

Taxation of closely held corporations – efficiency aspects

by

Peter Ericson and Johan Fall¹

May 2009

Conference attendees: Both authors

Presenter: Peter Ericson

Language: English

Abstract

This paper investigates two questions regarding closely held corporations. First, possible differences between closely and widely held corporations are explored. Second, a model is developed to investigate what factors and to what extent these factors influence a person to become an active owner of a closely held corporation. A background to the first question is that profits in closely held corporations in Sweden may be taxed as labour income, with a progressive marginal tax, while profits in corporations with broad ownership are taxed as capital income, at a flat rate. If the expected return after tax is lower in closely held corporations compared to corporations with a broad ownership, entrepreneurs and investors will demand a higher pre-tax risk-adjusted return. Evidence from Swedish data, covering all Swedish corporations, does not seem to reject these hypotheses. The model developed to address the second question utilizes extensive individual panel data. Some simple simulations are carried out, indicating that changes in taxation have important impact on the propensity to become a closely held corporation owner. A conclusion is that the tax-system restrains entrepreneurship and potentially employment and growth. Some suggestions to improve and expand the model are issued. Remaining key questions are e.g. how do changes in the tax rules for closely held corporations affect efficiency aspects with significance for e.g. employment, government tax revenue and income distribution.

¹ peter.ericson@empirica.se +46 70 482 7027
johan.fall@svensktnaringsliv.se +46 70 568 8096

Confederation of Swedish Enterprise, SE-114 82 Stockholm, Sweden.

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1. Introduction

Employment, growth and prosperity in the economy are dependent on a sufficient number of firms and employers providing places for people to work. In order to improve such fundamentals of the economy, it can be useful to investigate mechanisms that may be of importance. The interest for the role of entrepreneurs and smaller firms has increased in recent years. According to current research, entrepreneurship and small firms have a key function in the analysis of mechanisms driving the dynamics of structural changes, e.g. in the business sector.²

The current financial and economic crisis has slowed down economic growth. It is too early to sort out to what extent the slow down can be considered a business cycle effect and to what extent it will have more permanent, or structural, impact on the economy. However, there is clear evidence that severe effects already have come about in e.g. the labour market, since unemployment is rising rapidly, especially among particularly exposed groups such as young people and immigrants. Experiences from previous recessions show that labour market effects will continue for some time and there is an obvious risk that high unemployment may be preserved. Therefore, it has become increasingly important to investigate ways and means to improve opportunities for new jobs. Structural conditions for entrepreneurship, smaller and new firms may have a key role to play.

The ongoing globalisation will have strong impact on parameters such as competition, supply and demand in product and factor markets, employment, growth etc. A number of other factors, such as regulation, institutions, environmental factors etc. will also be of significance. This paper will particularly look into the Swedish tax system and what possible impact it has on entrepreneurs and small firms. Among other important factors, the tax system is particularly interesting to study, since it is at the finger tips of the politicians and it may serve as a powerful tool in the economic policy-tool box.

The focus of this paper is on closely held corporations (CHC). Individuals stepping into self-employment often choose to organise their business in the form of a CHC. This small corporation organisation form may be of key importance to growth and job creation in the economy. To better understand how risk, capital structure and ownership is related we investigate the differences between CHC and widely held corporations (WHC).

The aim of this paper is twofold. First, we explore whether some recently available micro-data, covering all Swedish enterprises, support theoretically justified hypotheses about differences between CHC's and WHC's. An extensive data set is used, covering all corporations in Sweden during the period 2000-2007. Moreover, extensive information about the owners is available from organisation forms where individual income statements refer to a specific corporation. Specifically, this concerns businesses organised as sole proprietorships, partnerships and closely held corporations.

Second, a model is developed to investigate what factors and to what extent these factors influence a person to become an active owner of a CHC. The model applies data covering register data on about eight percent of the Swedish population.

² Background and surveys can be found in e.g. Lundström (2009) and Hansson (2008).

The model is restricted to analyse CHC ownerships. Any owner experience from sole proprietorships and partnerships are taken into account. CHC's are considered to be the most interesting organisational form to analyse in detail. Prospering businesses and investment projects often prefer this kind of organisation, as the limited company provides a limited risk. The different taxation of CHC's, described in section 2, makes this organisation form especially interesting for business contracting (more) employees. Finally, an advantage of the CHC form (compared sole proprietorship or partnership) is that it may signal a higher level of stability and seriousness, as current regulations require CHC's to produce a yearly public annual report that is examined by an auditor.

There is a vast literature trying to explain the emergence of self-employment, or entrepreneurial activity, theoretically and empirically. This paper is primarily interested in effects from tax schemes and tax structures on incentives to start up and become an active owner of a CHC. Research on this topic must be interpreted carefully. It is important to consider the actual tax structure and the kind of tax studied. For example, empirical results regarding the effects of income taxes on self-employment often contradict in studies on US-Canada data compared to those performed on Swedish data. An explanation to this disparity is that income from small businesses to a large extent has been taxed as labour income in Sweden. On the other hand, the structure in US is much more generous to profit making firms, allowing the owners to choose a lower corporate taxation. Thus, an income transfer from employment to self-employment is much more profitable in the US compared to the situation in Sweden.

