

**Competitive and Flexible Company Structures using Vertical Integration and Cooperation:  
Empirical studies of the Commercial Printing Industry**

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## Competitive and Flexible Company Structures using Vertical Integration and Cooperation: Empirical studies of the Commercial Printing Industry

### ABSTRACT:

*This paper investigates how company structures, with respect to vertical integration and cooperation, affect the competitive advantages and resource flexibility within the fragmented and highly competitive Swedish printing industry. The results are based on five qualitative case studies and one quantitative survey study. The results demonstrate that vertical integration is widely used and is important to get competitive advantages within the industry. The main reasons are customers call for a full service provider and the need for integrating adjacent activities in the value chain to ensure fast deliveries and steady and appropriate input to production units. However, the findings suggest that due to heavy costs, cooperation is used to increase firms' resource flexibility to control necessary resources.*

**Keywords:** competitive advantage; dynamic capabilities; strategic alliances; strategy and structure; vertical integration

### INTRODUCTION AND THEORETICAL FRAMEWORK

Behind decisions regarding value adding activities, that have to be performed in the value chain to produce the end product or service<sup>\*</sup>, managers have to ask themselves whether the activities should be purchased on the market, performed by a partner in a cooperation or performed internally within the firm (e.g. Child et al., 2005; Faulkner 1995; Gulati, 2007; Harrigan, 1983b; Williamson, 1975; 1985). Specialization is in many cases successful, especially when there are cost advantages from large scale production (e.g. Faulkner, 1995). However, when specializing on a certain activity, it is most often necessary to interact with other firms to be able to produce the final product. Simplified, this can be done either by buying on the market, i.e. a *market transaction*, or by tying a close relationship with another firm by some form of *cooperation* (e.g. Child et al., 2005; Faulkner, 1995; Gulati et al., 2000; Jarillo, 1988). Vertical integration, on the other hand, *“can improve the ability of the firm to differentiate itself from others by offering a wider slice of value added under the control of*

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<sup>\*</sup> The term *product* will be used to cover both products and services.

*management*” (Porter, 1980, p. 307). Furthermore, vertical integration is one of the first considered and most frequently adopted growth strategies (Chandler, 1977; Harrigan, 1985). Decisions regarding whether a firm should make (integrate) or buy (cooperate or buy over the market) usually remain for a long time once made (Hill, 2000). Because of the strategic importance of these decisions, the choice of strategy regarding vertical structure is most often a reflection of long-term visions of the firm’s founder or managing director (Beal & Yasai-Ardekani, 2000; Harrigan, 1985; Schein, 1983).

There are many definitions of vertical integration and whether a firm is to be regarded as vertically integrated or not. In general, vertical integration arises when a firm integrates activities to produce its own inputs and/or takes care of its own outputs, in order to increase its power in the marketplace (e.g. Adelman, 1949a; 1955; D’Aveni & Ilinitich, 1992; Harrigan, 1983b; Hirsch, 1950; Jarillo, 1993; Mahoney, 1992; Perry; 1989; Porter, 1985). As identified by Harrigan (1984), a vertically integrated firm may benefit from reduced costs by avoiding time-consuming tasks, improving coordination between activities, differentiation of products and assuring supply. Furthermore, gaining access to end-users by integration is a way for new products to penetrate a mature market and may give firms *“improved ability to forecast cost or demand changes”* (Harrigan, 1983b, p. 3; 1985). There are also many possible negative consequences due to vertical integration. Common in the literature are, e.g., increased internal and fixed costs which raise the exit barriers, unclear allocation of costs and profits in the value chain, and decreased flexibility (e.g. D’Aveni & Ravenscraft, 1994; Gadiesh & Gilbert, 1998; Harrigan, 1985; Porter, 1980). Williamson (1991, p. 83) suggests that firms have a conservative approach to vertical integration as this is the *“organization form not of first but of last resort – to be adopted when all else fails”*.

