

# Value and risk of extended services within Swedish road freight sector

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## **Abstract**

The purpose of this study is to examine, how extended services from vehicle manufacturers can enhance value and reduce risk for transportation companies. The research shows that some transportation companies found extended services useful in order to enhance value and to decrease risks, while some of the companies mentioned advantages of not using extended services. Increased customer service, increased up-time are some of the value factors. Decreased number of delays, decreased likelihood of breakdowns are some of the risk factors mentioned by the case companies. This study contributes the knowledge by examining the transporters' experiences of using extended services.

**Keywords:** Transportation, Servitization

## **Introduction**

In Sweden, transportation companies have the possibility of acquiring service packages (and not just a product) from the vehicle manufacturers. These service packages typically include financing, insurance, transportation information systems, driver training, repair, and maintenance. The acquired services from the vehicle manufacturers are in this research called “*extended services*”. Truck manufacturers have introduced the extended services in different markets all around the world; however, there are few

published works, which shows whether the extended services help customers (transportation companies in the context of this study) to experience any advantages regarding increased value and decreased risk. One study was performed by Bastl et al. (2012), they analyzed the buyer's adoption in the servitization and how this adoption impact the buyer-supplier relationship.

It can be argued that there is a knowledge gap about the experiences of using a product together with such service systems, which have more service dominant logic compared to buying only the product from the point of view of customers (users). Considering this gap, the purpose of this study is to examine, how extended services from vehicle manufacturers can enhance value and reduce risk for transportation companies. Following research questions are derived from the purpose in order to fulfill the aim of the study: (1) What do road freight transporters consider as being valuable aspects in their operations and what do they consider as being risky issues?, and (2) What are the road freight transporters' experiences related to increased/decreased risks and value via buying and using products with extended services? The outline of this paper is structured as follows: Theoretical background of the study will be presented in the next section. Then, methodology of this research is presented in methodology section. After that, the case studies are presented and analyzed in empirical study section. Finally, concluding remarks will be presented in the last section.

## **Theoretical Background**

The concept of servitization appeared in the literature as early as in 1988. Vandermerwe and Rada (1989) have pointed out the changing role of services from just being a detail to being a strategic tool. Servitization is the result of changing business model, which undergo a transformation from selling only the products to selling the combination of products and services, which aims to fulfill particular needs of customers (Lim et al., 2012). Vandermerwe and Rada (1989) have foreseen that the new business models, developed in accordance with servitization philosophy, become increasingly more customer-oriented and they will help companies gain advantage over their competitors in the market. The motivation behind why companies changed their strategies is not all about companies deciding to use the servitization as a competitive weapon. There are more reasons for the change besides strategic motivations. These motivations are listed in the literature as financial and marketing related issues. Financial issues focus on how to achieve higher profit margins with correct pricing strategies.

Later Baines et al. (2011) proposed three clusters of service offerings: base services, intermediate services and advanced services. They also evaluated the relationship between risk and generated value for these three service offerings. They concluded that generated revenue and risk are increasing linearly from simple base offerings to the more complicated advanced offering. Namely, the companies, who want to generate more profit and value, have to deal with increasing risks and liabilities arising from their contracts with their customers. Customers are demanding more advanced service offerings and companies are trying to attract customers' attention by providing more customized service offerings together with innovative products (Mathieu, 2001, Oliva and Kallenberg, 2003) Furthermore, Baines et al. (2009b) conducted an extensive literature review of the servitization in manufacturing. Findings were presented in seven categories: (1) Different definitions of the servitization, (2) Evolution of the term "servitization". (3) Features of servitization, (4) Drivers of servitization, (5) Challenges of the adaption of servitization, (6) Industrial examples of the adoption and (7) Previous research aiding in the adaption of servitization. As can be seen in Baines et al. (2009b)

literature review, case study research is quite popular within this area of research. Case studies are conducted in various industries such as home appliances, mechanical, pharmaceutical, chemical, telecommunication and automotive (Baines et al., 2009a, Lindahl et al., 2009, Robinson et al., 2002).

