IMPROVING FINANCIAL FLOWS OF A PRODUCT CLAIMS HANDLING PROCESS

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Introduction

In difficult economic times many companies are looking to cut costs and increase efficiency. Often the solution is to look at their supply chain to assess what can be done. The reverse supply chain has not received the same kind of attention as the forward supply chain, even though research in closed loop supply chains and reverse logistics has increased in popularity in recent years (Nuss et al., 2014). The handling of product claims, which is closely connected to the handling of product returns and thus is a form of reverse logistics, is often overlooked by managers as it can be seen as a consequence of an error earlier in production. However, a well-functioning claims handling process can add value for customers as they can trust the claim service they receive will be quick and easy. This can be a competitive advantage especially in certain industries such as manufacturing, which is moving more to a servitisation focus (Lightfoot et al., 2013). Further, most companies nowadays have long and globally far-reaching supply chains that can make the process of determining financial responsibility in the case of a product claim complicated; the process is not only dependent on company policy but also multiple national legislations.

This paper reports on a project and subsequent empirical study investigating the product claims handling process of a Swedish manufacturing company, particularly the financial flows within it. The case company believes too much time is being spent on activities that are not adding value for customers; specifically a lot of time is spent on managing financial flows between different business segments belonging to the same company. Five product units that are part of larger segments were chosen for this study as the segment they belong to has had a special focus on the claims process. The study's research aim is to examine financial flows within the product claims handling process, suggest how to reduce the time used to handle financial settlements, and how to eliminate excess work that does not add value. The three related research questions are:

RQ1. What are the financial flows in the company's product claims handling process?
RQ2. What are any associated non-value adding activities?
RQ3. How can time be reduced for the financial flows in the company's product claims handling process?

Literature Review

In the case of a product claim the faulty product is not always returned to the manufacturer as the problem in some cases can be solved by service of the product in-situ. Thus, a product claim is not necessarily a product return. Research on product claims is limited such that this review considered product return and reverse/return logistics literature. Further, literature on the return claims handling process has rarely focused on the financial part of the process. While financial implications have received attention, financial flows have largely been ignored. Lastly, most research on return handling has been directed at the retail or e-business sector, less research has looked at heavier industries or design-to-order products. We chose to focus on the lean, agile and leagile literature to look at process flow improvement and apply it to the unique circumstances of financial flows for claims handling.

Lean

Lean has been a popular manufacturing and supply chain paradigm since it was first introduced by Womack et al. (1990). Since then lean has been used to increase value, cut costs and manage waste from healthcare to the meat industry (Simons & Zokaei, 2005; Fillingham, 2007). Lean has evolved where it is now also being applied to support functions where it has been found to provide economic benefits (Cudney & Elrod, 2011). While lean has not been studied in connection with a product claims process in companies Sarkar et al. (2013) found that lean increased efficiency in the claims handling process of an insurance company. The core idea of lean is waste management; waste is everything that does not add value to the customer, and the perfect supply chain is thus one that only includes value adding activities. The idea of eliminating waste applies to all sorts of waste; time waste, money waste and traditional waste. Time wastes is the most important as cutting lead times is one of the aims of lean (Naylor et al., 1999). The decrease in product diversity and an increase in automation are other goals of lean management. This includes both variations in the production and in suppliers (Arnheiter & Maleyeff, 2005).

This study does not extend to suppliers but only focuses on the variation in the internal processes of the case company. Decreasing the variation of the claim handling processes within the company decreases the risk of misinformation and could lead to increased visibility. The case company has worked with implementing lean and six sigma practices in their manufacturing processes and other segments of the organisation. Employees have been trained and many have received green or black belt certification. The claims handling process has not received as much attention as other processes, although projects aimed at improving and increasing the efficiency have now been started in several departments. During the company's initial internal examination it became clear that the claims handling was not handled in an optimal way and they consider that by using lean principles the process could be improved in order to save time and money.