Fombrun (1993, p. 186) states that the competitive landscape is getting more clustered and *“in many product groups where firms once competed in isolation, they now compete as allies in business communities”*. Acquiring necessary resources and knowledge to a firm can be both costly and time consuming. Cooperation is an opportunity to gain control of resources and knowledge without direct ownership, and thus, increasing the flexibility and dynamics in resource control. Alliances and cooperation are ways for legally independent players to create and/or preserve competitive advantages

against the surrounding world (Gulati, 1998; Gulati et al., 2000; Jarillo, 1988; Todeva & Knocke, 2005). According to Jarillo (1988, p. 38), “*the critical component that makes a relationship take the shape of ‘strategic network’, instead of that of a ‘typical market’ is the high degree of (perceived) ‘opportunity for joint value creation’ between the two organizations*”. Two, in the literature, commonly discussed reasons, for alliances or cooperation to be formed, are decreased transaction cost (compared to market transactions) and increased competitive advantage (e.g. Child et al., 2005; Faulkner, 1995; Gulati et al., 2000; Jarillo, 1988; Levin, 1998). While Jarillo (1988) states that an alliance must be efficient in lowering transaction costs, Gulati (2007) and Faulkner (1995) consider transaction costs subordinate to gaining control over resources. Other internal motives mentioned for forming alliances are spreading of financial risk (e.g. Faulkner, 1995) and speed to market (e.g. Lee, 2007). When being part of an alliance, gaining access to complementary resources makes it possible to focus on a small part of the total value chain (Levin, 1998; Porter, 1985) and Gulati (2007) suggests that participation in an alliance can make a firm “*‘expand the periphery’ of their value proposition to customers*”. Even though cooperation is one strategy of gaining access to resources needed for adding value to a product, combining several different strategies may create an even more flexible company structure. Parmigiani (2007) and Rothaermel et al. (2006) found indications that combining a strategy focused on vertical integration with outsourcing and cooperation has a positive effect on a firm.

### **Research Objective**

The objective of this paper is to investigate how company structures, with respect to vertical integration and cooperation, affect competitive advantages and resource flexibility within a fragmented and highly competitive industry. The studied industry in this paper is the commercial printing industry, which is fragmented (Gilboa, 2002; Intergraf, 2007; Kipphan, 2001) and under high competition and constant price pressure due to the commoditization of the printed product (Birkenshaw, 2004; Mejtoft & Viström, 2007; Smyth, 2006).

### **RESEARCH METHODOLOGY**

To get insight in how vertical integration and cooperation can be used to create competitive and flexible company structures in the printing industry, a hybrid research methodology has been applied.

The results in this paper are based on the results from five different qualitative case studies (e.g. Yin, 2003) and one quantitative survey study carried out in Sweden during 2004-2007 (summarized in Table 1). Parts of the results have been reported in Mejtoft (2006a; 2006b), Mejtoft & Nordin (2007; 2009), Mejtoft & Packmohr (2009) and Mejtoft & Viström (2009). All interviews in the qualitative case studies have been carried out either at the respondents firm, a location chosen by the respondent or by telephone. At the printing firms [Q1; Q3; Q4; Q5] the respondents were top management (most often the managing director or founder), due to their importance in setting the strategic path for the firm (e.g. Beal & Yasai-Ardekani, 2000; Collis & Montgomery, 2005; Harrigan, 1985; Porter, 1996; Schein, 1983). At the customer firms [Q2] the respondents were employees responsible for contact with their printing firm(s).

*Table 1. Summary of case studies included in the paper.*

	<b>Primary topic</b>	<b>Case firms</b>	<b>Part-study results</b>
Qualitative study 1 [Q1]	Vertical integration	6 printing firms	Mejtoft (2006a)
Qualitative study 2 [Q2]	Vertical integration	8 customers to printing firms	Mejtoft (2006b)
Qualitative study 3 [Q3]	Cooperation	2 printing firms	Mejtoft & Nordin (2007)
Qualitative study 4 [Q4]	Cooperation	13 printing firms	Mejtoft & Nordin (2009)
Qualitative study 5 [Q5]	Vertical integration/Cooperation	5 printing firms	Mejtoft & Packmohr (2009)
Quantitative study 1 [S1]	Vertical integration	136 printing firms	Mejtoft & Viström (2009)

The quantitative study [S1], regarding the integration of vertical activities in the value chain of print media, is based on a subset from a larger survey study of 136 Swedish commercial printing firms carried out during 2006. Out of the 136 firms 39% used digital printing technology\* and it constituted at least 10% of the production (digital printers), the rest used only conventional printing technology† (conventional printers). The questionnaire was sent out by letter to 300 randomly selected Swedish commercial printing firms. The population used was the members' list of the Swedish Graphic Companies' Federation (GFF). Even though this is not a complete list of all commercial printing firms in Sweden, which limits the possibilities to generalize the results to the whole Swedish commercial

\* Digital printing is printing technology that do not use a static master, that is printing technologies most often based on electrophotographic technology (similar as office laser printers) or inkjet technology (similar as home photo printers). A digital printing press can make every copy in a print run unique.