## **Methodology**

This research is conducted as a multiple case study within the road freight transportation industry in Sweden. Thomas (2004) argued that the aim of case study research is to provide intensive examination about a present phenomenon and according Eisenhardt (1989) case study research also focuses on understanding a phenomenon in the real life context. This study points to a very specific subject and a specific industry, which was found quite interesting to investigate further and case study method was considered as the most suitable way of providing deeper understanding on the topic being studied.

Data collection was completed in 2012. The selection of case companies is based on a detailed filtering process. The criteria used for filtering are geographical area, type of company, and number of employees. Altogether 14 companies remained in the end of filtering process. After calling all the companies, five companies showed interest to participate in the study. Case companies are located in Jönköping region (southern part of Sweden). All companies are of type “limited company” and the number of employees vary between 50-500 people. One of the case companies is a branch of an international third-party logistics provider. Three companies are originated in Sweden. The last case company is a Swedish transportation company with an internationally recognized partner. Furthermore, all case companies are operating within Sweden.

Data were collected through literature review, interviews and surveying company documents. Six interviews have been conducted and all interviews have been recorded. In the context of this study, the interviews have been performed as semi-structured interviews. Semi-structured interviews require an interview guide. This guide includes list of questions, which might differ from one interview to another interview. In contrast to structured interviews, the interviewers can ask particular questions to companies depending on their conditions in the semi-structured interviews (Welman et al., 2005). The interview questions have been prepared by the researchers. Questions have been grouped under four headings: general description of the case company, extended services, value and risk. Each group consists of two sets of questions, one set of questions have been asked to the companies using the extended services and the other set has been asked to the companies not using the extended services. Each interview was conducted in company facilities. Welman et al. (2005) mentioned that on-site interviews has many advantages. For instance, face-to-face interaction can provide a comfortable atmosphere during the interview for both interviewees and interviewers. Also, interviewers have the possibility interfere the conversation in case of misunderstandings or unclear questions. Higher response rate is another advantage of interviews in the form of personal visits compared to surveys and interviews on the phone. Also, it is worth to mention, confident atmosphere arising from face-to face interview let the interviewers perform quite long interviews, which last 2,5 hours on average. Data analysis was done carefully to avoid subjective interpretation of the researchers. In order to improve the quality of data analysis and validity of the study, transcripts, which were prepared with the help of voice records, were sent to the companies to ask for their feedbacks and approvals (Yin, 2003)

Validity of a case study is based on the trustworthiness of the results, and whether the results were biased by the subjectivity of the researchers or not (Runeson et al., 2012). Validity of this research was greatly improved by collecting the data from several sources, such as by reviewing existing literature, interviews and various documents (i.e. annual reports of the manufacturers, company specific documents, such as financial data). Also, transcripts of each interview have been sent to the interviewees in order to avoid the threat of inconsistency between discussions that took place during the interviews and to eliminate biased arguments, if any. Feedbacks and approvals from interviewees enable the authors make more consistent and qualified analysis, and improve the validity of the research. Reliability is about the ability of demonstrating the same result when other researchers follow the same methods (Yin, 2003) during data collection, and/or use same interview guidelines. In this study, case study protocol, which includes data collection procedures, selection procedure of case companies and design of interview questions, are clear and well defined. The reliability can be increased since the process used in this study is easy to follow and it allows the study to be replicated in other settings, hence increase the probability of reaching the same result.

## **Empirical study**

This section represents the information gathered from the interviews and company documents. First, each company will be presented shortly, followed by details of acquired extended services by each company. Then, value and risk aspects, which have been stated by the interviewees within their operations, will be presented. Finally, the advantages and disadvantages of using/not using extended services will be shown.

