Developing Service Concepts for Small Maintenance Companies

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Abstract

In the manufacturing industry, companies concentrate on their core activities, as a result of which maintenance services are increasingly purchased from outside. On the other hand, large maintenance service companies find it challenging to serve small dispersed customers. The purpose of this study is to find out how a large maintenance company can provide services to small and medium-sized enterprises by using small maintenance companies as subcontractors. This study utilises the action research method in order to assess and compare three cooperation arrangements: 1) a subcontracting agreement, 2) a service partner agreement and 3) franchising. The results indicate that franchising is the most potential approach for arranging cooperation with small maintenance service providers. This arrangement provides benefits to different parties, including customers, the franchisor and small service providers, while simultaneously complying with EU competition legislation. The franchising concept enables business to be managed efficiently, including the division of the market between different players, at the same time allowing the entrepreneurs to maintain their independent status.

Keywords: outsourced maintenance services, subcontracting, franchising, OEE

1 Introduction

In order for the manufacturing industry to be efficient, functional maintenance services are required. Maintenance has an influence on production volumes, product quality, utilisation rate and delivery reliability. When properly conducted, maintenance can also provide energy savings, increase safety and improve personnel satisfaction. In addition, environmental requirements can be addressed better [1,2].
Providing maintenance services is a major business. In 2005, Finnish manufacturing industry spent approximately 3.5 billion euros on maintenance, of which 35% was purchased from subcontractors [3]. The volume of outsourced maintenance is over one billion euros. The role of maintenance services is especially highlighted when the manufacturing industry makes less new investments while higher performance is required of the existing machinery [3].

The proportion of outsourced maintenance services is increasing steadily, while companies are concentrating on their core competence. On the other hand, the role of maintenance services is highlighted and companies set improvement targets for overall efficiency. Large companies in the process industry have been leading the development, because they have relatively small personnel costs, and the efficiency of machinery is the key to their competitiveness [4].

The most important motivations for outsourcing maintenance services are: 1) directing own resources to core activities, 2) reducing maintenance costs and 3) improving own productivity [5,6].

In addition, small and medium-sized enterprises (SME), especially engineering works, increasingly compete on international markets, either directly or indirectly so they must improve their productivity in order to be more competitive. The bottleneck for development is limited human competence, as the companies concentrate on production. Too often maintenance activities only cover unplanned repairs, which results in reduced overall efficiency. There is clearly a market opportunity for specialised maintenance companies.

Overall equipment effectiveness (OEE) is a commonly used indicator for assessing productivity. OEE can be interpreted as a product: OEE = availability x performance rate x quality rate [1]. According to Ahlmann (1997) and Hägg (2005), the average OEE in Swedish industry is 60-65%, i.e. there are plenty of opportunities for further development [7]. This situation has improved fairly little in the past decade. Importers and distributors provide different commercialised packages for machines, including spare parts, maintenance, modernisation and measurements. However, production reliability and efficiency are left to the customer.
This paper studies how a large maintenance company can provide services to SMEs by consulting small maintenance companies as subcontractors. Small maintenance companies have a strong motivation to maintain their virtual independence. The paper also discusses ways of organising the required cooperation between the large maintenance company and smaller operators. Currently the know-how of small operators is fragmented, and it is challenging to manage it using traditional subcontracting arrangements. This study utilises the action research method to assess and compare three cooperation arrangements: 1) a subcontracting agreement, 2) a service partner agreement and 3) franchising. The assessment is conducted from the point of view of a large case company. The above can be crystallised in the form of the following research question:

RQ What type of an operation mode is best suitable to a large maintenance company for arranging its cooperation with small service providers?

2 Research process

This paper utilises the action research method in order to find the best possible cooperation arrangement between a large maintenance service provider and its smaller partners. The first author currently works as a business development manager in the case company, where he is responsible for providing maintenance services to SMEs.

The case company is a multi-national conglomerate and also has significant maintenance service activities both internationally and in Finland. It has earlier focused on serving large customers in the process industry, including, metal, mining, oil & gas, and pulp & paper. The case company has now realised that there is also business potential in the SME sector and that its own organisational structure is too heavy for handling these operations in order to serve geographically dispersed customers. As a result, it is seeking for other means for entering this market.

A literature analysis was first conducted, on the basis of which three operational models were identified and tested in a real business environment. Secondly, the pros and cons of these three models were assessed, and conclusions were finally drawn.
3 Literature review

Franchising is a business concept consisting of a network of legally independent companies exploiting common assets, the franchisor being the master mind for the operations. Franchisees obtain the right to use the franchisor’s brand and business plan in return for a fee and agree to be under the control of the franchisor. The franchisor typically provides training to the franchisee’s personnel together with support services in order to ensure that the brand image is maintained. The franchisees commit themselves to following the franchising contract and related instructions [8].

