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Impact of ownership change on plant practice-performance dynamics: A longitudinal multiple case study

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A longitudinal multiple case study

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Abstract

Purpose – Ownership change has been an overlooked contingency factor in past plant level practice-performance studies. Therefore, the purpose of this paper is to examine the impact of ownership changes to practice-performance dynamics by longitudinally following the same 23 manufacturing sites from year 1993 to 2010.

Design/methodology/approach – Interview data of the made in Finland – study are used for presenting different paths of plant development in the long term. Both narratives and descriptive statistics are used to support the analysis.

Findings – The findings suggest that the benefits of long-term domestic ownership may in fact exceed the positive knowledge spill-over effects that derive from foreign acquisitions. Foreign acquirers seem to "cherry-pick" well-performing sites. Also it seems that the likelihood of inferior performance and plant shutdowns may increase due to foreign acquisitions.

Research limitations/implications – Due to the exploratory nature of the study the sample size did not allow for testing statistical significance of the results.

Originality/value – The exploratory findings of the study open new avenues of theory development for practice-performance studies, and corroborate research in other disciplines such as economics and corporate governance.

Keywords Performance, Best practices, Benchmarking, Manufacturing strategy, Longitudinal study, World-class manufacturing, Ownership change

Paper type Research paper

1. Introduction

According to Kim and Arnold (1996) firm practices should be aligned with firm strategy. Furthermore, several authors support the idea that strategy should be adapted to the changes of the business environment (Chakravarthy 1997; Christopher and Holweg, 2011; Hamel and Välikangas, 2003; Mascarenhas and Aaker, 1989; Zarnowitz, 1985). Therefore also firm practices should be adapted to the changes of the business environment (Galbraith, 1973; Kuula *et al.*, 2012; Niven, 1993; Upton, 1994). This idea is supported by Nickell *et al.* (2001) who found that changes in the business environment act as catalysts of firm practice reorganization. According to the contingency theory (Donaldson, 2001; Sousa and Voss, 2008), achieving such an environment-strategy and environment-practice fit should inevitably lead into improved firm performance (Venkatraman and Prescott, 1990). Ketokivi and Schroeder (2004) state that addressing contingencies in practice-performance studies in the operations management (OM) context is necessitated.

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In specific, two contingency factors have been overlooked in past OM practice-performance plant-level studies: First, the impact of plant ownership changes to plant practice-performance dynamics has not received much attention in the OM plant-level literature (Häkkinen *et al.*, 2004; Häkkinen, 2005), although ownership impacts both firm practices (Beaumont *et al.*, 2002; Child *et al.*, 2000; Voss and Blackmon, 1996) and performance significantly (Kirchmaier and Grant, 2005; Voss and Blackmon, 1996). For example, the impact of ownership changes to firm performance have been a hot topic for years in the field of economics (e.g. Arnold and Javorcik, 2009; Harris and Robinson, 2002; Lichtenberg *et al.*, 1987; McGuckin and Nguyen, 1995). Similarly, ownership-performance related corporate governance studies have been a topic of constant interest during the past decades in the field of organization and management studies (e.g. Benfratello and Sembenelli, 2006; Datta, 1991; Haleblian *et al.*, 2009; Vicente-Lorente and Suárez-González, 2007). Yet, OM plant-level practice-performance studies that focus on the impact of ownership have been rare (Häkkinen *et al.*, 2004; Häkkinen, 2005). Second, although longitudinal case studies could bring substantial value to OM research (Voss *et al.*, 2002), they are still rather scant in our discipline. As a general phenomenon, it appears that OM plant level practice-performance studies conclude more often than not by calling for further longitudinal research. Still, the calls remain mostly unanswered.

Therefore, this paper examines longitudinally the impact of plant ownership changes on plant practice-performance dynamics through a descriptive multiple case study. For these purposes, 23 Finnish manufacturing plants were interviewed on-site during three different points in time (1993, 2003 and 2010) with a standard questionnaire, which belonged to the cross-European Made in Europe (MiE) – study (Hanson *et al.*, 1994).

The paper is organized as follows: Section 2 reviews and synthesizes the relevant literature on the impact of ownership on firm practices and performance, and in Section 3 the research design is presented. Section 4 presents the analysis of the data. In Sections 5 and 6 the results are discussed in more depth. Finally, the paper is concluded with a discussion on managerial implications, limitations of the study and directions for future research.