The size of the tax wedge from different taxation schemes on incomes earned as employed vs. self-employed does have a direct effect on the required risk premium. All taxes, e.g. pay roll taxes, taxes on capital gains and corporate taxes have impact on the tax wedge. However, not only the tax wedge is of importance. Studies on the general tax level show that this also has impact on the level of self-employment. Theoretically this can be explained in a number of ways. Probably most important are the negative correlation between high taxes and private equity. Many studies find lack of capital to be the main obstacle for a large portion of potential entrepreneurs.

A symmetric tax reduces the risk of an investment project. Thereby, it might increase the probability to become self-employed. This may also contribute to explain the lack of correspondence among empirical results. In Sweden, neither corporate tax nor individual income taxes are symmetric. Carry back, i.e. deduct losses from previous profits, is not allowed in limited corporations in Sweden. Moreover, Swedish losses may only be deducted against labour income up to a certain limit. This is very different from the US, where loss compensation and deductability schemes are more generous.

Fölster (2002) and Hansson (2008b) explore the relation between income taxes and self-employment in Sweden. Fölster utilizes the variation in taxes between different counties and over time and concludes that there exists a negative relation between taxes and self-employment. Hansson uses LINDA data (briefly described section 3) to estimate the impact from taxes on the probability to become self-employed. Hansson defines self-employment as businesses organised as sole proprietorships or partnerships only, and excludes (due to lack of data) limited liability corporations by arguing that a majority of all start-ups are sole proprietorships. The results show that high levels of income taxes reduce the probability to become self-employed.

An overall conclusion is that taxes matter when it comes to the decision of becoming self-employed. However, comparing results from different countries, the effect of income taxes on self-employment is ambiguous. One explanation is disparity in tax structure. Any regulations determining whether incomes are taxed as labour income, capital income and/or corporate income are of importance, and the same goes for the frame work of rules determining deductibility of losses. Another important factor is the possibilities of smoothing incomes over time. We have not found any literature highlighting this aspect. In Sweden, for example, a corporation can allocate up to 25 percent of net profits to a tax allocation reserve that must be liquidated after six years. Additionally, in businesses organised as sole proprietors and partnerships, profits can be taxed as a corporate profit and funded into the corporation for infinite time. This fund can be used as a carry back instrument to smooth profits over time, a mechanism not available in limited corporations.³

The model is implemented in an existing individual dynamic micro-simulation model, *SWETaxben*, which up to now lack a treatment of self-employment and entrepreneurship. *SWETaxben* gives us the opportunity to explore how the decision to become a CHC owner interact with other choices, and to retrieve measurements of budget effects, income distribution, labour supply, and so on.

This paper must be read with a clear work-in-progress constraint in mind. Due to lack of data and delayed data deliverance, it has not yet been possible to complete the analysis in different aspects, e.g. to fulfil several empirical tests. Further development remains to be done e.g. to explore and explain how the CHC's evolve over time, modelling behaviour and integrating micro-data on CHC's with micro-data on individuals in *SWETaxben*. Continued work on a number of important issues lies ahead.

2. Taxation of corporations in Sweden and probable effects

Corporate income in all limited Swedish companies is taxed at a flat rate of 26.3 per cent since January 1, 2009, the previous rate was 28 per cent. Individual income is taxed under a dual system. Labour and business incomes are taxed under progressive rates, ranging from slightly above 30 per cent up to 57 per cent, while the ordinary tax rate for capital income is proportional at the rate of 30 per cent. This rate applies to e.g. interest, dividends, capital gains etc. from WHC's, listed on a stock exchange. For capital income from non listed (private) corporations the corresponding tax rate is 25 per cent, although a special framework of rules (3:12 rules) applies to CHC's.

In this paper, the definition of a CHC is made from a taxation perspective. Depending on i.a. the CHC stock owner's share in the company and an advanced assessment of the owner's importance for the corporation's earnings ability, the owner's stocks may be considered to be qualified and a limited amount of capital income is taxed at 20 per cent. If this criterion is met, the corporation is defined as a CHC. However, any capital income exceeding certain limits – so called limitation amount (*gränsbelopp*) – are reclassified as labour income and taxed under the progressive rates. If the stock owner in a CHC has an ordinary labour income leaving him or her at the top marginal tax rate, any income from the qualified stocks therefore may be taxed at a rate of 57 per cent. The frame work of rules determining the limitation

³ As a temporary measure, the Norwegian parliament has decided that losses in 2008-2009 could be carried back to 2006-2007. An upper limit of 20 MNOK per corporation and year applies.

amount is complex and based on the company's equity, wage sum, the interest rate and several other parameters.⁴

Considering regular economic double taxation, the full tax wedge on capital income is 48.41⁵ per cent for income from listed WHC's. For non listed companies (excl. CHC) the tax wedge is 44.725⁶ per cent. Finally, for CHC's the tax wedge ranges from 41.04⁷ to 68.309⁸ per cent.