Franchising allows for vertical integration while avoiding the overhead costs of a large company. In addition, the geographical dispersion of customers can be addressed through franchising [9]. A franchise chain benefits from gained bargaining power [10,11].

Franchisees are independent companies and consequently the franchisor needs to develop contracts, monitoring processes and financial information in order to ensure the quality of the services [12]. In general, a franchising chain is first small but expands gradually [13,14]. The franchisor must recognise that the business concept should allow a level of adaptation freedom to the franchisees [15].

According to Tuunanen [16], franchising provides the following benefits:

Benefits to the customer:
- Predictable service products at predictable cost
- More cost-efficient service provision
- Availability of a broader competence base
- Benchmarking information from other companies
- Better credibility through a large chain & brand

Benefits to the franchisee:
- Commercialised services facilitate service provision, marketing and sales
- A common, known brand
- Bargaining purchasing power through centralised sourcing
- Availability of added competence through the chain
- Availability of support services and guidance
- Sharing best practices
Benefits to the franchisor:
- Expanding clientele & sales
- Increased brand awareness
- Know-how enabling entry to new areas
- Relatively small risks

4 Results

A global strategy guides the case company’s own units to serve large-scale industrial customers, leaving the market potential of the SME sector somewhat unexploited. This is unfortunate, as the case company has documented practices ready for also serving small dispersed customers.

The service business unit of the case company considered different possibilities to expand its business to cover SME customers. It was clear from the beginning that a large organisation, such as the case company, does not have the economic motivation to establish offices in smaller towns. This market is currently served by small independent companies that typically employ less than five people and have in-depth technical competence in specific narrow fields. The case company could potentially gain an access to this market through small companies.

In order to obtain control over the above situation, the case company went through a development process, which included the following steps:
1. Subcontracting agreement
2. Service partner agreement
3. Franchising

1. Subcontracting agreement

The case company attempted to manage the fragmented subcontracting network through subcontracting agreements. This would enable it to manage the workload needed to fulfil customer needs. With subcontracting agreements, it’s also possible to improve service capability in a flexible manner. However, the challenge with this type of solution is how to keep up with rapid response times. The typical required response time is 24h, as agreed in
service level agreements. Nevertheless, independent companies are typically not willing to accept such requirements.

2. Service partner agreement

The case company’s management was not ready to establish a full franchising concept directly, as they wanted to avoid risking the company’s reputation due to actions by SMEs. Therefore, they did not want to allow using the case company’s brand. On the other hand, the case company had simultaneous business reasons to consider how the emerging full service requirements of large-scale customers should be dealt with.

The service partner model enabled the case company to reduce its own workforce in labour intensive activities. The company aimed towards a more competitive model and better cost control. A starting service partner received the old customer and the full service business together with the related personnel. The case company charged a fee based on the service partner’s turnover.

The positive elements of this model include entrepreneurship, small overhead costs and functional, customised enterprise resource planning (ERP) system. A new service partner receives a functional ERP covering critical aspects and enabling it to run its business. Therefore, it is easy for the partner to organise payroll, billing and accounting.

The main downside of the service partner agreement arrangement was its non-suitability for SMEs, due to the risk of increasing overhead costs should they hire more people to serve new customers. The model is more suitable for serving larger customers in cases where the number of required maintenance personnel is thirty or more. Another negative aspect of this model is that the outlook of service partners does not support the brand and quality level of the case company.

3. Franchising

The franchising model was adopted at the final phases of the research. In the franchising model, the case company’s role is to manage a network of small companies, which receive the permission to use commercialised services that are sold under a known brand. The
small companies continue to operate in an entrepreneurial manner and are controlled by the case company using a lean organisational structure. This allows low administrative costs, resulting in the services being competitive. In addition, the small companies have better local knowledge and established contacts to local SME customers. The full administrative bureaucracy of a large company would not be competitive in this type of market.

From the point of view of the case company, this arrangement enables revenue to be gained from a market where the case company was uncompetitive. In addition, this is a way to streamline non-core, loss-making operations. This is a management buy-out opportunity for the personnel to start their own business with ready customer contacts and a functional concept. Alternatively, this is an opportunity for an existing SME to expand its business. The business exists and the case company would face stronger competition, should it not utilise the opportunity. Franchising enables the case company to control the business. Franchisees are only allowed to sell their business to another franchisee if accepted by the case company. In addition, the chain acts as a distribution channel for the case company’s products. EU competition legislation must be taken into consideration when different contractual models are assessed. The franchising model allows the dividing of markets on the basis of addresses or postal codes. Consequently, franchisees can concentrate on serving customers in their own allocated area. This arrangement also enables the franchisor to control customer relationships.

