The value of Shared Service Centres: a DCF approach.

MBA Management Project Report

August 2012

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FT MBA class 2011-2012

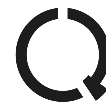
Management Project report submitted in accordance with the rules of

TiasNimbas Business School

in partial fulfilment of the requirements for the degree of

Master of Business Administration awarded by

TiasNimbas Business School



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Key words and abstract

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Title: The Value of Shared Service Centres; A DCF approach

Key words and phrases in this document are

- Shared service centre
- Accounting house
- Value-based management
- Business case
- Outsourcing

Abstract:
This study shows which factors to take into account when estimating the impact on firm value of concentrating finance and accounting activities in a shared service centre (SSC). Thereby it also assigns a proportional importance to the suggested factors. The results show that a possible reduction of personnel expenses is the most important factor to consider, followed by risk management opportunities and working capital management opportunities. Increase in revenue and a reduction of overhead expenses (e.g. IT costs and accountancy fees) are less important, but still are likely to have a significant impact on firm value. Results are based on interviews with CFO's and finance managers of firms that have started an SSC for finance and accounting.

Preface

This management project turned out to be a journey that took unexpected directions. The initial research question asked for guidelines for measuring *the value* of a shared service centre. After extensive consideration of the concepts of value, valuation and shared service centres the research question was adjusted, asking now for *the impact* of setting up a shared service centre on *the value of a firm.*

Professor Braggion and Professor Spalt, I appreciated our discussions and I thank you for your efforts in guiding me through the process of writing this thesis.

Filip Askvig, Paul Vervoort , Joyce van Breugel and other colleagues at ConQuaestor, I would like to thank you for your willingness to spend time with me in discussing all issues relevant to shared services, allowing me to access your customer base and welcoming me at your company. I enjoyed!

Executive summary

A Shared Service Centre (SSC) that is part of a firm, is not a cash generating unit. For that reason, it is not possible to determine the value of that SSC separately. If a discounted cash flow calculation shows that a firm (with SSC) is worth Euro 100.000, it is not possible to determine which part of that amount can be pointed at as the value of the SSC.

Taking the perspective of possible acquirers of an existing SSC, the value that they would assign to *acquisition* of the existing SSC can well be determined. In most cases that value will be zero, since a more value-generating alternative (setting up a new SSC) is directly available. Only in case an existing SSC has competences that are hard to develop when building from scratch (e.g. specific industry knowledge), an acquirer might assign value to the acquisition of an existing SSC.

What can be calculated, taking the perspective of the current owner, is the impact of setting up (or improving) an SSC on the value of a firm as a whole. The literature on SSCs suggests that a strong focus on cost factors is widespread, mainly considering direct cost reductions, e.g. personnel expenses. The outcomes of this study show that a sound business case should take much more into account than only reduced personnel expenses. By neglecting these additional factors, managers might underestimate the benefits of setting up or improving an SSC, and therefore forego opportunities to increase the value of their company.

This study is based on interviews with CFO's, finance managers and shared service centre managers of firms that have an SSC for finance and accounting. The interviews were designed on basis of findings in academic as well as commercial literature regarding the impact on a firm of starting an SSC.

The following research question was the starting point of the study:

'How to apply a discounted cash flow method for measuring the impact on firm value of concentrating finance and accounting activities in a shared service centre?'

The results show that the factors presented in table A should be taken into account, the percentages indicating the importance of the factors relative to each other.

Factor:	Impact:
Reduction of fte* in service function	39%
Reduction of need for working capital	9%
Reduction of operational risk (adaptation to regulation / compliance)	9%
Reduction of operational risk (risk management opportunities)	8%
Reduction of bad debt expense	6%
Reduction of average wage in service function	6%
Increase of revenue owing to customer satisfaction	5%
Reduction of fte* in business	4%
Increase of revenue owing to focus on core business	4%
Reduction of costs of business support (e.g. IT costs)	4%
Reduction of costs of integrating newly acquired business units	3%
Reduction of expenses for payout of overtime in the service function	2%
Discounts on accounts payable owing to payment planning	1%
Leveraging bargaining power in purchase activities	1%

*Table A: Interview results, relative to total value increase. *fte = full-time equivalent*

To illustrate a practical application of the outcomes, the mentioned factors are built into a DCF model that makes two calculations. First for the value of a firm *as is* and second for the adjusted value of a firm after allowing for assumptions on the suggested factors. The difference that arises is the (foreseen) impact on firm value of concentrating finance and accounting activities in a shared service centre. The net present value of foreseen transition costs should be subtracted from the value impact in order to decide for setting up an SSC or not.

