 2, and 3 indicates the amount of existing supply and number of competitors in different types of printing. The more proprietary or specialist know-how a supplier has, the less likely there is to be direct competition. The number of *know-how specialists* that can make most use of value added services is very limited as the white area in sector three indicates. The complexity of products and processes tends to create demand for added value services as the shadowed area of section 3 indicates. These often personalised services facilitate stable customer relations, which are less sensitive to price driven competition. Because of this favourable demand-supply ratio, know-how based firms can charge a higher service premium than most other firms are able to. In other words, they offer high value added services which customers are willing to pay for. Despite their significant role, knowledge creation and service innovations are not well understood (Gallouj, 1998). In particular, the role of co-operation, knowledge sharing and communications between supplier and customer need further investigation (Leiponen, 2000:88-9).

The data presented indicates that owner-managers of the know-how specialist firms often come from outside the printing industry. They are not typical craft printers but individuals who have an *innovative idea* which can be applied in the printing industry. Such ideas can create a competitive advantage that most other printing firms do not have. Sales and production staff working for know-how based businesses have marketing and production skills which often place them in better position than their colleagues in more conventional printing firms. These skills are related to core competencies of the business and this is reflected in better than average staff remuneration and terms of employment. However, such benefits apply only to the cases where staff skills are in the leading edge of the industry.

Instant printing firms and *mono colour printing firms*, which are located in section 1, represent the opposite end of the spectrum (Figure 21). Value adding services have a very limited role in the business and these firms focus on selling their production capacity. Simple standardised products require little, if any, consultative assistance and instead, most customers want short delivery times. Limited demand for value adding services means that these suppliers can rarely charge a premium which would cover the production and labour costs of such services. Instead, the key competence areas for this type of operation are cost control and effective utilisation of production capacity. Since there are numerous similar firms, customers can pick and choose their supplier. This creates intense price competition and mainly transaction-type customer relations. The lack of personalised buyer-seller relationships means that their marketing activities are mostly impersonal, such as leafleting and advertising in local newspapers.

Traditionally, black and white, mono colour printing has been an entry level business for craft printers who start-up their own businesses. After these firms have established their position they often gradually move towards more capital-intensive colour printing and transform themselves into general printers. These types of small printing firms have survived mainly by serving their local market niche where they face relatively low levels of competition. This proximity to the markets provides customers with an easy access to their services and some opportunities for personalised customer relations. However, rapidly developing photocopying and non-impact printing technology have significantly intensified competition in the low-volume, mono colour printing market. Shorter production turnaround times and the emergence of high street instant printing/copy shops have eroded the competitive position of traditional mono colour offset printing. Instead, owner-managers who are aggressive in marketing and able to embrace the latest non-impact printing technology are well positioned to succeed in this market. In such firms, sales staff can also benefit form the new technology because they can offer competitive delivery times to the customers. Production staff who are able to use the latest non-impact printing technology are also in a better position because constantly changing technology means that highly skilled staff are not widely available. However, most mono colour and instant printing firms have no technological advantage. As a result, they face very tough price and production-speed driven competition, which is reflected negatively in sales and production staff working conditions.

Many of the small *general printing firms* (Figure 21, sector 2) face a fair amount of competition and their customers represent various levels of demand for value added services. Typical general printing firm owner-managers have worked as craft printers before setting up their own firms to serve customers in local markets. Most of them are not particularly aggressive in marketing and they have little, if any, specialist technical know-how. Because their products are relatively simple, only less skilled customers require advice or personalised services. At the same time, many customers are relatively price-sensitive which leads to unstable customer relations. Existing competition means that there is constant downward pressure on prices, which does not leave much potential for value added services. These types of firms, in particular, are in a situation where they constantly need to reach a balance between competitive prices, value adding services, short delivery times and quality. Due to their heterogeneous customer base, the situation is very volatile. For some customers, product quality is essential, but others require the lowest possible price, short delivery times or value adding services. In addition there are always some competitors willing to sacrifice their profit margin in order to keep their production capacity in full use.