† Conventional printing technology uses a static master and each print in a print run is therefore identical (e.g. offset, flexographic and gravure printing).

printing industry, the list includes firms covering at least 80% of invoiced sales of printed commercial products in Sweden (K. Flick, *GFF*, personal communication, January 25, 2007). The number of ineligible firms in the sample was 46 and the response rate was calculated to 54% in accordance with the Council of American Survey Research Organizations requirements (CASRO, 1982; Wiseman & Billington, 1984). The ineligible firms were those that, at the time of the study, did not own any printing equipment (e.g. due to bankruptcy or changes in the firms production strategy) but still had not been removed from the list.

## RESULTS AND DISCUSSION

### Vertical Integration and Competitive Advantages

Vertical integration is both an important and widely used strategy in the commercial printing industry in Sweden [Q1; Q2; Q5; S1]. The results [Q1] show that vertical integration (e.g. D'Aveni & Ravenscraft, 1994; Harrigan, 1983a; 1984; Peyrefitte et al., 2002) became a way of overcoming the initial problems with the introduction of new production technology, since many of these problems originated from difficulties in acquiring jobs suitable for the new digital printing technology. The need to ensure appropriate input of jobs and guarantee fast handling of output, led firms to make strategic decisions to vertically integrate additional supporting activities. Hence, vertical integration has been carried out both backward, e.g. to gain customer contact and guarantee a steady flow of input, and forwards, e.g. by taking care of finished goods internally to ensure short delivery times (Figure 1). The results [Q1] further demonstrate that this is a way for printing firms to evolve into firms that can efficiently support the major business models for digital printing, such as print-on-demand, fast turnaround times and variable data printing. Due to the strategy of vertical integration, the firms become more customer-centric focused (cf. Day & Wensley, 1988), which makes it easier to add appreciated customer value to products.

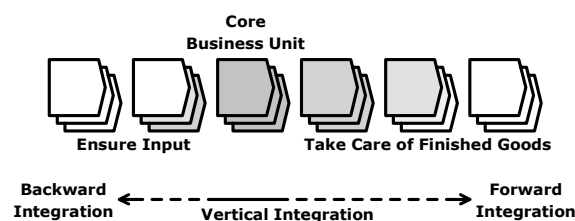


Figure 1. Vertical integration for the creation of competitive advantages.

Even though the results [Q1] show that vertical integration is important for digital printing firms, the results of the quantitative survey study [S1] illustrate that there are no significant differences between printing firms having digital printing (digital printers) and printing firms having only conventional printing technology (conventional printers) regarding integration in the value chain. Nevertheless, the overall degree of vertical integration in the commercial printing industry is high (Figure 2).

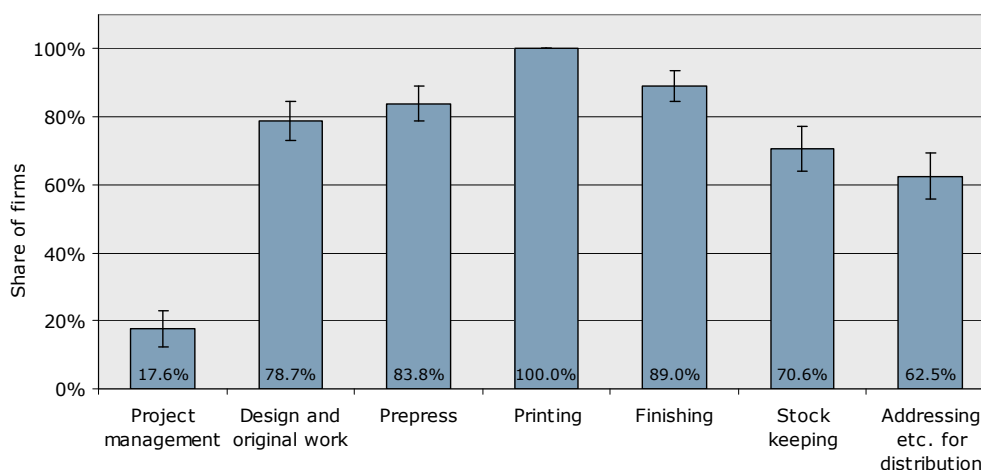


Figure 2. Vertical integration in the Swedish printing industry presented as share of firms that have integrated each step of the value chain (mean values with 95% confidence interval) [S1].

