European Journal of Law and Economics (2019) 47:407–433
https://doi.org/10.1007/s10657-019-09620-x

A regulation and transaction cost perspective on the design of corporate law

Hanna Almlöf[1] · **Per-Olof Bjuggren**[2]

Published online: 1 July 2019
© The Author(s) 2019

Abstract

For the corporate business model to be successful, it is important to align the interests of those who control and finance the firm. Corporate law has here an important task to fulfill. It offers a legal framework that can facilitate parties to conclude mutually preferable agreements at low transaction costs. The purpose of this paper is to show how to design corporate law to fulfill this task and apply this knowledge to a Swedish case. A two-dimension model that simultaneously considers both the regulation intensity and the level of default of corporate law is presented. The earlier literature treats these dimensions separately. By adding a transaction cost perspective to our model, we assess different regulatory techniques and examine how the Swedish legislation can be amended to help corporations by offering a standard contract that lowers the transaction costs of contracting. This can be achieved if default rules or standards of opt-out character are combined with other regulatory techniques with lower transaction costs such as opt-in alternatives and menus. We also show how our model can be used in other studies as a tool to analyze the design of legal rules.

Keywords Corporate law · Regulation · Contracts · Transaction costs

JEL Classification D23 · G32 · G38 · K22

✉ Per-Olof Bjuggren
p-o.bjuggren@ratio.se

Hanna Almlöf
hanna.almlof@liu.se

[1] Linköping University, Campus Valla, IEI, 581 83 Linköping, Sweden

[2] Ratio Institute, Jönköping International Business School, P.O. Box 3203, 103 64 Stockholm, Sweden

1 Introduction

Corporate law matters for economic efficiency and growth (Cooter and Schäfer 2012). Consequently, the design of corporate law is important.[1] The legislator should offer a legal framework that aligns the interests of those who control and finance the firm. The law should also facilitate for parties to conclude mutually preferable agreements at low transaction costs. But, how can we assess whether the legislators have succeeded in such an endeavor? With reference to an analysis of Swedish corporate law, we introduce a two-dimension model that addresses this problem.

Swedish corporate law uses a one-size-fit-all regulatory technique. This means that there is only one corporate company form, the *aktiebolag*, and hence, the act must include rules that both fit the needs of public listed firms and small one-person corporations. For decades, scholars and practitioners has questioned if the suit is not too large for the average firm and whether Sweden needs a new corporate form for closely held businesses (see e.g., Nerep 1999; Skog 2006; Arvidsson and Samuelsson 2006). However, to our knowledge none has tried to addresses this question from a law and economics perspective. In this paper, we accept the challenge and offer an economic analysis of the design of Swedish corporate law. For this purpose, we present a two-dimension model that makes it possible to analyze and characterize corporate law with respect to the level of regulation intensity and the level of default. Thus, the model visualizes alternative regulatory techniques and allows for comparison of different legal solutions. The model also serves as an analytic tool for policy changes as it eases the understanding of how transaction costs for individual firms affect the effectiveness of the different techniques and how regulatory techniques can be used to match the needs of different types of corporations, e.g., public corporations, corporation with and without controlling shareholders, closely held businesses and family firms. We limit our analysis to the regulation[2] of organization and decision-taking organs in the firm.

In the literature, at least two main topics on the design of corporate legislation can be identified. The first is how detailed corporate issues should be regulated in legal statutes and to what extent it instead should remain for the parties to regulate by contract. Within this topic, questions such as the usage of rules versus standards and non-regulation are discussed. We call this dimension of corporate law design the level of regulation intensity. The second main topic found in the literature is what we call the level of default, i.e. whether legal rules should be mandatory or non-mandatory and the usage of different default techniques such as opt-in and opt-out regulation. What is new in this paper is that these two dimensions are combined and integrated in one model of corporate law design. The earlier literature treats the dimensions separately. Ehrlich and Posner (1974) analyze rule making. They claim

[1] The importance of design of corporate law for economic efficiency is explicitly stressed by Bebchuck and Hamdani (2002).

[2] In this paper, we define regulation as a binding standard set by a public regulator for the intentional intervention of economic activities of private actors (Koop and Lodge 2015), with special attention to which extent the regulation provides room for private contractual agreements.

that it is fruitful to apply a specificity-generality continuum, in contrast to a "dichotomy between 'rules' and 'standards'". We will apply a similar analysis to rule making, but in combination with a consideration to the default character of a legal norm. In the analysis of level of default, we also envision, similar to McDonnel (2007), a continuum, instead of a dichotomy, between default and mandatory rules.

Applying our model on the Swedish case, we conclude that the rules are suboptimal for the majority of the firm, i.e. closely held corporations. We find that literature supports a corporate law design with a high level of both default and regulation intensity. To fulfill this support, the lawmaker should be ambitious in designing corporate law as a standard contract to fit the needs of the vast majority of corporations. In Sweden, as in most states, such firms are closely held. To succeed in the accurate level of defaults, the legislator cannot only equip the law with opt-out regulation. Such rules are often associated with excessively high transaction costs to derogate from. For different economic and psychological reasons, parties tend to stick with opt-out rules although they are suboptimal. Instead, the Swedish legislator's objective should be to lower the costs of contracting by also using opt-ins and menus. In addition, lawmakers in Sweden must acknowledge costs of so-called altering rules and strive to lower such costs, particularly by highlighting and not hiding the default character of legal norms. Our conclusions support policy change and we contribute with suggestions on how lawmakers may amend the Swedish Companies Act of 2005. Alternatively, a new legal form for closely held corporations could be introduced, regulated separately from the current *aktiebolag* and based on majoritarian defaults.

In addition, as our model works as an analytic tool that can guide lawmakers in the choice between regulatory techniques such as the choice between rules or standards and between mandatory or default regulation, we see that it potentially has universal character and can be applied to other corporate law issues as well as other areas of law. The model visualizes alternative regulatory techniques and allows for comparison of different legal solutions, which also make it useful for comparative legal studies.

Hence our contribution is twofold: First, we contribute to policy as our conclusions can assist Swedish lawmakers in their choice of regulatory techniques. Second, we contribute to literature and further research with our model as an analytic tool to assess regulatory techniques.

The paper will be organized in sections as follows: In section two, we introduce the Swedish case and the set of legal rules, which is the focus of this study. In section three, we present a theoretical background to the field of economic analysis of corporate law and regulation. In this section, we address the double trust problem, the corporation as a nexus for contracts and corporate law as a standard contract. In section four, we present our two-dimension model discussing the default and regulation intensity aspects of corporate law and how economic efficiency/growth and transaction costs are affected hereby. In section five, we apply our model to the Swedish case and show what implication our conclusions have for policy change. In Sect. 6, we briefly illustrate the universal character of our model and how it potentially can be applied on other cases. Summary and final comments end the paper.

2 Introducing the Swedish case

A lot of attention has been given to the relation between quality of corporate law and concentration of ownership and control. The focus is on firms listed on the stock market. In their seminal article from 1998 La Porta, et al. provide evidence that common law countries outperform civil law countries in terms of efficient capital market and the reason for this is found in the legal protection for minority shareholders. However, researchers seemed puzzled by the fact that some nations, such as Sweden, have functional capital markets, yet still concentrated ownership structures. Concentrated ownership is without doubt prevalent in Swedish firms, also in listed corporations (See e.g., Bennedsen and Nielsen 2010; Lekvall 2014). Consequently, scholars have offered alternative explanations. For example, Coffee (2001) investigates the effect of social norms and Dyck and Zingales (2001) examine so-called extra-legal institutions, e.g., religion, diffusion of newspapers, crime rate and tax compliance. According to Roe, political institutions like strong labor protection are also important (Roe 2002, 2008; Roe and Vatiero 2018). Social democratic influences have been stressed as one factor leading to concentration of ownership and control. Sweden is an example of a country with a persistent Social Democratic political influence since the 1930's. The high concentration of ownership and control is largely due to dual class shares and pyramiding (Högfeldt 2005; Bjuggren, et al. 2007). Högfeldt (2005) offers explanations to why this is the case. He also finds that a probable explanation can be found in the political environment with strong labor protection.

In this paper, we study corporate law and corporate governance in Sweden from another angle and without the limitation to public firms. Sweden has a relatively high number of incorporated firms given the population of only 10 million people. In the end of 2018 there were 590,000 *aktiebolag* registered with the authority. After the U.K. model, Sweden has one business form limited by shares, but two types of the same; the private and the public corporation. Accordingly, Swedish corporate law uses a one-size-fit-all regulatory technique. The Corporate Act (Aktiebolagslag 2005:551) includes rules that both fit the needs of public listed firms and small one-person corporations. Some rules only apply to public corporations, but most legal norms are applicable to all. In rough numbers merely 1500 corporations (0.25 percent) are public, and less than one third of them are listed. Concentrated ownership is without doubt prevalent in Swedish firms, also in listed corporations (Lekvall 2014). Hence, the grand majority of all corporations are closely held, often with no more than up to four owners (Almlöf 2014).