The CHC framework of rules was substantially reformed from 2006. Previously, the rules were considered to be quite harsh on the tax payers, often forcing them to pay the full marginal tax rate of 57 per cent on income emanating from their business. Through the 2006 reform the situation is changed to some extent. From the tax payers' point of view, the two major advantages of the reform are the introduction of a lower tax rate for capital income (20 or 25 per cent as opposed to the regular rate of 30 per cent previous to the reform) and a more generous calibration of the rules determining the limitation amount. In particular, owners to companies with a large wage sum benefit from the favourable rules, allowing them quite large dividends or capital gains, without risk to have these income reclassified and taxed under the full marginal tax regime up to 57 per cent. On the other hand a some advantages of the previous system was changed, probably most important was the abolishment of the partial single taxation up to a certain (low) rate of return.

Taxation of capital income may have impact on the supply of capital for investments. According to traditional (old school) theory, an investment will find sufficient capital in an open economy as soon as risk-adjusted rate of return of the investment meets the equilibrium rate of return established in the international financial market. Thus, only taxation enforced at the company level would affect investments. Domestic taxation affecting the owner level would (only) affect the level of private savings, and thereby the ownership structure, in each country. The bottom line according to this theory is that taxation at the ownership level is irrelevant to the supply of capital for investments.

However, beyond the theory of international financial markets, a number of additional factors have to be taken into account. In practice, smaller firms and entrepreneurs have little or non at all access to international financial markets. One explanation for this is that information is costly and complex to produce, provide and verify. There is always a case of asymmetric information, since a large or foreign investor has few possibilities to get access to and verify relevant information on investment opportunities in small, or perhaps not even yet started, companies. Moreover, there is a liquidity problem associated to small firm assets and yet another problem is that these assets seldom are divisible. An investor will be stuck with the investment for a period of time as there is no regular market to trade the asset in. For these reasons, the only available investors for small business usually are the three "F:s": family, friends and (perhaps) fools. Bearing this in mind, it seems fair to assume that domestic taxation at the owner level may influence investments, also in the case of an open economy.

Returning to the issue of taxation of capital income and supply of capital for investments, a starting point for further analysis is that there is a correlation between the profitability of an

⁴ More information on the framework of rules is available from the National Tax Agency and in Sørensen (2008).

⁵ $48.41 = 26.3 + (100 - 26.3) * 30$.

⁶ $44.725 = 26.3 + (100 - 26.3) * 25$.

⁷ $41.04 = 26.3 + (100 - 26.3) * 20$.

⁸ $68.309 = 26.3 + (100 - 26.3) * 57$.

investment and the likelihood to find financing. Furthermore, it is reasonable to assume that high profitability, or rate of return, comes with high risk. Rate of return should of course be assessed after taxes. If business income is taxed heavily, only business ideas with sufficiently high pre-tax rate of return will be undertaken. These projects will entail a lot of risk.

The issue of risk and rate of return as a measure of risk premium is dependent on several factors. In particular, the risk aspect is important when studying the situation for small and owner managed firms. Relevant factors are e.g. sources of finance – including the lack of substitutability between investment in a closely held corporation and investment in the stock market and the risk exposure for an entrepreneur, often suffering from lower social security benefit (as compared to regular employment) and lack of exit options (as compared to investment in the stock market).

Focusing on CHC's and possible effects from the tax system, one can start from the framework of rules previous to 2006. At that time, there was a quite clear progressive structure, especially for highly profitable investments. A simple comparison to investments in the regular stock market would suggest that closely held corporations are treated favourably by the tax system if they yield a low rate of return but less favourable if they yield normal, or above normal rate of return. This would suggest that for most levels small company investments require a higher rate of return, and therefore higher risk, in order to yield the same net of tax rate of return as a stock market investment.

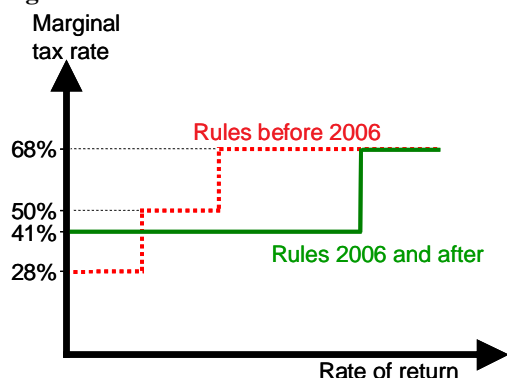
Following the line of reasoning above, one would expect that in equilibrium there would be an average of higher rate of return for small companies than for stock market investments. One would therefore anticipate a higher risk level in smaller companies. This would then have implications on the structure of financing in smaller companies, compared to other companies. Up to a certain point, the possibility to finance in the banking sector may be equivalent for small and other companies. But higher risk levels should result in increasing resistance from banks providing loans. To put it simple, banks avoid high risk. Higher risk business ideas may not gain financing through bank loans. Typically, higher risk financing may instead come from different forms of equity, such as domestic informal investments, business angels, venture capital or similar private equity structures.