Most general printing firms had to cope with the type of pressures discussed above. As a result they had developed a range of survival strategies. Proximity to customers helped sales staff to build and maintain close personalised customer relations in the local markets. A consequence of this strategy was that these businesses had little prospects for growth outside these limited local markets. Some small printing firms were offering a one-stop-shop for their customers. Such a 'full service' strategy meant that customers could buy all printed products and services from this single source. This in turn helped suppliers to establish long-term relationships with their clients. To be able to offer a large product portfolio some firms were extensively out-sourcing orders which they could not produce internally. An ability to manage a large subcontractor network was a key competence required from these 'broker' firms.

The employment conditions in the general printing firms are mainly dependent on customers' buying strategies and owner-managers' management style. Typically, the work of sales staff is characterised by limited resources and a focus on existing customers in the local markets. Since most craft oriented owner-managers have limited growth ambitions sales staff are not under great pressure to increase sales. Their task is mainly to generate a sufficient order volume for the existing production capacity. However, sales staff had to

work with a heterogeneous customer base, which represents a wide variety of printing related requirements. Production staff have to be flexible in terms of working hours and their ability to turn out a wide variety of different products. Although local markets may not be very competitive, short production time is a key sales argument and this keeps production under pressure. The ability to deliver a broad range of services is a key element of these printing firms' survival strategy and this will be discussed in the following section.

Services in the manufacturing context

This section seeks to unravel some of the complexities which characterise services in a manufacturing context. This complexity is aptly demonstrated by the variety of meanings that practitioners attach to the term 'services'. The views offered varied between businesses and also within firms, depending on the interviewees' work tasks. In this situation it is clear that an examination which makes the nature of services more distinct can benefit both practitioners and academics. The following analysis starts by dividing service activities into three hierarchical levels, which helps to organise the analysis of the complex reality. After this the business and production process and personal level service activities are analysed separately.

One key aspect of services, namely the importance of interpersonal relations, has already been addressed earlier in this chapter. However, the analysis as well as the literature recognise that not all aspects of services are directly related to personalised interaction. The following typology further theorises the hierarchical service concept which was first introduced in Chapter Seven as a way of organising buyers' views of services (Figure 19). It illustrates how the service concept can be analysed at three hierarchical levels that relate either to printing firms' business processes, print production processes or personal level interactions. These levels provide a way of organising the meanings that respondents attached to services, from the general to the more specific processes and outcomes (Figure 22). Level I at the top of the figure includes generic business level issues followed by production related level II activities and finally, at level III, personal interaction based services.