In closely held firms, organization is often uncomplicated as the owners also are the managers, and separation of ownership and control is not prevalent. Nevertheless, as the Swedish Corporate Act must fit all corporations, the regulation of organization and decision-taking organs is rigorous. The core chapters regulating the general meeting, the board of directors and the CEO, chapter 7 and 8 of the Act, are composed by 130 provisions, close to 10,000 words. In addition, procedural safeguards are found in numerous other chapters, e.g., regarding issuing of share and other securities. Interestingly, the legislator acknowledges that the

rules on organization and decision-taking organs may not fit closely held businesses. However, this mismatch is said not to affect the businesses negatively, as the majority of the rules are defaults and can be derogated from (see Government bill Prop. 2004/05:85, p. 202).

In this paper we assess whether the legislator is correct in this assumption. When doing so, we concede that the legislative goals of the Swedish Companies Act in this respect are both to protect shareholders from abuse or oppression by the directors, management or by majority shareholders and to lower the transaction costs of the parties. The outspoken legislative goal is to lower transaction costs for the contractual relationships between shareholders, managers and the firm. Hence, the purpose of the legislation is not to reduce transaction costs for courts or authorities and for this reason; we delimit from this study questions concerning public enforcement.

3 Law, transaction costs and the corporation

3.1 The trust problem

Law has an important function to fulfill for welfare increasing transactions to occur. In Cooter and Schäfer (2012), property, contract and corporate law are listed as the most important legal drivers of welfare and economic growth. The design of corporate law matters for how well corporations succeed to make the interests of entrepreneurs and investors converge. The design also matters for how attractive it is to start a corporation in the first place. For corporate law to be attractive, one must consider the transaction costs of contract solutions that align interests and that are adaptable to different and changing circumstances. Particularly through the life cycle of a firm, from startup to a large publicly listed corporation, the preferences and need for control, ownership and protection of stakeholders are likely to differ. We will more closely examine how the design of corporate law can lower the costs for accomplishing this objective (i.e. aligning interests and being adaptable to different and changing circumstances).

People in contractual relations often have conflicting incentives, and people are from time to time opportunistic. Asymmetric information and bounded rationality are at the roots of the problem. Laws and contractual safeguards serve as bridges that harmonize divergent incentives. The use of safeguards are unique in every transaction but the law is a public good in form of a social infrastructure that can be at low or no cost used by everyone. It serves as economizing on transaction costs. How low the transaction costs are will depend on how the law is formulated.

Cooter and Schäfer (2012) show with a broad painted brush how law in the form of property law, contract law and company law can overcome these problems. The authors focus on financing of innovation and promotion of economic development and welfare around the world. We use a similar framework but extend beyond their work by more closely examining how transaction costs can be reduced in corporate law. Williamson's assumptions that people are opportunistic, bounded rational and

have incomplete information are used (see Williamson 1985 etc.).[3] These factors lead to high transaction costs.

3.2 Nexus for contracts

Hansmann and Kraakman (2000) consider the legal personality to be the most important characteristic of the corporate form of business. By being a legal person, the assets of the corporation are shielded from the owner's personal creditors. This shielding is utterly important for the firm's contracting partners as it makes it easier for them to estimate how likely it is that their claims on the firm will be honored.

Jensen and Meckling (1976) depict the firm as a nexus of contracts. Inspired by Hansmann and Kraakman (2000) and Armour et al. (2017a, b), we change this depiction to a nexus *for* contracts.[4] Our focus is on firms that have adopted the corporate form of business. As a corporation is a legal entity, it can, as with a physical person, enter into binding agreements (contracts) with other physical and legal persons. From this perspective, the corporate form of a firm can be viewed as a "nexus *for* contracts" that coordinates financial investors, suppliers of intermediate goods, services and labor as well as customers in the production of goods and services. In other words, the firm is a central contracting party in a web of contractual relations.

Viewing the corporation as a nexus for contracts helps to understand that the role of the legislation, in addition to granting the firm a legal personality, is to assist and ease the contractual relations between different interests in the contractual web. Corporate law regulates some of these relations; others are regulated by securities regulation (relations to investors), sales law and consumer law (sale contracts with the firm either as a buyer or a seller), labor law (employment contracts) and tort law (legal claims for non-contractual damages). In this study, the relations between owners and managers and among shareholders are the focus.

In their seminal article, Jensen and Meckling (1976) depict a principal-agent relationship between shareholders and management. The shareholders are considered principals whose welfare is dependent on the actions of the management. The authors' approach is of a positive nature with refutable propositions (Jensen 1983). The transaction cost approach shares commonalities with agency theory. The nexus concept is used in transaction cost economics as well as in agency theory (see Williamson 1988). The behavioral assumptions of bounded rationality and opportunism (self-interest seeking with guile) that makes contracts incomplete are also shared with agency theory. In Williamson´s model, bounded rationality and opportunism are paired with the degree of uncertainty and complexity that has to be coped

[3] Bounded rationality means that the capacity of human beings to formulate and solve complex problems is limited. Opportunism means that human beings cannot always be relied upon to candidly reveal all information pertinent to a transaction. Occasionally, people will attempt to take advantage of such information asymmetries to exploit a situation to their own advantage at the expense of the other contracting party.

[4] Their motivation is that the corporation is "the common counterparty in numerous contracts with suppliers, employees, and customers, coordinating the actions of these multiple persons through exercise of its contractual rights" (Armour et al. 2017a, b, p. 5).

with in a transaction. The prevalence of uncertainty and complexity paired with the bounded rationality is one condition for opportunistic behavior being a profitable strategy. The other condition is that ex post, after a contract has been concluded, a transaction dependence between parties emerges (Williamson 1975). In Williamson (1988) there is a focus on this transaction dependency and how the parties can handle the interdependencies through different kinds of safeguards. The focus is on ex post governance. In other words, how to reduce the costs of future disturbances in the relations between the firm and its contractual partners is emphasized. Safeguards that align incentives, are often devised by the contractual parties themselves (Williamson 1988, 2002; Nicita and Vatiero 2014). In accordance with transaction cost economics, we discuss how corporate law can help the firm with contractual solutions that reduce future contractual problems. Taking uncertainty and complexity in consideration are important factors in this endeavor.

According to Armour et al. (2017), there are primarily three agency problems to be addressed. These problems are between shareholders, the board and the executive management, between majority and minority shareholders and between shareholders and creditors. We particularly focus on the relationship between shareholders, board of directors and executive management and the relation among shareholders with majority voting power and shareholders with small non-controlling ownership (protection of the minority). Shareholders are often considered to be the owners of the firm (particularly in closely held companies). Shareholders' contractual relations with the firm are characterized by a claim on the residual that remains when all the other contractual obligations of the firm have been met (shareholders are residual claimants). The size of the residual is dependent on the management of the firm's resources. Consequently, shareholders have an interest and a legally recognized right to control how the firm is managed. Occasionally, there is a separation of ownership and control in that owners and managers are different persons. In these cases, the board has an important role to play as an agent who controls the management on behalf of shareholders. However, in most cases, owners and directors and/or executive managers are the same persons. In these corporations, the division into two decision-taking organs, the general meeting and the board of directors, is usually non-prevailing. Instead, the owner-managers act as one active decision-taking organ.

3.3 Corporate law as a standard contract and hypothetical bargaining

Within the context of the corporation as a nexus for contracts, we concentrate on the contractual relations between the firm and its shareholders. Shleifer and Vishny (1997) regard this focus as the core of the corporate governance perspective. These contractual relationships are regulated by corporate legislation, supplemented by the articles of association and, in certain cases, a shareholders` agreement. Different contractual parties contribute resources to the firm and have contractual claims on the legal person. How well the firm succeeds in the transactions with these parties determines firm performance. As first noted by Coase (1937), transactions are not costless. Entering into contracts is associated with transaction costs. To be witty, these transaction costs can be described as three magic C's; contact, contract and

control costs. Contact costs represent all costs associated with localizing and obtaining information about prospective contract partners and the terms these partners offer/demand. Contract costs are the costs of negotiating and concluding a contract with someone. Control costs are the costs of monitoring and policing the contract. One task of the lawmaker is to increase economic efficiency by legal rules that lower transaction costs in the economy (cf. Coase 1960).

In case transaction costs were zero, corporate law could more or less be reduced to a registration of a corporation as a legal person, allowing it to enter into contracts with other parties (cf. Armour et al. 2017a, b, p. 17). It would then remain for the shareholders and the legal person to enter into, negotiate and enforce contracts for the birth and survival of the corporation. However, transaction costs are not zero. Contracting is costly (Buchanan and Tullock 1962) and can, in certain cases, be overly costly such that transactions are not occurring. High transaction costs also make contracts incomplete.