In the eyes of the customers, the choice of printing technology used, hardly ever matters as long as the printed result is as expected (Romano et al., 1999). Given that customers often lack knowledge about what a new technology can offer (cf. Porter, 1985), it is important for suppliers to have close customer contact. Since the respondents [Q1] believe that advertising agencies do not fully understand how to utilize digital printing technology, many printing firms strive towards increasing their share of so-called direct customers to solve this problem. This is done through backward integration by incorporating prepress and simpler original work. By working directly with customers, the digital printing firms believe they can utilize digital printing in a more effective way, since they can influence customers to take advantage of the uniqueness of the new production technology. Hence, there is a better opportunity to add extra value to a customer's product when a firm has control over production technology and product development as well as close customer contact. Since direct

customers often lack interest and knowledge in contracting different activities in the print media value chain separately, providing full service solutions makes it possible for printing firms to increase their share of direct customers.

The results [S1] and the integration curve (Figure 2) are consistent with earlier research by showing that fewer firms have integrated activities further away from the core business (cf. Peyrefitte et al., 2002). Consequently, the integration pattern of different stages in the industry has the tendency to take the characteristics of a “bell shaped” curve (Figure 2).

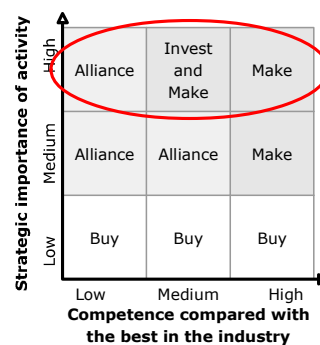


Figure 3. Due to the high strategic importance of activities close to the core business, vertical integration is important for commercial printing firms in Sweden (After Faulkner, 1995, p. 15).

Referring to the model by Faulkner (1995) (Figure 3), it appears as if many firms in the printing industry regard activities close to the core business as strategically important for their business [Q1; Q5; S1], because they have decided to integrate these activities. Consequently, the firms avoid market transactions and, depending on the degree of competence, primarily integrate or cooperate through alliances to perform the activities in the value chain. Cooperation will be further discussed below.

Considering the highly competitive situation in the printing industry (e.g. Birkenshaw, 2004; Mejtoft & Viström, 2007; Smyth, 2006), the results on vertical integration are inconsistent compared to the results of other researchers such as Balakrishnan & Wernerfelt (1986), Eisenhardt & Schoonhoven (1996) and Harrigan (1985). Unstable competitive conditions should, according to these previous studies, encourage a lower degree of transfer from internal units. This is, however, not the situation in the printing industry since competition is strong and still the level of vertical integration is high. A possible explanation for this inconsistency is that commoditization of printed products has made the



bargaining power of the printing industry low (e.g. Birkenshaw, 2004; Smyth, 2006), which makes the industry vulnerable to bargaining from others (cf. Harrigan, 1985; Porter, 1974). By vertical integration it has been possible for the industry to regain some of this lost power and increase the probability of making a profit. According to the results [S1] there is no correlation between the level of vertical integration and the size of the firm. This implies that the need for being vertically integrated is strong within the industry and it is not only the larger firms that choose to follow this strategy.

### **Cooperation and Resource Flexibility**

The results on cooperation [Q3; Q4; Q5] illustrate two different ways printing firms can increase their resource flexibility and get a perceived added value by being part of an alliance (cf. Faulkner, 1995; Gulati et al., 2000; Jarillo, 1988). The intention to enhance customer satisfaction encouraged the case firms to engage in alliances to retain contact with their customers. The case firms mainly cooperated due to two reasons; (1) to add resources that extended capacity and rendered possible temporarily increases in production and (2) to complement their line of production and services with complementary resources in order to offer full service solutions to customers. Hence, the main reason for cooperation was gaining access to different kinds of resources.

The respondents [Q3; Q4] were unanimous that by cooperating they increased their flexibility in resource deployment (cf. Gulati et al., 2000; Håkansson & Johansson, 2002), which has been considered important to increase a firm's strategic flexibility according to the literature (cf. D'Aveni, 1994; Eisenhardt & Martin, 2000; Fombrun & Ginsberg, 1990; Miller et al., 1996; Sanchez, 1995; Williams, 1994). This is mainly due to the respondents' two main reasons to cooperate; (1) the possibility of large scale production and (2) reducing investment needs. Hence, not having to cope with new investments and still being able to satisfy customers' needs were important for the case firms.

In general the case firms [Q3; Q4] believed that they could perform better on the market by utilizing alliances (cf. Rothaermel, 2001). With respect to how the case firms structure their businesses, their

way of using institutional arrangements to become successful is consistent with the findings of Rothaermel et al. (2006), because they are combining vertical integration with various kinds of partnerships.

