1. Introduction
The significance that good leadership can have can hardly be disputed but it is most definitely difficult to measure its value, albeit the leadership of a firm or that of a country. The academic world has always been striving to quantify everything but there are still no perfect ways to measure the value of most intangible resources. In understanding the invisible intangible resources the concept of intellectual capital (IC) was introduced and has its origins in the transformation from an industrial to a knowledge society in the nineteenth century (Catasús & Chaminade, 2007). The concept of IC was further developed and popularized in the mid-1990s as an attempt to understand the difference between a firm’s book and market value, and to understand how to manage this abstract concept. The ambition was to classify the different intangible resources in order to make them quantifiable (ibid.). The issue was that there was a trend of more investments going into intangibles instead of the classic tangible assets and there was a need to address the value of these investments (Edvinsson, 1997). The intellectual capital was first classified into two different subclasses; (1) Human Capital (HC), which consists of the intangible resources embedded within the members of the organisation and (2) Structural Capital (SC), which is mainly the knowledge that is found in the routines of the organisation (Bontis et al., 1999). Later a third component, Relational Capital (RC), was added and meant to describe the value of the external relationships of the firm (Catasús & Chaminade, 2007). How the IC should be measured is very firm-specific and it has therefore been difficult to develop generic methods and models that would be of use for all firms.

Shared leadership is a concept that is different depending on which country you look at. Even though there has been a history of one strong leader, there have been many shared leaderships in our history, e.g. the Roman senate. It seems that there is a trend in Sweden for managers to share their leadership with one or more managers (Döös & Williamson, 2003). This trend has come to light because of the increasing pressure management faces and the increasing workloads. In earlier times, e.g. during the industrialization, the manager did not have the responsibility to be a leader extraordinaire. Today, because of the need for firms to minimize costs, the role of managers has become more complex and
extensive. In the research of Döös et al. (2005) it was found that 41% of the managers in Sweden share their leadership in some form. Academia has formalized shared leadership between managers in Sweden into four main categories; (1) Co-leadership, where the managers share all responsibility and tasks, (2) Shadow leadership, where one manager has the main responsibility but the tasks are shared, (3) Functionally shared leadership, where the responsibility is shared but the managers perform different tasks and (4) Matrix/Distributed leadership, which are more vague forms of shared leadership where a level of cooperation needs to be out of the ordinary (Döös et al., 2003). Of course, most shared leaderships are hybrids of the different categories. There is an almost absolute consensus among managers sharing leadership that their knowledge is increasing because of the cooperation and continuous knowledge exchange. Furthermore, they believe that the organisation becomes more effective and makes it more enjoyable to work at the workplace (Döös et al., 2013; Lork & Lundh, 2014). The value of this knowledge exchange and these structural improvements has earlier not been researched and in our paper we intend to investigate the importance of shared leadership in Swedish publicly listed firms. We do this by investigating the correlation between the share of IC and the level of shared leadership in the management of the firm. The research question used to examine this correlation is; “Does the level of shared leadership in Swedish publicly listed firms correlate with the intellectual capital as a share of the market value?”

2. Literature review
The intention of the literature review is to combine the two topics of shared leadership and intellectual capital in order to establish a common ground that can be used to evaluate the possible effects of shared leadership to a firm’s intellectual capital.

2.1 Intellectual capital
As mentioned in the introduction, the difference in value between book and market value is often called intellectual capital (IC) (Edvinsson, 1997; etc.). The introduction and increasing importance of this concept can be explained by the need of practitioners to better govern their organisations in a growing knowledge society (Catasús & Chaminade, 2007; Bontis et al., 1999). To govern an organisation with the highest accuracy possible the goal must be to know the value of all its assets, albeit tangible or intangible assets. For the practitioners to be able to communicate the value of their intangible assets there was a need for clarification on this otherwise abstract concept (Catasús & Chaminade, 2007). An illumination that happened millennia ago for the tangible assets was now taking place for the intangible assets. Accountants became more involved and there is now some consensus to the classifications of three subclasses of IC; (1) Human
capital (HC), (2) Structural capital (SC) and (3) Relational capital (RC). Edvinsson (1997) first brought a model to light excluding RC but included relations as a subclass to SC.