Hence, one purpose of corporate law is to lower transaction costs by providing a ready-made standard contract (See e.g., Easterbrook and Fischel 1982; Bebchuk 1989). The task of the legislator is to formulate a standard contract close to what informed rational persons would have chosen if they had anticipated future contingencies and actively negotiated without focusing on transaction costs (See e.g., Cheffins 1997; Easterbrook and Fischel 1989; Gordon 1989). This contract will be attractive to firms since transaction costs will be reduced. The method to find the rules of such a standard contract is often referred to as the "Hypothetical Bargaining Model" (see e.g., Ayres and Gertner 1989; Coffee 1989; Charny 1991; Posner 1992, p. 396).

Describing corporate law as a standard contract facilitates the understanding that this contract is inherently incomplete. The legislator cannot foresee all possible circumstances and events that could affect the relation between parties. In addition, the lawmaker will not be able to construct a standard contract that suits firms of all sizes or all phases of their life cycles. To compensate for this behavior, the standard contract should, as the starting point, be of a default character (Easterbrook and Fischel 1986). Parties must be allowed to derogate from the legal standard when they find it necessary. Therefore, the default character of the rules is important; in the next section, we will further discuss how the lawmaker can decrease transaction costs by means of different regulatory techniques.

4 A model of corporate law design

4.1 Introducing the model

The legislator has essentially two toolboxes at its disposal to influence transaction costs in the contractual web of the corporation and guide the firm towards a cost-efficient framework. Cost efficient framework here means a legal framework that lowers transaction costs in the firm's contractual relations among shareholders (present and future) and between shareholders and the board of directors and/or the executive management. The two toolboxes are the level of regulation intensity

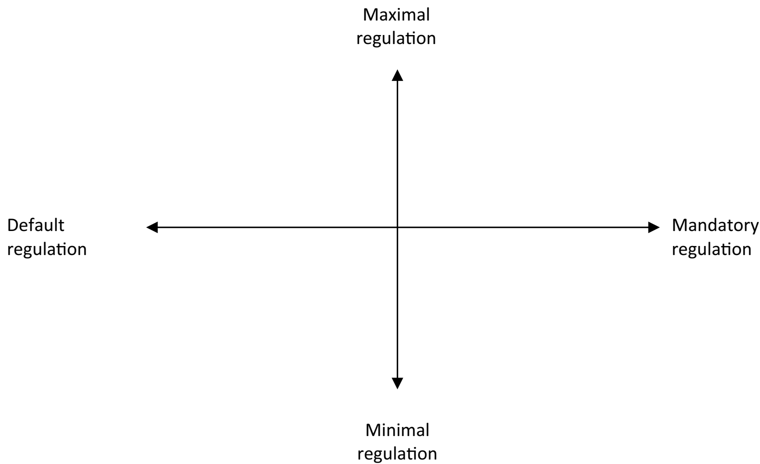

Fig. 1 The default and regulation intensity aspects of corporate law

chosen in corporate law and the level of default characterizing the rules. Figure 1 illustrates these two aspects (or toolboxes) by movements along the vertical and horizontal axes. By placing regulatory techniques in the model with respect to their level of regulation intensity and the level of default, differences between them are highlighted. In addition, through a transaction cost analysis of the techniques, they can be better understood and compared with each other.

4.2 The vertical axis: level of regulation intensity

Several aspects, such as culture and legal tradition, affect how intense and detailed regulation is. Of course, one can question the need of legal rules altogether. In such a case, the legislator either ignores the area, is unaware of it or has concluded that the market will regulate itself, hence, no state interference is necessary. In the latter situation, deregulation, meaning to abolish legal rules, could be an alternative, representing a regulatory technique at the very bottom of the scale of the vertical axis of regulatory intensity. However, in the area of corporate law, some regulation is inevitable (since legal provisions at least must establish the legal personality).[5] From a legislative perspective, the law must address gaps in explicit contracts (Easterbrook and Fischel 1989, p. 1433). Two legal regulatory techniques to fill in gaps are through rules and standards. We will discuss the transaction cost implications of these two legal techniques.

[5] At least when it comes to grating the corporation the ability to enter into contracts, to sue and be sued (cf. Hansmann and Kraakman 2000). In Armour et al. (2017a, b, p. 5) they write about legal personality as ”the most important contribution of corporate law …” and on p. 17 it is pointed out that legal personality can origin from other legal areas than corporate law.

Crucial assumptions of human beings in transaction cost analysis, as developed by Williamson (1975, 1985), are that people have bounded rationality and opportunistically take advantage of asymmetric information. Bounded rationality and opportunism makes explicit contracts between parties more or less incomplete due to high transaction costs. Contingent claims contracts as envisioned by Arrow and Debreu (1954) that cover all future possible events will be impossible. The pairing of bounded rationality with complexity and uncertainty of the future makes it costly to address contingencies in contracts. In regulation, a distinction can be made between rules and standards. A rule differs from a standard by being specific in the description of what is permitted/prohibited, while a standard is of a more general character with a high degree of vagueness of what is unlawful. As shown by Ehrlich and Posner (1974), a continuum exists between what can be considered rules and standards in terms of specificity and generality. We are inspired by the authors' approach and see the continuum as a variable for degree of regulation intensity. For example, if the general meeting is regulated by a set of detailed legal rules, this will result in a piece of legislation with high degree of regulatory intensity compared to a legislation that regulate the general meeting in one or a few general standards.

Before explaining our continuum of the degree of regulation intensity as depicted in Fig. 1 in more detail, it is fruitful to note the major difference of specificity of rules and standards in terms of transaction costs implications. A rule saves transaction costs in that it reduces the uncertainty of legal consequences. However, standards cannot be replaced with rules on a one-to-one basis. Several rules are normally needed for each standard that is replaced. Therefore, the reduction of uncertainty eventually is at the expense of the complexity of needing to track many rules. As described by Williamson (1975, 1985), complexities as well as uncertainty increase transaction costs. In other words, there is a trade-off. Another factor to focus on is the high cost of promulgation of rules. This cost is fixed and favors rules for frequent situations as the regulation cost per situation decreases as frequency increases.

The vertical axis of the model in Fig. 1 illustrates the level of regulatory intensity. As will be explained in more detail, there is a non-linear relationship between regulatory intensity and transaction costs. At the bottom, we find regulation that corresponds to a minimum number of legal standards, which only regulate the utterly basic rules for corporations to function as legal persons. On the other end of the scale, at the top, we find a regulation that correspond to a comprehensive and complex set of mostly legal rules and only some standards that are meant to cover as many situations as possible. A preconceived conclusion would be that a complex, all covering, piece of legislation, would be more costly to comply with than a minimalistic regulation. Numerous rules, covering many types of contingencies, indeed make it costly for shareholders, directors and managers to be informed of the legal framework. However, although the complexity affects transaction costs, this preconceived conclusion is only partly true. As can be observed in this section, there are strong arguments for corporate law in the higher portion of the scale. We have identified two main streams of the legal literature about regulation intensity. The first stream is instrumental for explaining transaction cost consequences of movement along the vertical axis, while the second offers a more normative theoretical explanation of why regulation intensity high on the intensity scale is desirable.

4.2.1 Movement along the vertical axis and preferred position

In the first stream of literature, the regulatory techniques of rules versus standards are discussed. A rule differs from a standard in being clear-cut in the description of what is permitted/prohibited (Weber 2013). Since the content of a rule is given ex ante, before an act occurs, rules in general generate lower transaction costs for the parties than standards do. The predictability of a rule can have the cost saving effect that parties settle before court (Ehrlich and Posner 1974). Because of the relatively low cost of compliance, it is argued that situations, which are frequent for corporations, should preferably be regulated by rules. In contrast, a standard is more vague in describing what conduct is permissible; instead, the interpretation is made ex post by the adjudicator, e.g., court (Kaplow 1992). This makes the application of a standard more difficult predict; in addition, occasionally, it is necessary to hire expensive legal expertise or to prepare for many different outcomes. Legal uncertainty is always associated with high costs but as the number of precedents accumulates, the content of a standard may become clearer as each precedent supplements the standard with a case-based rule. However, as sometimes argued, specialized court could be better fitted and trusted to handle the discretion of a standard-based legislation (Kaplow 1992, pp. 608–610). The Delaware courts could be seen as an example of this, yet its influential position in American corporate law has lately been questioned (see Goshen and Hannes 2018). On the other hand, it might be argued that specialized courts are also very efficient of dealing with a complex and comprehensive rules-based legislation (see e.g., Parisi and Fon 2009, p. 20). Nevertheless, a legal standard can be more flexible for changes in society and result in an application of the law that is better tailored for the individual parties (Cheffins 1997). This also makes a standard more suitable for regulating non-day-to-day situations (Kaplow 1992).

One of the main disadvantages of using rules is the risk that they do not cover all aspects of the regulated situation, leaving gaps in the legislation, which can be used to circumvent the purpose of the rule. These gaps are overlooked or, for the legislator, unknown scenarios. For example, Ehrlich and Posner (1974) highlights the risk of both under- and over-inclusion of legal rules. In addition, certain areas are overly complex for all aspects to be covered in one clear-cut rule. The alternative, for the legislator, is to elaborate the rule into a set of detailed rules, covering all identified angles of the situation, or to sum all variables in a catch-all standard (Cheffins 1997). For a transaction cost analysis, this means that occasionally an accurate cost comparison must be made between on the one hand a standard and on the other a set of legal rules. Hence, in general, there is not a one-to-one relationship between standards and rules.

