# Income Shifting in Sweden
# An empirical evaluation of the 3:12 rules

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*the Expert Group on Public Economics*
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# Förord

Vid skattereformen 1991 införde Sverige en tudelad inkomstbeskattning där inkomster från kapital beskattas annorlunda än inkomster av arbete och transfereringar. Beskattningsmodellen kombinerar progressiv beskattning av arbets- och transfereringsinkomster med en relativt låg proportionell skatt på kapitalinkomster. Denna modell har flera fördelar, men medför också potentiella problem. Akilleshälen är beskattning av fåmansföretag där ägarna i viss mån kan välja hur inkomsten fördelas mellan egen lön och vinst. Möjligheten för företagarna att klassificera sina inkomster regleras av 3:12-reglerna. Hur dessa regler bäst kan utformas har debatterats sedan skattereformen. År 2006 ökades möjligheten att ta ut en större del av inkomsten som kapitalinkomst. Syftet var bl.a. att skapa bättre förutsättningar för entreprenörskap.

För ESO är de samhällsekonomiska effekterna av reglernas utformning centrala. Det är viktigt att skattesystemet inte missgynnar nystartande av företag för att exploatera nya tjänster och produkter. Men om skattereglerna i stället huvudsakligen leder till skatteplanering är nettoeffekten en samhällsekonomisk kostnad. Dessutom kan det medföra ytterligare kostnader om skattesystemets legitimitet skadas.

I denna rapport till ESO studerar docent Annette Alstadsæter och fil. dr. Martin Jacob hur omfattande omklassificeringen av inkomster från arbete till kapital är genom 3:12-reglerna, och vilken betydelse detta har för skatteinkomsterna. De gör detta genom att i detalj analysera skattedata över tiden och empiriskt belägga effekter som härrör från de förändringar av 3:12-reglerna som gjordes 2006. Utifrån resultaten diskuterar sedan författarna statsfinansiella och samhällsekonomiska effekter.

Författarna konstaterar bl.a. att incitamenten till omklassificering av inkomster i fåmansföretag har ökat avsevärt. Det

finns tydliga indikationer på att denna omklassificering ökat markant till följd av detta och har lett till ett betydande skattebortfall. Analysen visar även på fördelningseffekter. Det är främst personer med höga inkomster som utnyttjar möjligheten till omklassificering.

Rapportarbetet har följts av en referensgrupp med god insikt i dessa frågor. Som vanligt i ESO-sammanhang, svarar författarna själva för de slutsatser som presenteras i rapporten.

Det är min förhoppning att rapporten bidrar till ökade kunskaper de olika effekterna av beskattningen av fåmansföretag och på så sätt kan bidra till ett bättre underlag för eventuella framtida överväganden om reglerna.

Stockholm i maj 2012

Harry Flam
Vice ordförande för ESO

# Foreword and acknowledgements

Income shifting is the process of transferring income between income categories and tax brackets in order to reduce total tax payments. Income shifting is legal and a pure relabeling of existing income. The main purpose of this report is to raise awareness of the phenomena of income shifting and the challenges it creates and to provide some empirical evidence on the extent of income shifting in Sweden. The 2006 changes in the taxation of dividends to active owners in closely held corporations (*Fåmansföretag*), the *3:12 rules*, increased both the incentives and opportunities for shifting income from the labor income tax base to the capital income tax base. We identify how taxpayers respond to these changing incentives along several dimensions. Based on these findings, we discuss some consequences of income shifting at the aggregate level and provide a rough estimate of the potential tax revenue lost from income shifting under the 3:12-rules. And finally, we identify some main challenges within the current 3:12 rules that, in our opinion, contribute to increasing participation in income shifting. It is our hope that this report can be a constructive contribution to the Swedish policy debate.

In preparing this study, we have received valuable information and assistance from Magnus Allgulin, Åsa Andersson, Lena Birkelöf, Paul Elger, Charlotte Nömmera, Dan Sölverud, and in particular, Johan Almenberg, Martin Hill, and Martin Kjellqvist. We also received excellent help with data handling from Statistics Sweden.

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None of the aforementioned persons is responsible for any remaining shortcomings or for any of the conclusions drawn.

