Executive summary

In 2006, a reform changed the Swedish tax rules for dividends to active owners of closely held corporations, the so-called 3:12 rules. Tax relief of SEK 1 billion reduced the tax burden on closely held corporation owners, with the aim of stimulating businesses activity, spurring investment, and creating jobs.[10] This reform effectively reduced the dividend tax rate by 10 percentage points for active owners of closely held corporations and simultaneously increased the amount of dividends to be taxed at this reduced tax rate (the dividend allowance) for most active owners. In addition, an optional, alternative method for calculating the dividend allowance was introduced, the simplification rule, under which the dividend allowance is fixed per firm, independent of its capital, wage costs, or activity of the firm. In sum, these changes made it beneficial to be taxed under the 3:12 rules for many shareholders and spurred income-shifting[11], as documented by Alstadsæter and Jacob (2012a).

So far, there is no scientific empirical evidence of any effects of the 2006 reform on business activity. The present report addresses open questions in the evaluation of the 2006 tax reform and closes the gap between evidence of increased income shifting around 2006 and, still unknown reform effects on business activity. In particular, this report studies the effects of the 2006 reform on corporations' investments in real capital, employment, the establishment of truly new corporations, and the income of owners and corporations.

Three questions are addressed in the present report and empirically analyzed separately in Chapters 2 to 4. We briefly summarize our findings to each question as follows.

[10] Edin et al. (2005), Government Bill 2004/05:1, 2005/06:40, and 2006/07:1.

[11] Income shifting is the process of reclassifying income across time, jurisdictions, and tax bases to reduce taxes.

1. **Did the 2006 tax reform affect investments and job creation?**
   Yes, to some extent. The 2006 tax reform changed the allocation of investments in capital stock across firms. After the reform, corporations with limited internal funding increased their investments relative to firms with cash reserves and retained earnings. In other words, investments shifted to firms with investment opportunities but not the necessary funds. This result is in line with economic theory. The dividend tax cut created access to cash and thereby improved the allocation of funds across firms. In contrast to investments in real assets, employment was mostly unaffected by the reform. The 2006 tax reform apparently had a very small effect on job creation. On the other hand, we find that the labor income of employees in closely held corporations increased after the reform and more so in closely held corporations with limited internal funds.

2. **Did the 2006 tax reform affect the establishment of new corporations with real activity?**
   No. The increased number of new closely held corporations with real activity has been mainly driven by an increase in the number of existing partnerships and self-employed changing their organizational form to closely held corporations. This increase in incorporations of the self-employed and partnerships is driven by tax incentives.

3. **Did the 2006 tax reform affect the income of business owners and firms?**
   Yes, to some degree. Our results indicate that the marginal firm that incorporates after the 2006 reform is less productive and has less growth potential than before the reform. However, the self-employed and partnerships incorporating still have higher profitability and growth than comparable firms that stay unincorporated. Changing the organizational form to a closely held corporation also appears to increase the overall income of business owners.

We utilize new and very rich data sets to evaluate the responses of individuals and firms to the 2006 reform in the 3:12 rules. Since the effect of the tax reform may overlap with other effects such as economic growth, we need to contrast corporations that benefit from the tax reform (treatment group) with corporations that are not affected by the tax reform (control group) but have similar corporate characteristics. We do this using a so-called difference-in-difference analysis. To test how the 2006 tax reform affected the allocation of investments across firms in Sweden, we follow the approach of Becker et al. (2013) and compare corporations with internal funding (cash-rich firms) to corporations with little access to internal funding (cash-poor firms). When evaluating the effects of incorporation, we compare the profitability and growth of firms incorporating with the profitability and growth of comparable firms that remain unincorporated and of comparable existing closely held corporations.

We present no results for the overall economic or tax revenue effects of the total income-shifting responses to the 3:12 rule changes as documented by Alstadsæter and Jacob (2012a) or for the effects on value creation, as documented in the present report. There is no suitable comparison group to make a valid identification of aggregated effects, since all non-listed corporations are affected by the reform.