2. Literature review

2.1 Manufacturing strategy, best practices and firm performance

Improving operational capabilities plays an important role for firm competitiveness (Hayes and Wheelwright, 1984). Therefore, these capabilities need to be continuously developed (Hayes *et al.*, 2005). Improving operations can be pursued by a myriad of different means, but in the long term implementing best practices pays off (Putkiranta, 2006; Voss *et al.*, 1995). According to Voss *et al.* (1995), best practices form an important paradigm within the discipline of OM. Typically manufacturing strategy and best practices are developed in tandem to support each other.

The framework by Hayes *et al.* (1988) that divides manufacturing strategy into structural and infrastructural areas of strategy, or between hard and soft aspects of strategy as per Lillis and Szwejczewski (2012), has been widely accepted as a general model of manufacturing strategy among academics (Minor *et al.*, 1994; Mills *et al.*, 1995; Dangayach and Deshmukh, 2001; Skinner 1996). This idea of splitting manufacturing strategy into structural and infrastructural categories originates in the work of Hill (1986). According to Miltenburg (2008) structural aspects of manufacturing strategy refer to sourcing, process technology and facilities, whereas infrastructural aspects

refer to human resource management, systems (production planning and control) and management (organization structure and controls). Since firm practices should be aligned with firm strategy (Kim and Arnold, 1996), this paper focusses specifically on infrastructural manufacturing practices, i.e., human resource, system and management practices (Putkiranta, 2006).

Implementing best practices – such as human resource, system and management practices – have been shown to have a positive impact on firm performance (Bloom *et al.*, 2013). This study focusses on examining the longitudinal relationship of aforementioned practices to firm performance. Typical measures of firm performance can be found in the comprehensive works by Beamon (1999) and Gunasekaran *et al.* (2001, 2004). Firm performance is divided into absolute and relative performance as per Putkiranta (2006). The research framework is depicted in Figure 1.

Studies on the relationship of best practices and firm performance are many, and they have been traditionally anchored to well-known surveys and research programs. made in Europe (MiE) – study (e.g. Hanson and Voss, 1995; Collins *et al.*, 1996), the Profit Impact of Market Strategy – program (Buzzell, 2004), the PROmoting Business Excellence – program (e.g. Yarrow *et al.*, 2004), and the International Manufacturing Strategy Survey (e.g. Demeter, 2003) are good examples of some of the most impactful practice-performance initiatives. This study is a spin-off of the above mentioned MiE-initiative. Yet, our dataset is unique compared to the above mentioned initiatives since we have longitudinally followed the same 23 firms for a time period of 17 years (Putkiranta, 2012; Kuula *et al.*, 2012; Kuula and Putkiranta, 2012).

2.2 Ownership changes

Generally speaking, ownership identity should be addressed (Thomsen and Pedersen, 2000), because firm ownership impacts firm performance significantly (Kirchmaier and Grant, 2005; Oswald and Jahera, 1991). Since the current OM literature has not paid much attention to ownership as a contingency factor in practice-performance studies (Häkkinen *et al.*, 2004, Häkkinen, 2005), there is a need to take a cross-disciplinary approach in reviewing the relevant literature on the topic. Since ownership changes have been studied in the fields of organization, management and economics extensively, the relevant parts of literature on the topic of these disciplines are reviewed.