Agility

A steady demand with little risk for fluctuations is important for a lean supply chain however a lean supply chain is not designed to be able to react quickly to different levels in demand but rather to deliver quickly in a steady stream. The agile paradigm on the other hand is designed to do the opposite; to handle volatile demand. Lee (2004) specifies that the main objectives of supply chain agility are to respond quickly to short-term changes in demand or supply and to handle external disruptions smoothly. Agility is important for companies that need to have a fast or time-compressed supply chain that can react quickly to such changes. Agility is closely linked with the concept of postponement. The idea of postponement is that the customization of the product should be carried out as late in the production process as possible; in other words the customization should not start until there is a demand for the products. This reduces the risks of uncertainty and greatly shortens lead times. (Collin & Lorenzin, 2006) The supply chain must also be able to handle flows of information quickly in order to be able to process the information about markets and demand. The ability to react quickly to this information is what makes agile supply chains so competitive in certain markets. (Mason-Jones, et al., 2000)

Leaglity

As noted above companies must work hard in this post-recession environment to improve competitive advantage and cut costs. Lean has proven to be a way of achieving this by cutting costs, shortening lead times and eliminating non-value adding activities. However, demand in most markets is increasingly volatile and harder to forecast, which leads to the need for agile manufacturing and supply chains. The agile paradigm is thus suitable for managing this variability and in order to achieve agility a company must work closely with other companies and organizations in its supply chain. Sabri & Shaikh (2010) argue that in today's markets most companies cannot solely rely on just one paradigm; used on their own the systems are not optimal for the requirements of low costs and an ability to react quickly to the fluctuations in demand, thus a combination is preferred. Collin &

Lorenzin (2006) and Naylor et al. (1999) have also called for mixed supply chain strategies. Naylor et al. (1999) coined the term leagility, a paradigm that combines the two leading paradigms of lean and agile. They argued that the key factor that determines a switch-over between lean and agile is the position of decoupling points. One decoupling point is information, which is appropriate in a claims handling process.

Leagility in a product claims handling process

This study adopts the leagility concept as its theoretical base by arguing that leagility principles can be adapted to a product claims handling process, particularly for the financial flows. The nature of the claims process changes depending on the stage of the process. In the beginning of the process when a customer makes a claim toward the sales unit, the sales unit of the company needs to be agile in order to quickly solve the customer's problem. The demand or in this case the supply of claims is volatile which makes it difficult to forecast claims and thus an agile claim system is the most suitable for this phase. However, when the sales unit has solved the customer's problem, either by providing service or ordering a replacement product, they make an internal claim towards a production unit in the appropriate segment that originally designed and/or manufactured the product. At this point the claim is between the sales unit, the design unit and/or the production unit. Now the focus is on settling the financial claim and investigating the responsibility of the claim; the customer is no longer an active part of the claim process, and the company would like this portion to be as efficient or as lean as possible to save time, which should save efforts and cost. The sales unit is considered as the intermediary in the process, or if using the leagility concept they are the decoupling point for information.

Methodology

This paper focuses on the part of the claims process concerning the time to deal with internal financial settlements; hence any suggested improvements will be in-line with lean principles. Further, the case company expressed an interest in implementing lean principles in the claims handling process as they have done this for other processes in other parts of the organisation as noted above. The case company is a Swedish global industrial manufacturer of process technology and industrial equipment and supplies a wide range of markets and industries. We cannot name them for confidentiality reasons however their annual orders are between SEK 30-40 billion and they have between 15-20,000 employees. Their main products have a market share ranging from 10-30 percent. Due to their business to business (B2B) nature and their specialised and bespoke products their customers do not return products for the same reasons that consumers do. The reasons are almost always related to a malfunction, design flaw or some other product problem.

In order to investigate the financial flows of the company's product claims handling process where not much is known about the phenomenon, a single case study was determined to be the most suitable way of achieving the study's aims. The study employed qualitative methods in order to answer the three research questions noted in the introduction (Ellram, 1996; Nyberg, 2000). The data was collected by participant observation at the case company, interviews and a follow-up workshop.

The first interviews with the claim coordinators from each product unit were totally unstructured with an objective to develop a process map showing the financial flows of their individual claims handling process. The second interviews were also with the same claim coordinators where the maps were revised and the main problems or time wasting activities in the process were identified. These interviews were again unstructured because it was considered that structured interviews could make the respondents somewhat uncomfortable and lead to them not sharing some important information (Silverman, 2006). This also gave the researcher the freedom to change questions or go in a different direction if the situation warranted it, one of the benefits of an unstructured interview (Patton, 2002). Finally, a workshop was conducted at the case company with all key employees

working in a product claims handling process but who were from different parts of the organisation: claim coordinators, controllers and others who were deemed important for the process.

Findings

RQ1. Mapping the financial flows in the product claims handling process

From the process mapping it became clear that processes differed between the various claim coordinators. For example, one of the most apparent differences was that one unit sends some replacement orders free of charge, so the sales unit does not put in an order for a replacement but instead requests free delivery. This method has not been applied at any of the other product units and the interviewees from Italy stated it would be impossible to do in Italy as their legislation would not allow it. Despite the differences it was possible to develop six key steps that emerged from comparing the various process maps and identifying mutual activities. These steps are presented and briefly explained in Table 1.