Previous empirical results from Swedish data have indicated differences between CHC's and WHC's. In particular, the CHC's had higher rate of return and higher solvency margin, indicating a higher risk profile, which in turn corresponded to high corporate profitability before tax. There seemed to be an equilibrium where the relatively few businesses able to acquire the high levels of profitability have responded to the high risk by having a high solvency margin.⁹

The tax reform from 2006 may have altered the situation. Direct comparisons between the systems are hard make, due to different methods to define the tax base etc. One interpretation would be that the marginal tax rate at the lower end of the rate of return scale has risen at the same time as the income level above which the tax rate is higher has risen.

⁹ Andersson et al (2004) provide some analysis of the tax system previous to 2006.

Figure 1: Schematic illustration of old and new rules in Sweden



3. Data

Statistics Sweden provides data for all Swedish companies within the data base FRIDA, which contains approximately 1 000 variables for each company. The primary source is withdrawals from standardised accounts (SRU) provided by the National Tax Agency. FRIDA includes several organisational forms for companies, e.g. limited corporations (*aktiebolag*), partnerships (*handelsbolag*) and sole proprietorships (*enskilda näringsidkare*).

The data base LINDA, studying individuals, is also available from Statistics Sweden. It contains slightly more than 1 000 variables for some 300 000 sample individuals (3% of the total population). Supplementary information regarding members of households is also available. Several sources are used e.g. National Tax Agency, National Social Insurance Board and the Swedish Public Employment Service.

This paper uses consistent data from 2000-2007. All data is anonymized. It is possible to track a company or an individual over time within each one of the data bases. However, there is no available information on any connections between individuals in LINDA and companies in FRIDA. Neither is there full information regarding creation or termination for companies.¹⁰

4. Characteristics of CHC's and WHC's

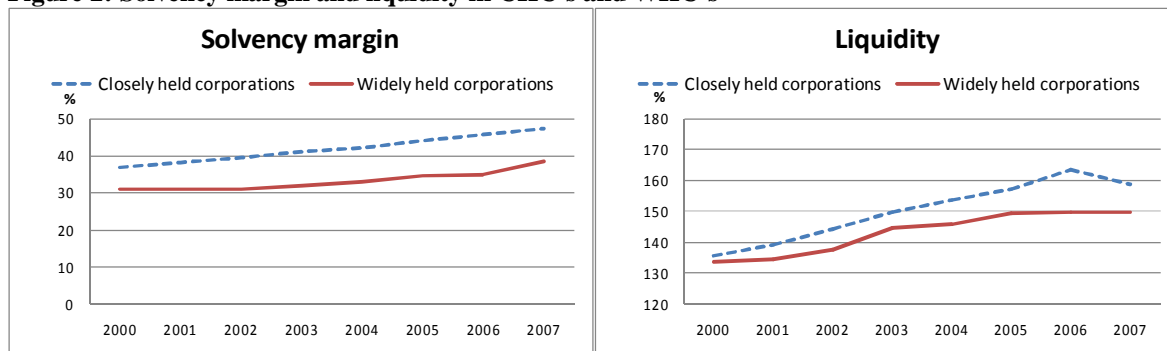
This section gives a brief overview of some descriptive data originating from FRIDA. The main interest is on limited corporations. WHC's are often listed on a stock exchange, while CHC's are non listed and meet some additional criteria regarding ownership concentration.

4.1 Capital Structure

A brief picture of the capital structure can be obtained by a look at the solvency margin, defined as equity + untaxed reserves, divided by balance sheet total. There is a difference between CHC's and WHC's of around 10 percentage points. During the period of time studied, the difference is quite stable. This observation seems to support the hypothesis that CHC's have to compensate a higher average risk through a larger portion of equity capital.

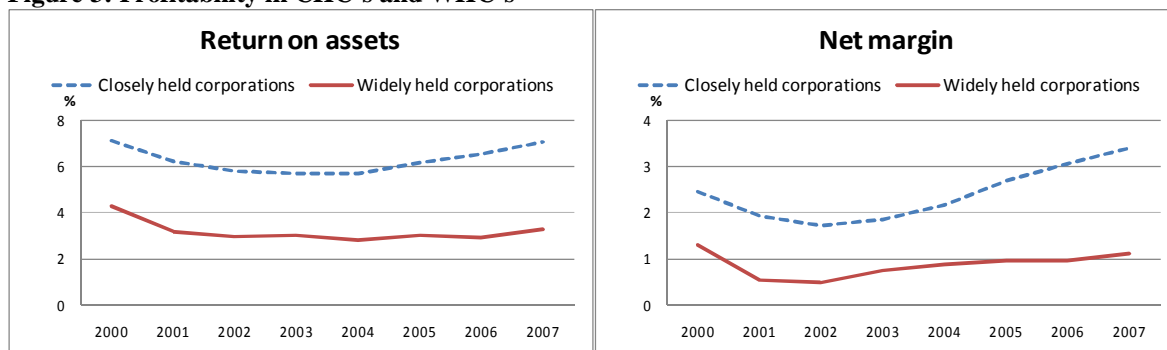
A look at the liquidity situation in the different types of corporations points in the same direction. For CHC's the curve has a kink at the end of the studied period. Interpretations must of course be done with precaution, but an explanation for this may be that the change of rules has triggered higher dividends, and thereby affected liquidity. Some further evidence is presented below.