### *Presentation of the case companies*

In this section companies will be presented shortly. Due to confidentiality issues, company names will be kept hidden and the case companies will be called as Company A, B, C, D and E. Company A is one of the biggest transportation companies (including its subsidiaries with the turnover of 277 million SEK (33 mill. euros) in Jönköping region. Company B, is the smallest company within the sample in terms of number of employees, number of vehicles and turnover. The company achieved 57 M SEK turnover in 2011 (6.8 M Euros). Company C is a road carrier and a subsidiary to a global transport and logistics company originated in Germany. Company C are operating in the middle region (Gothenburg, Örebro, Västerås, Linköping, and Jönköping). Company D is a daughter company to a corporate group engaged in freight transport and contracting. There are three main departments in Company D, which are ballast (material production of coarse sand and stone material), construction (road and ground preparations), and transport recycling that provides vehicles for Company D's operations. Company E is another carrier, which was established in Jönköping. DHL is the biggest client of Company E. Besides this, Company E serves some bigger companies within Sweden on behalf of DHL such as Husqvarna AB and IKEA. Table 1 shows some company information with regard to number of employees, number of trucks and trailers, turnover in 2011.

### *The extended services used by the companies*

Case companies differ from each other in terms of how they resolve their service issues. Variations range from the use of own workshops and insurance companies to maintenance and repair agreements with vehicle manufacturers. Table 2 shows the detailed list of how the different companies have chosen to resolve the service issues and where they acquire the services. Different manufacturers call their extended

services in different names such as silver contract, gold contract, or green card. Besides all service items, it might be important to note that why driver training is also included in the extended services. Since 2009, EU-countries implemented a new rule that all professional heavy duty truck drivers are obliged to undergo 35 hours of training every five years to acquire a proof of professional competence (Sverige Åkeri företag Öst, 2012)

*Table 1 - General information of the case companies*

Company	No. of Employees	No. of Vehicles Turcks+Trailers	Turnover (MSEK)	Operates
Company A	100	73	244	Domestic
Company B	59	42	57	Domestic
Company C	250	160	850 (all regions)	Domestic
Company D	85	60+20	176	Domestic
Company E	180	140+130	220	Int./Dom.

*Table 2 - How case companies have resolved the issue in different areas and the services they acquire from their vehicle manufacturers*

Company / Services	Maintenance and repair	Finance	Driver training	Transportation information system	Road assistance	Insurance
Company A	Own workshops mostly Extended services: 1 Silver contract (Volvo) 5 Tillsynsavtal (Scania) 2 Green card (Scania)	Their own bank	TYA	Different system (Webb Idha)	None	Insurance mediators
Company B	Own workshop (smaller jobs) & authorized workshops Extended services: 7 maintenance and repair (Volvo)	Their own bank	TYA	4 Masternaut's system 2 Scania fleet management	Volvo and Scania	Insurance mediators
Company C	STS (a local workshop) & authorized workshops No extended service	Self-financing	TYA	None	Volvo and Scania	Insurance mediators
Company D	Own workshop (belongs to sister company)	Self-financing	TYA	None GPS systems on heavy trucks (provided by Bankfors)	Bergningscentralen and Assistancekåren	Insurance mediators
Company E	Own workshop (smaller jobs) & authorized workshops Extended services: 6 Green cards (Scania) 17 Gold contracts (Volvo)	Financing options offered by vehicle manufacturers (both Scania and Volvo)	TYA	16 Scania fleet management system (+ cruise control) Some Volvo fleet management system 30 C-track	Volvo and Scania	Insurance mediators

### *Risk and value for transportation companies*

During the interviews, it was asked the case companies to define the risk and value in the context of their business environment and operations. Value is a fuzzy term due to its subjective characteristics. Also, value notion is usually substituted by different words such as utility, quality, benefits, and satisfaction (Lefaix-Durand and Kozak, 2010, Sweeney and Soutar, 2001). When interviewees were asked about value or valuable aspects of their business, they sometimes interpreted value as utility, advantage, and/or satisfaction. A similar interpretation occurred when researchers asked the interviewees to explain what risk means to them. The case companies listed disadvantages, risky issues, and some uncertainties of their operations during the interviews. Risks and

uncertainties of the companies mentioned during interviews align with existing literature regarding lost customers, breakdowns, congestions, damages, delays, demand related and demand fluctuations, problems with achieving desired profitability, accidents, and thefts (Waters, 2011).