Key Step	Explanation
Retrieve costs for remedial action	The sales unit must enter their claim costs into the system
Investigate result: Accepted; Rejected with goodwill; or Rejected outright	Investigation concerning whether the claim should be accepted, i.e. should sales unit be compensated. Three outcomes: claim accepted and compensated; claim rejected but costs paid as an act of goodwill; or claim rejected outright.
Review of sales unit costs	The costs that the sales unit has entered are reviewed to ensure that they are correct.
Settlement of costs sales unit - causative unit	The costs are settled between the sale unit and the causative unit.
Get ERP information	The claim coordinators need information from several ERP systems which results in long waiting times as they do not have access to them and must contact someone to gain access.
Issue credit note	If the claim is accepted or taken as goodwill the claim coordinator or someone from the finance department, depending on the process, must issue a credit note.

Table 1: Key steps found in the mapped claim processes

RQ2. Determining associated non-value adding activities

All non-value adding activities identified during interviews with claim coordinators, sales company representatives and other employees were listed. Many of them were the same for all claim coordinators. There was a wide variety of activities but some were small enough that they could be easily solved or did not create excess work for all coordinators. However, other activities were larger and more difficult to solve; one of these is the absence of one global order system for the whole company.

Once the major non-value adding activities were identified they were associated to the six key steps in the claims handling process. There is a wide range of activities and while some appear quite small, e.g. the absence of a rule concerning the minimum amount for credit notes, for some product units this has a large effect as they put lot of work hours and resources into settling claims for as low as €25. Others are more difficult to investigate, like the problem of the sales unit adding the wrong costs to their claim. The key steps and the associated problems are shown in Figure 1.