From the customer’s perspective, services are available regardless of deficiencies in local competences, as resources can be temporarily re-located within the chain. In addition, the final costs of services can be predicted better, as the maintenance services are commercialised. By using the services provided by the chain, the customer obtains benchmarking information on other companies, including best practices. In the long term, however, this arrangement may reduce the number of players, potentially increasing price. On the other hand, the quality of services will improve.

4.1 Practical implementation of the franchising model in the case company

The case company provides franchisees with the right to use the concept against a fee. In return, franchisees commit to following common values, rules and principles. The case company manages and guides franchisees according to agreed key performance indicators.
Should the contract be terminated, franchisees lose their right to customers, the concept, its products and services, as well as the permission to use the logo and brand. In addition, they have to return all related material. The case company has an option to the franchisee’s existing customers.

Franchisees have access to the case company’s methods and tools relating to maintenance management, overall equipment effectiveness and specialised maintenance. The case company is responsible for obtaining new customers nationwide, while franchisees are responsible for their own operational areas. The case company owns strategic tools, such as vans, information systems and branded clothing that are provided to franchisees on a leasing basis. Franchisees obtain the benefit of the case company’s high volume sourcing contracts and receive a higher price on the market, thanks to added credibility and a streamlined concept.

Franchisees obtain a more balanced work load as they become part of a network where customer relationships and work orders may come from the case company, other franchisees or a call centre. At the beginning franchisees can either buy an existing customer relationship from the case company or bring in their existing customers.

Franchisees are legally independent, maintaining their own name and virtual independence. They are responsible to their own customers for fulfilling their mutual contracts and to the chain for complying with the agreed maintenance concept and operational activities. Maintaining an entrepreneurial status is important to small service providers, as it is highly valued especially in small communities. The case company has a list of recommended prices for services, but franchisees can decide the exact price. Franchisees can act as subcontractors for each other without having to pay fee to the case company. When sub-contracting each other, the franchisee with the customer relationship controls the business. In addition, franchisees are obliged to have liability insurance similar to the case company’s own operations.

Franchisees measure overall equipment effectiveness (OEE) in the customer’s production. OEE can be used to analyse either an entire production line or a single machine, covering usability, speed and quality viewpoints. It describes the proportion of utilisable capacity
out of the theoretical potential. OEE can also be a part of the service level agreement (SLA) between the franchisee and its customers.

The entire chain is audited on a regular basis and franchisees are evaluated using the same criteria as the case company. Franchisees become a part of a quality system, without having to create one of their own. The quality system covers both the information included in the common enterprise resource planning (ERP) system and site visits to check the actual status of the agreed processes.

Franchisees receive accounting services as required by law as a part of the franchising concept and can thus concentrate on serving customers. The only requirement for franchisees is to enter activities, including working hours, spare parts and maintenance history, in the ERP system. Accounting services are provided by a single actor nationwide.

The case company monitors the operations of franchisees by means of several indicators. These key performance indicators (KPI) automatically steer the operation in the desired direction. Franchisees must commit themselves to this type of follow-up and give their permission to hand over the data to the case company. KPIs will later be included in a common ERP system.

In order to optimise the service business, three viewpoints must be simultaneously addressed: the customer, franchisee’s personnel and franchisee’s profitability. These elements are shown in Figure 1.

Fig. 1. Optimisation of service business from three key viewpoints
Customer satisfaction is measured twice a year by an external assessor. Should there be negative feedback, a complaint process is automatically initiated. It is in the interest of the customer to utilise this assessment to improve service provision. Personnel satisfaction is measured annually with help of an external assessor. Should there be any dissatisfaction, a clarification process is initiated. Profitability is assessed monthly by monitoring turnover and earnings before interest and taxes (EBIT) and by comparing them with set targets. By steering operational efficiency, one can influence all these three viewpoints.

The assessment of operational efficiency includes monitoring blue and white collar employee utilisation separately. High employee utilisation shows to customers as efficiency, thus improving customer satisfaction. A high workload and customer satisfaction increase the sense of job security among the personnel, thus improving personnel satisfaction.

4.1.1 Expanding the client base of the franchising chain

Expanding the client base of the franchising chain typically takes place in three ways: 1) the customer may have bought the service from someone else before and now wishes to use the services of the chain, 2) the customer may have conducted the work by himself/herself before and now wishes to outsource it, or 3) the customer has not conducted preventive maintenance before and now finds it beneficial.

In a case where the customer wishes to outsource maintenance activities and reduce expenses, the franchisee obtains the maintenance business from the customer and possibly also some of its personnel. The customer and the franchisee sign a maintenance contract, according to which services are provided. The franchising chain supports the outsourcing process by providing tools for maintenance management, the assessment of overall equipment effectiveness and specialised maintenance.