This suggested application of the findings is likely to result in significantly different managerial decisions with regard to setting up or optimizing shared service centres.

Table of Contents

Preface **p v**

Executive summary **p vi**

Chapter 1: Introduction **p 1**

1.1 The research question p 2

1.2 The goal and relevance of the study p 2

1.3 Method used p 3

1.4 Contributions of other authors p 3

1.5 An outline p 4

Chapter 2: Key concepts **p 5**

2.1 Shared Service Centre p 5

2.1.1 Three organizational forms p 6

2.1.2 Activities in a finance and accounting SSC p 8

2.2 Value p 8

2.2.1 The concepts of value and price p 9

2.2.2 The value of a firm p 11

2.2.3 The entity concept p 12

2.3 Valuation methods p 12

2.3.1 Discounted Cash Flow method p 13

Chapter 3: Method of research **p 14**

3.1 Literature review on value p 14

3.1.1 Adjustment of the research question p 15

3.2 Literature review on shared service centres p 15

3.2.1 Cause and effect analysis p 15

3.3 Interviews p 16

3.3.1 The interview format p 17

Chapter 4: Results **p 20**

4.1 Value, valuation and shared service centres p 20

4.1.1 The perspective of the owner p 20
4.1.2 The perspective of the possible acquirer p 21
4.1.3 Three scenario's p 22
4.2 Interview outcomes p 24

Chapter 5: Application P 27
5.1 Relating interview outcomes to a DCF model p 28
5.1.1 Revenue p 28
5.1.2 Cost of goods sold p 29
5.1.3 Personnel expenses p 30
5.1.4 Other overhead expenses p 31
5.1.5 Working capital p 32
5.1.6 Sensitivity p 33
5.2 The outcomes of the valuation p 34

Chapter 6: Conclusions & Recommendations p 36
6.1 Conclusions p 36
6.2 Limitations p 37
6.3 Recommendations for further research p 38

Appendix A – The management project proposal p 39
Appendix B – Activities in a finance and accounting SSC
Appendix C – Cause and effect analysis
Appendix D – Cause and effect analysis summary
Appendix E – Interview format

Attachment: Excel file ***Valuation SSC***

Bibliography

List of tables and figures

Figure 1a: *Decentralized service organization* p 6

Figure 1b: *Services in an SSC* p 6

Figure 1c: *Outsourcing* p 7

Figure 2: *Fragment of model 'Valuation SSC': worksheet 'assumptions SSC'* p 28

Figure 3: *Fragment of model 'Valuation SSC': assumptions Cost of goods sold* p 30

Figure 4: *Fragment of model 'Valuation SSC': assumptions Personnel expenses* p 31

Figure 5: *Fragment of model 'Valuation SSC': assumptions Other overhead expenses* p 32

Figure 6: *Fragment of model 'Valuation SSC': assumptions Working Capital* p 32

Figure 7: *'Valuation SSC': worksheet 'assumptions SSC', assumptions in line with interview outcomes* p 34

Table A: *Interview results, relative to total value increase* p vii

Table 1: *Interview results (average)* p 24

Table 2: *Interview results column 1, relative to total value increase* p 25

Table 3: *Interview results column 2, relative to total value increase* p 25

Table 4: *Interview results column 3, relative to total value increase* p 25

Table 5: *Sensitivity of firm value to 1% change in each of the suggested factors* p 33

Chapter 1 - Introduction

This paper shows how to conceptually connect value, valuation and shared service centres (SSCs). After drawing conclusions on that, the paper shows which variables to consider when estimating the impact on firm value of concentrating finance and accounting activities in a shared service centre. The findings are based on literature research in combination with interviews with CFOs, finance managers and shared service centre managers. The results show that reduced costs owing to full-time equivalent (fte) reduction in finance and accounting activities is the most important factor to consider. Nevertheless this factor is likely to account for only 39% of the total value increase when concentrating finance and accounting activities in an SSC. Revenue increase, risk reduction and reduction of other overhead expenses play an important role as well.