Oslo and Vallendar, April 12, 2012

Annette Alstadsæter and Martin Jacob

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# Sammanfattning

## Den svenska duala inkomstskattemodellen och 2006 års reform av 3:12-reglerna

*Genom 1991 års skattereform introducerades den tudelade beskattningen av förvärvsinkomster och kapitalinkomster*

Den svenska *duala* inkomstbeskattningen innebär en progressiv beskattning av förvärvsinkomster och en proportionell beskattning av kapitalinkomster i motsats till de flesta andra länders skattesystem som innebär att all inkomst från olika förvärvskällor läggs samman och beskattas enligt en och samma skatteskala. I det senare fallet, ett s.k. *globalt* inkomstskattesystem, påförs skatt på inkomstbeloppet från alla inkomstkällor enligt samma skattetabell. Det duala skattesystemet infördes i Sverige 1991, i Norge 1992 och i Finland 1993. Genom införandet av detta inkomstskattesystem breddades skattebaserna (genom att avdrag och särskilda bestämmelser avskaffades), och marginalskattesatserna sänktes. Under de två senaste årtiondena har en rad andra länder infört olika former av duala inkomstskattesystem. Den svenska skattereformen 1991 benämns ofta ”århundradets skattereform” och har bl.a. analyserats av Agell, Englund och Södersten (1996, 1998).

Vid utformningen av ett nytt inkomstskattesystem, är det en utmaning att undvika möjligheter till obehörig inkomstöverföring mellan skattskyldiga, skattebaser och olika tidpunkter. Detta är särskilt viktigt inom ett dualt inkomstskattesystem med stora skillnader i skattesatser på kapital- och förvärvsinkomster. I extremfallet skulle alla höginkomsttagare kunna ”sätta sig på bolag” för att omvandla typiska arbetsinkomster till bolagsinkomster. Beskattningen av fåmansföretag är akilleshälen för den duala inkomstskatten (Sørensen, 1994). För att förhindra omvandling av arbetsinkomster till inkomster på bolagsnivå har de nordiska länderna infört olika typer av system för uppdelning av förvärvs-

inkomster respektive kapitalinkomster för ägare till fåmansföretag (se Lindhe, Södersten och Öberg, 2002, 2004).

*3:12-reglerna är tillämpliga för aktiva ägare i fåmansföretag. Det är bara utdelningar inom ramen för gränsbeloppet som beskattas som utdelning i inkomstslaget kapital. Utdelningar som överstiger gränsbeloppet beskattas som förvärvsinkomst i inkomstslaget tjänst.*

Det svenska systemet för inkomstuppdelning, *3:12-reglerna*, infördes 1991 och ska tillämpas av aktiva ägare i aktiebolag där fyra eller färre personer äger mer än 50 procent av aktierna. Enligt 3:12-reglerna beräknas en normalavkastning på insatt kapital i bolaget, ett s.k. gränsbelopp (belopp för utdelning inom ramen för kapitalbeskattning). Gränsbeloppet beräknas med utgångspunkt i två delar. Det lönebaserade underlaget är beroende av den totala lönekostnaden i bolaget, medan det avdrag som beräknas på insatt aktiekapital är beroende av ägarens anskaffningskostnad på andelarna i företaget, som vanligtvis utgörs av bolagets nominella aktiekapital men som även kan bestå av ovillkorade aktieägartillskott. Utdelning som inte överstiger delägarens gränsbelopp (som belöper på dennes ägarandelar) beskattas som utdelning med en skattesats på 20 procent (från och med 2006). Utdelning som överstiger gränsbeloppet beskattas som förvärvsinkomst (till och med 2011), där marginalskattesatsen fastställs utifrån aktieägarens totala löneinkomst från alla källor.