Figure 22: Key service attributes on three hierarchical levels

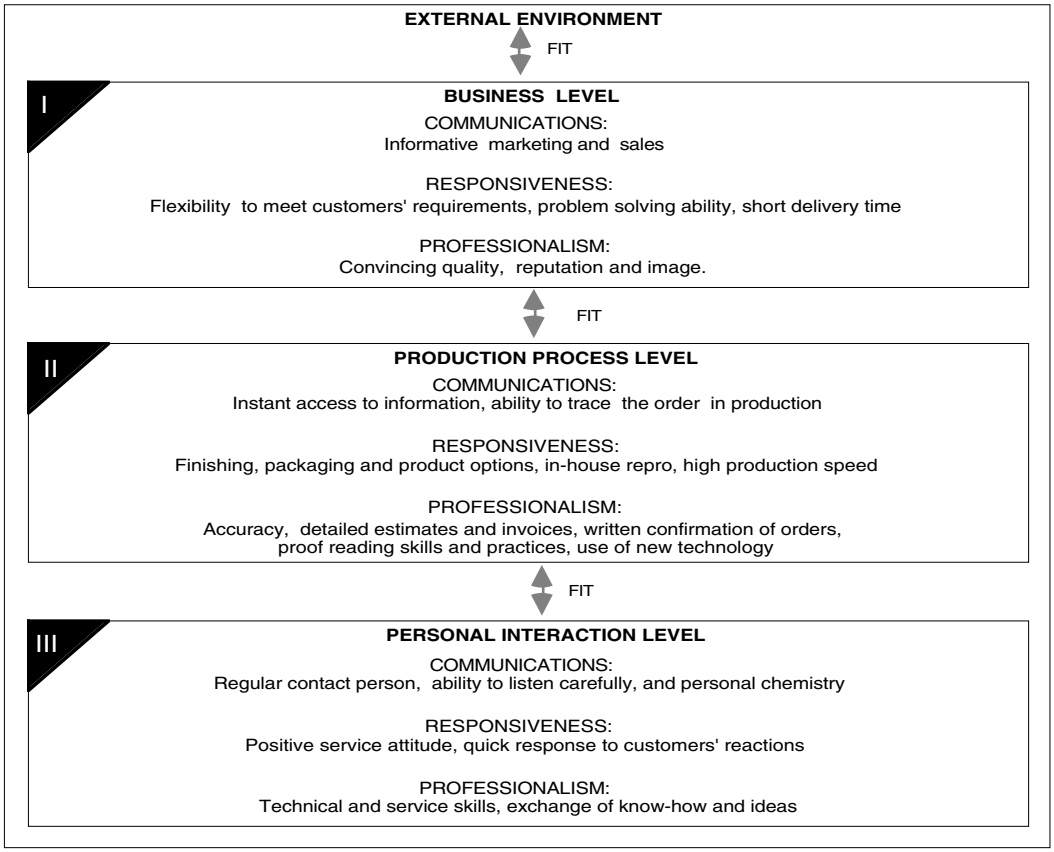


Figure 22 provides a conceptual overview of different level service attributes by incorporating the views of buyers, owner-managers, sales staff and production personnel into one figure.[5] By dividing service activities into three categories that represent different types of activities it becomes easier to understand their dynamics and significance in various situations. The relative importance of different service activities can change from customer to customer, between products and as the business relationship develops. For instance, the reputation and image of the printing business are most important for buyers in situations where they are considering placing an order with a new print supplier. However, if the interaction between the buyer and the printing firm's personnel continues personal level attributes gradually become a key element of service (see Chapter Five, pp. 89-91). The type of the product influences services' character so that complex products require more advisory services whereas delivery times and easy access tend to be more important in the case of simple products. Being aware of these dynamics can help practitioners to deliver the correct type of services to the customers. The typology also helps to understand how different level service attributes are related to each other and that customers, owner-managers and printing firms' staff may have different views on these activities and their significance.

At the business process level, the firms' actual product-market positioning is a key service attribute because it largely dictates the circumstances in which service delivery takes place. In the illustration (Figure 22) the arrow between external environment and business level highlights this issue. The characteristics of a printing firm's business need to have a sufficient fit with the external environment so that the firm is able to survive. Overall, service attributes at the business level are relatively abstract, such as informative marketing and sales, the flexibility to meet customers' requirements, problem solving ability, short delivery times, the reputation of the business and convincing quality (see detailed discussion in Chapter Seven). Typically, these types of service attributes are most important for owner-managers and professional buyers. However, only a minority of owner-managers had a well thought out service concept for their businesses. Many of the owner-managers' statements, such as 'We stand for a high quality printing service', were too vague to have much practical significance for service management. This type of non-specific statement can easily cause problems within the printing firm because each employee in production and sales may interpret it differently. Some of these owner-managers' statements were clearly aimed at emphasising a particular managerial ethos within the firm, whereas others were aimed at building an image amongst customers. Although most owner-managers claimed that services were an important part of the business, many had a rather narrow and production-oriented view of their nature. This is significant, since owner-managers' skills, preferences and attitudes have a profound influence on the role that services have in the business.

At the production process level, service activities are much more specific and are directly connected with manufacturing activities. Service activities at this level are subject to the choices made at the business process level and production personnel often feel that their ability to deliver services is constrained by such limitations. For example, because of such limitations production staff may not be able to deliver to customers all the services they would like to have. In other words, problems will arise unless there is a sufficient fit between the external market environment, the firm's business level positioning and the activities at the production process level.

Printing process related services are particularly important for the production staff and buyers, whose work is directly related to these activities. The hierarchical nature of the service concept is well illustrated by, for example, the case of the responsiveness concept.

At the production process level, this concept translates into a set of more specific issues such as high production speed, in-house pre-press, and numerous product, finishing and packaging options. At the personal interaction level the responsiveness refers to the positive service attitude of the printing firm's staff and their quick reaction to customers' requests. Similar business, production process and personal interaction level hierarchies can also be identified with other service attributes such as communications and professionalism (See Figure 18 and discussion in Chapter Seven).