1.1 The research question

The following research question was starting point of the study:

'How to apply a discounted cash flow method for valuation of a shared service centre?'

The research question is asking how (in what manner) we should apply a DCF method for measuring the value of a SSC. In order to answer this question on *how* we should measure, we first should know *what* we exactly want to measure. While discussing this issue at ConQuaestor it came to surface that this is not clear in the first place. The *value* of a shared service centre; what do we mean?
Chapter two and four will bring clarity, building on insights of the Austrian school of economics. As will be shown in the third chapter, after gaining insights from literature on value and valuation the research question was altered to:

'How to apply a discounted cash flow method for measuring the impact on firm value of concentrating finance and accounting activities in a shared service centre?'

Both questions were proposed by consultants from the unit ‘shared services and outsourcing’ at ConQuaestor (a Dutch finance consultancy). When discussing the impact of setting up a shared service centre with clients, ConQuaestor experienced a strong focus on costs and costs reductions. The literature on SSCs suggests that this strong focus on cost factors is widespread, and mainly considers *direct cost* reductions, e.g. personnel expenses. (see also Buijs et al., 2004, p.13). However, there may be a less visible impact of setting up a SSC as well; for example, better availability of information due to an efficient and high-quality performance in the SSC. (see again Buijs et al., 2004, p.13, Strikwerda, 2010, p.7) ConQuaestor felt that by neglecting these additional factors, clients might underestimate the benefits of setting up an SSC, and therefore forego opportunities to increase the value of their company. While the theoretical argument for taking *all* value drivers into account when making managerial decisions is obvious, an open question is exactly *which* factors a firm should focus on in order to obtain a more adequate picture of the impact of setting up an SSC. This thesis is an attempt to make progress on this issue.

1.2 The goal and the relevance of the study

The ultimate goal of this study is to provide guidelines for application of a DCF method when measuring the impact on firm value of concentrating finance and accounting activities in a shared service centre, thereby prioritizing the factors that should be considered.

Together with the presentation of findings in this report, an Excel model is provided that can serve as an example of how to practically apply the proposed guidelines in a valuation model. Chapter 5 elaborates on this model.

It is important to notice that this study *does not* draw conclusions on *what amount* of value can be created by setting up a shared service centre. It gives guidance on which factors to consider when taking action to estimate the possible impact. The actual estimations on each of the factors should be done by a thorough analysis of the current and future situation.

A comprehensive view on how an SSC can impact the value of a firm enables ConQuaestor to improve business cases for setting up SSCs, thereby enhancing ConQuaestor's business opportunities. A comprehensive view on the issue could also be used as a tool for framing discussions with clients regarding shared service centres in a (more attractive) *value* perspective as opposed to a *cost* perspective. Since there was no known previous research providing a comprehensive view on how an SSC can impact the value of a firm, ConQuaestor decided to initiate the current study.

This report has been written for consultants at ConQuaestor, providing them with insights for better consulting performance. This report is also useful for all those considering decisions in which SSCs play a role.

1.3 Method used

This study has been carried out in four successive phases, each of those with its own approach.

1) Exploration of literature in search for insights in how to connect the concepts of value, valuation and shared services.
2) Exploration of literature in search for advantages and disadvantages of concentrating finance and accounting activities in an SSC.
3) Field interviews with finance managers in order to validate and assign a relative importance to the factors that were found in the literature.
4) Construction of a valuation model in which the developed guidelines are applied to a stylized example .

1.4 Contributions of other authors.

Literature on shared services is limited. According to Strikwerda (2010, p.112), in the scant literature available on SSC's, no clear theory exists other than (commercially motivated) arguments that working with an SSC is an advantageous organizational approach. In line with this, no studies were found that specifically connect firm value and shared service centres. In

contrast, the available general literature on firm value and valuation is extensive. The information needed for constructing a DCF model was taken from Arzac (2008) and van der Veer (2011).