The value of human capital stems from the knowledge embedded in the members of the organisation and this knowledge can be divided into subclasses (Bontis et al., 1999):

- Competencies – The skills and know-how.
- Attitude – The motivation and leadership qualities of management.
- Intellectual agility – The innovative, entrepreneurial and adaptive skills etc.

It is paradoxical that investments in HC short-term deteriorate the book value of the firm and that the value of HC still is difficult to determine, making it a seemingly unprofitable investment no matter the increase in the invisible resource of HC (Edvinsson, 1997).

Structural capital is defined as the knowledge that stays at the organisation at the end of a working day (Edvinsson, 1997). It is the intangible assets that the firm can control, which differs from HC which is not controllable. The structural capital is more often interesting for investors and has come to develop a more explicit value (Edvinsson, 1997). Some of the SC resources can legally be protected as Intellectual Property Rights (IPRs) and all the SC resources can also be divided into subclasses (MERITUM, 2001):

- Organisational routines, procedures and systems.
- Culture.
- Databases etc.

The relational capital is the value of all external company relations. These relationships can like the other forms of IC be divided into subclasses (MERITUM, 2001):

- Customer relationships.
- Supplier relationships.
- Relationships with R&D partners.
- Firm’s relations with stakeholders and their perceptions of the firm.

It is important to take note of the importance of the interconnectivity of these three subclasses of IC. It is this interplay that account for the sum of intellectual capital (MERITUM, 2001). With such a complex concept as intellectual capital Catasús & Chaminade (2007) argues that it is paradoxical to make such a simple classification but it is a step in the right direction, if the goal is to being able to manage and measure the IC.
2.2  Shared leadership
An increase in shared leadership has been a trend of the later decades in Sweden and it has shown to be of interest to younger managers (Döös et al., 2005). The increasing workload of managers drives this trend but whether it will take over in Sweden where organisations already are hierarchically flat remains uncertain (Andréas & Lindström, 2008). As an attempt to generalize the different forms of shared leadership Döös et al. (2003) constructed a model to simplify understanding the relations of managers sharing leadership. They came up with a model of four different subclasses of shared leadership:

- Co-leadership – The closest relationship of managers with shared responsibilities, authorities and tasks.
- Shadow leadership – When one manager has more responsibility and authority but the informal tasks are shared.
- Functionally shared leadership – Is found when the managers are functionally separated but have the same authority and share responsibility.
- Matrix/Distributed leadership – This is the weakest form of shared leadership where the managers in general share neither tasks nor authorities and responsibilities. To be considered a shared leadership there has to be cooperation out of the ordinary between the managers.

Managers can share leadership either formally or informally meaning that the sharing has been formally designed by the firm. Döös et al. (2005) investigated the frequency of these forms of shared leadership in Swedish firms for the government agency Arbetslivsinstitutet and found that 41% of the managers in Sweden share leadership in some form. 15% shared leadership formally while 26% shared informally.

In studies of the managers’ experiences from shared leadership it has been shown that they thought that the knowledge exchange and organizational improvements have been among the major benefits. For instance, the possibility to exchange ideas and go through them together instead of taking decisions on their own has shown to be a very common advantage. Also, to always be available for the employees even if one of the managers is unavailable has shown to be appreciated in the firm (Döös et al., 2013; Lork & Lundh, 2014).