From a small business perspective it is significant that buyers considered the latest production technology and in-house pre-press and finishing facilities important elements of firms' service capabilities (Chapter Seven). For many small printing firms such integrated production facilities are an unrealistic option. In addition to the investment needed, such integrated production would require more skilled staff, who may not be readily available. As a result, services like graphic design and more specialised finishing are regularly sub-contracted to other small firms. In some cases the entire job is contracted to a firm with more suitable production facilities for a particular order. Often customers were not aware of the amount of subcontracting work included in their order. Printing firms tended to hide it because some customers would not have accepted this practice. Service capability and the use of subcontracting offers an area for further research. In particular, it would be interesting to know more about 'hidden subcontracting' and its contribution to service capability.

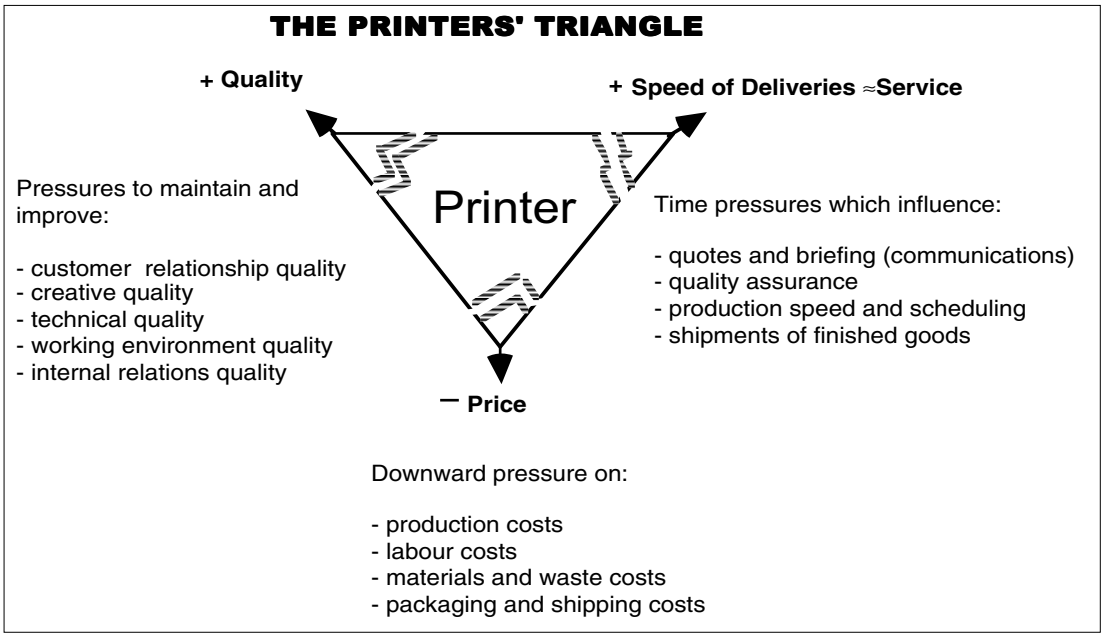
Numerous different service typologies have been developed since the theory building on services began in the 1960s (Lovelock, 1983; Bryson and Daniels, 1998). Most of the micro-level classifications have been based on the type of the seller or buyer or the characteristics of the services or the buyer-seller relationship. However, so far the hierarchical aspects of services have hardly been recognised. Thus the service hierarchy concept offers a chance to capture issues which have not been sufficiently addressed, among them the fit between an organisation's environment, its strategic positioning in the market place and the service management process (Miles and Snow, 1984). It can also be helpful in analysing the dynamic nature of services, the often contradicting views of various actors, and the service activities embedded in the manufacturing process.

Delivering service and quality in the manufacturing context

This section draws together the outcomes of the quality and service delivery analysis and further theorises the printer's triangle concept, which has been discussed from various angles in Chapters Four, Five and Six. This concept contributes the service and quality literatures by highlighting the dynamic economic and social processes which are crucial for service delivery. Essentially, it is about maintaining a balance between quality, production speed and pricing under contradictory pressures. Under such circumstances different types of tensions develop between printing firms' owner-managers and sales and production staff as each one of them pursue their own objectives within the firm in order to meet customers' requirements for products, services and price. The last part of this section explains how the investigated firms organised their quality management under the above described pressures.