4.2 Initial experiences

Adopting the franchising concept is still in progress and none of the existing franchisees yet fully follow the model, though they are in transition towards adopting it. One of the franchisees is currently very close to full adoption, while two others still follow the service
partner agreement. However, they are currently not allowed to use the case company’s logo, brand or uniforms. All the three current franchising companies have their roots in the case company and have been formed through management buy-outs.

The plan is to expand the chain by including in it about five new companies annually. Of course this type of business has a certain saturation size, which is currently unknown, however. One of the current bottlenecks for expansion is that the case company’s management are somewhat reluctant to release the brand for use, due to potential risks to its reputation. In addition, there is an ongoing internal discussion over the organisational position of these activities within the case company.

Customer relationships have continued fluently and the level of customer satisfaction has improved significantly. The case company has systematically monitored the development of customer satisfaction during the entire process.

The franchising arrangement has been financially rewarding to the customers, the case company and the franchisees. The main root cause for this improvement in economic performance is the reduction of administrative costs. The same function can be implemented more smoothly and cost-effectively when run by an individual entrepreneur. In addition, the cost awareness is better among the personnel. Profitability is improved by swifter negotiations and the way how employees experience their own work when business is more transparent. In addition, the franchising arrangement allows avoiding the overhead costs of the case company to be fully allocated to the franchising business, i.e. this is a way of reducing the inflexibility of the accounting system.

4.3 Positive and negative aspects

The positive and negative aspects of in-house operation and the three studied cooperation arrangements are presented in Table 1.
<table>
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<tr>
<th>Business type</th>
<th>Description</th>
<th>Positive</th>
<th>Negative</th>
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| Case company’s own business   | - Advanced business knowledge  
- Maintenance as core competence for selected business sectors | - Active development & pioneer operations  
- All functions in-house | - Large organisation’s bureaucracy  
- Economies of scale  
- Agility almost non-existent and strive towards unite business practices  
- Portfolio management results in outsourcing profitable units |
| Subcontracting agreement      | - Subcontracting from independent companies  
- Ordered when needed | - Enables the case company to manage the workload needed to fulfil customer needs | - Rapid response times challenging  
- Subcontractor commitment to long-term operations challenging  
- Managing subcontractor’s personnel challenging |
| Service partner agreement     | - Option to outsource less profitable units  
- Partner operates independently  
- Some similarities to franchising  
- Subcontractor pays a fee for customer relationships | - Does not risk case company’s reputation  
- Small overhead costs  
- Risk-free business to the case company | - Case company’s brand cannot be utilised  
- Not optimal for serving SMEs, originally designed for the case company’s existing customers  
- Sales resources independent, long-term planning challenging  
- Key person dependency, continuity uncertain  
- Partner responsible for business development, often weak |
| Franchising                   | - Business fully based on the franchising concept  
- Franchisee does not own customer relationships | - Revenue with minimal risks from a market in which the case company was uncompetitive  
- Entrepreneurial spirit, agility, lean organisational structure  
- Control over franchisees  
- Flexible resource management, no internal competition  
- Even workload provides security to franchisees  
- Centralised sales support | - Giving the case company’s brand to franchisees is a risk |
5 Conclusions

Maintenance services are a significant factor in the manufacturing industry, offering potential for reducing costs. The importance of maintenance is continuously increasing, as companies have pressures to be more efficient. They concentrate on their core activities so maintenance services are more often purchased from outside. This study concentrates on Finland and utilises the action research method to assess and compare three cooperation arrangements: 1) a subcontracting agreement, 2) a service partner agreement and 3) franchising.

The results indicate that franchising is the most potential approach for the case company to arrange its cooperation with small maintenance service providers. This arrangement enables benefits to be obtained for a number of parties, including customers, the case company and small service providers, while simultaneously complying with EU competition legislation. The chain can have a common ERP system, utilise common sourcing contracts, even out their workload and utilise a common accounting practice. The case company has started utilising the franchising concept, and the initial experiences are promising, including positive customer feedback. This enables the case company to enter business that would not otherwise be possible.

The managers of other companies should consider the adoption of the franchising concept as a part of their operation. The franchising concept allows managing the business efficiently, including the division of the market between different players and simultaneously enabling franchisees to maintain their entrepreneurial status. With the model, it is possible to unite the work of different players towards reaching a common goal. Franchisees can optimise their own work, which benefits the entire chain, and best practices can be shared openly. Large companies with heavy organisational structures can reduce their overhead costs by means of the model. The franchising concept also allows for management buy-outs and outsourcing unwanted operations, while maintaining a profitable cash flow. In addition, the franchising model prevents the entrepreneurs from taking over the customer relationships and leaving the chain.
This study covered a single company in a single country. In addition, the utilisation of the franchising concept is at its initial stage, with a limited number of franchisees, and the case company has not yet reached a stage where it could fully follow all franchising principles. In addition to addressing the above described limitations, recommended future research could include a more detailed analysis of realised customer value.

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References