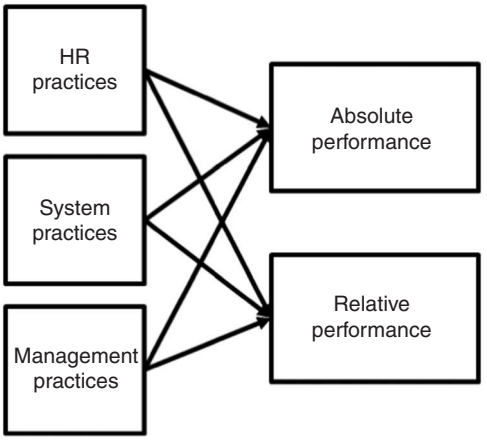

Figure 1.
Research framework

In the following, motives behind ownership changes and drivers of ownership change success are presented (see, Table I). Haleblian *et al.* (2009) identified four major motives for firm acquisitions: value creation, managerial self-interest, environmental factors and firm characteristics. An acquisition can create value by gaining market power in the industry (Prager, 1992), by reducing costs of value creation (Banerjee and Eckard, 1998), by enabling horizontal redeployment of resources to gain economies of scope (Capron *et al.*, 1998) and by disciplining ineffective managers of the acquisition targets (Jensen, 1986). The opposing view to value creation is that acquisitions are driven by motives of value destruction, i.e., managerial self-interest. From this point of view, acquisitions may be motivated by personal opportunism of managers to increase their compensation (Agrawal and Walkling, 1994), to gratify their ego (Hayward and Hambrick, 1997) and to use defensive tactics at the expense of shareholder wealth (Field and Karpoff, 2002). Environmental factors may also impact acquisition decisions, such as the fit between environment and firm strategy (Thornton, 2001), external governance structures (Rossi and Volpin, 2004), imitation (Stearns and Allan, 1996), resource dependency (Pfeffer, 1972) and network ties (Haunschild, 1993). A number of firm-related characteristics also impact the acquisition decision greatly, such as prior firm acquisition experience (Barkema and Schijven, 2008), firm strategy and market position (Harzing, 2002).

Success in firm ownership changes is mediated by deal characteristics, managerial effects, firm characteristics and environmental factors (Haleblian *et al.*, 2009). Deal characteristics such as whether the acquisition is paid in cash or through stock-financing (Carow *et al.*, 2004), and whether the deal is a tender offer or a merger are important factors impacting acquisition success (Agrawal *et al.*, 1992). Managerial effects such as managers' ownership and compensation of the deal (Hubbard and Palia, 1995), and managerial experience in acquisitions and managers' personality are further important characteristics that have an effect on acquisition performance (Krishnan *et al.*, 1997). Firm-specific characteristics such as the historical performance of the firm (Heron and Lie, 2002), size of the firms in question (Moeller *et al.*, 2004) and acquirer experience in acquisitions are also drivers of acquisition

Acquisition motives		Drivers of success	
Value creation	Market power	Deal characteristics	Payment type
	Efficiency		Deal type
	Resource deployment		
	Market discipline		
Managerial self-interest	Compensation	Managerial effects	Ownership
	Hubris		Compensation
	Target defense tactics		Managerial experience
			Cognition/personality
Environmental factors	Environmental uncertainty	Firm characteristics	Performance
	Regulation		Size
	Imitation		Acquirer experience
	Resource dependence		
	Network ties		
Firm characteristics	Acquisition experience	Environmental factors	Waves
	Firm strategy and position		Regulations

Source: Haleblian *et al.* (2009)

Table I.
Acquisition motives and drivers of acquisition success

success (Haleblian and Finkelstein, 1999). Environmental factors that impact acquisition success are the so-called acquisition waves driven by general market acquisition trends and equity market cycles (Carow *et al.*, 2004), and regulatory events that influence the bidder-target power relationship (Malatesta and Thompson, 1993).

Are ownership changes generally a source for improved firm performance? On the one hand, there seems to be a broad consensus in the mergers and acquisitions (M&A) literature that acquisitions most probably will not improve acquiring firm value (Chatterjee, 1992; King *et al.*, 2004; Haleblian *et al.*, 2009; Moeller *et al.*, 2003). On the other hand, the literature in the discipline of economics seems to broadly agree that ownership changes through foreign direct investment result mostly in significant performance improvements in the acquired plants (Arnold and Javorcik, 2009; Chuang and Lin, 1999; Globerman, 1979; Lichtenberg *et al.*, 1987; McGuckin and Nguyen, 1995). Although these two disciplines have used differing measures of acquisition performance in their studies – firm value and econometric analysis, respectively – these contrasting findings need to be addressed in the OM literature dealing with ownership change, M&A.

Acquisition success has been explained by a myriad of different approaches. For example, the phenomenon has been attempted to be explained with several of the major organizational theories, such as firm-specific resources, differences in agency costs (Boardman *et al.*, 1997) and institutional factors (Wiwattanakantang, 2001). From a plant-level perspective, the key explanations for acquisition success in the foreign direct investment studies have been acquisition following restructuring (Arnold and Javorcik, 2009) and spill-over effects of superior managerial and technological capabilities (Balsvik and Haller, 2010; Benfratello and Sembenelli, 2006, Globerman, 1979; Harris and Robinson, 2003). Such restructuring and knowledge transmission typically takes place at the plant level by disseminating acquirer best practices (Voss and Blackmon, 1996) and advanced manufacturing technologies (Beaumont *et al.*, 2002) to the acquisition target, which eventually results in improved plant performance.