*2006 års reformering av 3:12-reglerna syftade till att stimulera företagande och sysselsättning inom familjeägda företag. Skattesatsen för utdelningar som rymdes inom gränsbeloppet sänktes, och samtidigt höjdes underlaget för beräkning av gränsbelopp avsevärt.*

3:12-reglerna har varit föremål för många diskussioner under årens lopp. En utmaning var att en stor del av gränsbeloppet baserades på bolagens lönekostnad, och att reglerna inledningsvis uteslöt tillgodoräknandet av lön till delägare. Detta innebar att aktiva ägare i bolag med höga lönekostnader fick ett högt gränsbelopp, medan aktiva ägare i mindre bolag med få anställda fick ett lågt gränsbelopp, även om det satsade aktiekapitalet var lika stort. År 1999 tillsattes en offentlig utredning som skulle utvärdera 3:12-

reglerna och föreslå ett alternativt skattesystem. Betänkandet, *Beskattning av småföretag*, lades fram 2002 (SOU 2002:52). I betänkandet föreslogs att 3:12-reglerna skulle ersättas med ”BEK-modellen”[1]. Efter en offentlig debatt om det lämpliga i detta förslag ombads dock en annan expertgrupp i mitten av 2004 att återkomma med ett förslag till förändring av de befintliga 3:12-reglerna. De lade fram sin rapport, *Reformerad ägarbeskattning – effektivitet*, prevention, legitimitet, i januari 2005 (Edin, Hansson och Lodin, 2005). Som Lodin anger (2011b, s. 169):

> *”Vårt utredningsuppdrag innebar också att undersöka möjligheterna att undanta större fåmansföretag från fåmansföretagarreglerna. Vi nådde också ganska långt på en sådan undantagsregel, som skulle undanta företag med ca 10 eller fler anställda. Vi fann emellertid att det i stort sett i varje tänkbart gränsområde kom att ligga en betydande del mycket konjunkturkänsliga företag, exempelvis byggföretag, varigenom risken blev stor att många företag skulle komma att åka in i och ut ur systemet beroende på konjunkturen. De principiella och administrativa problem detta skulle förorsaka gjorde att vi övergav tanken på en formell undantagsregel.”*

Baserat på utredningen av Edin, Hansson och Lodin (2005) lade regeringen fram sitt förslag till förändringar av 3:12-reglerna i slutet av 2005 (prop. 2005/06:40). Den huvudsakliga motiveringen för ändringsförslagen var att öka ersättningen för risktagande inom ramen för 3:12-reglerna och att främja entreprenörskap och sysselsättning i bolag med ett ägande som var koncentrerat till ett fåtal personer. Ökningen av det lönebaserade utdelningsutrymmet och det minskade kravet på delägarlön, innebar att det lönebaserade gränsbeloppet i fåmansföretag med höga lönekostnader ökade. Detta innebar i praktiken att aktiva ägare i sådana företag sannolikt skulle undvika att få sina utdelningar och kapitalvinster beskattade som förvärvsinkomster.

Ett annat syfte med de ändrade reglerna var att förenkla 3:12-reglerna för mindre bolag. Därför infördes förenklingsregeln. Dessa förändringar trädde i kraft i januari 2006. Förändringarna har dock bara ansetts utgöra mindre ändringar av 3:12-reglerna. De har inte fått någon större uppmärksamhet, om ens någon, i den

[1] Till grund för beräkningen inom BEK-modellen (beskattat eget kapital) ligger en avkastning på aktiekapitalet, som inte bara baseras på insatt aktiekapital (i likhet med det befintliga systemet), men också på bolagets balanserade vinstmedel. På så sätt beskattas balanserade vinstmedel om de delas ut (endera som utdelning eller som löneinkomst för ägaren). Denna del av aktiekapitalet multipliceras med en faktor 0,45. (Se vidare SOU 2002:52.).

ekonomiskt-politiska debatten. Ändå har dessa ändringar totalt sett lett till betydande förändringar i incitamentsstrukturen, vilket beskrivs i kapitel 3. Skattesatsen på utdelningar inom gränsbeloppet har sänkts med 10 procentenheter, och gränsbeloppet har höjts drastiskt för aktiva ägare i fåmansföretag. Särskilt införandet av förenklingsregeln innebar ett höjt gränsbelopp för mindre bolag med lågt nominellt kapital och låga lönekostnader. Inom ramen för denna regel fördelas en fast nivå av gränsbeloppet per bolag till aktiva ägare efter deras ägarandel. Omkring 80 procent av de aktiva ägarna väljer förenklingsregeln när de ska beräkna gränsbeloppet. Ytterligare förändringar i skattesatserna för beräkning av gränsbelopp efter 2006 har gjort 3:12-reglerna ännu generösare för vissa grupper.