The printer's triangle (Figure 23) is a key concept which links together the external and internal pressures and contradictions that influence service capability. It illustrates the underlying economic and social processes which very much shape the way small printing firms operate. The external competition-related pressures derive largely from the product-market positioning of the firm, as discussed earlier in this chapter. Within the firm these pressures, such as short delivery times and competitive prices, influence the work practices of owner-managers and sales and production staff as well as the organisation of the production process. Together these processes contribute to the dynamic tensions which the arrows pulling away from the centre of the printer's triangle illustrate. They arise as the supplier simultaneously seeks to maintain and improve quality, minimise delivery times and maintain competitive prices. Due to the inherent contradictions, the situation is unstable and it takes constant efforts by the owner-managers to manage customers and staff, both of which are essential for successful service delivery. In competitive markets, owner-managers have to make sure that their firms' production and labour costs stay as low as possible. In such situations tensions emerge between owner-manager and members of staff. Even if both parties understand the competitive pressures, cost savings can easily have a negative impact on staff motivation and a firms' service capability.

Figure 23: Delivering service and quality under pressure



Breaks at the tips of the triangle represent quality, service and pricing failures, which tend to happen as the process is taken to its critical limits. The printer's triangle demonstrates how it is virtually impossible to maximise both quality and production speed simultaneously without facing problems. Even if the supplier decides to pursue best price, service and quality simultaneously, it can only be achieved on a temporary basis. In the end, competitive prices will not cover the rising costs of extremely high production speed and quality. These contradictory goals are not the only limitation. Small print suppliers also need to cope with relatively scarce resources, which limit their flexibility and offer only a thin financial cushion in the event of failure. Constant work pressure and requirements for high quality will in the end have a negative influence on sales and production staff. Hence, a good working environment and strong internal relations, as well as satisfactory remuneration, are important elements of service management. There are no permanent solutions to these dilemmas and printing firm owner-managers can only try to achieve a temporary balance between inherently contradictory objectives.

In a competitive situation businesses may improve their performance gradually with the help of technology and by developing their internal processes, thus stretching the limits of their production and service delivery capacity. Advances in production technology, management practices and employees' skills are the main sources of such flexibility. As indicated earlier, some firms need to stretch their limits more than others, depending on their product-

market configuration. In instant and general printing, price and delivery speed are the key competitive drivers because products are relatively simple and quality needs to be sufficient rather than exceptional. Thus instant printers tend to focus their efforts on speed and cost effectiveness. Less specialised general printing firms encounter pressures to stretch all three corners of the triangle at the same time, which is very difficult. General printing firms are in this situation because of their heterogeneous customer base, which does not allow specialisation in any of the key competence areas, quality, speed or competitive prices. Under such constant contradictory pressures the production process can easily reach the breakdown point where quality and service delivery fail.

An important inherent contradiction exists between service and quality. Typically, short delivery times equal service, which causes pressure to increase production speed. When pushed too far this causes quality problems, which materialise as an inability to meet agreed delivery times and mistakes in printed products. In such situations tensions emerge within the printing firms. Typically, owner-managers and sales personnel put a pressure on pre-press and press operatives, who are expected to increase turnaround speed and maintain the quality. For the production workers such demands are extremely frustrating because it is very difficult to maintain high quality and production speed simultaneously.

The investigation revealed various strategies aimed to sustain quality and short delivery times. Besides subcontracting, much of the flexibility needed was based on the organisation of work within the printing firm. Most owner-managers employed multi-skilled staff who could move from one task to another depending on the workload. The service mentality of the staff and a non-bureaucratic organisation were also seen as ways to improve flexibility. By making use of the latest technology, production speed could be increased, although new unproven production technology also involves an increased risk of quality problems.

These types of measures were proactive and by adopting them owner-managers could build their firms' overall capabilities and ability to survive in competition with other firms. Some owner-managers opted only for more short-term solutions, such as over-time working and the use of part-time staff. These did not necessarily improve firms' service capability in the long-term and in the short-term they increased production costs. As the above indicates, printing firms' staff are largely responsible for service delivery capability not only in terms of their interaction with customers but also because they are a source of the required

flexibility. The most effective way to improve staff-based flexibility is to improve their skill levels and to increase their autonomy to manage their own work. Under such circumstances sales and production staff are more likely to develop and maintain favourable attitude towards serving customers to the best of their ability.