The literature on rules and standards, with focus on corporate law, can be summarized in the following manner. In general, compliance with rules adds on less transaction costs for contracting parties then standards. However, a legislative act consisting of only rules and no standards results in a detailed non-perspicuous regulation, putting it on top of the scale of the vertical axis of regulatory intensity. Therefore, maximum regulations with rules that cover all contingencies represent high transaction costs for the firm. Inevitably, certain questions must be regulated by standards.

Therefore, corporate law always consists of a mix between rules and standards. On the other end of the vertical scale, a piece of legislation heavily based on standards might be easier to overview, but costlier to comply with. When moving from maximum regulation, replacing rules with standards, transaction costs decreases as it eases the overview of the law (i.e. as the degree of complexity decreases). However, the decrease in transaction costs only continues to a point, where the savings in transaction costs represented by fewer rules are equal to higher transaction costs for compliance and lack of predictability represented by more standards or regulatory gaps (i.e. to the point where the increase of the uncertainty of what to do to avoid legal consequences associated with standards and gaps is equal to the decrease of the degree of complexity of having fewer rules). Beyond that point, the higher transaction costs of standards and legal uncertainty dominates. Hence, there is no linear relationship between regulation intensity and transaction costs. In conclusion, the literature on rules versus standards provides us with a middle course represented by the upper part of the vertical scale in our model as preferred outcomes.

To clarify, let us also examine what occurs with transaction costs if we move in the opposite direction from low regulation to high detailed regulation. More regulation is associated with supplementary rules that cover more contingencies. As standards are replaced with more detailed rules, uncertainty is diminished at the expense of more complexity for the individual in the form of more rules to keep track of. As remembered, both uncertainty and complexity lead to higher transaction costs because of the bounded rationality of the human being. Therefore, a tradeoff between complexity and uncertainty is achieved before the maximal regulation point is achieved. This point is likely to be situated at a point where there are more of rules than standards, i.e., above the horizontal line. Above the tradeoff point, transaction costs increase when standards are replaced by rules.

In the second stream of literature involving regulatory techniques, which affect the desired intensity of regulation (preferred position on the vertical axis from a transaction cost perspective), we find the theory of majoritarian defaults. According to this theory, regulation should, in accordance with the hypothetical bargaining model, correspond to what rational parties would have contracted for if they have had perfect information and did not encounter significant transaction costs and could be fully confident that the agreement achieved would be performed as agreed.

When applying the model normatively, with no specific individuals to consider, the model must always include generalization. The legislator must then decide on how detailed the regulation should be referred to as level of idealization (Charny 1991, p. 1821). Should the law correspond to what parties this transaction type would most likely have chosen (considering that parties in general do not regulate issues that are considered non-important or unlikely to occur)? Alternatively, should the law cover all possible scenarios? To lower transaction costs, the law should also cover situations that are rare and difficult to predict and therefore often are omitted or forgotten by actual parties. From the hypothetical bargaining model perspective, the legislator is in a better position than the average parties to formulate contract-covering contingences. The legislator has the advantages of a higher degree of rationality and more information that follows from specialization. People engaged in the lawmaking process have

advanced law education and get information and aptitudes from their daily work. These individuals are in a better situation to generate the best rule for a certain transaction type, i.e., a high degree of idealization (Charny 1991). Therefore, the literature supports an all-covering corporate law, which regulate both frequent and rare situations. In conclusion, also the theory on majoritarian defaults supports an inclusive corporate law represented by the upper part of the vertical scale in our model as preferred outcomes.

4.3 Horizontal axis: level of default

Let us now consider the horizontal axis to illustrate the level of default in the design of corporate law as a continuum between default and mandatory rules. In this section, we add a transaction cost analysis on default rules and show how these costs affect the level of default. In theory, the parties can derogate from default rules. However, depending on how much effort is needed to replace the legal rule or standard with contract terms, a default rule can be close to the mandatory endpoint because of high transaction costs. It is particularly cumbersome if a corporate law does not follow the hypothetical bargain model. The combination with high transaction costs to derogate from defaults will make most firms choose to stay with potentially suboptimal rules. Before entering into this discussion, let us explore the endpoints of the axis and certain arguments for the need of both mandatory and default corporate regulation.

The left-hand endpoint of the horizontal axis in Fig. 1 corresponds to non-mandatory rules or standards, also referred to as a gap-filling or default regulation (see e.g., Ayres 1993). The right-hand endpoint of the axis corresponds to a mandatory regulation. The parties cannot derogate from mandatory rules or standards, not even by a unanimous decision by the firm's shareholders. Considering the enabling role of corporate law, providing the parties with a standard contract, the law should correspond to the hypothetical bargaining model. If not, legal rules that do not fit the need of the parties will be costly to comply with. This finding is utterly important if the regulation is mandatory (cf. Bebchuk 1989). In economic theory, given that the legislator cannot foresee all possible circumstances, this argument is used to support a non-mandatory regime. A reason for default regulation is, as mentioned in Sect. 3.3, that no one, including the best lawmaker, will be able to construct a standard contract that suits all firms, e.g., listed versus unlisted firm, family firms versus non-family firms, closed versus open corporations, startups versus older firms, and firms of different sizes. Hence, a standard contract is bound to be a suboptimal for at least certain proportions of the firms in the economy. For example, transferable shares and separation of ownership and control are characteristics of large listed firms, but not of small and medium sized family firms. If the standard contract, provided by corporate law, essentially meet the needs of large firms, it is crucial for the rules to be of default character letting other firms agree on more suitable contract clauses (Hansmann 2006).

4.3.1 Why mandatory rules

It must be recognized that not all corporate rules or standards can be defaults. In particular, legal rules that strive to protect a certain interest are argued to be mandatory, to avoid circumvention of the law. This particularly applies to third-party interests. However, it is equally important to recognize that, although certain rules initially may appear as mandatory, they can continue to be legally circumvented. In fact, Romano (1989) argues that mandatory rules are not truly mandatory, since the owners can decide to incorporate in another state, which regulates the question differently. Notwithstanding state competition, rules that are inevitable for the corporation to function as a legal person are truly mandatory, e.g., rules that state that the corporation have legal rights and obligations. No agreement among the shareholders, or with stakeholders, can change this fact.

In corporate law, most mandatory rules have the character of protecting rules. A protecting rule can normally be derogated from by the consent of the protectee. Similarly, as in all private law disputes, the protectee can also choose not to file a lawsuit against the violator of the protecting rule and by doing so impliedly consent to the infringement. Under normal circumstances, this regulatory technique of protecting rules/standards will ensure accurate protection, at least as long as the protectee has reasonable opportunity to exercise his or her right. Given this characteristic of protecting rules, labeling them as mandatory is not always appropriate. In closely held firms, unanimous consent by all shareholders is both feasible and likely to happen. Therefore, shareholders' protection in these situations is better understood as default rules. In contrast, in corporations with dispersed ownership, unanimous consent might be impossible to achieve and therefore shareholders' protection rules, although default in theory, are in practice mandatory.

The need of protection in the form of mandatory rules arises when one of the parties is not capable of protecting its own interests, i.e., when transaction costs are excessively high to make contractual solutions between parties possible. This is often referred to as market failure or contracting failure (cf. Klausner 1995, p. 769; Armour et al. 2017a, b, p. 19). We can, as delineated by Cooter and Ulen (2008, pp. 226–231), distinguish three kinds of situations where high transaction costs motivate mandatory regulation. First, there can be external costs in the form of negative spillovers to a third party, i.e., someone not part of contract. Due to contact, contract and/or control costs, this third party cannot influence the contract to internalize the externalities. (For further discussion of this, see Easterbrook and Fischel 1989.) In corporate law, externalities are the typical argument for mandatory protection of creditors and future shareholders. A second reason for mandatory regulation is when parties face unequal bargaining power (Baldwin et al. 2012). The source of such inequality is often asymmetric information, opening the door for opportunistic behavior by one party (see e.g., discussion in Williamson 1985). However, several scholars do not see this as an argument for mandatory regulation. In contract theory, Ayres and Gertner (1999) are using this argument to argue for so-called minoritarian or penalty defaults (later questioned by Posner 2005). In corporate law, Bebchuk and Hamdani (2002) uses a similar argumentation to promote so-called reversible defaults, i.e. whenever lawmakers face a choice between two default arrangements

when neither is clearly superior, preference should generally be given to the alternative that is more restrictive of managers (see also Bebchuk 1989, p. 1412). The third reason for mandatory regulation is in situations of monopoly, which also could be seen as another situation with unequal bargaining power. Supplementing Cooter and Ulen's list, we wish to add a fourth situation; when one party in the contractual relationship in fact constitute a group of individuals, who together only with difficulty can coordinate their decisions to exercise their legal rights (e.g., high coordination costs). This finding occurs where a trade-off has to be made between decision costs and Pareto sanctioned decisions (see Buchanan and Tullock 1962; Charny 1991).