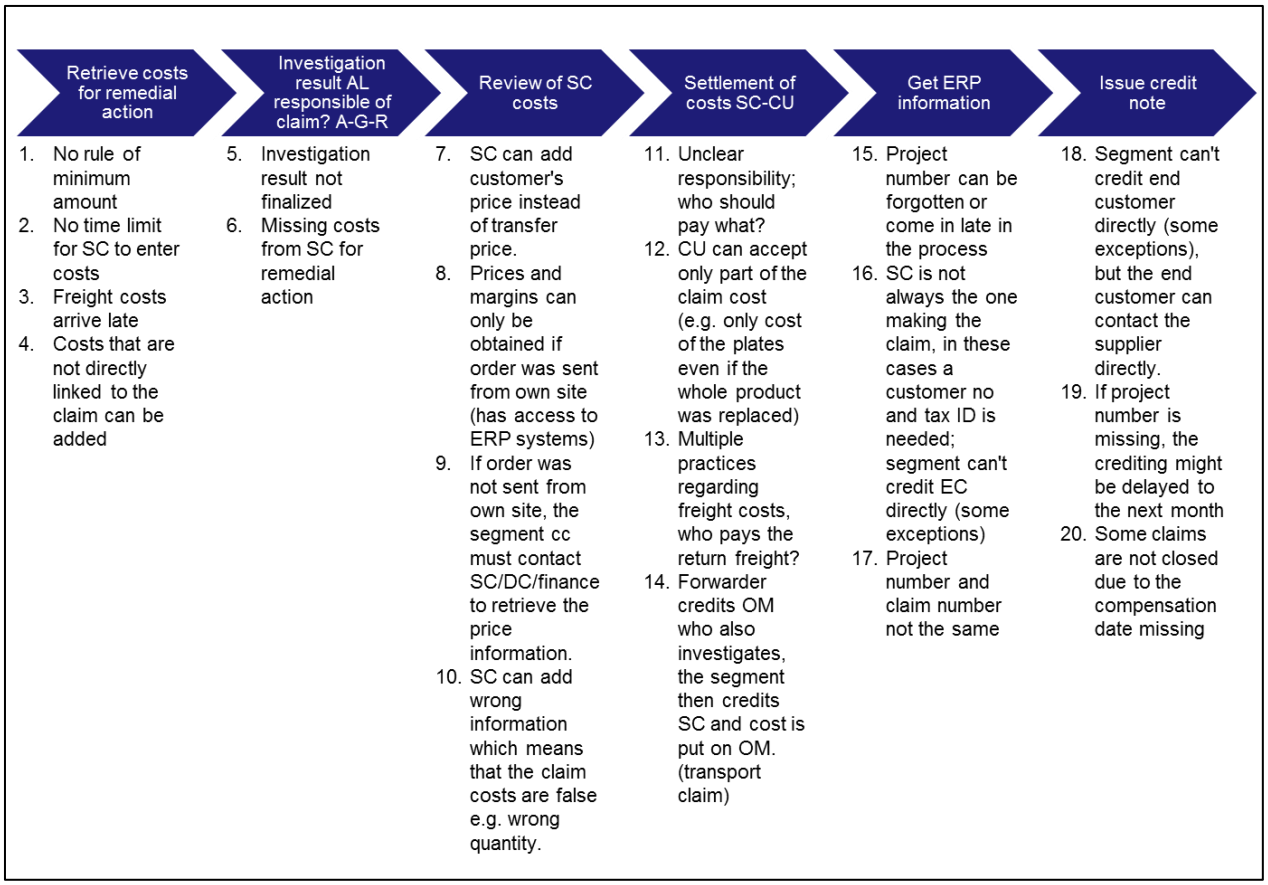

Figure 1: Key steps of the process and the identified problems

As an example of how these activities interact, we discuss here the issue of the costs that the sales unit enters and how they are compensated if the claim is accepted. The claim rules of the company state that the causative unit (the unit that was responsible for the claim) should compensate the sales unit. However, production units can only compensate up to the cost price because any margin obtained in the sale goes to the segment where they are located. When the sales unit is compensated for a replacement order, the production unit only pays the cost price while the segment pays the margin. This handling of the cost price and margin creates a lot of work; the segment claim coordinator must make sure the cost that the sales unit has entered is their price and not for example the price that was charged to the end customer. This is fairly easy if the order was sent from the same site that the claim coordinator works in, but because the company has multiple order systems (s)he cannot access the ERP order systems for other sites and has to contact someone to retrieve the price information for other sites. When the compensation is paid, the costs need to be booked to the right parts of the organisation.

RQ3. Reducing time for the financial part of the product claims handling process

During the workshop root causes to the problems were identified and solutions to these were suggested and discussed. The solutions, like the problems, also range from some that could more easily be implemented to some that would be very costly and difficult to implement, like a new order system that would be used on all sites.

The solutions to the root causes were categorized using the matrix shown in Figure 2. They were divided into four groups depending on their impact on the process and the amount of resources needed for their implementation. As is evident from the figure most of the solutions belong in the 'high impact/high resources category. Their implementation would require a large amount of

resources but would also have a high impact on the process. However, the most interesting solutions for the case company are the ones in the 'high impact/low resources' category as these could be fairly easy to implement but would have a high impact on the process, i.e. the famous 'picking the low hanging fruit' situation.