Relevant criticism to the plant-level studies having found a positive relationship with ownership change and plant performance exists. The key argument in the literature is that if the foreign investors are mainly good at "cherry-picking" the best acquisition targets, the findings on performance gains due to foreign direct investment may be biased. In fact, for example, McGuckin and Nguyen (1995), Harris and Robinson (2002) and Balsvik and Haller (2010) found evidence that foreign investors engage in cherry-picking. This is to say, on the one hand, that increasing performance of already pre-acquisition well-performing plants may be challenging, but on the other hand, if only post-acquisition performance of acquired plants is compared to non-acquired plants, the results are biased. Yet, most of the studies evidencing foreign direct investment to improve plant performance have transparently compared efficiency gains pre- and post-acquisition. Therefore, it can be conclude that restructuring and spill-over effects are a seemingly valid explanation for the findings that foreign acquired plants tend to experience performance gains.

The counter part of foreign ownership is domestic ownership. Interestingly, Balsvik and Haller (2010) found that domestic firms are typically left with "lemons" instead of "cherries," i.e., mediocre performing plants to acquire. They found that these lemons acquired by domestic firms experienced lapses of inefficiency post-acquisition, and that they were mostly unable to reach pre-acquisition efficiency levels. This signals either that domestic acquirers are less capable of disseminating best practices and advanced

manufacturing technologies to acquired plants than their foreign counter parts, or that domestic and foreign acquisitions are driven by different motives (Bertrand and Zitouna, 2008).

Finally, what are the performance implications, when ownership changes do not occur? According to common sense, long-term commitment to plant development should pay off, and vice versa, continually changing ownership status will result in strategic aimlessness and inferior performance. This line of thinking is supported by Liljeblom and Vaihekoski (2009) and Vicente-Lorente and Suárez-González (2007), who found that foreign ownership drives manufacturing plants to short-termism and downsizing. Furthermore, according to Bernard and Jensen (2007), Harris and Hassaszadeh (2002) and Maksimovic *et al.* (2011), the probability that acquired plants are resold or shut down is remarkably high, which is by definition the idea of ending up as a "punch bag" plant (Putkiranta, 2006).

3. Methodology

The aims of case sampling and statistical sampling are very different (Meyer, 2001). Case sampling pursues to select cases that are expected to extend current theory, to fill theoretical categories and to exemplify polar types (Eisenhardt, 1989). In contrast, statistical sampling has been traditionally concerned about generalizability, coverage and sample representativeness of a specified population. Due to the exploratory nature of this study, a sample of 23 Finnish manufacturing plants was hand-picked as case firms in 1993 based on their potential to contribute to existing theory of benchmarking and practice-performance studies. Possibly polar case types were selected in terms of firm size, geographical location, yearly turnover, focus market, method of manufacturing and future business plans. The sample covers several industries, such as food and beverages, consumer goods, processing, metal, automotive, industrial goods and pulp and paper. More detailed information on sample descriptive statistics can be found in Putkiranta (2006), Kuula and Putkiranta (2012) and Kuula *et al.* (2012).

A standard questionnaire adapted from the cross-European MiE study was used as the interview instrument. The instrument was developed by the MiE-study researchers. Several studies using the same survey have been published (e.g. Hanson *et al.*, 1994; Voss *et al.*, 1995; Collins *et al.*, 1996), which indicates good instrument reliability. The instrument included over 70 questions in areas such as organization, culture, cycle times, quality, plant equipment, business measurement, strategic intentions and production capabilities, which were measured with a five-point Likert-scale. Each question included descriptions for low (1), medium (3) and high (5), which improves comparability of the results especially through time.

Following good principles of interviewing as per Arksey and Knight (1999), four interviewers were triangulated in order to reduce single researcher bias. Typically there were two interviewers and the firm CEO or plant manager present in an interview. All the interviews were conducted on-site, which allowed for visual verification of the interview contents. The interviews were always recorded when permitted by the interviewee. The respondents were assured that their responses would be held in the strictest confidence and that there was no right or wrong answers, which according to Podsakoff *et al.* (2003) is a good way of reducing common methods bias. Additionally, the questionnaire was not shown to the interviewee before, during or after the interview so that the responses would not affected by the scales used. Typically during the interview each interviewer took notes and gave scores of their

own for each question asked. Directly after each interview the question scores given by the two interviewers were compared and conflicts were resolved.

This same interview process was repeated in years 2003 and 2010 as follow-up study by reinterviewing the same firms with the same standard instrument. By year 2010, four plants had seized operations due to moving abroad, so in the sample of year 2010 there were only 19 original sample plants left. The drop-out rate is surprisingly low taking into account that there are 17 years between the first and last survey conducted. According to Pettigrew (1990), choosing the time of sampling carefully helps in understanding and interpreting changes that can be seen. Therefore, the interviews were conducted intentionally during three economically interesting points in time in the history of Finland (Ojala *et al.*, 2006): the economic restructuring in the aftermath of the collapse of the Soviet Union, 1990s recession and joining the European Union; the recovering economy of the 2000s; and the economic turmoil following the worldwide financial crisis. These contextual factors should be born in mind while interpreting the results of this study.