The major difference between the two different types of partnerships identified above can partly be described by the difference in the degree of dependence between the printing firms and their partners. In the first type of cooperation mentioned above, the firms have ownership and control over the most important type of printing equipment needed for their business and cooperate with partners to ensure that they and their partners have access to additional production capacity whenever needed. Consequently, they are not entirely dependent on their partners to guarantee delivery to their own customers. Contradictorily, in the second type of cooperation, identified in the results [Q3; Q4; Q5], the firms sold products and services that were to be produced on printing equipment not under the firms' control. This causes these firms to be more dependent on their partners. The results [Q3] also confirm this difference in dependence on the alliances since the respondent at the firm that did not have all types of production equipment internally indicated the importance of long-term trust and commitment to the alliances (cf. Jarillo, 1988; Medcof, 1997; Morgan & Hunt, 1994; Ring & van de Ven, 1992).

### **Company Structures for High Flexibility and Competitive Advantages**

The respondents [Q1; Q5] give indication on the strategic importance of vertical integration to achieve competitive advantages. The most prominent advantages mentioned are the ability to lower lead times in the value chain (forward integration) and to ensure a steady flow of input to the printing units (backward integration). Furthermore, the results in the quantitative study [S1] show that the level of vertical integration, regarding the number of integrated activities, is rather high in the commercial printing industry in Sweden. However, there is also an awareness of the high cost and potential lock-in problems with vertical integration [Q3; Q4; Q5] (cf. D'Aveni & Ravenscraft, 1994; Harrigan, 1985). Even though the competitive advantage of being vertically integrated to meet customers' demands is highly stressed in all studies in this paper, the results also clearly indicate that it decreases the strategic flexibility. The firms [Q3; Q4; Q5] manufacturing flexibility benefits from

cooperating with external partners and this flexibility makes it easier for the firms to face fluctuations in customers' taste and demand (cf. Adelman; 1949b; Chang, 1993). Nevertheless, the results make clear that cooperation alone is not a successful competitive strategy for the case firms but that the combination between vertical integration and cooperation is the preferred company structure (cf. Parmigiani, 2007; Rothaermel et al., 2006).

Even though the printing industry is a production industry with a focus on production resources, the way of structuring the firms regarding vertical integration and cooperation is mainly done to get satisfied customers and to increase customer relationships. Both vertical integration and cooperation are successful ways of accessing important and valuable resources to achieve this goal (cf. Adelman, 1949a; 1955; Ahuja, 2000; Eisenhardt & Schoonhoven, 1996; Gulati et al., 2000; Harrigan, 1983b; Perry; 1989). However, in the printing industry, as in many other industries, there is a need to combine vertical integration with cooperation, so-called taper integration, to level competitive, flexibility and cost advantages. The commercial printing industry in Sweden is striving to build flexible and competitive organisational arrangements. This is most certainly not a unique situation and the concept of combining vertical integration with partnerships has been known and used for a long time in many industries to for example handle demand uncertainties (cf. Adelman, 1949b; Parmigiani, 2007).

Many organizations promoting and supporting the printing industry, such as the Swedish Graphic Companies' Federation (GFF) and the Print On Demand Initiative (PODi) in the US, have promoted the service provider concept for a long time. The results in this paper show that the industry is striving towards being flexible to meet customers' demands, taking on the service provider concept and thereby trying to avoid being "just a print provider". The printing industry deems vertical integration important to meet customer's demands on providing full service solutions and short delivery times. A high level of vertical integration, however, creates a non-flexible organization with severe risk for lock-in effects in certain investments (cf. D'Aveni & Ravenscraft, 1994; Harrigan, 1985; Porter, 1980). Consequently, value added partnerships are used and they are very important for loosening the vertically integrated structures and creating more flexible organizations. Even though some firms have

chosen to cooperate within their core business, the mainstream way of organizing the firms is by having many value added activities internally. Having control and owning an activity are strategically important for maintaining competitive advantage, and the capacity of the integrated activities is subordinate to this. Through balancing the internal capacity with partnerships it is possible to create a flexible organization more ready to endure changes in the competitive landscape.

### CONCLUSIONS

The commercial printing industry is a fragmented, over established and mature industry that has had a new production technology introduced and met new threats from the Internet and substitute products like electronic non-printed media. The results in this paper demonstrate that vertical integration is important in order to get competitive advantages in the commercial printing industry in Sweden and a widely used strategy. To work with a full service firm is appreciated by the printing firms' customers, especially direct customers, due to these customers' needs for a supplier of complete solutions for printed matters. Consequently, a vertically integrated full service firm can provide value added services which makes it possible for customers to minimize their organization regarding production and purchasing of printed matters. Another reason for engaging in vertical integration is the need for having internal control of adjacent activities in the value chain to ensure fast deliveries, steady supply and appropriate input to the printing firms' printing units.