1.5 An outline

Chapter 2 explains the key concepts that together form the basis of this study: the concept of shared services, the concept value and the concept of business valuation by means of a discounted cash flow method. Chapter 3 elaborates on the four phases in which the study was carried out. Chapter 4 presents the results. Chapter 5 presents a valuation model based on the application of the results in a stylized example. Chapter 6 summarizes the main findings of the project, reflects, and recommends further research.

Chapter 2. Key concepts

This report brings three concepts together: shared service centres, value, and a discounted cash flow method for business valuation. This chapter will define these concepts.

2.1 Shared Service Centre

An SSC can be defined as follows:

> *In a Shared Service Centre, some supporting business processes and non-strategic activities are concentrated and treated as the core business of the centre.* (Schulman et al., 2005)
>
> *An SSC carries out tasks, independent of location, as part of a firm-wide process chain. This process chain is supported with integrated ERP software.* (Buijs et al., 2004, p.12)

'Supporting business processes' could for example comprise HR-activities, ICT activities or finance and accounting activities. The main aim of concentrating the activities in an SSC is 'to get more bang for the buck' (Schulman et al., 2005) Cost reduction is mentioned by practitioners as the leading driver for setting up an SSC (Kagelman, 2005, p.82).

Having services *concentrated in an SSC* is regarded very different from having services carried out by a *centralized* staff organization. *Centralization* is aimed at bringing decision rights and accountability to a single point in the organization. When performing services in an SSC, the decision rights and accountability are still at the business units. Therefore the set-up of an SSC is termed a *concentration* of services instead of centralization*. (Buijs et al., 2004, p.19)*

Since ConQuaestor is a finance consultancy, and since it is likely that service centres for example HR or IT activities have very different effects on firms,

this report focuses exclusively on shared service centres in which finance and accounting activities are concentrated.

2.1.1 Three organizational models

This report considers three ways of organizing finance and accounting activities within a firm.

1) A decentralized service organization:

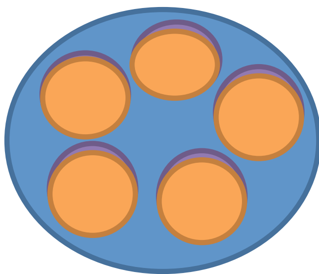

Figure 1a: Decentralized service organization

Firm
Service activities
Business unit

2) Executing services in a ***shared service centre*** that is part of the firm:

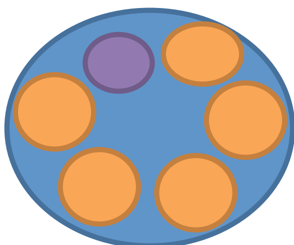

Figure 1b: Services in an SSC

3) Finance and accounting activities executed by a third party. (For example a business process outsourcing provider). This organizational model is termed ***outsourcing***, the service providers are termed Business Process Outsourcing providers (BPO providers).

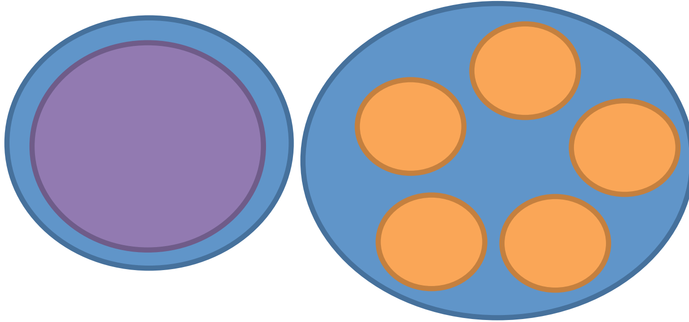

Figure 1c: Outsourcing

Outsourcing of finance and accounting activities as well as all kinds of hybrid models that exist in practice, are beyond the central question of this study and therefore not further developed within the scope of this report.