It is left for future research to quantify these total effects to study what is driving the various real effects documented in the present report and how they might vary across different types of sectors and types of individuals. It is thus not possible to conclude whether the effects on value creation compensate for the widespread income-shifting effects of the 2006 reform. It is, however, important to point out that the behavior of Swedish firms with respect to the economic factors described in this report is in accordance with the predictions of economic theory.

By tightening some of the loopholes within the 3:12 rules, one could reduce the extent of tax-minimizing income shifting and tax planning without altering any effects of the 3:12 rules on growth and value creation. This is discussed in more detail in Chapter 5. Next we briefly summarize the analysis and results of Chapters 2 through 5 and close with some policy recommendations.

Chapter 2: The effects of the 2006 reform on investments and job creation

We analyze the effects of the 2006 reform on the distribution of investments and employment within the group of closely held corporations. More specifically, we compare the behavior of cash-poor firms relative to cash-rich firms in the periods around the reform.[12] Scientifically reliable estimates of the effects on the levels of investments and employment of the firms were not feasible due to the lack of a reliable control group for the estimations.

The main result of this chapter is that the 2006 reform changed the composition of investments, since cash-constrained closely held corporations appeared to raise fresh capital and increase their investments after the reform compared to otherwise similar corporations that were not cash constrained. The reform thus changed the allocation of investments across corporations. Such an allocation response is in line with the predictions of economic theory and is suggested to increase efficiency in the economy.

Reducing the dividend tax will have different investment incentive effects on firms with low and high levels of retained earnings.

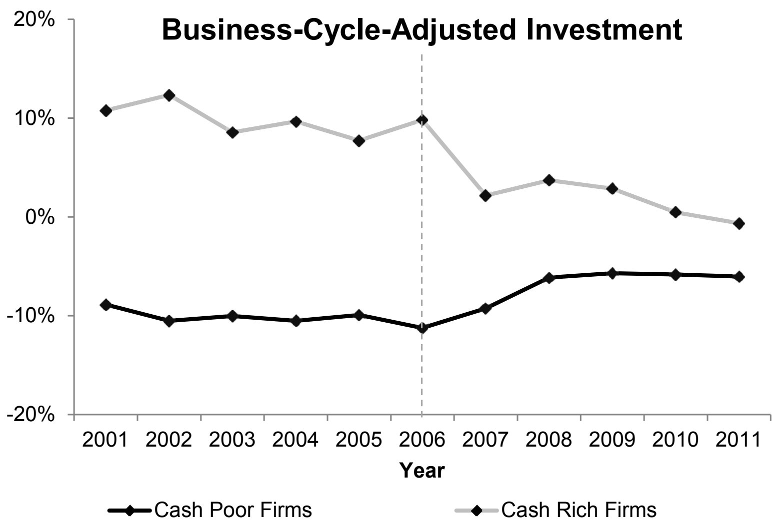
A dividend tax cut, such as the 2006 tax reform, is expected to have different effects on various firms, depending on their access to funding. Some firms have internal funds, for example, large cash holdings or retained earnings. A cut in the dividend tax does not change the required rate of return to invest and hence these firms are, in theory, unresponsive to changes in the dividend tax cut. In contrast, firms with low internal funds cannot finance investments internally and hence need to raise new external equity to undertake investments. A dividend tax cut reduces the required rate of return for these firms and consequently the 2006 tax reform is expected to increase the investments of firms with low internal funds.

[12] We follow the approach of Becker et al. (2013) and sort our firms into quintiles based on internal access to funding, measured by the ratio of cash to assets. We use the top and bottom quintiles of the cash-to-assets ratio to compare investment effects across firms. We denote firms as cash rich if they belong in the top 20% of the distribution of cash to assets in an industry–year group. Second, we denote firms as cash poor if they belong in the bottom 20% of the distribution of cash to assets in an industry–year group. We further carry out this sorting separately for closely held corporations and widely held corporations.

The 2006 reform appears to have improved the allocation of investments in fixed assets across firms. Cash-rich firms reduced investments after the 2006 reform, while cash-poor firms increased investments.