As almost every other industry, the printing industry is highly dependent on different kind of resources in production. The findings suggest that cooperation and alliances are used to increase printing firms' resource flexibility. By cooperation it is possible for printing firms to acquire fast access to valuable resources such as production equipment and knowledge, which increases flexibility. The results demonstrate that this can be done either to complement a firm's line of production and services with complementary resources to be able to offer full service solutions to customers or to extend the capacity of their current resources when there is a need for a temporarily increase in production capacity. Through cooperation it is possible to achieve cost and flexibility advantages by reducing capacity or acquiring access to complementary production equipment and still being able to get similar advantages as a vertically integrated firm. Creating a balanced organization

that has both internal capacity and partnerships with strategically chosen firms makes it possible to create a flexible organization that has both cost advantages and flexibility to endure changes in the competitive landscape.

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### REFERENCES

- Adelman, M. A. (1949a). *Integration and Antitrust Policy*. Harvard Law Review, Vol. 63, No. 1, pp. 27-77.
- Adelman, M. A. (1949b). *The Large Firm and Its Suppliers*. The Review of Economics and Statistics, Vol. 31, No. 2, pp. 113-118.
- Adelman, M. A. (1955). *Concept and Statistical Measurement of Vertical Integration*. In G. J. Stigler (Ed.), *Business Concentration and Price Policy: A Conference of the Universities - National Bureau Committee for Economic Research* (pp. 281-330). Princeton University Press.

- Ahuja, G. (2000). *The Duality of Collaboration: Inducements and Opportunities in the Formation of Interfirm Linkage*. *Strategic Management Journal*, Vol. 21, pp. 317-343.
- Balakrishnan, S., & Wernerfelt, B. (1986). *Technical Change, Competition and Vertical Integration*. *Strategic Management Journal*, Vol. 7, pp. 347-359.
- Beal, R. M., & Yasai-Ardekani, M. (2000). *Performance implications of aligning CEO functional experiences with competitive strategies*. *Journal of Management*, Vol. 26, No. 4, pp. 733-762.
- Birkenshaw, J. (2004, April). *The future of print on paper*. Prepress and print Technology, Pira International. Retrieved January 26, 2005, from <http://pira.atalink.co.uk/pulp-and-paper/163.html>
- CASRO, Council of American Survey Research Organizations. (1982). *On the Definition of Response rates*. A Special Report of the CASRO Task Force on Completion Rates. Retrieved April 4, 2007, from <http://www.casro.org/resprates.cfm>
- Chandler, A. D. (1977). *The Visible Hand: The Managerial Revolution in American Business*. Belknap Press.
- Chang, M. (1993). *Flexible Manufacturing, Uncertain Consumer Tastes, and Strategic Entry Deterrence*. *The Journal of Industrial Economics*, Vol. 41, No. 1, pp. 77-90.
- Child, J., Faulkner, D., & Tallman, S. (2005). *Cooperative Strategy, Managing Alliances, Network and Joint Ventures, Second Edition*. Oxford University Press.
- Collis, D. J., & Montgomery, C. A. (2005). *Corporate Strategy, A Resource-Based Approach, Second Edition*. McGraw-Hill/Irwin.
- D'Aveni, R. A. (1994). *Hypercompetition – Managing the Dynamics of Strategic Maneuvering*. Free Press.
- D'Aveni, R. A., & Ilinitch, A. Y. (1992). *Complex Patterns of Vertical Integration in the Forest Products Industry: Systematic and Bankruptcy Risks*. *Academy of Management Journal*, Vol. 35, No. 3, pp. 596-625.
- D'Aveni, R. A., & Ravenscraft, D. J. (1994). *Economies of integration versus bureaucracy costs: Does vertical integration improve performance?*. *Academy of Management Journal*, Vol. 37, No. 5, pp. 1167-1197.