Product losses, damages and delivery delays are some common type of risks, which have been stressed by Company B and D. Company D also stated irresponsible behaviours of drivers as another source to damages and mentioned that after drivers loaded products, they become fully responsible for those items and they need to be cautious during their journeys. Delays are another risk factor, which was mentioned by several case companies. Company B, D and C mentioned weather conditions as a cause to the risk of delays, as it has been pointed out by Coyle et al. (2010) and Rodrigues et al. (2008). Flat tires, congestion, breakdowns, and conditions of the roads were stated by Company E, D, A and C as other possible reasons to delay, which can end up with missing schedules. Furthermore, the companies have put emphasis on one risk factor: Competition created by foreign drivers. These drivers come from other European countries such as Lithuania, Poland etc. and they provide lower prices for the shippers and they try to receive the share from the market. As a result of this situation, the case companies mentioned that have to deal with unfair competition created by these drivers. Lower profit margins, increasing fuel prices, service fees, salaries and demand for lower prices were mentioned by case companies as risk factors, which result failures in achieving targeted profitability. Volatile pricing strategies in fuel prices can impact on economies of smaller carriers in comparison with large-scale carriers. In addition to these risk factors, case companies mentioned some economical threats such as demand fluctuations, recession, and seasonality. Case companies mentioned that economic recession impact the demand for transportation. For instance, Company A mentioned that recession caused decreasing percentage of fill rates of the trucks. This situation leads to increased empty runs, which can damage companies' operational efficiency. Case companies also mentioned that seasonality causes overcapacity during the seasons with too low demand. Overpricing, low quality service and insufficient human resources have been listed as other risks, which result in losing the customers and fall behind of their competitors.

Several aspects are mentioned as being valuable for the case companies and their customers during the interviews. Case companies have stated on-time delivery and lowering rate of damages as valuable aspects. Flexibility was also an important aspect mentioned by case companies. It refers to the ability of solving customers' problems quickly and seeing the opportunities, not problems, when receiving requests from customers. Level of customer service was also an aspect that Company B and C mentioned as important and valuable in order to be able to stay competitive in the market. Company C mentioned the importance of making the information of goods available to their customers during products' journey from source to target. Time, low damages, and traceability correspond with what Lumsden (2006) includes in his explanation of delivery service and transport quality in terms of dependability (deliver when promised), reliability (right product, right quality and in right quantity), and transport safety (protection against damages, theft and decrement). The case companies also listed the availability of right equipment and drawing an environmental friendly image. Knowledgeable and skillful staff that enabled smooth transportation (good ambassadors, nice behavior, and decent communicators from booking to delivery) was also discussed by Company C and A as aspects which was valuable aspects. Table 3 provides extensive list of the information gathered during the interviews.

Table 3 – Summary of value/advantages and risk/disadvantages listed by the case companies