¹⁰ More information on FRIDA and LINDA is available from Statistics Sweden.

Figure 2: Solvency margin and liquidity in CHC's and WHC's

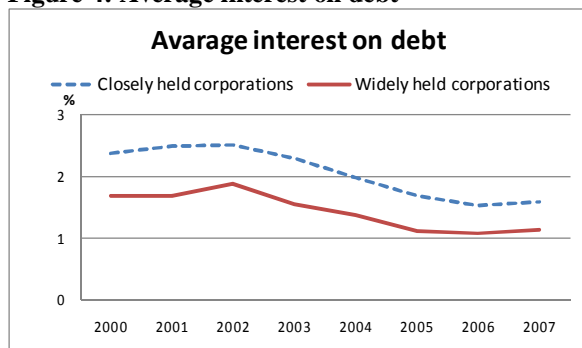
4.2 Profitability

In line with our reasoning above, there may be average higher risk in CHC's. From this it may follow that profitability also would be higher among the CHC's. As shows in the figures below, there are some empirical observations supporting this. In fact, the difference in profitability between CHC's and WHC's rises in the end of the period. This would be a bit of a surprise, since tax rules have been relaxed since 2006. To some extent, time lag could explain this, as profitability in a certain year may originate from investment decisions made some years earlier, under a different tax regime.

Figure 3: Profitability in CHC's and WHC's

4.3 Interest on debts

Following the reasoning outline above regarding the higher solvency margin among CHC's, a consequence would be that the CHC's have less favourable opportunities to borrow from banks and that their loans will be more expensive. The figure below shows some evidence supporting this. Average interest on debt is higher for CHC's and this has been the case during the whole studied period. Since the tax reform in 2006, the difference has been slightly reduced, which might have to do with diminishing differences between the risk levels of new projects.

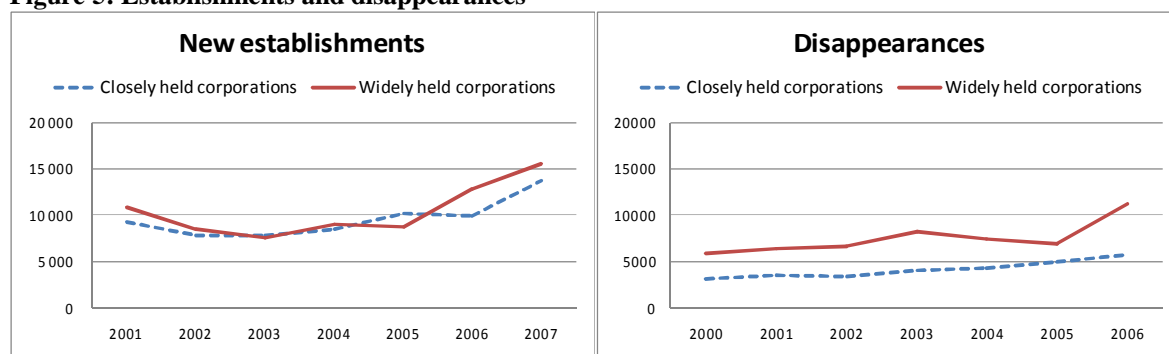
Figure 4: Average interest on debt

4.4 Establishments and disappearances

Unfortunately, the data does not provide a perfect variable to study the survival rate of the different types of corporations. A possible approximation may be to investigate new establishments and disappearances for each year studied. We find that there are small differences for new establishments, at least until the two latest years. There are a strong increase for WHC's in 2006 and an even stronger increase for CHC's in 2007. To some extent, this may be explained by a favourable business cycle.

When it comes to disappearances, there seems to be a difference stable over time. An explanation for the lower rate among CHC's may be the higher level of personal relation from the owners. The previously discussed higher solvency margin may also contribute to a higher endurance, which in turn could result in relatively fewer disappearances.