4.3.2 The transaction cost perspective on default rules

Regarding a transaction cost perspective on default rules, our argument is that such costs affect the level of default. A traditional default regulation uses the opt-out technique. Parties to a contract can derogate from an opt-out rule by including another rule in their agreement. From a corporate law perspective, this contract could either be the articles of association,[6] or a (unanimous) formal or informal agreement by the shareholders. In certain cases, the contract could be a formal decision made by the board of directors. For parties who want to use the flexibility of the law and adjust their contract accordingly, the regulatory technique of opt-out will lead to (at least) the following costs: The parties must be familiar with the law and the fact that the rules are defaults. Occasionally, this need necessitates obtaining counseling from a legal advisor. The parties then need to investigate alternative solutions to the regulated situation, negotiate and agree on the solution they believe fit their relationship best. The decision can be followed by formal requirements such as majority vote requirements, documentation and registration. Finally, there are costs associated with controlling and enforcing agreements.

As an example, suppose the law states free transferability of share as the default rule. Parties to a closely held business seeks advice from a legal consultant on whether a right of first refusal, a post-sale purchase right or a ban of transfers is recommended in their situation, given the ownership structure and family situation of the owners. The parties agree on a combined solution, which is included partly in the articles of associations, partly in a shareholders` agreement. However, future contingencies can complicate the contractual situation. If 2 years later, one of the owners enters into marriage, it provides the shareholders reason to reevaluate and maybe rewrite certain parts of the agreement. Alternatively, when an owner passes away, the remaining owners will enforce the transfer restriction chosen in the contract.

Irrespective of how natural the measures used in this example appears for any entrepreneur or consultant, one must observe the costs of including contingencies in a contract. High transaction costs carry a risk that rational parties will choose to

[6] In some legislation, like American state law, both the corporate charter and its bylaws govern the corporation. I Sweden however, only one document regulates the firm. When using the concept Articles of association we refer to these documents together.

not consider contingencies and will be stuck with suboptimal regulation instead of contracting for a tailored solution. One reason for such a rational inactivity can be that the parties believe that a situation is unlikely to occur and therefore not worth negotiating around (Eisenberg 1989; Korobkin 1997). In the rare event that a contractual regulation turns out to be needed, the decision of non-activity can be very costly. In conclusion, due to high transaction costs, opt-out as a regulatory technique must generally be placed away from the left-hand endpoint of the horizontal axis of our model and closer to the center of the scale.

There is also a status quo effect to consider in the explanation why parties stick with default rules although it does not appear optimal (Korobkin 1997, 1998). This kind of effect has been found in experimental tests of the Coase theorem. It has been found that "people sometimes demand much more to give up something that they have than they would be willing to acquire it" (Cooter and Ulen 2008, p. 91). This behavior is called the endowment effect. The status quo effect is very similar. This effect also must be considered when placing the opt-out technique along the horizontal axis.

4.3.3 Acknowledging altering rules

There are more transaction costs to be considered when discussing the opt-out regulatory technique, which leads us to what Ayres (2006, 2012) refers to as altering rules. Altering rules are understood as legal conditions for displacing a default rule or standard. One example of such condition found in corporate law concerns the amendment of the articles of association. Such an amendment required several actions. A decision must be made by the general meeting of shareholders, postulating numerous formal requirements to be fulfilled, including documentation and registration of the decision. If the parties fail to fulfill these requirements, the derogation from the default rule will not be legally binding. Scholars has specifically paid attention to the requirement in some American state corporate acts, stating that charter amendments must be precede by a proposal put forward by the board of directors (see e.g., Bebchuk and Hamdani 2002; Hannes 2004; McDonnel 2007), essentially giving management veto power over all charter amendments. We should also consider the costs of different majority requirements. As argued by McDonnel (2007), default rules are more or less "sticky" depending on who is assigned authority to take the decision to deviate from the default rule, and how this decision must be taken. Defaults rules that are the least cost demanding are referred to as Teflon-defaults, e.g., deviation does not compel a charter amendment and the decision can be taken by a simple majority vote by the board of directors. By adding on requirements, default rules becomes more and more sticky, e.g., supermajority vote by the board, majority vote by the general meeting, supermajority vote of the outstanding shares, approvals by supermajority vote of two sequel annual meetings, approvals by both the board of directors and the general meeting, up to the point of requiring unanimity of both.

By acknowledging altering rules, another type of transaction costs is identified, which affect the level of default in corporate design. To lower contracting costs, attention must also be paid to how altering rules can be eased or abolished. In

conclusion, for our model on corporate law design, a regulatory technique with high costs of using the altering rules must be placed further to the right-hand endpoint on the horizontal axis than the exact same technique with less cost intense altering rules. This conclusion applies regardless if the technique is based on rules or standards or if it corresponds to the hypothetical bargaining model or not.

4.3.4 Alternative default regulatory techniques

As shown above, the opt-out regulatory technique carries higher or lower transaction costs and these costs effect the level of defaults. Alternative regulatory techniques can be considered to find an appropriate level of stickiness. In this section we enlighten opt-ins, menus and Future Oriented Defaults to lower transaction costs and sunset provisions in order to make the defaults rules more sticky.

If a legislator truly strives for a default character of the corporate legislation, it must consider other regulatory techniques than opt-out. One alternative is to use opt-in regulation as it adds on less transaction costs for the parties then opt-out. By opt-ins, we understand legal rules or standards that are not automatically applicable to the contract but are dependent on an active choice by the parties. A distinction should to be made between opt-in rules that the firm is free to adopt and the case when the opt-ins represent the only deviations permitted from the main principle. In the latter situation, the opt-in is better understood as a part of a mandatory regime than a non-compulsory alternative.

The cost lowering effect of an opt-in technique is, first that it clearly indicates that the legal question is within a non-mandatory field of the law. Second, it directly states an alternative to the default rule, which helps the parties in their search for suitable alternatives. However, opt-in rules do not only save costs for the firm by supplying ready-made alternative contracts, there is also a network effect to consider (cf. Klausner 1995). The fact that the legislator has approved the formulation of an alternative contract clause is likely to consequently have that the clause will be frequently used and thus be subject to benefits of standardization. As the telephone becomes more attractive and valuable, the more telephones exist; a contract clause also becomes more attractive the more frequently it is used. Among other things, the interpretation, information, price, and accessibility to legal services are facilitated by the benefits of network externalities. This lowers the cost of contracting and enforcement.

Opt-ins can also be combined into sets of rules, often referred to as menus (Ayres 2006). The advantage of such a regulatory system is that the opt-in solutions can be tailored for different groups of firms, e.g., corporations with sole ownership, family firms, closely held businesses and listed corporations with dispersed ownership. This regulatory strategy helps the law to function as a standard contract corresponding to the hypothetical bargaining model for not just one main type of corporate businesses, but several. However, simplification is desired in menus to facilitate the choice of best rules. An excessive number of choices will affect the legislation in regulation intensity, putting it on the cost intense higher end of the vertical axis in our model. A menu of a limited number of opt-in rules that fit two or more types of corporations in the economy can substantially lower transaction costs. For this to

be feasible, the menus do not have to cover full charters that regulate all aspects of corporate law (which often seems to be the presumption in the literature). Instead, we argue that opt-ins in the form of menus can preferable be used to determine a selected section of the legislation, such as the transferability of share or the decision-taking organs in the firm. If the legislator succeeds in this endeavor, the regulatory technique of menus can be placed far to the left on the horizontal axis of our model in Fig. 1.

In literature, we also find a specific discussion on enabling default arrangements in the regulation of takeovers. Two articles dealing with this issue are Bebchuk and Hamdani (2002) and Hannes (2004). Bebchuk and Hamdani consider the case where, without an initiative from the boards of directors, shareholders are unable to change the corporate charter in order to opt-out of the default antitakeover devices. Since the default rules are favorable to the management, it is unlikely that it will suggest such an amendment. Hence, although default in theory, due to high transaction costs these rules have become close to mandatory. While Bebchuk and Hamdani suggest a reversible default referring to the material content of the default rule (giving preference to the solution that is more restrictive of managers), Hannes stresses that this will not help midstream corporations that already have clauses in their charters allowing antitakeover devices. Instead, he suggest an alternative regulatory technique, called Future Oriented Defaults, that eliminate current charter provision and at the same time set a new default standard. The corporations are free to change their charter to opt out of the standard, including readopt their old management friendly charter provisions, but it necessitates an approval of the general meeting. The underlining purpose of the Future Oriented Defaults is to increase the level of default of specific rules or standards by penetrating a status-quo situation due to immutable transaction costs. The Future Oriented Defaults should therefore always be placed to the left of the rule it is suppose to revert on the horizontal axis of our model in Fig. 1. However, how far to the left depends on how well it represents a majoritarian default, the costs of altering rules and other transactions costs of contracting.