4. Results

Descriptive survey research was performed on the sample, which according to Forza (2002, p. 151) "is aimed at understanding the relevance of a certain phenomenon and describing the distribution of the phenomenon in a population." Instead of aiming to explain variance of the dependent variable, we aimed to recognize patterns in the data (Eisenhardt, 1989) and to provide "thick" narratives to support the patterns found (Jick, 1979). First, three narratives are introduced of case firms. The narratives cover all categories of ownership change that were identified in the literature review, that is – long-term domestic ownership, continuously changing ownership, foreign acquisition and plants shut down. Thereafter, descriptive practice-performance statistics are presented to support the narratives and to develop a more holistic understanding of the longitudinal changes that have taken place within the sample.

4.1 Case firm X: domestic long-term ownership enabled strategic resilience

Case firm X is a manufacturer of engineering and construction goods that has remained domestically owned throughout the time period examined. Their product is mainly targeted to the infrastructure construction segment. In year 1993 the company was in a difficult market position. They were losing market share to Chinese mass producers due to higher costs of production. At the same time, the financial situation of the company did not allow to invest in automation technology unlike their competitors did. The firm was not simply able to compete in the market of volume production. Due to these competitive pressures, by year 2003 the firm management did the only thing they could and changed the direction of their strategy drastically. Instead of competing with volume production, they decided to move into one-of-a-kind production. The product type did not change, but the level of customization allowed for each order was radically increased. Soon they noticed that they had globally close to none competitors in the one-of-a-kind niche. As a result, profits of firm X started to rise rapidly. Interestingly, production technology remained unchanged throughout this period. The firm CEO explained that the change was more of a "mind-set change." The CEO explained that in concrete terms they only reorganized their internal processes and trained their employees heavily. Later by year 2010 firm X was performing much better than in 1993, which was a result of repositioning firm strategy and investing heavily in human practices. In the later stages of development, the success allowed the firm also to set up

modern flexible manufacturing systems to support their current strategy, which brought their competitiveness on a new level. As a result, firm X saw the most drastic change in subjective performance within all the companies studied.

4.2 Case firm Y: a strategic supplier was acquired by its customer, resold and finally shut down

In 1993, case firm Y was a strategic supplier of industrial technological equipment for two globally operating firms, which were competitors to a certain degree. As a strategic supplier, firm Y actively engaged in activities such as product development, key process development, sales and marketing in tight collaboration with both of its strategic customers. By year 2003, one of the two major customers of firm Y decided to vertically integrate its operations by acquiring firm Y. Marketing, sales and all the other functions were centralized to the headquarters of the new owner leaving production as the only task of the site. As a result, the other major customer of firm Y quit the business relationship with firm Y, because they could not simply trust their operations to their competitor, i.e., the new owner of firm Y. When the atmosphere of the interviews of year 1993 and 2003 are compared, they are like night and day. In 1993 the plant manager was so busy that organizing an interview was cumbersome. The business was growing, sales were up and orders arrived at an ever-rising pace. In 2003 the same plant manager would have had all day to discuss and drink coffee with our research team. Sales and profitability had both decreased ever since the acquisition. The downhill continued ever thereafter. Between years 2005 and 2007 two different private equity funds took control of the firm, reorganized the operations substantially and engaged in various cost-cutting schemes. In the interviews in year 2010 firm Y had nearly forgotten about the glory of the 1990s. Instead, what was left was aimlessness and frustration. Some years after the third interview plant operations were seized and moved to another location due to issues with over capacity.

4.3 Case firm Z: practices and performance of a state-of-the-art lean plant degenerated due to an acquisition by a foreign multinational firm

Case firm Z is an equipment producer for the pulp and paper industry, which was acquired by a foreign multinational firm between years 1993 and 2003. Before the acquisition the plant was a state-of-the-art factory of its time using modern lean practices in their production. The plant was publicly recognized by foreign media for the level of its operational sophistication. As a part of an acquisition wave to Finland, the new foreign owner acquired also firm Z. In an attempt to integrate the new plants to their current corporate processes and IT infrastructure, the modern lean practices were discarded. The key reason was that the enterprise architecture of the new owner did not support lean. For example, visual production control became virtually impossible. Basically both firm practices and performance started to decline ever thereafter. The acquisition wave of the new owner was deemed highly unsuccessful by year 2010. Shortly before the third interview with firm Z in 2010, the firm made a strategic partnership agreement with one of its long-term suppliers located 100 meters away from the plant. They agreed that the supplier would gain control of the production activities of the entire plant leaving only sales and marketing as the duties of the multinational parent firm. The plant manager was hopeful in the interviews of 2010 regarding the future of the plant now that the plant had a new strategic direction after a good decade of operational degeneration.