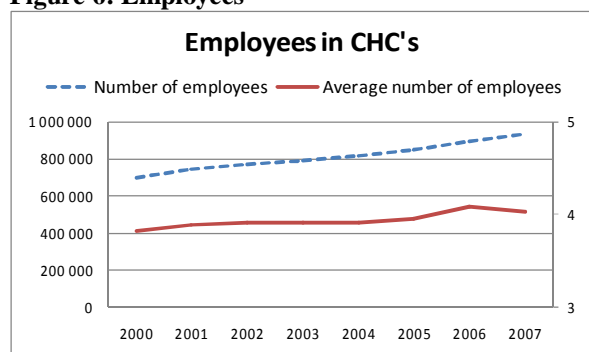
Figure 5: Establishments and disappearances



4.5 Employees

The important role for employment from CHC's is described in the figure below. Close to one million people find their jobs through these companies. The development has been quite strong during the period, and a slight increase in growth rate may be discerned. Favourable impact from the business cycle probably explains at least part of this. There is probably a time lag from any employment effects emanating from the 2006 change of tax rules. However, the slight down turn in average number of employees has probably to do with the sharp increase in new establishments, often with the owner as sole employee.

Figure 6: Employees

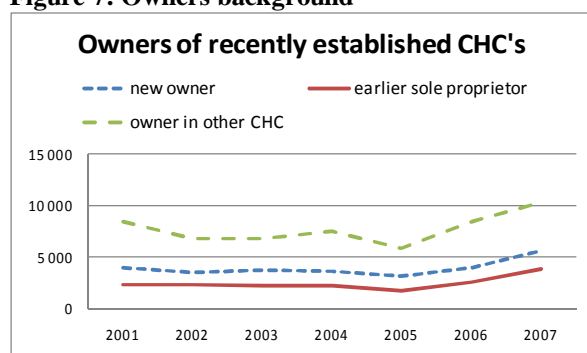


4.6 Owners background

To find out more regarding owners background, it is possible to study available information on the previous status of recently established owners. The strongest increase in new establishments is among people previously involved in other CHC's. These are probably people with high initial knowledge of the frame work of rules and high adaptability to

changes. Furthermore this is in line with theory on serial entrepreneurs etc. The probability of managing a small firm may be higher among people with previous experience.

Figure 7: Owners background

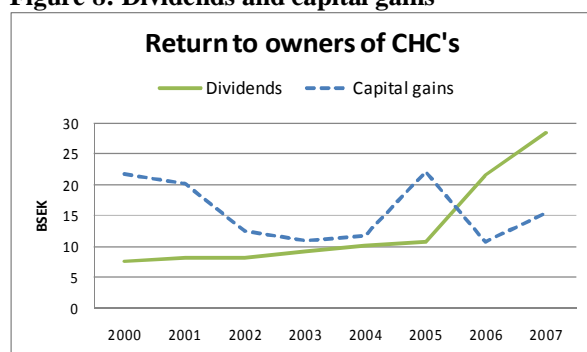


4.7 Dividends and capital gains

As previously described, CHC's have showed increased profitability since the new taxation rules that came into effect in 2006. Another quite strong indication for this is that dividends have risen sharply, reaching for 30 Bn SEK, compared to a previous average level of some 10 Bn. To some extent, the dividends may emanate from previous years' retained earnings. The previously reported decrease in liquidity is in line with such an interpretation.

Capital gains are highly volatile and must be interpreted with high precaution. In the transition from 2005 to 2006 the frame work rules were subject to excessive uncertainty, triggering many owners to bring forward transactions. A threat of sharp increase in taxation of capital gains where projected. This has had impact on the statistics in the figure below. However, the rules were changed retroactively and in 2007 the level seems to be re-established on a historical average level.

Figure 8: Dividends and capital gains



5. Taxes and incentives to become a business owner

The decision to become self-employed involves a choice between different forms of business organisation. Most Swedish entrepreneurs, more than two out of three, choose to start up their business as a *sole proprietorship* or *partnership*, both with unlimited liabilities. A smaller portion of new entrepreneurs chooses to directly establish a limited *closely held corporation* (CHC).¹¹ The latter business organisation form is familiar to transform prospering sole proprietorships or partnerships into.

¹¹ The standard minimum share capital in a limited corporation is 100 000 SEK (€10 000, \$15 000)

How is the choice of business organisation form affected from different factors, e.g. the taxation? In this section we present a model aiming to explain and simulate to what extent individuals choose to become self-employed as an active owner of a CHC.

5.1 A model for CHC ownership

A statistical model to estimate probability to become a CHC owner is kept simple in this paper. Information about the individual and the corresponding household is used to explain the probability of becoming self-employed, i.e. taking the step to be an active owner in a CHC. Thus, the model is only applicable to individuals with labour income and it excludes CHC owners. In contrast to the simple model, the data and the description of the Swedish regulations for tax and benefits are particularly detailed, within the frame work of the static micro simulation model *SWEtaxben*, further explored below. To represent gains or losses from becoming self-employed or not, the model calculates the difference in disposable income that the individual would expect in the short run from the two alternatives.

The probability for an individual to become a CHC owner is modelled as an ordinary Probit model,

$$P(\text{CHC}=1) = F(X'\beta) \quad (1)$$

where F is the cumulative normal distribution function. The variables and parameters are presented in Table 1 below.