- Day, G. S., & Wensley, R. (1988, April). *Assessing Advantage: A Framework for Diagnosing Competitive Superiority*. *Journal of Marketing*, Vol. 52, pp. 1-20.
- Eisenhardt, K. M., & Martin, J. A. (2000). *Dynamic capabilities: what are they?*. *Strategic Management Journal*, Vol. 21, pp. 1105-1121.
- Eisenhardt, K. M., & Schoonhoven, C. B. (1996). *Resource-Based View of Strategic Alliance Formation: Strategic and Social Effects in Entrepreneurial Firms*. *Organization Science*, Vol. 7, No. 2, pp. 136-150.
- Faulkner, D. (1995). *International Strategic Alliances, Co-operating to Compete*. McGraw-Hill.
- Fombrun, C. J. (1993). *Envisioning Strategic Change*. In P. Shrivastava, A. Huff, & J. Dutton (Eds.), *Advances in Strategic Management, Volume 9* (pp. 157-188). JAI Press.
- Fombrun, C. J., & Ginsberg, A. (1990). *Shifting gears: Enabling change in corporate aggressiveness*. *Strategic Management Journal*, Vol. 11, No. 4, pp. 297-309.
- Gadiesh, O., & Gilbert, J. L. (1998, May-June). *How to map your industry's profit pool*. *Harvard Business Review*, pp. 149-162.
- Gilboa, R. (2002). *The Production Digital Printing Market: Opportunities and Trends*. Proceedings from IS&T's NIP18, pp. 134-138.
- Gulati, R. (1998). *Alliances and Networks*. *Strategic Management Journal*, Vol. 19, pp. 293-317.
- Gulati, R. (2007). *Managing Network Resources, Alliances, Affiliations and Other Relational Assets*. Oxford University Press.
- Gulati, R., Nohria, N., & Zaheer, A. (2000). *Strategic Networks*. *Strategic Management Journal*, Vol. 21, pp. 203-215.
- Håkansson, H., & Johanson, J. (2002). *A model of industrial networks*. In D. Ford (Ed.), *Understanding Business Marketing and Purchasing, An interaction approach, Third Edition* (pp. 145-149). Thomson Learning.
- Harrigan, K. R. (1983a). *A Framework for looking at vertical integration*. *The Journal of Business Strategy*, Vol. 3, pp. 30-37.
- Harrigan, K. R. (1983b). *Vertical integration, outsourcing, and corporate strategy*. BeardBooks.

- Harrigan, K. R. (1984). *Formulating vertical integration strategies*. Academy of Management Review, Vol. 9, No. 4, pp. 638-652.
- Harrigan, K. R. (1985). *Vertical Integration and Corporate Strategy*. Academy of Management Journal, Vol. 9, No. 2, pp. 397-425.
- Hill, T. (2000). *Manufacturing Strategy: Text and Cases, Second Edition*. Palgrave.
- Hirsch, W. Z. (1950). *Toward a Definition of Integration*. Southern Economic Journal, Vol. 17, No. 2, pp. 159-165.
- Intergraf. (2007). *Competitiveness of the European Graphic Industry*. European Commission, Enterprise and Industry Directorate-General.
- Jarillo, J. C. (1988). *On Strategic Networks*. Strategic Management Journal, Vol. 9, pp. 31-41.
- Jarillo, J. C. (1993). *Strategic Networks, Creating the Borderless Organization*. Butterworth-Heinemann.
- Kipphan, H. (2001). *Handbook of Print Media, Technologies and Production Methods*. Springer.
- Lee, G. K. (2007). *The significance of network resources in the race to enter emerging product markets: The convergence of telephony communications and computer networking, 1989-2001*. Strategic Management Journal, Vol. 28, No. 1, pp. 17-37.
- Levin, B. M. (1998). *Strategic networks: The emerging business organization and its impact on production costs*. International Journal of Production Economics Vol. 56-57, pp. 397-405.
- Mahoney, J. T. (1992). *The Choice of Organizational Form: Vertical Financial Ownership Versus Other Methods of Vertical Integration*. Strategic Management Journal. Vol. 13, pp. 559-584.
- Medcof, J. W. (1997). *Why Too Many Alliances End in Divorce*. Long Range Planning, Vol. 30, No. 5, pp. 718-732.
- Mejtoft, T. (2006a). *Strategies for Successful Digital Printing*. Journal of Media Business Studies, Vol. 3, No. 1, pp. 53-74.
- Mejtoft, T. (2006b). *Perceived Satisfaction by Customers in the Digital Printing Value System*. TAGA 2006 Proceedings, pp. 486-511.
- Mejtoft, T., & Nordin, Å. (2007). *Strategic Alliances in the Digital Printing Industry*. TAGA 2007 Proceedings, pp. 38-62.