Quality issues in printing reflect the characteristics of customised batch manufacturing and the particularities of the industry itself. As a method proof reading has developed gradually over many years and it was an essential quality management tool not only in small printing firms but also in large advertising agencies. Although printing is manufacturing, much of the quality is created before the work goes to press during product briefing, proof reading and other episodes of interaction between the printing firm and its customer. Typically, each production run is unique and its parameters are negotiated with the customer. In each distinct situation, quality management needs to accommodate continuous variations in product attributes, design and delivery times. In printing, proof reading is a quality management and control method that meets the above requirements. Being a non-bureaucratic method embedded into the process it offers an effective way of engaging customers and printing firm staff with the quality control. This type of quality management relies largely on skilled craft personnel and their motivation to maintain high standards. As such, proof reading seems to accommodate creativity, customisation and flexibility better than the formal quality management.

Owner-managers' quality control was largely built on trust-based relationships and close personal control whereas formal quality management systems were rarely used. The key task of owner-managers was to make sure that the quoted quality, price and delivery times at least matched possible rival offers. As a result, it was typical that printing firms had problems in keeping to the quoted delivery dates. Such situations were normally solved by re-negotiating quality and delivery terms first with the customer. After this it was printing firms' flexibility that helped to solve the remaining problems often in terms of flexible working practices and overtime work. This caused some tensions within the firm. Production staff, in particular, faced a situation where they became under pressure because of short delivery times.

Sales staff have a role in quality control where they negotiate a balance between suppliers' and buyers' contradictory requirements for quality, services and prices. In this position they have to sustain and manage contradictory pressures on a daily basis. The essence of

proof reading is that the printing firm's staff and customers together identify and correct quality failures before the order goes to print. During the proof reading process sales staff have to control customers' inputs into the production. In well-established customer relationships this was much easier because parties knew exactly what each one of them were expected to do. The informal nature of proof reading seems to accommodate the creativity, customisation, personalised business relations and delivery of value added services.

A particular problem associated with proof reading was that it did not provide a channel for systematic customer feedback after the order had been completed. Hence, production personnel normally had very few direct customer contacts other than when mistakes occurred. As a result, production staff suffered from a lack of positive feedback and its motivating effects. However, production staff were fairly satisfied with the flexibility and proactive quality failure prevention which were perceived as the strengths of proof reading. In addition the level of quality control could be adjusted on the basis of how demanding each order was. Regardless of proof reading and production staff efforts, extreme production speed could easily compromise print quality.

New technology has important implications for quality management because it inflicted changes with which existing quality management systems were unable to cope. These effects were not limited to technological aspects of the production process; they also produced fundamental changes in the division of labour. For example, previously developed quality management responsibilities and skills became ineffective quite suddenly. As soon as management systems ceased to reflect the constantly evolving division of labour, a new wave of quality problems emerged. Since quality management is part of a constantly evolving industrial process, it needs to be flexible enough to accommodate such changes. The existing literature (Chapter Seven) has paid insufficient attention to the dynamic nature of industrial processes and quality problems. This has resulted in quality management that is too rigid and unable to cope with a rapidly changing environment and internal processes. Moreover, very limited attention has been paid to the quality problems related to the adoption of new technology.

Suggestions for further research

The current research has raised a number of service-related issues which need further investigation both in printing and the wider manufacturing context. The investigation has demonstrated the nebulous nature of the service concept and the numerous different meanings attached to it even within one specific industry. This causes numerous problems when the concept is used analytically or in business practice; there clearly is a need for sharper definition for services. One possible direction for further research is to deconstruct interviewees' service concepts and analyse the hierarchy of different meanings attached to it, as demonstrated in Chapter Seven and earlier on in this chapter (Figure 21).

Given the growing importance of customised batch manufacturing, the wider use of the printer's triangle type concept needs to be studied in other industries. The findings of the present study suggest that the printer's triangle construct provides a way of analysing basic social processes in printing firms and the wider manufacturing context. It provides a way of explaining the external and internal pressures that influence printing firms' service capability. Wider understanding of these processes can advance the understanding of service's role in manufacturing. The inherent contradictions between quality, processing speed and price are apparent in many service industries. Hence the printer's triangle offers an interesting approach in studying the contradictory pressures that, e.g. national health care services have to cope with.