Table 1: Probit estimates of the probability to become a CHC owners

Parameter	Estimate	Std. error	Pr > ChiSq
Intercept	-2.5002	0.0268	<.0001
Sole proprietor or partnership last year	0.3729	0.0204	<.0001
Difference in disposable income	0.00538	0.000852	<.0001
Women	-0.2528	0.0165	<.0001
Age < 30	-0.1446	0.0342	<.0001
Single	-0.1535	0.0212	<.0001
Born in Sweden	0.1790	0.0253	<.0001
Living in large city	0.1476	0.0157	<.0001
University degree	-0.0512	0.0197	0.0095

“Difference in disposable income” refers to change in yearly disposable income, measured at an individual level, for individuals choosing to become self-employed as an active owner in a CHC. To calculate this difference the tax/benefit model *SWEtaxben*, is used twice. First, all individuals are assumed to keep their observed status and yearly salary. Second, they are all assumed to start-up a CHC corporation that reports an income equivalent to the observed salary plus pay roll tax. The owner is assumed to optimise the mix of salary and dividend to maximise after tax income. It should be brought to notice that the model only predicts the transition from not being a CHC owner to becoming one.

By analysing “Difference in disposable income”, it may be possible to explore the impact of the tax and transfer systems on the return of an individual’s fixed labour cost. Thereby, the return from either to become self-employed or to remain an employee will depend on an estimate of individually productivity and production, measured as the current labour cost.

5.2 SWEtaxben and CHC owners

*SWEtaxben*¹² is a Swedish tax/benefit micro simulation model. It is an extended version of the static micro simulation model FASIT¹³ governed by Statistics Sweden and used by the government, researchers and associations to evaluate how different reforms' affect e.g. government budget, income distribution and marginal taxes. Some of the *SWEtaxben*'s features:

- Labour supply is modelled as a household decision where both observed and unobserved heterogeneity are considered along with a complete description of the budget set.
- All individuals are categorized a priori to a certain status (child, old age pensioner, student, disability pensioner, unemployed, other, long term sick or working). Given a set of binary dynamic logit models, each individual are set at risk to change status when the environment changes, e.g. taxes or income from other members in the household.
- Welfare is measured by a social welfare function (SWF) with the opportunity to reflect different levels of inequality aversion.

This paper aims to extend *SWEtaxben* with a status representing self-employment. Information on individual's income-tax statement determines whether he or she is an active owner and receives income from a CHC. This information is combined with a prediction from the model presented above. Thereby, an optimal status is determined, where the after tax income is maximised. In the next section a couple of reforms affecting the taxes of CHC owners and the CHC itself, is explored.

5.3 Simulated tax reforms

The expected number of CHC owners may change when changes are made to the tax system. Below, a sample of such changes of taxes and regulations are simulated. All employed (and non CHC owner) individuals with a positive labour income are studied. For each such individual, the outcome of becoming a new CHC owner is calculated under the simulated change of rules. If the outcome is favourable, the simulation will show to what extent the number of CHC owners will increase.

5.3.1 A simplifying standard rule for the limitation amount

In 2006 a simplification in the income-tax statement was introduced for CHC owners. An option of applying a standard rule was made available. This made it possible to refrain from tedious calculations, based on historical equity contribution and salaries, aiming to decide the threshold – so called limitation amount (see section 3) – that limits the amount of dividends that could be taxed under the capital income regime. The new standard rule states a standard amount (*schablonbelopp*), working as a minimum level for the limitation amount. In 2006 the standard amount was set to 64 950 SEK. The amount increased to 91 800 SEK in 2007, and in the forthcoming assessment year (2010) the amount is further increased to about 120 000 SEK.

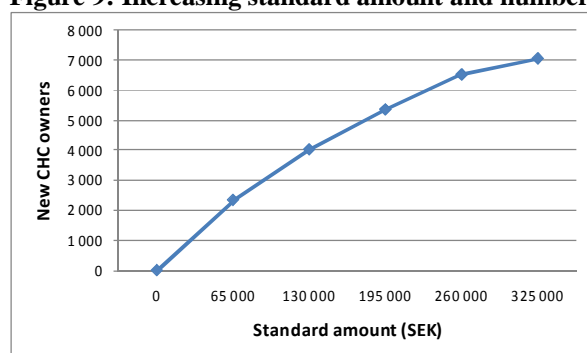
¹² See Ericson and Flood (2009) for a documentation of *SWEtaxben*.

¹³ Statistics Sweden provides a documentation of FASIT

The introduction of a the standard amount for CHC owners did not only simplify the income-tax statement, it could also reduce taxation for owners who's dividends exceeded the limitation amount according to the traditional rules. As mentioned in section 2, the reform in 2006 included a tax-cut from 30 percent to 20 percent on capital income from a CHC.

To evaluate the effects of a reform where the standard amount is increased, the probability of becoming self-employed is estimated in the model. In the simulation, covering all employed individuals earning more than 300 000 SEK (equal to around 1 million individuals), the standard amount is allowed to vary between 0 – 325 000 SEK. Figure 9 presents the expected effect on the number of new CHC owners.