The action of *setting up* a shared service centre is part of mainstream business practice, since firms generally do not feature a shared service centre right from the start. Increased pressure on cost reductions is one of the main drivers for setting up an SSC. (Strikwerda, 2010, p.112; Buijs et al., 2004, p.12) Generally, this pressure comes into play when firms enter a more mature stage of their life cycle. (Strikwerda, 2010, p.124) The movement from a decentralized service organization directly to outsourcing is possible but considered as risky. (Buijs et al., 2004, p.38)

For reasons of clarity, this report distinguishes between ***'activities in the SSC'*** and ***'activities in the business (units)'***, thereby not considering an SSC as a business unit. The part of the firm that executes finance and accounting activities, either decentralized or in an SSC, is termed ***'the service function.'***

This definition leads for example to the following application: *'Reduction of fte in the business'* meaning: reduction of the number of fte in the business units. And *'Reduction of fte in the service function'* meaning: reduction of the number of fte that perform finance and accounting activities. (For example after transferring from a decentralized service organization to an SSC approach.)

2.1.2 Activities in a finance and accounting SSC

According to a survey conducted by Bangeman (2005) amongst shared service centre managers in the US, more than 50% of the firms that own a shared service centre for finance and accounting services, take care of the following processes in the SSC:

1) Accounts payable accounting
2) Accounts receivable accounting
3) Fixed assets accounting
4) General ledger accounting
5) Travel and expense accounting
6) Customer billing
7) Receivables collection
8) Cash management
9) Insurance portfolio management
10) Intercompany accounting
11) VAT accounting

These processes account for the main part of the work performed in an SSC. On which additional processes to concentrate in an SSC and which processes to keep at the business units, firms make very detailed and case dependent choices. Appendix B shows an overview of processes that could be executed in an SSC for finance and accounting. This study assumes that details regarding which exact *additional* processes are concentrated in an SSC and which are kept at the business units are only of marginal influence when considering which factors of the SSC impacts firm value.

2.2 Value

In his dissertation on the concept of economic value, Vis states that where classic economists have difficulties explaining the conceptual essence of 'economic value', the Austrian school of economics brings crystal clear insights. (Vis, 2010, p.117)

Following on this, the Austrian insights are explored and developed in the following section and taken as a point of departure for this report. Insights of the Austrian school of economics will not be discussed into the final details, the goal here is to understand the nature of the concept of 'value' well enough to give substantiated guidance in the application of a DCF method in relation to an SSC.

2.2.1 The concepts of value and price.

Classical economists infer price levels from the combination of supply and demand. *Why* humans are willing to pay those prices remains unclear. (Vis, 2010, p.7) In order to explain this, *price* and *value* should be distinguished. Digging into the origins of the Austrian school of economics, the economist Carl Menger (1840 - 1921) can be regarded as the founder of a theory of value.

The value of goods arises from their relationship to human needs and is not inherent in the goods themselves. With changes in this relationship, value arises and disappears. Objectification of the value of goods, which is entirely subjective in nature, has nevertheless contributed greatly to confusion about the basic principles of our science. (Menger, 1950, p.120)

When I discussed the nature of value, I observed that value is nothing inherent in goods and that it is not a property of goods. But neither is value an independent thing. Goods always have value ***to*** *certain economizing individuals and this value is also* ***determined*** *only by these individuals. (Menger, 1950, p.146)*

Von Mises, building on the foundations of Menger, puts it as follows:
Value is the importance that acting man attaches to ultimate ends. Only to ultimate ends is primary and original value assigned. Means are valued derivatively according to their serviceableness in contributing to the attainment of ultimate ends. Their valuation is derived from the valuation of the respective ends. They are important for man only as far as they make it possible for him to attain some ends. (Mises, 1949, p.96)

The following statement on prices clearly illustrates the difference between price and value.

Prices are social phenomena as they are brought about by the interplay of valuations of all individuals participating in the operation of the market. The valuations which result in determination of definite prices are different. Each party attaches a higher value to the good he receives than to that he gives away. The exchange ratio, the price, is not the product of an equality of valuation, but, on the contrary, the product of a discrepancy in valuation. (Mises, 1949, p. 331)

Value is an ex ante concept. (Vis, 2010, p.135). It is given in the expectations humans have about the future. Experiences from the past only play a role because they might *influence* a person's expectations of the future.