Scholars have also argued that sometimes it is appropriate to use regulatory techniques associated with high transaction costs in order to protect parties without using mandatory regulation. One alternative is a so-called sunset provision. According to a sunset default rule, any contractual diversion is only applicable for a given period of time; after that, the opt-out solution must be re-approved or the corporation reverts to the default (see eg., McDonnel 2007, p. 410–413). Again, this regulatory technique can be used to address the problem with pro-management provisions in the charters, when amendments of the charter are dependent on management initiatives. The argument is weaker when the corporate act allows shareholders, individually or representing certain percentage of the outstanding stock, to initiate amendments. In theory the technique could also be used for diversion from minority shareholders protection rules in situations when mandatory legislation cannot be fully motivated. However, it should be noted that periodical review of articles of association is costly. Increasing transaction costs of contracting place this regulatory technique rather far to the right on the horizontal axis of our model in Fig. 1.

Finally, it is to be noted that the ownership structure might matter for the need to protect shareholders. In a recent article by Goshen and Hannes (2018)

it is argued that the increased competent institutional ownership of US corporations makes it less necessary to use corporate law to protect shareholder interests against managers. Private ordering solutions are increasingly used to solve conflicts outside the courtroom. However this argument is primarily valid for listed corporation and not for the majority of corporations with less than four owners.

4.4 Model summary and normative application

Regulatory techniques have different effects on the transaction costs of complying parties, i.e. between shareholders, directors and executive managers in a corporation. To illustrate the differences between regulatory techniques, we use a model showing the level of regulation intensity and level of default. When the two dimensions, represented by the vertical and the horizontal axes of our model, are combined, it is possible to draw general conclusions on preferable techniques from a transaction cost perspective.

Starting with the vertical axis in Fig. 1, we integrate findings from two streams of literature. Both support a regulatory technique that corresponds to a high level of regulation intensity. First, according to the literature on rules versus standards, clear-cut rules are associated with greater predictability and therefore lower compliance costs. Hence, rules should be used to regulate frequent situations for the firm, while standards, being more flexible for changes in society, should be used mainly to regulate non-day-to-day situations. Second, in accordance with the literature on majoritarian defaults, the theory supports legislation to also cover situations, which are difficult to predict and therefore often are omitted or forgotten by actual parties. Together, these two lines of arguments compose the vital elements for corporate law to function as a standard contract. In conclusion, theory support regulatory techniques are to be placed on the upper end on the vertical axis. However, not on top, as such an all-inclusive piece of legislation would be overly costly to overview and comply with.

For the legislation to fulfill the function as a standard contract, the legislator must consider the heterogenic needs of firms. Hence, the legal framework cannot fit the needs of all corporations; therefore, the rules, as a starting point, should be of default character. Examining the horizontal axis in Fig. 1, a transaction cost analysis favors a level of default to the left of the center of the scale. To achieve this level of default, the legislator cannot only rely on opt-out techniques. High transaction costs often make the parties reluctant to derogate from the legal norms. Instead, the legislator should combine opt-out-regulation with opt-in alternatives, possibly combined in small menus. In the mission of lowering the parties' transaction costs, the legislator must also acknowledge the cost of applying altering rules and recognize when default rules in reality has become mandatory due to immutable transaction costs.

In sum; the preferred area of regulation in our model, when applied to the regulation of organization and decision-taking organs, is illustrated as the shadowed area in Fig. 2.

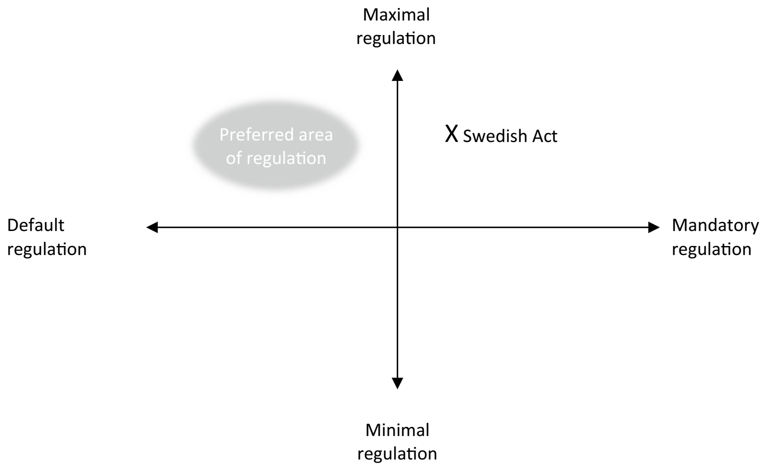

Fig. 2 Default and regulation intensity aspects of the Swedish case

5 Applying the model to the Swedish case

In this section, we illustrate the usage of the two-dimension model by applying it to a specific case. The full-length analysis of this case can be found in Almlöf (2014, chapter 9). The case addresses the regulation of organization and decision-taking organs in Swedish corporate law when applied to closely held businesses. Hence, the analysis illustrates the application of the model to a set of legal norms. In Sect. 6, we elaborate on how the model can be used in other areas of law.

Let us start by considering the vertical axis. In sum, the Swedish regulation on organization and decision-taking organs can be placed in the upper area of our model, see Fig. 2. The reason is two-folded. First, the one-size-fits-all approach itself leads to a numerous number of legal norms, as the law must fit the need of corporations of all sizes. For example, for public corporations, it is compulsory to have a CEO, while voluntary in private firms, and role of the chairman of the board is regulated in closer details. Covering these different scenarios adds on legal norms and increases regulatory intensity. Second, in the area of organization and decision-taking organs, few legal questions are regulated by standards. Instead, the act consists of primarily rules, including many details of e.g., notice for meetings, meeting proceedings or adjournment. Hence, the legislator regulates most anticipated scenarios.

Based on these observations, it is possible to conclude that the Swedish Corporation Act is following a hypothetical bargaining model with a high level of idealization and including situations that are rare and difficult to predict and therefore often are omitted or forgotten by actual parties. As discussed in Sect. 4.2, literature supports such legislative technique with high level of regulatory intensity. However, it is not possible to conclude that the law corresponds to majoritarian defaults, as it regulates firms of all sizes and organizational needs in one and the same act. As the act must fit corporations with dispersed ownership, the needs of closely held businesses

are overlooked. For example, the act includes detailed rules on voting proceedings at the general meeting based on majority vote, but offers no solution to corporations with two owners in case of deadlocks (see e.g., Andersson 2010; Neville 2010). This is unfortunate, since empirical studies show that partners often select an ownership structure of equal power or assume that decisions are taken unanimously (see e.g., Neville 2006, p. 88). Further, in shareholders agreements the owner-managers often includes clauses of veto rights, granting possible minority shareholders a greater protection than provided by law. This also indicates that the law is not corresponding to the needs of closely held firms. This is unsatisfactory, since, as accentuated in Sect. 2, only approximately 1500 of all registered *Aktiebolag* are public corporations, and merely one-third of them are listed on a stock exchange; this is 0.25 percent of all registered corporations. Consequently, the law as a standard contract is suboptimal for most firms. The situation is not helped by the fact that Sweden lacks specialized courts in corporate matters, which could entail the expertise to potentially overcome mismatches between the purpose of the law and its applicability to closely held firms.

As indicated in Sect. 2, the legislator recognizes this mismatch. Thus, the majority of the rules on organization and decision-taking organs are non-mandatory, which highlights the default aspect of the regulation as illustrated by the horizontal axis of our model. The opt-out regulation technique is exclusively used for this purpose, i.e. no opt-in alternatives or menus can be found in this part of the Swedish corporate act. The default rules can be derogated from by a resolution by the shareholders in one of two alternative means. The first alternative is by a formal decision to amend the articles of association made by the general meeting of shareholders. By this decision, the contract clause included in the articles will affect all current and future shareholders. The act expressly regulates when this effect is possible. For example, the articles can include rules on how to give notice to shareholders for the general meeting, as the legislator has anticipated that closely held firms prefer a quicker and more informal way to give notice. The second alternative is a decision to depart from the default rule made by unanimous assent among the shareholders. Such decision will only affect the specific situation to which the assent applies, as it cannot have an effect on future shareholders. The act only stipulates one situation when this opt-out alternative is possible, with all other situations remaining un-codified. For example, with unanimous assent, the shareholders can without notice hold an extra general meeting and pass a resolution, which infringe the norm of equal treatment. In a family firm, the older generation shareholders might find it relevant to take a decision that give privilege to the younger generation, maybe as a step in a succession plan. Even if the shareholders are entitled to pass such resolution, it is impossible to grasp this by reading the statues.

As indicated in this paper, the regulatory technique of opt-out is often associated with high transaction costs, bringing the technique close to the right of the center on the horizontal axis of the model. The opt-out rules in Swedish corporate law has high costs of altering rules as the agreement by the shareholders must fulfill formal requirements for the decision to count as a derogation from the legal norm. More cumbersome, the law is silent on when the second alternative, derogation though unanimous assent, is possible. To fully understand the scope of the principle of

unanimous assent, one must perform an advanced legal analysis searching for the underlying purpose of the legal norm. Hence, legal expertise is required for the parties to take full advantage of the flexibility of the law.