There seems to be a short-term increase in overall investments in real assets in 2007 but, due to the lack of a suitable comparison group, we cannot separate business cycle effects from reform effects. We therefore concentrate the analysis on the allocation of investments among corporations. To illustrate the investment effects of closely held corporations around the 2006 tax reform, Figure 1 presents the development of investments in capital stock for cash-poor and cash-rich corporations. To control for business cycle effects, the investments for the two groups are presented as relative investments compared to average investments across corporations in a given year. As shown in the figure, cash-poor firms have increased their relative investments since 2006.

Figure 1 Investments in the Capital Stock of Closely Held Corporations[13]



[13] Figure 1 is part of Figure 2.3, Chapter 2.

The investments of cash-poor and cash-rich firms have converged since the reform.

Figure 1 is a graphical illustration of converging investments across cash-rich and cash-poor firms. The investments of cash-rich firms decreased at the same time. However, this effect could have been driven by various differences across corporations and not have stemmed from the reform. To control for these firm-level effects, we estimate the reform effect in a regression framework in which we account for other factors that influence investment decisions. These estimations confirm the development seen in Figure 1. Investments in capital stock by cash-poor firms have increased since the reform by about 11% of fixed assets relative to the investments of cash-rich firms. As Chetty and Saez (2010) argue, this improves the allocation of investments across firms and thereby raises efficiency.

The 2006 reform does not appear to have created any large changes in the distribution of employment in closely held corporations.

Next, we analyze the effect on employment and job creation. We test whether the 2006 reform incentivized cash-poor firms to hire more employees relative to cash-rich firms. We conclude that employment in closely held corporations has not been systematically affected by the 2006 reform. There are some explanations for this finding. First, we measure employment effects simply by the number of employees. We have no information on any changes in the labor supply, for example, through the extension of hours worked. Second, firms could have hired external employees from temporary work agencies or freelancers.

Employees' labor incomes appear to have increased in response to the 2006 reform and more so in cash-constrained closely held corporations.

Unlike for job creation, we find strong empirical results for another dimension of employment. Employees in closely held corporations significantly increased their labor income levels after the reform. The labor income increase is greater for cash-poor firms than for cash-rich firms. Before the reform, the average labor income was higher in cash-rich firms than in cash-poor firms. The cut in dividend tax decreased this labor income gap by about 6%. The labor income of employees in cash-poor and cash-rich firms has converged since the reform. Whether this increase stems from more working hours, higher wages, or both cannot be tested with our data.

Investment responses to the reform among widely held corporations are similar to those among closely held corporations, but of lesser magnitude.

The 2006 reform also reduced dividend taxes for shareholders in unlisted, widely held corporations. The reduction of five percentage points is only half the corresponding tax rate reduction for active owners in closely held corporations. However, this five percentage point reduction applies to unlimited dividends received by shareholders, while the 10 percentage point reduction for active owners of closely held corporations only applies to dividends within the dividend allowance.

We find similar results for widely held corporations as for closely held corporations: Investments in the capital stock of cash-poor firms have increased since the reform by about 6% of fixed assets relative to the investments of cash-rich firms. There have been no significant reform effects on job creation within widely held corporations. As for the sample of closely held corporation, the labor income of employees in widely held corporations increased after 2006. All effects are, however, of lesser magnitude than the percentage increases documented among closely held corporations.

Chapter 3: The 2006 reform: The creation of new businesses and choice of organizational form

The main result of this chapter is that there was no increase in the establishment of truly new closely held corporations with real activity in response to the 2006 reform. This might appear uninteresting at first glance. It is, however, important to bear in mind that if one considers the trends and aggregate statistics of the number of closely held corporations, the establishment of these corporations appears to have surged after 2006. One might then conclude that this dividend tax incentive was a good tool for creating more businesses. We document, however, that this is not the case. The reform did not increase the establishment of new closely held corporations with real activity. The observable increase in the foundation of these corporations is driven by existing self-employed and partnerships that incorporated in response to the strengthened tax incentive.