4.4 Descriptive statistics

Figures 2-4 present means of infrastructural practice items and performance items for years 1993, 2003 and 2010 for each of the ownership categories presented above. The scale ranges from one to five, five being the highest possible score. In year 1993 all the sample plants were domestically owned. Therefore, these categories reflect future patterns of ownership change. Perhaps due to this, practices and performance of all the categories seem to be very uniform in 1993 with the exception that the managerial practices and relative performance of the plants that will be experiencing several changes of ownership in the future were higher than in other categories (see, Figure 2). As reflected in the narratives, the plants that changed ownership several

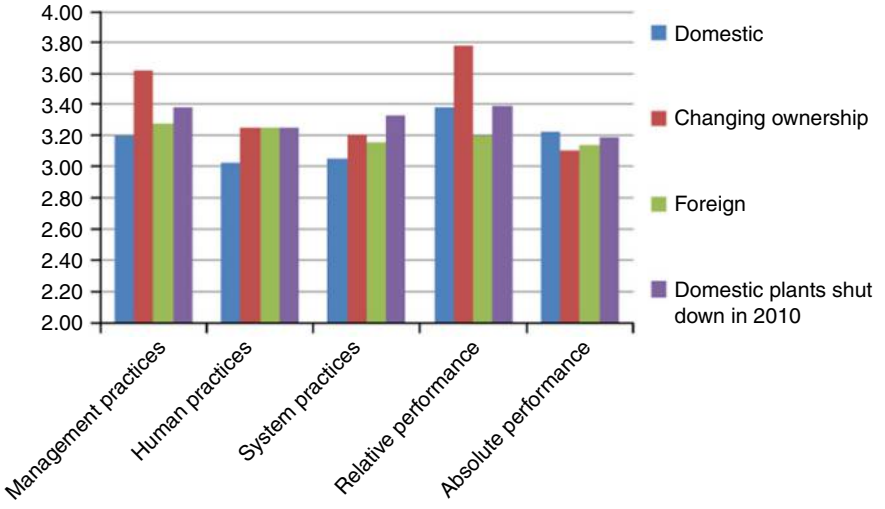

Figure 2.
Descriptive statistics of practices and performance in year 1993

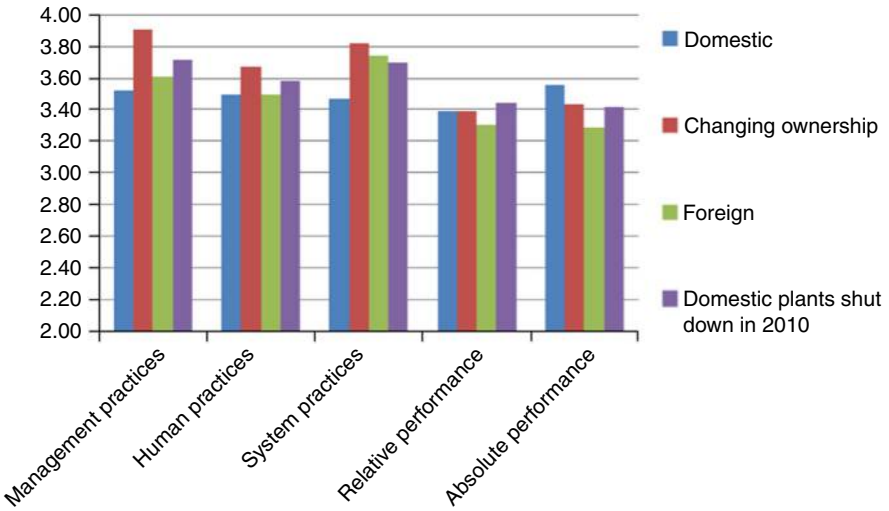

Figure 3.
Descriptive statistics of practices and performance in year 2003

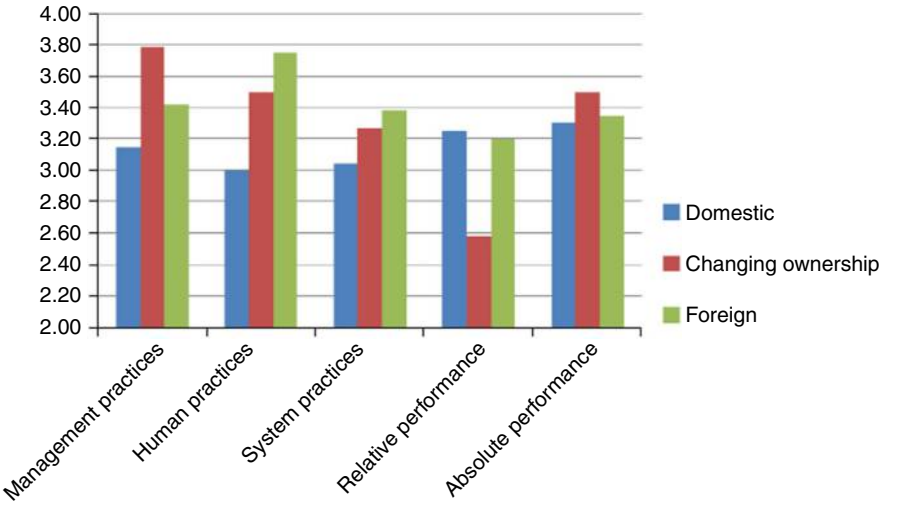

Figure 4.
Descriptive statistics of practices and performance in year 2010

times were originally mostly well-performing "show-case" plants. This indicates possibly cherry-picking behavior of the future acquirers (Balsvik and Haller, 2010; McGuckin and Nguyen, 1995; Harris and Robinson, 2002).

In year 2003, all the infrastructural practices in all categories of ownership experienced a significant increase (see, Figure 3). Plants that experience several changes of ownership used slightly more infrastructural practices than other categories did. This may be due to the restructuring schemes brought by the new owners of the changing ownership category plants. Performance of the plants increased slightly in overall, although the plants in the category experiencing continuously changing ownership saw a decrease of relative performance as compared to year 1993. This is again in support of the narratives described earlier.

By year 2010, four of the original sample plants seized operations due to moving them abroad. Interestingly, in the year 2010 sample the differences in the use of infrastructural practices and resulting performance differed significantly across the different categories of ownership (see, Figure 4). The use of all infrastructural practices fell back to 1993 levels for the domestic long-term owned sites. The plants that experience several changes of ownership saw a slight decrease in managerial and human practices, and their system practice use fell substantially. Foreign-owned sites peaked in human and system practice use this year. This indicates that domestically owned sites have been strategically more responsive to the changes of the market environment than in other categories of ownership. Performance experienced a slight decrease in overall when compared to year 2003, and for the first time a significant performance difference was seen in the substantial drop in the relative performance of changing ownership sites. This supports the idea that the plants that experience continuous changes of ownership end up as aimless "punchbags" (Putkiranta, 2006).