	In Operations		Using Extended Services		Not Using Extended Services	
	Value / Important	Risks	Value / Advantage	Risk / Disadvantage	Value / Advantage	Risk / Disadvantage
Company A	<ul style="list-style-type: none"> <li>-Customer wishes</li> <li>-On-time deliver</li> <li>-No damages</li> <li>-Good customer service</li> <li>-Flexibility</li> <li>-Solve problems quickly</li> <li>-See the opportunities, not the problems</li> <li>-Knowledgeable and skillful staff/drivers</li> <li>-Good quality and price</li> </ul>	<ul style="list-style-type: none"> <li>-Not achieving profitability</li> <li>-Losing customer</li> <li>-</li> <li>Standstill/breakdown</li> <li>-Delays</li> <li>-Traffic blockades</li> <li>-Accidents</li> <li>-Theft</li> <li>-Market fluctuations</li> <li>-Recessions</li> <li>-Competition from foreign drivers</li> </ul>	<p><b>Service agreements</b></p> <ul style="list-style-type: none"> <li>-Better insight of the costs</li> <li>-Invitations</li> <li>-Reminders</li> </ul>	<p><b>Service agreements</b></p> <ul style="list-style-type: none"> <li>-Service and repair coincide</li> <li>-Expensive</li> <li>-Decreased availability</li> </ul> <p><b>Transportation Information System (TIS)</b></p> <ul style="list-style-type: none"> <li>-Compatibility issues</li> </ul>	<p><b>Service agreements</b></p> <ul style="list-style-type: none"> <li>-Cheaper</li> <li>-Convenient</li> <li>-Better control over the vehicles</li> </ul> <p><b>Financing</b></p> <ul style="list-style-type: none"> <li>-Better deals</li> </ul> <p><b>Insurance</b></p> <ul style="list-style-type: none"> <li>-Better deals</li> <li>-Insight and knowledge of insurance issues</li> </ul> <p><b>Drivers training</b></p> <ul style="list-style-type: none"> <li>-Possibility to continue driver training anywhere</li> <li>-Cheaper</li> </ul>	<p><b>Service agreements</b></p> <ul style="list-style-type: none"> <li>-Responsibility</li> <li>-Increased workload</li> </ul>
Company B	<ul style="list-style-type: none"> <li>-Good customer service (reasonable prices, availability of staff, and trustworthy image)</li> </ul>	<ul style="list-style-type: none"> <li>-Losing customers</li> <li>-Recession</li> <li>-Damages</li> <li>-Delay</li> <li>-Lack of skillful drivers</li> <li>-Competition from foreign drivers</li> </ul>	<p><b>Service agreements</b></p> <ul style="list-style-type: none"> <li>-Increased customer service</li> </ul>		<p><b>Financing</b></p> <ul style="list-style-type: none"> <li>-Lower rates</li> </ul> <p><b>Insurance</b></p> <ul style="list-style-type: none"> <li>-Cheaper</li> </ul>	
Company C	<ul style="list-style-type: none"> <li>-Quality (on-time delivery, traceability, availability, low rates of damages)</li> <li>Environment-friendly image</li> </ul>	<ul style="list-style-type: none"> <li>-Traffic blockades</li> <li>-Accidents</li> <li>-Weather</li> <li>-Recession</li> <li>-Competition from foreign drivers</li> </ul>	<p><b>Road assistance</b></p> <ul style="list-style-type: none"> <li>-Strong 24/7 service in the form of availability of spare parts, competence and know-how</li> </ul>	<p><b>TIS</b></p> <ul style="list-style-type: none"> <li>-Compatibility issues</li> </ul>	<p><b>Service agreements</b></p> <ul style="list-style-type: none"> <li>-Cheaper</li> <li>-More flexible</li> <li>-Possibility to share schedules with workshops</li> <li>-Closer control of the vehicles</li> </ul> <p><b>Insurance</b></p> <ul style="list-style-type: none"> <li>-Possibility to collaborate</li> </ul> <p>Driver training</p> <ul style="list-style-type: none"> <li>-Flexible</li> <li>Cheaper</li> </ul>	<p><b>Service agreements</b></p> <ul style="list-style-type: none"> <li>-Extra work required</li> <li>-Possibility of hidden costs</li> </ul>
Company D	<ul style="list-style-type: none"> <li>On-time delivery</li> <li>“One stop purchase”</li> <li>Environment-friendly image</li> </ul>	<ul style="list-style-type: none"> <li>-Losing customers</li> <li>-Accidents</li> <li>-Demand fluctuations</li> <li>-Recession</li> <li>-Weather</li> <li>-Road conditions</li> <li>-Damages</li> <li>-Flat tires</li> <li>-Competition from foreign drivers</li> <li>-Irresponsible drivers</li> </ul>		<p><b>TIS</b></p> <ul style="list-style-type: none"> <li>-Limited capability and functions</li> </ul>	<p><b>Service agreements</b></p> <ul style="list-style-type: none"> <li>-Cheaper</li> <li>-More flexible</li> <li>-Ease of communication</li> </ul> <p><b>Insurance</b></p> <ul style="list-style-type: none"> <li>-Cheaper</li> </ul> <p><b>Driver training</b></p> <ul style="list-style-type: none"> <li>-Cheaper</li> </ul>	<p><b>Service agreements</b></p> <ul style="list-style-type: none"> <li>-Limited access to latest technology</li> <li>-Limited knowledge in the workshops</li> </ul>
Company E	<ul style="list-style-type: none"> <li>-On-time delivery</li> <li>-Availability of right resources</li> </ul>	<ul style="list-style-type: none"> <li>-Losing customers</li> <li>-Standstill</li> <li>-Breakdown</li> <li>-Accidents</li> <li>-Demand fluctuations</li> <li>-Increasing fuel prices/salaries</li> <li>-Flat tires</li> <li>-Competition from foreign drivers</li> </ul>	<p><b>Service agreements</b></p> <ul style="list-style-type: none"> <li>-Quick service</li> <li>-Reliable service abroad</li> <li>-Know the cost/easy to calculate</li> <li>-Decreased risk of compounded costs</li> <li>Refund</li> </ul>	<p><b>Insurance</b></p> <ul style="list-style-type: none"> <li>-Limited offers</li> </ul>	<p><b>Service agreements</b></p> <ul style="list-style-type: none"> <li>-A trustful relation built up locally</li> <li>-Closer control</li> <li>-Cheaper</li> </ul> <p>Driver training</p> <ul style="list-style-type: none"> <li>-Cheaper</li> <li>-More flexible</li> </ul>	<p><b>TIS</b></p> <ul style="list-style-type: none"> <li>-Not electronically transferable information</li> </ul>