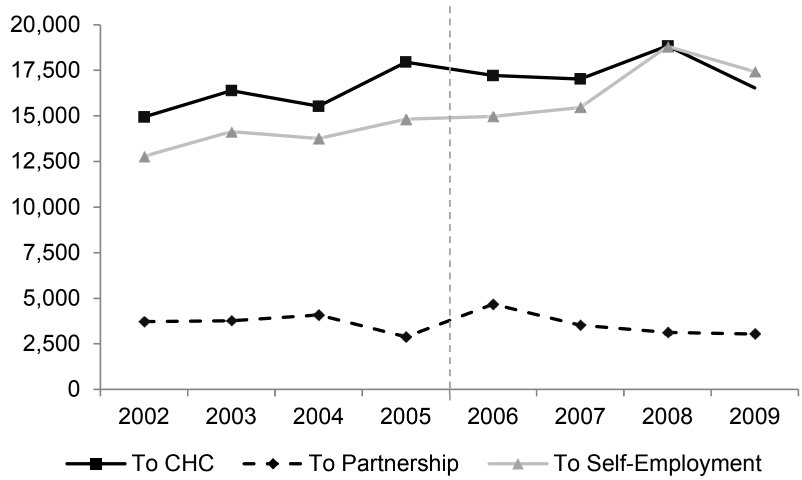
The number of new corporations does not necessarily reflect increased business activity. Existing non-incorporated firms can choose to incorporate in response to tax incentives.

Alstadsæter and Jacob (2012a) document that 25% of new corporations after the tax reform were established for tax avoidance purposes and have no or little real activity. In Chapter 3 of the present report, we analyze whether the reform also spurred the establishment of newly started closely held corporations with real activity. A second dimension of the analysis of business creation is whether a new closely held corporation is truly a new start-up firm or an existing self-employed or partnership that incorporates. By changing organizational forms, a firm often experiences a shift in the taxes it faces. A change in organizational form could be part of the owner's tax-minimizing strategy. At the same time, limited liability could lead to different firm growth, since it reduces the owner's risk. If taxes incentivize business owners to incorporate their businesses, firms could move to a higher growth path.

The 2006 reform did not spur more employees to establish closely held corporations with real activity.

To analyze whether the 2006 reform increased business activity in the economy, we use the percentage of employed individuals who decided to start up a closely held corporation. Figure 2 plots the number of previously employed individuals establishing a closely held corporation or participating in a closely held corporation for the first time (black line). As comparison groups, we present the number of individuals establishing self-employed businesses (gray line) and partnerships (dotted black line). We find that the start-up rate of closely held corporations increases over time. Yet this increase cannot be attributed to the tax reform, since start-ups of self-employed firms follow the same trend. The 2006 tax reform therefore does not additionally incentivize employed individuals to establish closely held corporations.

Figure 2 Frequency of Employed Individuals Establishing New Firms[14]



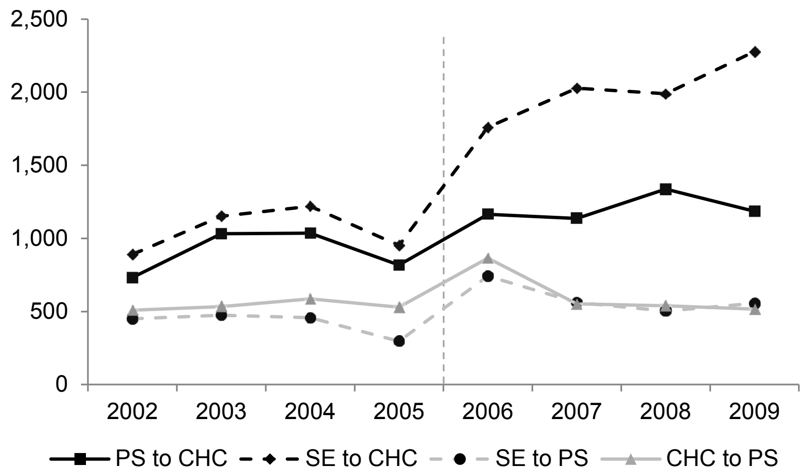
The increase in new closely held corporations after 2006 is mainly due to existing self-employed firms and partnerships that incorporate.