5. Discussion, limitations and future research

During the period of this longitudinal study, many changes occurred in the manufacturing units studied. There were changes not only externally, in the market

and political environment, but also internally, in structures and business customs, all of which had an impact on the units. As can be seen in Figure 5, over 50 percent of the studied companies received a new owner during 1993-2003. During the 2003-2010 period, 16 companies remained in the same ownership, four were closed and moved abroad, and the rest received a new owner.

The dynamics behind changing ownership of manufacturing sites is closely linked to type of ownership, as it was discussed earlier in this paper. Long-term domestic owners, foreign owners and continually changing owners seem to affect practices utilized and resulting performance highly, although this could not be statistically validated due to small sample size. Still, some general observations will be presented next in order to enrich the discussion. First, domestically owned sites seem to compete in a recessive market by downsizing best practices of all categories, whereas foreign-owned sites seem to stick to the best practices they are employing. This observation is in line with the findings of Voss and Blackmon (1996) on foreign-owned plant best practice adoption. Second, long-term domestically owned sites seem to outperform the sites that experienced continuous changes of ownership, especially in terms of Relational performance. Foreign acquirers seem to have generated short-term benefits to the plants, but in the longer term they fared worse than plants their domestic peers. This is an interesting finding in the context that all groups seem to have implemented an equal amount of Management, System and Human practices originally in 1993. After the waves of ownership changes took place after that the plants seemed to take very different tracks of development, which were highly influenced by the actions and strategy of their new owner. In other words, it seems that long-term domestically owned sites have been able to benefit most of the best practices implemented, possibly due to learning curve effects (Argote and Epple, 1990). Therefore one conclusion could be that long-term domestic ownership may also be a viable option for sustaining and developing plant performance. The plants that changed ownership several times were also more likely to be shut down than their domestic peers with long-term commitment