## Begreppet inkomstomvandling

*Inkomstomvandling är processen där inkomster överförs mellan olika inkomstkategorier och skatteklasser för att minska det totala skattebeloppet.*

I kapitel 2 ges en teoretisk översikt och definition av fenomenet inkomstomvandling. *Inkomstomvandling* är lagligt skatteundandragande och har inga omedelbara reella effekter. Det är inget annat än en omklassificering av den befintliga inkomsten. De tre huvudsakliga typerna av inkomstomvandling är över tid, mellan skattebaser och mellan skattebetalare. Vi ska ge exempel på dessa olika typer och en översikt över den empiriska litteraturen inom området.

För att genomföra en inkomstomvandling måste man ha ett ekonomiskt incitament i form av en potentiell skattesänkning. Det är dock inte alla skattebetalare som ägnar sig åt inkomstomvandling, även om de har ett incitament att göra det. Orsaken kan vara att de inte känner till incitamenten eller att de inte har möjlighet till inkomstomvandling. Inkomstomvandling kan få stora effekter på aggregerad nivå. Inkomstskillnaderna efter skatt ökar, eftersom det oftast är höginkomsttagare som minskar sin totala skattebelastning genom att ägna sig åt sådana åtgärder. Inkomstomvandling leder till missvisande statistik. Exempelvis skulle sänkt skattesats på utdelning kunna leda till en ökning av redovisad vinst och utbetalda utdelningar. Om detta bedöms enskilt skulle man

kunna dra slutsatsen att skattereformen gynnar företagande och ökar skatteintäkterna. Om denna ökning av bolagsvinsterna i själva verket är delägarnas förvärvsinkomster som har överförts till bolagssektorn för att minska de individuella skattebetalningarna minskar de totala skatteintäkterna eftersom förvärvsinkomsten överförs till ett annat inkomstslag med lägre beskattning. När effekterna av en skattereform utvärderas är det viktigt att ta hänsyn till effekterna på alla skattebaser.

## Incitament för inkomstomvandling i Sverige: 3:12-reglerna

*Efter 2006 års reform har 3:12-reglerna blivit mycket generösa för många delägare i fåmansföretag. Skattesatsen för utdelning har sänkts från 30 till 20 procent, och det årliga gränsbeloppet överstiger ofta aktiekapitalet i företaget.*

I kapitel 3 beskrivs principerna för beskattning av fysiska personer och företag i Sverige, skattesatsernas utveckling under perioden 2000–2012 och vilka effekter förändringarna har haft på incitamenten till inkomstomvandling. Vi beskriver 3:12-reglerna i detalj. 2006 års reform medförde både en sänkning av skattesatsen på utdelningar inom ramen för gränsbeloppet som betalas till aktiva ägare av fåmansföretag och en drastisk ökning av gränsbeloppet. Ytterligare en utveckling sedan 2006 har varit den stadiga höjningen av gränsbeloppet inom ramen för förenklingsregeln. År 2006 var detta gränsbelopp 64 950 kronor, medan det för år 2012 uppgår till 143 275 kronor. I många fall, och i synnerhet efter det sänkta minimikravet på nominellt aktiekapital till 50 000 kronor, överstiger det årliga gränsbeloppet i betydande grad aktiekapitalet i bolaget. Möjligheten att spara outnyttjat gränsbelopp som räknas upp med ränta påföljande år har ett optionsvärde som ger incitament till att starta holding- eller skalbolag med enda syfte att generera gränsbelopp för framtida användning, vilket vi framhåller i kapitel 4. I ruta 4.4 gör vi en beräkning av detta optionsvärde med hjälp av 2007 och 2012 års skattesatser. Till följd av det höjda gränsbeloppet inom ramen för förenklingsregeln, det sänkta minimikravet på nominellt aktiekapital för aktiebolag och avskaffandet av revisionsplikten för vissa typer av företag har detta optionsvärde ökat i betydande grad under perioden 2007–2012.