The above leads to the conclusion that, due to high transaction costs, the default regime of the Swedish Corporate Act is partly illusive. The flexibility of the law is hampered by the opt-out regulatory technique, the high costs of altering rules and the veiled principle of unanimous assent. When placing the Swedish Corporate law into our two-dimensional model, it will appear in the higher end of the vertical axis, representing high regulation intensity due to high degree of complexity and slightly to the right on the horizontal axis, representing a regulation with a low level of default. This does not correspond to the normative conclusions in Sect. 4, which stipulates that the regulation of organization and decision-taking organs should be significantly further to the left. However, more cumbersome, this finding does not correspond to the intent of the legislator, who is aware that the law design fails to meet the needs of closely held businesses (i.e., deviates from the theory of majoritarian defaults) but argues that this is compensated by the level of default (Preparatory works Prop. 2004/05:85, pp. 199–203).

Therefore, we argue that, in future legal reforms, the traditional opt-out regulations technique should be supplemented, and occasionally replaced, by other techniques. The Swedish legislator should strive for default rules that truly correspond with the hypothetical bargaining model. This finding means that the model firm should be closely held with few owners. The majoritarian defaults could be supplemented by tailored opt-in solutions for one-owner firms, closely held firms with separation between ownership and control and companies with a distributed ownership. An alternative would be to have separate corporate laws for corporations with dispersed ownership and closely held businesses. We also argue for a codification of the principle of unanimous assent to illustrate the veiled non-mandatory portion of the legislation and a clarification of the scope of the principle. This will lower the transaction costs and thus strengthen the level of default in corporate law.

6 The universal character of the model

So far, we have demonstrated how the model can be applied in an analysis of corporate law in a specific country, viz. Sweden. However, we envision also other uses and argue that it has a potential universal character.

First, the model could be applied to other areas of corporate law, e.g., the regulation on capital requirements, the transferability of shares or the regulation on directors' liability. It has the potential to serve as an analytic tool for policy changes as it eases the understanding of how transaction costs affect the effectiveness of the different techniques and how regulatory techniques can be used to match the needs of different types of corporations. Literature within these fields of corporate law will guide researcher to normative argument on preferred position in the model. In other words, when changing focus to another area of corporate law the preferred position in Fig. 2 will change in accordance with the literature within that field. For example, literature focusing on negative externalities

and reasons for mandatory regulation (see e.g., Coase 1960; Wagner 2011; Easterbrook and Fischel 1989; Romano 1989; Gordon 1989) can assist in applying the model to capital requirement and creditor protection in small and medium sized firms. This stresses that the model is an analytic tool, not a normative instrument.

Second, as the model visualizes alternative regulatory techniques, it allows comparison of different legal solutions and is therefore useful for comparative legal studies. For example, as a call for future research, it would be interesting to apply the model to corresponding sets of legal norms from other states and countries, representing different legal families and compare with the conclusions of this study. Hence, the model is also valuable for comparative studies where solutions are compared, not only based on their legal content, but also on the regulatory techniques used. An illustrating and contrasting, but also rather simplifying, comparative case to the Swedish one could be the suggestion for a European private company, the SPE (Societas Privata Europaea). The proposal of a European private company was put forward by the European Commission in 2008, never agreed upon and final withdrawn in 2014 (see COM(2008) 396 Final and 2014/C 153/03). The suggested company form was, on the European level, meant to be subject to a minimalistic regulation composed of only mandatory rules. The regulation of organization and decision taking organs was scaled down to the division of power between the shareholders and the managing body. The rules ensured the shareholders exclusive and non-delegable authority of a number of fundamental corporate issues such as; variation of rights attaching to shares, amendments to the articles of association, approval of the annual accounts, appointment and removal of directors and their terms of office and increase or reduction of share capital. Such decisions were meant to be taken with supermajority vote, corresponding to two-thirds of the outstanding shares. Director's duties were regulated with catch-all standards, but complex issues such as the right of shareholders to challenge resolutions or director's liability was to be governed by the applicable national law. Issues not regulated by proposal were at large left for parties to decide in the articles of association. In an appendix to the suggested act, parties found a list of items that upon registration must be regulated in the articles of association. However, there was no guidance on how to regulate, such as opt-in alternatives or standard charter provisions to copy. Hence, the suggested regulation of a European private company did not follow the theory of corporate law as a standard contract.

Therefore, when placing the SPE-case in our model, it ends up in the lower area of the scale of the vertical axis of regulatory intensity, representing a minimalistic regulatory approach with mostly rules and only some standards. It will also be placed far to the right as the regulation was mostly mandatory and parties were upon registration demanded to regulate non-mandatory issues in their articles of association, but left without guidance that could save transaction costs. Hence, when assessing the regulation of organization and decision-taking organs, the SPE-case appears in our model of default and regulation intensity aspects of corporate law opposite the preferred area of regulation as discussed in Sect. 4. Clearly, there were other considerations than contemporary research on economic analysis of the design of corporate law that were the driving forces behind the proposal.

Third, and finally, as the analysis shift with the literature in the field, we see the potential that our model can be applied in other areas of law as well. Especially legal fields that for long has been subject to economic analysis and regulation theory, such as long-term contractual relationships, competition law and labor law.

7 Concluding remarks

In this paper, we present a two-dimension model on corporate law design. Both dimensions are found in the earlier literature on the regulation of corporations; however, until recently, they have not been combined and integrated into one model. This model functions as an analytic tool that helps us to understand and evaluate different regulatory techniques based on their level of regulation intensity and the level of default. By applying the model to the Swedish case, we illustrate how the model can be used as an analytic tool for suggestions of policy changes based on a transaction cost analysis of a chosen set of legal norms.

The point of departure for our analysis is that one purpose of corporate law is to decrease the transaction costs for parties by offering attractive contract solutions that are adaptable to different and changing circumstances. Through corporate law, the legislator can assist the firm in their search for a contractual solution that aligns the interests of shareholders in firms that have different ownership structures and plans for future ownership changes. By reducing transaction costs, the legislator ensures that the corporate form continues to be attractive.

With the help of our two-dimension model, we have shown that it is not sufficient to have default rules that provide firms the freedom to design their own rules that regulate the relationships between shareholders, or with the management. Equally, a low degree of regulation makes firms clueless regarding how to address conflicts. The legislation can help firms by offering a standard contract that lowers the transaction costs of contracting and that considers the heterogeneity of firms. To succeed in this endeavor, the legislator should combine default rules and standards of opt-out character with opt-in alternatives and menus. Regarding the choice between rules or standards as regulatory techniques, we find that rules should be used to regulate frequent situations, while standards should preferably regulate seldom-occurring contingencies.

We encourage more research on conceptual, empirical and/or comparative aspects of regulatory design. Such studies should, among other things, strive for conclusions that can assist national lawmakers in the choice of regulatory techniques. As the model visualizes alternative regulatory techniques and allows for comparison of different legal solutions, we see that it potentially has universal character and could be used in other areas of corporate law, as well as in other legal fields.

Acknowledgements An earlier version of this paper was presented at the 9th Annual Nordic Corporate Governance Network Workshop in Reykjavik. Financial support from the Vinnova project "Financing of Innovation" is gratefully acknowledged. Furthermore, we are particularly thankful for the valuable comments provided by Professor Jesper Lau Hansen, University of Copenhagen and Kristinn Már Reynisson, Reykjavik University.

Open Access This article is distributed under the terms of the Creative Commons Attribution 4.0 International License (http://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made.

References

Almlöf, H. (2014). *Bolagsorganens reglering och dess ändamålsenlighet: en aktiebolagsrättslig studie om ägarledda bolag*. Stockholm: Jure, Jönköping International Business School.

Andersson, J. (2010). Minority shareholder protection in SMEs: A question of information *ex post* and bargaining power *ex ante*? In M. Neville & K. E. Sørensen (Eds.), *Company law and SME's* (pp. 191–206). København: Thomson Reuters.

Armour, J., Hansmann, H., & Kraakman, R. H. (2017a). Agency problems and legal stategies. In R. H. Kraakman, et al. (Eds.), *The anatomy of corporate law: A comparative and functional approach* (pp. 29–48). Oxford: Oxford University Press.

Armour, J., Hansmann, H., Kraakman, R. H., & Pargendler, M. (2017b). What is corporate law? In R. H. Kraakman, et al. (Eds.), *The anatomy of corporate law: A comparative and functional approach* (pp. 1–28). Oxford: Oxford University Press.

Arrow, K. J., & Debreu, G. (1954). Existence of an equilibrium for a competitive economy. *Econometrica, 22*(3), 265–290.

Arvidsson, N., & Samuelsson, P. (2006). Det behövs en ny företagsform för ägarledda fåmansbolag. *Balans* (12), 45.