Mises answers the question 'why do humans trade'? by stating that humans trade in order to substitute a more satisfactory state of affairs for a less satisfactory state of affairs. The difference between the current and expected level of satisfaction is what determines the decision to trade or not to trade. Valuation becomes crucial as a means of evaluating alternative decision options.

Three conclusions are inferred from these statements and considered as a starting point for understanding the relation between value and shared service centres.

1) Value is the importance that humans assign to the ultimate ends.

2) Prices are exchange rates that can be observed in a market place. They are in between the valuations of trading parties.

3) Value is determined by expectations of the future.

2.2.2 The value of a firm.

How the value of a firm should be determined remains unclear so far, how the value of an SSC should be determined remains unclear as well.

In order to gain a better understanding why a firm has a certain value, it is necessary to understand why objects in general have value to humans.

Menger (1950, p.52) states: *Things that can be placed in causal connection with the satisfaction of human needs we term 'useful things'. If humans have the power actually to direct the useful things to the satisfaction of their needs, we call them 'goods'. When goods are in* ***direct*** *connection with the satisfaction of needs we call them economic goods. Goods can also be in* ***indirect*** *connection with the satisfaction of needs, in that case we call them* ***capital goods.***

Capital goods are considered as factors of production (e.g. machines). Economic goods are goods that can be used by consumers (e.g. a pair of shoes).

The value that humans assign to the economic goods that are produced can be set equal to the aggregate present value of a set of capital goods plus the services of capital, land and labour during the production period. (Menger, 1950, p.68)

On basis of these statements, the conclusion follows that, in order to determine the value of a firm (the combination of capital goods, capital, land and labour) one should look at the value that humans assign to the goods that are produced.

It is likely that the goods produced by a firm are not meant to satisfy the needs of the owner of the firm. In that case, for valuation of the firm it is *not* the value that the owner assigns to the products he produces that should be looked at. It is the value that is assigned by *other* individuals to the produced goods that

determines the value of the firm. Since that value can only be transferred to the owner of a firm by means of trade, the foreseen *prices* determine the value of the firm to the entrepreneur.

2.2.3 The entity concept

Entrepreneurs put capital goods and labour together in a purposely set up manner. This 'plan' can be regarded as a capital good itself. (Vis, 2010, p. 291) If the capital goods are put in a different combination by a different entrepreneur, under a different 'plan' the aggregate value would be different. This means that for valuation of a business, the whole combination of capital goods and production factors must be regarded as one entity. This point of departure for valuation is called the *'entity concept'.*

The value of the entity cannot be calculated by aggregating the values of the separate capital goods, nor can the value of separate capital goods be determined by splitting the entity value into pieces. A separate capital good will not produce goods, nor will it satisfy any human need. Therefore it is impossible to assign a value to it without considering the connection with other capital goods.

Disentangling the entity and looking from the perspective of the owner to the value of separate components is conceptually impossible; it is the *combination* that is conditional to the creation of value.

'Economically, a combination of production factors can only be valuated as an entity. Isolated valuations of production factors are impossible'. (Vis, p 283)

2.3 Valuation methods

There are several methods to determine the value of a firm. These may be broadly divided into 1) earnings and asset multiples and 2) discounting of accounting earnings or cash flows. (Sudarsanam, 2010, p.420). Real options can be seen as a third class of valuation methods, however, these can only be used as an extension of the method of discounting of accounting earnings or cash flows. Real options are useful when the future is highly uncertain and

managerial flexibility is available to respond to future developments. Considering the set-up or improvement of SSCs, there is no need for applying real options since uncertainty about the future is not a prominent factor. When it comes to the valuation of investment decisions, the discounted cash flow method is regarded as a mainstay. This study builds on that method.

2.3.1 Discounted cash flow method.

In order to estimate the value of a firm to its owner, the discounted cash flow method should be applied using the following steps:
(Sudarsanam, 2010, p. 437)

1) Estimate the future cash flows of the firm over a forecast horizon, based on the assumptions of the owner.
2) Estimate the terminal value of the target at the forecast horizon.
3) Estimate the cost of capital appropriate for the firm, given its risk and capital structure.
4) Discount the estimated cash flows to give a value of the firm.

In this report, these steps were taken as a starting point when building a model for valuation of a firm.