*Den faktiska skillnaden mellan den högsta marginalskattesatsen för utdelningar och den för löner är 25,4 procentenheter för aktiva ägare i fåmansföretag.*

En vanlig löntagare har få möjligheter att omvandla sin förvärvsinkomst till kapitalinkomst. Delägare i fåmansföretag bestämmer dock sin egen lön och det belopp som ska lämnas i utdelning. För att få en fullständig bild när man jämför skattebelastningen på löner med utdelningar till aktiva ägare i fåmansföretag, är det viktigt att ta hänsyn till skatter som betalas både på individnivå och på företagsnivå. Dessa olika skattesatser för skattebaser och inkomsttyper skapar incitament att överföra inkomster mellan skattebaser, individer och över tid för att sänka den totala skattebelastningen. På individnivå beskattas aktiva ägares utdelningsintäkter från fåmansföretag med 20 procent, medan förvärvsinkomst beskattas med marginalskattesatser på mellan 31,6 och 56,6 procent (2011 års skattesatser). För höginkomsttagare råder en skillnad på 36,6 procentenheter mellan skattesatsen på utdelningsinkomster inom gränsbeloppet och den högsta marginalskattesatsen på löneinkomster.

Något som ofta förbises i den offentliga debatten om skatter är att både löner och utdelningar beskattas två gånger: på individnivå *och* på företagsnivå. Sociala avgifter erläggs på alla löneutbetalningar som görs från företag. Medräknat skattekomponenten i de sociala avgifterna uppgår den totala marginalskattesatsen på löneinkomst från fåmansföretag till 48,3–66,4 procent. Utdelning sker av beskattat kapital dvs. beloppet har alltid beskattats först på bolagsnivå. Den totala skattebördan för utdelningar som ryms inom gränsbeloppet uppgår som ett resultat av detta till 41 procent. Skillnaden i skatt avseende utdelningar och löner i den högsta marginalskattesatsen uppgår därmed till 25,4 procentenheter för aktiva ägare av fåmansföretag, vilket är ett betydande incitament för inkomstomvandling.[2]

## Empiriska belägg för inkomstomvandling i Sverige

I kapitel 4 presenteras detaljerade empiriska belägg för inkomstomvandling och beteendereaktionen på individnivå respektive

[2] Vi har använt genomsnittliga kommunalskattesatser i hela rapporten. Skattekilen är större vid högre kommunalskattesatser, vilket ger större incitament för inkomstomvandling.

företagsnivå som ett resultat av 2006 års skattereform. Vi använder Företagsregister och individdatabasen Frida, som täcker alla företagsdeklarationer, alla självdeklarationer av privata aktiebolagsägare och alla K10-blanketter för perioden 2000–2009. Med hjälp av den databasen kan vi koppla samman tre uppgiftskällor och på så sätt identifiera beteende som avser inkomstomvandling och skatteundandragande.

*Med 2006 års reform förändrades incitamenten på flera olika sätt både på individ- och bolagsnivå. Det är viktigt att beakta reaktioner på bolags- och individnivå samtidigt när man utvärderar konsekvenserna av en skattereform och försöker identifiera inkomstomvandlingsbeteenden.*

2006 års skatteförändringar är ett mycket bra exempel på kopplingen mellan bolags- och delägarnivån, och på behovet av att beakta de båda dimensionerna när man analyserar reaktionerna på skatteförändringarna. Även om skatterna enbart reformerades på aktieägarnivå förväntar vi oss att finna effekter på bolagsnivå. Reformen påverkade incitament i flera dimensioner:

1. Incitamenten att betala ut utdelning ökade, eftersom skattesatsen för utdelningar inom ramen för gränsbeloppet sänktes och storleken på gränsbeloppet ökade för aktiva ägare i fåmansföretag.
2. Incitament för att lämna utdelning i stället för att betala ut löner som ersättning till aktiva ägare. Vi förväntar oss att aktiva ägare till fåmansföretag erhåller en större del av sin totala inkomst från företaget i form av utdelning.
3. Incitament för att bli en aktiv ägare i ett fåmansföretag, antingen genom att gå från ett passivt till ett aktivt ägande, minska antalet ägare för att kategoriseras som ett fåmansföretag, byta organisationsstruktur för en egenföretagare eller bilda ett nytt fåmansföretag. Till följd av detta förväntar vi oss en högre ägarkoncentration i fåmansföretag efter reformen.
4. Vid grundandet av ett holdingbolag eller ett skalbolag uppstår ett ökat värde från de potentiella skattebesparingarna genom möjligheten att ackumulera outnyttjade gränsbelopp. Vi förväntar oss följaktligen en ökning av antalet

mindre, inaktiva företag och en tendens mot allt färre kapitalintensiva företag.