- Mejtoft, T., & Nordin, Å. (2009). *Cooperation and Resource Flexibility as Competitive Strategy: The Case of the Printing Industry*. In A. Albarran, P. Faustino, & R. Santos (Eds.), *The Media as a Driver of the Information Society: Economics, Management, Policies and Technologies*. MediaXXI/Formalpress.
- Mejtoft, T., & Packmohr, S. (2009). *Transaction Costs and Their Influence on Institutional Arrangements in the Swedish Printing Industry*. In A. Albarran, P. Faustino, & R. Santos (Eds.), *The Media as a Driver of the Information Society: Economics, Management, Policies and Technologies*. MediaXXI/Formalpress.
- Mejtoft, T., & Viström, M. (2007). *Positioning in the Printing Industry – Differentiation in Terms of Price, Lead Time, Print Quality and Flexibility*. In N. Enlund, & M. Lovreček (Eds.), *Advances in Printing and Media Technology, Vol. 34* (pp. 327-336). Acta Graphica Publishers.
- Mejtoft, T., & Viström, M. (2009). *Vertical Integration and the Commercial Printing Industry*. Manuscript submitted for review.
- Miller, D., Lant, T. K., Milliken F. J., & Korn H. J. (1996). *The Evolution of Strategic Simplicity: Exploring Two Models of Organizational Adaptation*. *Journal of Management*, Vol. 22, No. 6, pp. 863-888.
- Morgan, R. M., & Hunt, S. D. (1994). *The Commitment-Trust Theory of Relationship Marketing*. *Journal of Marketing*, Vol. 58, pp. 20-38.
- Parmigiani, A. (2007). *Why do firms both make and buy? An investigation of concurrent sourcing*. *Strategic Management Journal*, Vol. 28, pp. 285-311.
- Perry, M. K. (1989). *Vertical Integration: Determinants and Effects*. In R. Schmalensee, & R. D. Willig (Eds.), *Handbook of Industrial Organization, Volume 1* (pp. 183-255). North-Holland.
- Peyrefitte, J., Golden, P. A., & Brice, J. (2002). *Vertical integration and economic performance: a managerial capability framework*. *Management Decision*, Vol. 40, No. 3, pp. 217-226.
- Porter, M. E. (1974). *Consumer Behavior, Retailer Power and Market Performance in Consumer Goods Industries*. *The Review of Economics and Statistics*, Vol. 56, No. 4, pp. 419-436.
- Porter, M. E. (1980). *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. Free Press.

- Porter, M. E. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance*. Free Press.
- Porter, M. E. (1996, November-December). *What is Strategy?*. Harvard Business Review, pp. 61-79.
- Ring, P. S., & van de Ven, A. H. (1992). *Structuring Cooperative Relationships between Organizations*. Strategic Management Journal, Vol. 13, pp. 483-498.
- Romano, F. J., Lee, B., Rodrigues, A., & Sankarshanan. (1999). *Professional prepress, printing, and publishing*. Prentice-Hall.
- Rothaermel, F. T. (2001). *Complementary assets, strategic alliances, and the incumbent's advantage: an empirical study of industry and firm effects in the biopharmaceutical industry*. Research Policy, Vol. 30, pp. 1235-1251.
- Rothaermel, F. T., Hitt, M. A., & Jobe, L. A. (2006). *Balancing vertical integration and strategic outsourcing: Effects on product portfolio, product success, and firm performance*. Strategic Management Journal, Vol. 27, pp. 1033-1056.
- Sanchez, R. (1995). *Strategic Flexibility in Product Competition*. Strategic Management Journal, Vol. 16, pp. 135-159.
- Schein, E. H. (1983). *The Role of the Founder in Creating Organizational Culture*. Organizational Dynamics, Vol. 12, pp. 13-28.
- Smyth, S. (2006). *The Future of European Printing to 2011*. Pira International.
- Todeva, E., & Knocke, D. (2005). *Strategic alliances and models of collaboration*. Management Decision, Vol. 43, No. 1, pp. 123-148.
- Williams, J. R. (1994). *Strategy and the Search for Rents: The Evolution of Diversity among Firms*. In R. P. Rumelt, D. E. Schendel, & D. J. Teece (Eds.), *Fundamental Issues in Strategy: A Research Agenda* (pp. 229-246). Harvard Business School Press.
- Williamson, O. E. (1975). *Markets and Hierarchies: Analysis and Antitrust Implications*. Free Press.
- Williamson, O. E. (1985). *The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting*. Free Press.

Williamson, O. E. (1991). *Strategizing, Economizing, and Economic Organization*. Strategic Management Journal, Vol. 12, pp. 75-94.

Wiseman, F., & Billington, M. (1984). *Comment on a Standard Definition of Response Rates*. Journal of Marketing, Vol. 21, No. 3, pp. 336-338.

Yin, R. K. (2003). *Case Study Research, Design and methods*, Third Edition. SAGE Publications.