2.3  Shared leadership as intellectual capital
The value of good leadership is intangible and should be part of the intellectual capital. When Steve Jobs, one of the most famous company leaders of the last decade, passed away in 2011 the Apple shares dropped by 5% in Germany (Kollewe, 2011). Although it is a singular event, it is fair to say that the leadership in firms does affect the value. However, a front figure like Steve Jobs
plays a different role than the one of mid-managers but their impact is nonetheless important. We argue that the knowledge transfer between managers that are sharing leadership and their employees will affect the human capital of the firm. The cooperation and structural systems that these managers set up have according to themselves been beneficial for the firm and should affect the structural capital of the firm. In smaller firms the relational capital would most likely be affected by managers sharing leadership since they both, depending on the form of shared leadership, will interact with customers.

3. **Methodology**
As we want to investigate the value of shared leadership in Swedish firms our research question is:

"Does the level of shared leadership in Swedish publicly listed firms correlate with the intellectual capital as a share of the market value?"

In order to answer our research question we will perform our investigation in three stages. First, we will investigate the level of shared leadership at publicly listed firms. Second, the intellectual capital of the chosen firms will be calculated. Third, we will compare the level of shared leadership with the intellectual capital. To conclude the research we will try to establish underlying reasons of our results in a discussion.

3.1 **The level of shared leadership**
To investigate the level of shared leadership we have a questionnaire with questions that examine the integration of shared leadership in firms. This questionnaire is constructed mainly to examine how much the company uses shared leadership but also to explore the type of leadership that is used. The questionnaire is based on the likert scale and gives the basis for a point system that will create an index of the level of shared leadership. This questionnaire is sent out to the HR management of 500 randomly selected publicly listed companies.

3.2 **The intellectual capital as a share of the market value**
The intellectual capital as an absolute value is not of interest to us, instead we want to investigate the IC as a share of the market value [IC(%)].

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\frac{\text{Intellectual Capital}}{\text{Market Value}} = IC(\%)\]
To investigate the IC(%) we look at the annual reports of the companies that has responded to our questionnaire about shared leadership to find their book value. Thereafter, we will examine the market value of the companies by looking at their value at the end of the year. From the market value we will subtract the book value to find the intellectual capital. The intellectual capital will then be divided by the market value of the firm to retrieve the IC(%) as shown in the formula above.

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\text{Market Value} - \text{Book Value} = \text{Intellectual Capital}
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### 3.3 Comparison of level of shared leadership to the intellectual capital share of market value

Finally, we investigate if there is a correlation between the levels of shared leadership to the intellectual capital share of market value. With these results we do a regression analysis to find the trend and determine if the level of shared leadership is in correlation with the intellectual capital. To discuss the underlying reasons of our results we compare them to earlier research and see if we from that information can determine any explanation.

### 3.4 Critique

It is not certain that shared leadership always will benefit the firm, especially when it is not implemented correctly. Actually, it has shown difficult to gain information on shared leaderships that have failed, which indicates a bias towards positive expectations. This can be a problem because it in some cases might affect the intellectual capital negatively, while our main hypothesis is the opposite. It remains uncertain if the different forms of shared leadership would affect the IC differently. The knowledge exchange and structural building between sharing managers would probably differ depending on the form because it would mean that they possess different unique qualities in comparison to each other. Also, the importance of shared leadership might differ between industries and even companies. Furthermore, there can be a problem with heteroskedasticity that could at first render our results insignificant. In fact, a discovery could be that there are different groups within the scope of the research that have different variances. This could be due to, as earlier mentioned, that different industries work in certain ways or that depending on the form of shared leadership it affects the intellectual capital differently.

### 4. Contribution

Our contribution will be two folded. First, it will contribute to the field of leadership in the sense that it will show the value of shared leadership. This might, depending on the results, shatter the image of the one strong leader and
lead to an increasing trend of shared leadership. If the correlation is negative it will show that the investments in shared leadership might not be worth it. As an Easter egg there is a possibility that it can be shown that shared leadership is more successful in certain industries. Second, it will contribute to the field of intellectual capital, which is struggling with defining and measuring the value of the subclasses of IC. Also, it is possible that it would help the creation of models for managing intellectual capital. Furthermore, this paper will pave new ways for further research in both intellectual capital and shared leadership.
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