Genom den empiriska analysen får vi resultat som bekräftar de förväntade beteendereaktioner som anges ovan. Nedan presenteras några av de viktigaste empiriska resultaten från kapitel 4.

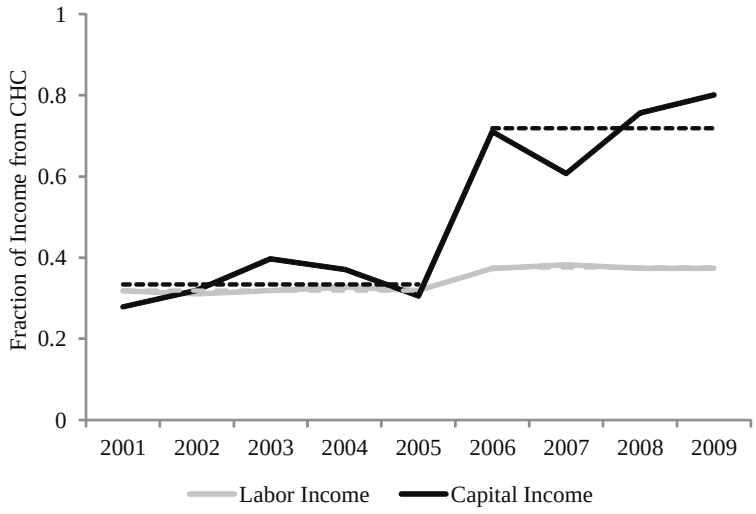
*Många fåmansföretag som inte tidigare hade lämnat utdelning började lämna utdelning under 2006.*

För det första finner vi att många fåmansföretag började lämna utdelning efter sänkningen av skattesatsen på utdelningar med 10 procentenheter. Mer än 20 procent av alla fåmansföretag började lämna utdelning under 2006. Fåmansbolag lämnade avsevärt högre utdelningar efter reformen, och det totala beloppet för utdelningar var konstant trots den ekonomiska nedgången 2008.

*Det förekommer mer inkomstomvandling från inkomstslaget tjänst till inkomstslaget kapital efter skattereformen. Aktiva ägare med hög inkomst erhåller högre utdelningar och lägre löner från sina fåmansföretag efter 2006. Detta minskar effektivt deras totala skattebelastning.*

För det andra finner vi bevis för detta nya beteende i form av inkomstomvandling mellan inkomstslagen i vår aggregerade statistik. Samtidigt som utdelningsinkomsterna från bolag med en vid ägarkrets minskade, ökade utdelningarna från fåmansföretag med över 80 procent jämfört med genomsnittet före 2006. Denna höga utdelningsnivå har legat konstant efter reformen. Vi intresserar oss därför för den andel av inkomsten som intjänas genom fåmansföretagen. Figur 1.1 visar den andel av total inkomst av tjänst som intjänats i fåmansföretag (den gråa linjen) och den andel av total utdelning som fysiska personer erhåller från fåmansföretag.

**Figur 1.1 Andel av förvärvsinkomst och andel av kapitalinkomst från fåmansföretag**




Vi finner att efter reformen ökar den andel utdelningsinkomster som erhållits från fåmansföretag till över 70 procent av de sammanlagda utdelningarna. Före reformen erhöll företagare bara omkring 33 procent av alla utdelningar från fåmansföretag. Däremot ändras betydelsen av inkomst av tjänst från fåmansföretag bara marginellt. Detta tyder på att tillväxten i fråga om sammanlagd inkomst i huvudsak beror på ökad utdelning från fåmansföretag och inte på ökad inkomst av tjänst. Vi tittar också närmare på mixen när det gäller lön och utdelning för ägare till fåmansföretag. Om fysiska personer utnyttjar möjligheterna i skattelagstiftningen att minimera skatten förväntar vi oss att skattebetalare som påförs statlig inkomstskatt föredrar att få utdelning utbetalad i stället för lön. Det är precis detta resultat som vi hittar i uppgifterna. Höginkomsttagare genererar en betydande del av sin inkomst från kapitalinkomst, som utdelningar och räntor. Det är mer troligt att de erhåller utdelningar, och det är också mer sannolikt att ägare till fåmansföretag lånar ut väsentliga penningbelopp till sina bolag. Fysiska personer med lön men utan utdelningar från fåmansföretag har en inkomst av tjänst som ligger under gränsen för statlig inkomstskatt. Fysiska personer verkar följaktligen optimera mixen av lön och utdelning i skatteplaneringssyften.