Chapter 3: Research Method

This study was carried out in four stages. First, literature on the concepts of value and valuation were reviewed. Second, literature on shared service centres was reviewed, thereby organizing advantages and disadvantages of a shared services approach in a cause and effect analysis. Third, interviews were carried out in order to determine and prioritize factors by which setting up an SSC might have impact on firm value. Finally, an Excel model was constructed in order to illustrate how the results of the literature study and interviews can be practically applied.

3.1 Literature review on value.

The following research question was starting point of the project as a whole:

'How to apply a DCF-method for valuation of a shared service centre?'

Three assumptions are implicit in this question:

1) Valuation of a SSC as such is possible.
2) A DCF method is a valid method and is applicable for valuation of a SSC.
3) A generic answer to this question is possible; guidelines can be developed that are generally applicable.

Vis (2010, P.283) in his dissertation on economic value states:

'Economically, a combination of production factors can only be valuated as an entity. Isolated valuations of production factors are impossible'.

This statement brought doubts on assumption 1). An exploration of the concepts of 'value' and 'valuation' was set up in order to understand what reasoning is behind the statement. Literature brought clear insights, which are presented in the first section of chapter 4.

3.1.1 Adjustment of the research question.

The conclusion that production factors cannot be valued separately was basis for an adjustment of the research question into:

'How to apply a discounted cash flow method for measuring the impact on firm value of concentrating finance and accounting activities in a shared service centre?'

Decisions on outsourcing (and thereby for example shutting down the SSC that is owned by a firm) might not be entirely different form decisions on SSC's, but are not further investigated. The scope of this study is limited to decisions regarding *setting up* or *improving* a financial shared service centre.

3.2 Literature review on Shared Service Centres.

According to Strikwerda (2010, p.112), in the scant literature available on SSC's, no clear theory exists other than (commercially motivated) arguments that working with an SSC is an advantageous organizational approach. Strikwerda mentions one exception, the dissertation of Kagelmann: *'Shared Services as alternative Organizational form'* (2000). Strikwerda himself wrote another exception: '*Shared Service Center II, van kostenbesparing naar waardecreatie'* (2010). In order to create an overview of how the set-up or improvement of an SSC could impact the value of a firm as a whole, both these studies as well as commercial literature were explored.

Additional to this literature study, three exploratory meetings were arranged with finance managers that have broad experience in working with an SSC. These meetings were arranged with the main aim of developing a background knowledge of the concept of shared services and their practical application.

3.2.1 Cause and effect analysis.

The factors by which an SSC is likely to have impact on an organization that were found in the literature, were combined in a cause and effect analysis:

mapping the possible impact of setting up an SSC to the value of a firm. The cause and effect analysis is shown in appendix C. Since the analysis is quite extensive, a summary version has also been included. (appendix D) This is to help present the main idea of the analysis without getting lost in all the details. The cause and effect analysis was required since the relation between the factors mentioned in the literature and the value of a firm was not obvious. To give an example:

Strikwerda (2010, p.7) mentions increased transparency as an important reason for setting up an SSC. Assume that this factor plays a role, how to reasonably estimate its impact on firm value? Does it lead to a revenue increase, a cost reduction or both? Assume it leads to costs reduction, which costs are affected? In the cause and effect analysis, the increased transparency is connected with *better opportunities of enforcing accountability*, one of the factors mentioned by Bergeron (2003). This is connected with *improved efficiency in the service function*, leading to a *reduction of fte (full-time equivalent) in the service function*, finally leading to a *reduction of personnel expenses.* This factor is impacting firm value.

If all connections to, for example, increased transparency are traced, the analysis shows that increased transparency impacts many value drivers. What can be concluded is that directly estimating the impact of increased transparency does not make sense when considering firm value, it is the factors that are ultimately affected that should be looked at.

3.3 Interviews

Following on from the cause and effect analysis, additional information was required for two reasons. 1) The literature on SSCs is limited and mostly commercially motivated or at least highlighting the benefits of SSCs, it might be so that the factors that were found in the literature are considered as irrelevant in practice. 2) For making practical decisions on how to adjust a financial forecast when considering the set-up of an SSC, it is important to know how to *prioritize* the factors. For example, the available time for