Instead of creating genuinely new businesses, the 2006 reform motivated existing self-employed individuals and partnerships to incorporate. Figure 3 counts existing Self-employed firms and partnership owners who changed organizational form. The *black line* counts the number of individuals switching from a partnership to a closely held corporation. The *dashed black line* counts individuals switching organizational form from self-employment (SE) to a closely held corporation. The dashed gray line comprises individuals switching from self-employment to a partnership. The solid gray line shows individuals switching from a closely held corporation to a partnership. The majority of switches across organizational forms occur as changes from self-employment to closely held corporations. Since the reform, the number of self-

[14] Figure 2 is a reproduction of Figure 3.4, Chapter 3.

employed firms who incorporate has increased by more than 75% and the number of partnership owners who incorporate has increased by 33%. Since the 3:12 rules were made more generous after 2006, the trend of individuals switching from self-employment to closely held corporations has grown even further.

Figure 3 Frequency of Business Owners Switching Organizational Form, 2000–2011[15]



The tax incentive to incorporate is stronger for Self-employed firms and partnership owners, who are subject to both local and central government income tax.

If the self-employed or owners of partnerships incorporate, the taxation of their business changes from personal income taxation to a double taxation of corporate profits (corporate income taxes and dividend taxes). If the business owner's overall income is above the threshold for the central government tax (*statlig skatt*), it may be beneficial to incorporate from a tax perspective, since the combined tax rate on dividend income is then below the combined local and central government tax rate on labor income. Our empirical analysis reinforces the observation that self-employed firms and owners of partnerships who are subject to the central

[15] Figure 3 is a reproduction of Figure 3.6, Chapter 3.

government tax are more likely to incorporate to reduce tax payments.

Following the approach of Alstadsæter and Jacob (2013a), we split the sample according to the prior year's tax status to identify the tax effect on the propensity to incorporate. The results show that the propensity to incorporate is higher for individuals who have tax incentives to do so, that is, who are subject to the central government tax. The 2006 tax reform then increased the likelihood of incorporation of highly taxed business owners who are self-employed or in partnerships.

Chapter 4: The effect of incorporation on firm growth and business owner income

Chapter 3 documents that the increase in the number of closely held corporations since 2006 is due to existing self-employed firms and partnership owners who incorporated their businesses. Chapter 4 studies the effect of these organizational form changes on firm growth and on the income of the owners. Our results suggest that firms switching their organizational form generate additional growth and investments but that the marginal incorporator is less productive than before the reform. At the business owner level, we observe some increased income after incorporation.

The more profitable self-employed and partnerships incorporated in response to the tax incentives. They also generated more profits and grew faster than the remaining self-employed and partnerships.

In general, profitable partnerships and self-employed businesses are more likely to respond to tax incentives and to change their organizational form to a closely held corporation. The empirical analysis indicates that new closely held corporations grow faster, invest more, and hire more employees than remaining partnerships or existing closely held corporations. However, since the 2006 reform of the 3:12 rules, this increase in investment and growth has been less pronounced. However, partnerships that incorporate still have higher profitability and growth than comparable firms that stay unincorporated. The 2006 reform made incorporation profitable for self-employed and partnership owners, for whom incorporation would not have been beneficial prior to 2006.

Our results indicate that the reform has led to an income increase for new closely held corporation owners relative to existing closely held corporations. This increase is due to higher dividend income.

Chapter 5: Discussions and conclusions

The present report documents the effects of the 2006 tax reform on the allocation of investments and employment, the establishment of closely held corporations, and the income of firms and owners. The purpose of the analysis is to evaluate the existence and direction of such effects and not to quantify the magnitude of effects in terms of different aggregate measures. Similarly, Alstadsæter and Jacob (2012a) document income-shifting and tax avoidance responses to the 2006 reform without quantifying such effects. This needs to be addressed by future research.

The tension between the high marginal tax rates on labor income and lower marginal tax rates on capital income require income splitting rules for closely held corporations to somehow prevent tax base erosion through tax planning. By tightening some of the present loopholes within the 3:12 rules, one could reduce the extent of tax planning without affecting any of the positive effects of the 3:12 rules on growth and value creation.