### *Advantages of using and not using extended services*

Valuable aspects and advantages of using extended services have been found to be related to financial advantages (better insight, ease of calculating, reduced risk of instant large costs, good amortization plans, and money back), increased customer service levels (as a result of vehicles in good shape that can last longer), assurance of best service (when operating abroad and when using road assistance), and increased up-time (as a result of strong road assistance and prioritization in the workshops). Apart from what case companies have experienced as increased value, the companies with little experience have stated some of their expectations related to the use of extended services. The expectations were related to financial aspects such as providing better economy in the long run and increasing vehicles' up-time as a result of problems being found and dealt with at an early stage. The case companies mentioned several risk factors that the extended services can help transportation companies to reduce. For instance, the risk of being fooled by workshops in abroad, where the company do not have any possibility to control the situation, likelihood of a breakdown, delays, and financial risks in form of penalty fees and compounded costs. Furthermore, case companies also mentioned several disadvantages of using extended services apart from advantages of using the extended services such as limited availability and decreased up-time as a result of workshops location, compatibility issues with other transportation information systems. In addition, they mentioned that maintenance and repair can coincide, if the company is using agreement, where repairs are not included. Limited insurance offers, and transportation information systems that could not fulfill the company's needs can be listed other disadvantages experienced by the case companies. Finally, no increased risks issues were mentioned by the case companies, who are currently using extended services.