Another promising area for future research is the relation between firms' strategy, customer relations and services' added value potential for manufacturing businesses. The findings of the current research suggest that there is a link between firms' product-market positioning and the value that services can add to the business. The added value potential of services in connection with knowledge intensive products, processes and new technology are key areas of future research. The complex and dynamic nature of such linkages and the value adding potential of services need to be investigated in different types of businesses. Of particular importance are circumstances where service activities can have a negative impact on manufacturing businesses. Overall, there is a need for a better understanding of the economic significance of services for different types of businesses and the wider economy.

The data presented suggests that personal level interaction with customers has a significant influence on the design, quality and delivery of customised product-service packages. The subtle qualities of this personalised interaction need further analysis. Besides academics, management and employees in manufacturing businesses as well as customers can benefit from better understanding of these complex situations. Rapid developments in information and communications technologies have already had a profound impact on the production process and customer relations. New communication technologies enable new forms of interaction via telephone, e-mail, electronic data transfer and video conferencing. These may change basic social processes, for instance the way trust develops between the parties. Where new ways of communicating change patterns of personal interaction, the implications for service delivery are significant and need to be studied.

The wider implications of new technology are also very significant and require further research. The current research indicates that the emerging 'information society' will change even the most traditional industries. In the first place this conversion will concern industries which are largely based on information processing, such as printing, education and financing. This new situation creates both threats and opportunities for small firms. To address these issues, research should explore small firms' ability to retain their competitive advantage, which is largely based on personalised customer relations, their ability to deliver services and proximity to the local markets. For instance, the internet is an affordable marketing channel for small firms but it also places local market niches within the reach of large corporations.

Supplier pools, which were discussed in Chapter Seven, are an area which should be investigated in different industrial contexts. The analysis suggests that professional print buyers' had developed a purchasing strategy which combined intense competition between supplier firms and the benefits of long-term customer relations. For the buyers, such a supplier pool secured competitive prices, high quality and effective service delivery. Such purchasing strategies seem to manage competition effectively and a deeper understanding is needed of their implications for suppliers and applicability to other industries.

Given the importance of informal quality management in small firms these practices provide an important area for further investigation. As mass customisation is becoming an increasingly important aspect of manufacturing, flexible, informal quality management is set

to gain in importance. Research of these practices could benefit especially creative industries where formalised quality management is difficult to apply. The wider quality implications of information technology are also important areas for research. The data presented shows that new technology places serious challenges for existing quality management by causing fundamental changes even in the most conventional industrial processes. Such changes require new quality management skills from management employees and customers. Moreover, information technology related quality failures are often unexpected in nature and likely to increase unless research-based and systematic actions are taken.

Notes

[1] Despite these alleged weaknesses, during the second half of 1990s The World Competitiveness Yearbook has ranked Finland one of the most competitive nations, second only to the USA and Singapore. Although this type of comparisons are highly dependent on the criteria used, it is indicative that the UK ranking is 15. - clearly lower than the Finnish position (IMD, 2000).

[2] Like their print suppliers professional buyers had to cope with many contradictory demands. By booking media space as late as possible, advertising agencies can gain very significant cost savings. As a result, professional buyers were given very short notice to source printed matter. This could make it very difficult to deliver the order in time and to maintain all other quality requirements.

[3] Professional print buyers could trust every one of their regular suppliers and in a competitive situation the lowest bidder won the order. However, there were also exceptions to this rule. For instance, buyers tended to find out about a supplier's available printing capacity before placing the order. If the supplier was working close to full capacity this was considered a risk and the order was given to the printer that had more capacity available.

[4] All kinds of communication problems were particularly acute with new customers. The extra workload typical of first-time orders was mainly caused by a situation where the supplier needed to establish the customer's preferences and requirements from scratch. In the case of repeated orders, the printing firm already had much of the basic information it needed.

[5] Figure 22 has been adapted from Figure 19, which was presented in Chapter Seven. Although Figure 19 is based on the buyers' listing of service attributes its categories also include the service attributes that printing firms' owner-managers, sales and production staff expressed in their interviews.

Appendix one

LETTER TO OWNER-MANAGERS

Appendix two

OWNER-MANAGER QUESTIONNAIRE

Appendix three

SALES QUESTIONNAIRE

Appendix four

PRE-PRESS QUESTIONNAIRE

Appendix five

PRESS QUESTIONNAIRE

Appendix six

PRINT BUYER QUESTIONNAIRE

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