Ayres, I. (1993). Preliminary thoughts on optimal tailoring of contractual rules. *Southern California Interdisciplinary Law Journal, 3*(1), 1–18.

Ayres, I. (2006). Menus matter. *The University of Chicago Law Review, 73*(1), 3–15.

Ayres, I. (2012). Regulating opt-out: An economic theory of altering rules. *The Yale Law Journal, 121*(8), 2032–2116.

Ayres, I., & Gertner, R. (1989). Filling gaps in incomplete contracts: An economic theory of default rules. *The Yale Law Journal, 99*(1), 87–130.

Ayres, I., & Gertner, R. (1999). Majoritarian versus minoritarian defaults. *Stanford Law Review, 51*(6), 1591–1613.

Baldwin, R., Cave, M., & Lodge, M. (2012). *Understanding regulation: Theory, strategy, and practice* (2nd ed.). Oxford: Oxford University Press.

Bebchuk, L. A. (1989). The debate on contractual freedom in corporate law. *Columbia Law Review, 89*(7), 1395–1415.

Bebchuk, L. A., & Hamdani, A. (2002). Optimal defaults for corporate law evolution. *Northwestern University Law Review, 96*(2), 489–519.

Bennedsen, M., & Nielsen, K. M. (2010). Incentive and entrenchment effects in European ownership. *Journal of Banking & Finance, 34*(9), 2212–2229.

Bjuggren, P.-O., Eklund, J. E., & Wiberg, D. (2007). Ownership structure, control and firm performance: The effects of vote-differentiated shares. *Applied Financial Economics, 17*(16), 1323–1334.

Buchanan, J. M., & Tullock, G. (1962). *The calculus of consent: Logical foundations of constitutional democracy*. Ann Arbor: The University of Michigan Press.

Charny, D. (1991). Hypothetical bargains: The normative structure of contract interpretation. *Michigan Law Review, 89*(7), 1815–1879.

Cheffins, B. R. (1997). *Company law: Theory, structure, and operation*. Oxford: Clarendon.

Coase, R. H. (1937). The nature of thefirm. *Economica, 4*(16), 386–405.

Coase, R. H. (1960). The problem of social cost. *Journal of Law and Economics, 3*(1), 1–43.

Coffee, J. C., Jr. (1989). The mandatory/enabling balance in corporate law: An essay on the judicial role. *Columbia Law Review, 89*(7), 1618–1691.

Coffee, J. C. Jr. (2001). Do norms matter? A cross-country examination of the private benefits of control. *Columbia Law School: The Center for Law and Economic Studies*, Working paper no. 183. SSRN: http://papers.ssrn.com/paper.taf?abstractid=257613. Accessed 2018.

Cooter, R., & Schäfer, H.-B. (2012). *Solomon's knot: How law can end the poverty of nations*. Princeton, NJ: Princeton University Press.

Cooter, R., & Ulen, T. (2008). *Law & economics* (5th ed.). Boston, Massachusetts: Pearson/Addison Wesley.
Dyck, A., & Zingales, L. (2001). *Private benefits of control: An international comparison*. The Center for Research in Security Prices, working paper no. 535, Available at SSRN: http://papers.ssrn.com/abstract=296107. Accessed 2018.
Easterbrook, F. H., & Fischel, D. R. (1982). Corporate control transactions. *Yale Law Journal, 91*(4), 698–737.
Easterbrook, F. H., & Fischel, D. R. (1986). Close corporations and agency costs. *Stanford Law Review, 38*(2), 271–301.
Easterbrook, F. H., & Fischel, D. R. (1989). The corporate contract. *Columbia Law Review, 89*(7), 1416–1448.
Ehrlich, I., & Posner, R. A. (1974). An economic analysis of legal rulemaking. *Journal of Legal Studies, 3*(1), 257–286.
Eisenberg, M. A. (1989). The structure of corporate law. *Columbia Law Review, 89*(7), 1461–1525.
Gordon, J. N. (1989). The mandatory structure of corporate law. *Columbia Law Review, 89*(7), 1549–1598.
Goshen, Z., & Hannes, S. (2018). *The death of corporate law*. European Corporate Governance Institute. Law working paper no. 402/2018 (pp. 1–45). http://ssrn.com/abstract_id=3171023. Accessed 2018.
Hannes, S. (2004). Corporate stagnation: Discussion and reform proposal. *Journal of Corporation Law, 30*(1), 50–95.
Hansmann, H. (2006). Corporation and contract. *American Law and Economics Review, 8*(1), 1–19.
Hansmann, H., & Kraakman, R. (2000). The essential role of organizational law. *Yale Law Journal, 110*(3), 387–440.
Högfeldt, P. (2005). The history and politics of corporate ownership in Sweden. In R. K. Morck (Ed.), *A history of corporate governance around the world: Family business groups to professional managers* (pp. 517–580). London: University of Chicago Press.
Jensen, M. C. (1983). Organization theory and methodology. *Accounting Review, 58*(2), 319–339.
Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, 3*(4), 305–360.
Kaplow, L. (1992). Rules versus standards: An economic analysis. *Duke Law Journal, 42*(3), 557–629.
Klausner, M. (1995). Corporations, corporate law, and networks of contracts. *Virginia Law Review, 81*(3), 757–852.
Koop, C., & Lodge, M. (2015). What is regulation? An interdisciplinary concept analysis. *Regulation & Governance, 11*(1), 95–108.
Korobkin, R. (1997). The Status quo bias and contract default rules. *Cornell Law Review, 83*(3), 608–687.
Korobkin, R. (1998). Inertia and preference in contract negotiations: The psychological power of default rules and form terms. *Vanderbilt Law Review, 51*(6), 1583–1651.
La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1998). Law and finance. *Journal of Political Economy, 106*(6), 1113–1155.
Lekvall, P. (2014). *The Nordic Corporate Governance Model—With comment by Ronald J. Gilson and contributions by national experts*. Stockholm: SNS Förlag.
McDonnel, B. (2007). Sticky defaults and altering rules in corporate law. *SMU Law Review, 60*(2), 383–439.
Nerep, E. (1999). Om reformeringen av aktiebolagsrätten i Sverige. In L. Gorton, et al. (Eds.), *Festskrift till Gunnar Karnell* (pp. 489–500). Stockholm: Carlsson Law Network, Jure.
Neville, M. (2006). Conflicts in small and medium-sized enterprises. In P. K. Andersen, N. J. Clausen, & R. Skog (Eds.), *Shareholder conflicts* (pp. 87–129). København: Thomson Reuters.
Neville, M. (2010). A statutory buy-out right in SMEs—An important corporate governance mechanism and minority protection? In M. Neville & K. Ensig Sørensen (Eds.), *Company law and SMEs* (pp. 247–293). København: Thomson Reuters.
Nicita, A., & Vatiero, M. (2014). Dixit versus Williamsin: The 'fundamental transformation' reconsidered. *European Journal of Law and Economics, 37*(3), 439–453.
Parisi, F., & Fon, V. (2009). *The economics of lawmaking*. New York: Oxford University Press.
Posner, R. A. (1992). *Economic analysis of law* (5th ed.). Boston, Massachusetts: Little Brown and Company.
Posner, E. P. A. (2005). *There are no penalty default rules in contract law*. University of Chicago Law & Economics, Olin working paper no. 237 (pp. 1–27).
Roe, M. J. (2002). Corporate law's limits. *Journal of Legal Studies, 31*(2), 233–271.

Roe, M. J. (2008). The Institutions of corporate governance. In C. Menard & M. M. Shirley (Eds.), *Handbook of new institutional economics* (pp. 371–399). Boston: Springer.
Roe, M. J., & Vatiero, M. (2018). Corporate governance and its political economy. In J. N. Gordon & W. G. Ringe (Eds.), *The Oxford handbook of corporate law and governance (Ch. 3)*. Oxford: Oxford University Press.
Romano, R. (1989). Answering the wrong question: The tenuous case for mandatory corporate laws. *Columbia Law Review, 89*(7), 1599–1617.
Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. *Journal of Finance, 52*(2), 737–783.
Skog, R. (2006). Ny företagsform utan personligt ägaransvar? *Balans, 32*(11), 23–26.
Wagner, G. (2011). Mandatory contract law: Functions and principles in light of the proposal for a directive on consumer rights. In A. I. Ogus & W. H. Boom (Eds.), *Juxtaposing autonomy and paternalism in private law* (pp. 9–42). Oxford: Hart Publishing.
Weber, F. (2013). European integration assessed in the light of the `rules vs. standards debate´. *European Journal of Law and Economics, 35*(2), 187–210.
Williamson, O. E. (1975). *Markets and hierarchies: Analysis and antitrust implications: A study in the economics of internal organization*. New York: Free Press.
Williamson, O. E. (1985). *The economic institutions of capitalism: Firms, markets, relational contracting*. New York: Free Press.
Williamson, O. E. (1988). Corporate finance and corporate governance. *Journal of Finance, 43*(3), 567–591.
Williamson, O. E. (2002). The lens of contract: Private ordering. *American Economic Review, 92*(2), 438–443.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.