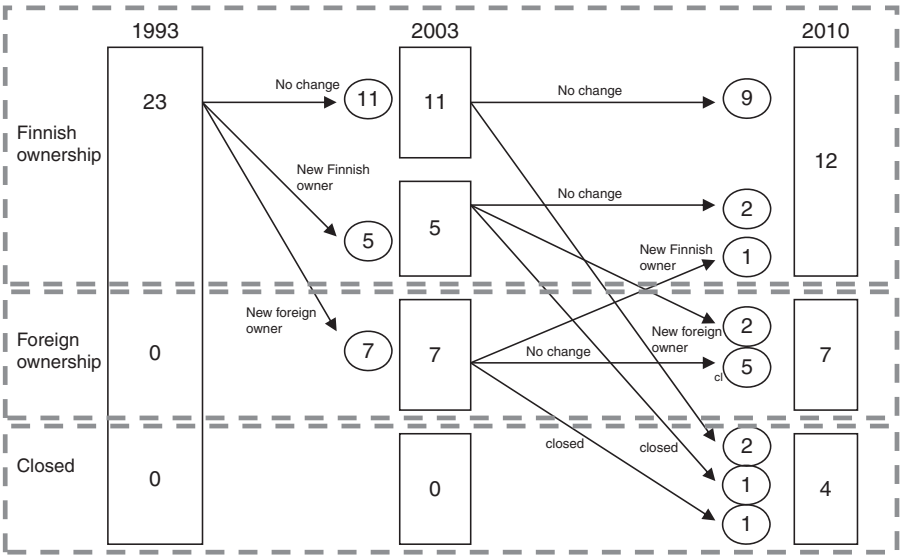

Figure 5.
Ownership changes in the sample 1993-2003, and 2003-2010

to plant practice development. This observation contrasts the idea of the superiority of foreign-owned sites (e.g. Conyon *et al.*, 2002). This is especially interesting since the foreign acquirers seemed to "cherry-pick" well-performing plants in the first place.

Reasons behind these dynamics of change are many. With some sites there was an answer such as, in one case, an attempt to vertically integrate which did not end too well, and in which the site was resold before the third round of this survey. Reasons may be found in the works of Ferdows (1997) when analyzing the strategic roles of units and what were the potential benefits of acquisitions. Another explanation behind the ownership, practice and performance changes might lie behind effects of different stages of macroeconomic business cycles on strategic decisions. According to Zarnowitz (1985), the phase of the business cycle affects firm strategy, or in other words, firms do indeed need to adjust their strategies systematically over cycle stages (Mascarenhas and Aaker, 1989). On plant level this means that strategic decisions are directly reflected into modes of ownership, best practices applied and performance yielded. Our sample seems to support this idea, which is seen as relatively procyclical behavior of ownership changes and practice-performance variables of this study. For example, during an upswing of the Finnish economy (year 2003) foreign ownership, utilization of best practices and achieved performance rose sharply.

This study serves a warning example to decision makers who are considering to enter into an agreement of selling their plants, especially to foreign acquirers – very likely the post-acquisition plant performance will deteriorate. This notion is supported broadly by the M&A literature (Chatterjee, 1992; King *et al.*, 2004; Haleblian *et al.*, 2009; Moeller *et al.*, 2003). As noticed in the narratives of this study, a myriad of contextual factors impact the success of the plant. Especially "soft" factors need to be taken into account while considering acquiring a plant such as the cultural fit with the new owner, and the resulting trade-offs that occur due to integrating the plant to the parent firm strategy, processes and enterprise architecture. In other words, the decision between local responsiveness and global efficiency is not trivial (Harzing, 2002). Also the antecedents of the acquisition need to be carefully considered (cf. Haleblian *et al.*, 2009).

The exploratory findings of the study pave the way for theory development of practice-performance studies, and corroborate research in other disciplines such as economics and corporate governance. Large sample studies are encouraged to validate these proposals. Also an in-depth longitudinal single case study into the reasons behind plant ownership changes may prove an interesting future topic of research.

Similarly, it might be interesting and valuable to research deeper those manufacturing units where the ownership has changed several times over years. This might provide indicators what practices to consider when taking over a foreign plant. One other avenue for future research could be to study individual practices, when, and how deeply they should be implemented in order to maximize the plants performance in certain environments.

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