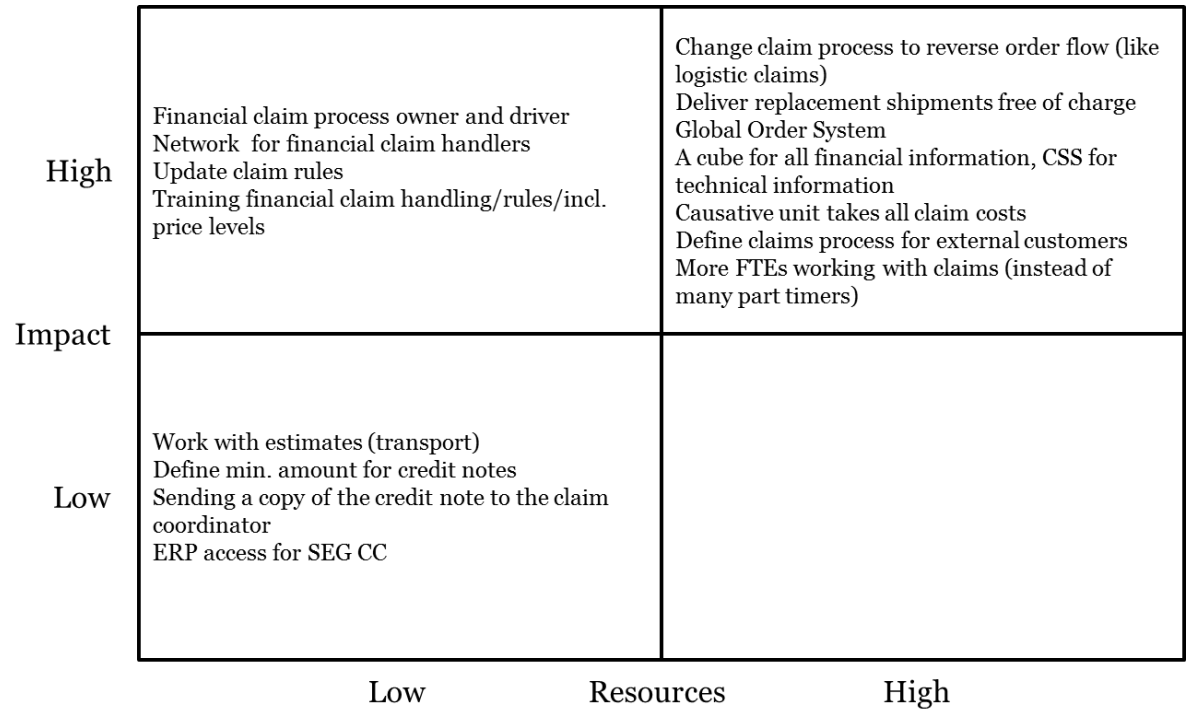

Figure 2: Matrix of possible solutions

After the workshop the solutions were presented to the company steering committee of the project. During this presentation, the members of steering committee who have experience with the claims handling process discussed the different solutions and as a result three of the solutions emerged as the most important ones. These three all have in common the largest positive effect on the process with the least amount of resources required for implementation.

Three most important solutions

The first solution is appointing a process 'owner' for the financial part of the product claims handling process. The whole process has a process owner but during this study it has become apparent that the financial part would benefit from an additional 'own' owner. Many of the suggested 'smaller' solutions could be driven by this process owner. This process owner would also in time drive other improvements, one of which could be the increase in standardisation of the claim process, as the decrease in variability is important when striving for a lean process.

Another important solution is the suggestion that the process should be the order flow in reverse. This would mean that the sales unit would directly contact the supply unit that supplied the product. The segment would only be involved when the financial compensation is settled and if the claim is caused by a line failure; that is if the product has been in use for more than 200 hours. This would mean that the flow of information would be shorter as it would not need to go through the segment. The elimination of this unnecessary work and task is also in-line with what the literature on lean. Having the segment in the middle between the sales and supply units does not create any value for the customer. This way of working is actually being used with logistics customer claims which are claims being made to the company's distribution centres. The fact that the solution is already

implemented in parts of the organisation gives confidence that it could work with other customer claims as well.

The sales unit sending replacement products free of charge is the third important solution. This would need to be investigated thoroughly before implementing as there are a couple of problems with it as some countries' legislation does not allow it. Also, approximately 50 percent of all claims are rejected so sending free of charge replacements to claims subsequently rejected still leads to financial settlements as the unit that supplied the replacement would then need to make a claim to the sales unit. However, if implemented correctly this would eliminate a lot of excess work that is not creating value for the customer.

Conclusions

This study showed that the financial flows of a product claims handlings process in the case company differ to some extent based on the claim coordinator handling the claim. The reason for this is the lack of standardisation of processes. Interviews with the key employees working within the process, mostly claim coordinators, also identified a number of non-value adding activities. Some of these activities would be easy to eliminate while some would not be easy at all due to the structure of the organisation or other significant reasons such as investment. Lastly, the research found multiple suggestions on how the process could be improved and thus shortening the time of the financial settlements process. Three of these suggestions were considered the most important and of interest to the company.

This study contributes to the literature on product claims handling, leagility and lean. Leagility has not been considered before in a claims handling process, and further exploratory research in other industrial sectors should be undertaken to enhance this study' findings (Naylor et al., 1999; Collin & Lorenzin, 2006). Further, other studies should focus on the implementation of lean principles in reverse logistics to provide useful insights for companies wanting to increase efficiency not just in their forward production chains but also in their reverse supply chains (Nuss et al., 2014).

From a practitioner's perspective, this study also suggested that the case company should strive to implement lean principles in order to address problems that arise from insufficient internal communication and lack of standardisation. One of the root causes to this may be that the company has grown extensively due to multiple mergers and acquisitions. It is not uncommon for companies to only implement lean in certain parts of the organisation and thus not achieve its full benefits (Womack et al. 1990). Improving communication also leads to easier process standardisation, both of which are a goal in lean management (Arnheiter & Maleyeff, 2005)

The company would also benefit from an activity-based costing (ABC) analysis of the claim costs (Grant et al., 2007); at this time it is difficult to estimate the real claim costs as only the direct costs are calculated. A thorough ABC analysis would give valuable information about the real costs associated with claims handling. Unfortunately an ABC analysis could not be conducted as a part of this study due to the lack of financial information and also time constraints for this project.

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