### *Disadvantages of using and not using extended services*

Besides valuable aspect of using extended services, case companies listed advantages of *not* using these services as follows (1) Financial aspects (cheaper maintenance and repairs in their own or local workshop, cheaper solutions regarding driver training, better deals and lower rates through own bank and insurance provider), (2) Possibilities to cooperate (cooperation with insurance company to lower damages and possibility to share information with other workshop easily), (3) flexibility (possible to move around, to choose when, where, and how to pursue the training, to reschedule, and to access workshop), (4) increased up-time (no need to wait for spare parts, if the workshop is owned by the company), (5) access to workshop with knowledge and experience of specialized equipment, (6) control (more eyes on the planning, more knowledge about the vehicle in the form of information of what is wrong, where the vehicle is, what has been done, what needs to be done and when). As mentioned by some companies, not using extended services can decrease the risk of losing the control over the vehicles, since they have better communication with other workshops or they run their own workshops already. Increased responsibility and extra workload for the company were mentioned as disadvantages of not using extended services. Furthermore, it was also mentioned that the limited knowledge of mechanics at their own or local workshops may increase the probability of costly mistakes, which can lead to loosing guaranties. Limited access to latest technology was also found to be a disadvantage of using own or local workshops. Hidden costs of lost guarantees, insufficient technology for repair and maintenance in local or company-owned workshops were other issues, which have been mentioned by the case companies as increased risk factors of not using extended services. Table 4 shows the findings of the empirical study.

*Table 4 - Increased/decreased value and risks with using/not using extended services*

	Using Extended Services	Not Using Extended Services
Increased value	<ul style="list-style-type: none"> <li>-Financial advantage</li> <li>-Increased customer service levels</li> <li>-Assurance of best service</li> <li>-Increased up-time</li> </ul>	<ul style="list-style-type: none"> <li>-Financial advantage</li> <li>-Possibility to cooperate</li> <li>-Flexibility</li> <li>-Increased up-time</li> <li>-Access to knowledgeable workshops on specialized equipment</li> <li>-Control</li> </ul>
Decreased value	-	-
Increased risks	-	<ul style="list-style-type: none"> <li>-Hidden costs</li> <li>-Losing guaranties</li> </ul>
Decreased risks	<ul style="list-style-type: none"> <li>-Financial risk</li> <li>-Risk of being fooled</li> <li>-Likelihood of breakdowns</li> <li>-Delays</li> </ul>	<ul style="list-style-type: none"> <li>-No control over vehicle</li> </ul>

## **Concluding discussion**

This study aims to provide an examination of extended services, whether they can enhance value and reduce risk for transportation companies. To the best of our knowledge, user experience with regard to usage of these types of services have received little attention in existing literature. We contribute with new knowledge by investigating how extended services can enhance value and reduce risk for the users, in this case, transportation companies. Results of this study will help both transportation companies and vehicle manufacturers. Transportation companies can gain knowledge about the solution alternatives, and make an informed decision to both increase performance of their operations and provide qualified service to their customers. Another benefit for the transportation companies is to acquire an understanding about how they can make good investments. Moreover, vehicle manufacturers can use the knowledge here to increase the awareness and to emphasize the importance of using the extended service in the industry. Even though the research focused on road freight transportation companies in Jönköping region in Sweden, it can be argued that the findings are interesting for the vehicle manufacturers, when they sell their products and services in other countries (same trucks and services are offered on a global market) and transportation companies in other countries can benefit from the findings as well.

As in all research, it is important to acknowledge the limitations of this study. One limitation is that the case study is limited to companies in Jönköping region of Sweden and this also limits the number of interviews conducted with the case companies. These limitations should be considered when later researchers attempt to replicate or further investigate the findings, and each of these limitations can be readily addressed by further research. Other interesting aspects for further research include extension of the scope to involve companies in different regions of Sweden or in other countries. It is also interesting to perform a similar study with more cases in order to make another detailed investigation for establishing a pattern, which shows the effect of extended services on risk and value experiences of other companies. Working with different types of logistics service providers would also be beneficial in order to explore if there is any pattern of what specific type of companies that buy extended services and to what extent they prefer using extended services. Also, manufacturing companies who offer the extended services, and dealers who play intermediary roles between manufacturer and customer, might be included in the case study to be able to add different perspectives to research work. This might lead researchers to see and to evaluate how risk and value are

experienced on different sides of different parties regarding offering, buying and using extended services. Also a natural further research area in road transportation would be investigating how these service packages are offered and used in emerging and rapidly growing market settings of Europe, like those of Russia and Turkey.

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