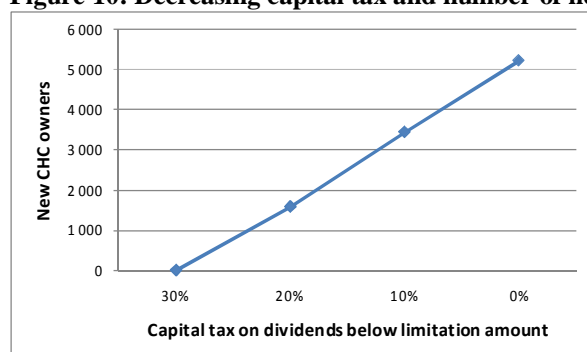
Figure 9: Increasing standard amount and number of new CHC owners



5.3.2 Capital tax

Since 2006, the capital income tax rate has been lowered from 30 percent to 20 percent on dividends below the limitation amount. Figure 10 shows how the expected number of new CHC owners is affected by changes in the capital tax rate. In this simulation, covering all employed individuals earning more than 300 000 SEK (equal to around 1 million individuals), the standard amount is fixed according to present rules, at 120 000 SEK.

Figure 10: Decreasing capital tax and number of new CHC owners

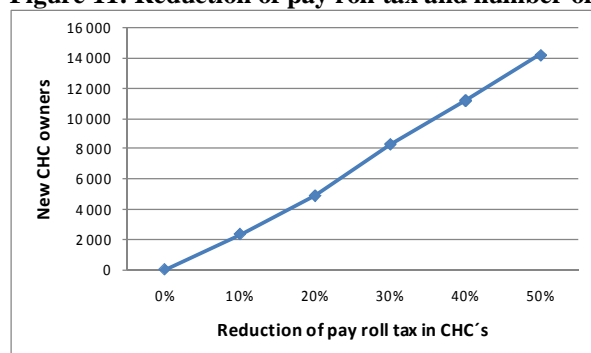


5.3.3 Payroll tax

From January 1, 2009, the payroll tax was lowered from 32.42 percent to 31.42 percent. For employees younger than 26 years of age the rate was cut by about 50 percent. Currently, there is a public debate on how to increase employment in small and medium sized corporations. Among different issues, pros and cons of a targeted decrease of the pay-roll tax is being discussed. Figure 11 shows a simulation, covering all employed individuals with no substantial transfer or similar income (equal to around 2.5 million individuals), where the

number of CHC owners is expected to rise when a general cut in the pay roll tax for CHC's is introduced.

Figure 11: Reduction of pay roll tax and number of new CHC owners



5.4 The CHC's and their owners over time – dynamics

The model predicts whether an individual will become self-employed as an active owner of a CHC. However, it does not say anything about the corporation itself. All start-ups in the model developed in this paper are hitherto only supposed to consist of the owner and his own efforts. This assumption may be considered unrealistic for both start-ups and mature firms. The dynamics over time, where firms are prospering, voluntarily liquidated, or defaulted, are ignored. Therefore, it would be interesting to develop a corporate model that could simulate how corporations evolve over time. Given the individual start-up decision, such a corporate model also could simulate how decisions affect the firm's destiny, and the yield to the owner(s).

Another, much simpler approach might be to replicate the existing firms. In such an approach, individual decisions to become self-employed would be implemented through existing firms, with all its characteristics. These existing firms would be replicated up to an estimated number and put in the new owner's hand. Thus, a steady state would be simulated, rather than the time at start-up.

6. Concluding remarks

Empirical data seem to confirm the hypothesis that differences exist between CHC's and WHC's. The observed differences suggest that the Swedish tax system discriminates CHC's. Moreover, the differences indicate that the tax system forces the CHC's to undertake more risky investments in order to counteract the higher tax rate. Higher risk decreases supply and increases cost of foreign capital, distorting the capital structure. Excessive solidity along with a personal relation to the corporation may be explaining factors to the higher survival rate among CHC's. Since the recent tax reforms, aiming to reduce the tax burden on owners of CHC's, the number of CHC's, as well as the number of employees in CHC-firms, have increased. It may still be too early to draw any stronger conclusions, but these increases may be seen as further indications confirming our hypothesis.

In modelling CHC ownership, there are some interesting conclusions worth mentioning. Data seem to confirm expected outcomes of the duality in the tax-system that causes pre-tax profitability to be higher in CHC's compared to WHC's. A conclusion is that the tax-system restrains entrepreneurship and potentially employment and growth. Moreover, the choice to become self-employed is affected by the expected yield.

A model explaining how firms evolve over time has to be developed to answer the key questions: how do changes in the tax rules for closely held corporations affect efficiency aspects with significance for e.g. employment, government tax revenue and income distribution. Moreover, data coverage needs to be extended in some important areas. It is appropriate to finish off with a reminder of what was mentioned introductory, that this is a work in progress-paper. Continued work on a number of important issues lies ahead.

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