Tensions in the Swedish tax system are strengthened if the tax rate on corporate income is reduced.

As long as large differences persist between the top marginal tax rates on labor income and capital income within the Swedish dual income tax system, there will be tensions in the tax system. Thus, there is a need for some form of 3:12 rules limiting the amount of dividend income to the active owner. Any future reductions in the corporate income tax rate will strengthen the incentive to participate in tax-minimizing income shifting through a 3:12 corporation, but they will also increase investment incentives.

The definitions of what constitutes a closely held corporation and active owners in a closely held corporation are part of the problem with the current 3:12 rules

The definition of closely held corporations is a key challenge of the 3:12 rules. As it now stands, firms with highly dispersed ownership, such as consulting firms, in which a large fraction of employees are also shareholders, can be taxed under the 3:12 rules.[16] However, the 3:12 rules are designed for firms with close ownership. Therefore, firms with many owners should be treated as widely held firms. The key issue, then, is the pricing of shares that are acquired by employees in the corporation. The difference between the purchasing price and the true market value is compensation for the supply of labor and should be taxed as wage income. The actual market value of shares in unlisted firms can be imputed by standard valuation techniques from the finance and accounting literature or by observing realized share prices among unrelated parties.[17] It is important to have a clear and operational definition of active owners, regardless of ownership share.

The inclusion of owner wages in the calculation of dividend allowance under the general rule makes it attractive for many owners to be taxed according to the 3:12 rules.

The 2006 reform changed the calculation method for the amount of dividends that are to be taxed at 20%: The dividend allowance. As of 2006, wage payments to active owners are also included in the wage base for calculating the dividend allowance under the general rule. This makes it particularly attractive for owners of human capital-intensive firms to be taxed according to the 3:12 rules and for employees in such firms to become active owners to earn greater compensation for their labor effort, distributed as dividends within the dividend allowance. One avenue to tackle this

[16] The 4% capital ownership restriction that was introduced in 2014 does not affect the definition of a closely held corporation or that of an active owner, but it limits the number of active owners who can utilize the wage allowance under the general rule. Active owners with less than 4% capital share will still be taxed according to the 3:12 rules, but their dividend allowance is reduced, since only the capital base is included in the calculation of the dividend allowance.

[17] Such techniques are used in many countries for inheritance tax purposes, where shares in unlisted firms are subject to an inheritance tax. These firms need to be valued according to standardized valuation methods.

issue is to make exceptions in the general rule for the so-called liberal professions.

The lack of an activity requirement at the firm level increases opportunities for tax planning.

Currently, so-called active owners of firms with little and no activity are, in practice, allowed to accumulate dividend allowances. The opportunities for income shifting under the 3:12 rules can be reduced without affecting any of the rules' beneficial growth effects. The 3:12 rules include an activity clause for shareholders to be taxed according to these rules. The introduction of an activity clause at the corporate level would eliminate the possibility of closely held corporations with little or no income accumulating dividend allowances under the simplification rule.

The complexity of the 3:12 rules can increase tax non-compliance.

Ownership shares are self-reported. The lack of a shareholder register makes it impossible for the tax authorities to credibly double-check self-reported ownership shares and thus also imputed dividend allowances. Complex tax rules and tax forms can make it hard for taxpayers to follow the rules, even if they want to. Alstadsæter and Jacob (2013b) document widespread misreporting of ownership shares under the simplification rule and some of this misreporting appears to be accidental.

Further research should be undertaken to understand more about the drivers of the documented effects.

In the present report we answer specific questions and document relative changes in levels of response to the 2006 reform. The purpose of this report is to investigate whether the reform had any real effects. Going into depth on each of these effects and both quantifying them and analyzing whether they are driven by industry differences, asset structure, financing policy, and so forth, are interesting avenues for future research and could have policy implications. Analyzing the distributional effects of these responses would also be of interest. This is, however, beyond the scope of the present report and we leave this for future research.