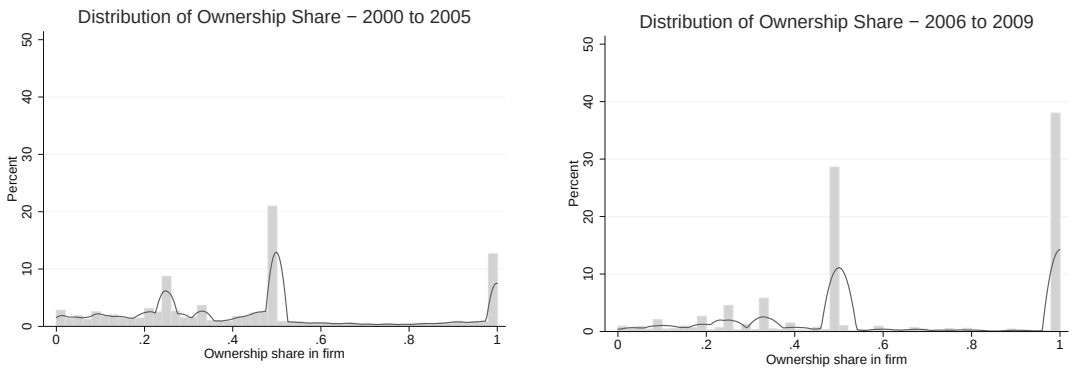
*Aktiva aktieägares innehav i fåmansföretag har ökat efter 2006. Detta kan tolkas som ett tecken på inkomstomvandling. Tidigare passiva ägare omklassificeras som aktiva, nya holdingbolag grundas med ett koncentrerat aktivt ägande och fler egenföretagare bildar bolag.*

För det tredje ser vi en högre koncentration av aktiva ägares aktieägande i fåmansföretag efter 2006 års reform, vilket framgår av figur 1.2. Före reformen hade 47 procent av fåmansföretagen ett aktivt ägande på minst 50 procent. Denna andel ökade till 74 procent efter reformen.

Den starka tendensen mot fullständigt aktivt ägande i fåmansföretag är en indikation på en inkomstomvandling, där passiva ägare omklassificeras till aktiva, av löntagare som bildar egna konsultföretag, eller av fysiska personer som bildar holdingbolag för att i framtiden dra fördel av det ackumulerade gränsbeloppet.

Genom 2006 års skattereform fick också egna företagare starkare incitament för att bilda bolag i syfte att minimera skatten, som Edmark och Gordon visar i bilaga 3 till denna rapport. De analyserar hur skillnaden i genomsnittlig skattesats påverkar sannolikheten att bilda bolag när företaget är organiserat som enskild firma och som ett fåmansföretag. En ökning med 1 procent i skatt ökar sannolikheten för att innehavaren av en enskild firma ska bilda bolag med 0,75 procentenheter. De enskilda näringsidkarnas ökade benägenhet att bilda bolag kan också bidra till en ökning av aktivt ägande i fåmansföretag, som vi kan utläsa av uppgifterna.

**Figur 1.2 Fördelning av aktiva ägarens ägarandel i fåmansföretag**




Dessutom finner vi att aktiva ägare till fåmansföretag har högre inkomst, högre utdelningar och högre utbildning än den genomsnittliga anställde skattebetalaren. Det innebär följaktligen att 2006 års skattereform potentiellt påverkar höginkomsttagare. I vår analys finner vi dessutom att efter reformen är det övervägande personer med högre inkomst som bildar nya fåmansföretag. Det är just dessa personer som vi förväntar oss ska bilda bolag, eftersom de påförs statlig inkomstskatt och alltså har störst möjlighet att minska sin skatt genom att föra över förvärvsinkomst till fåmansföretag.

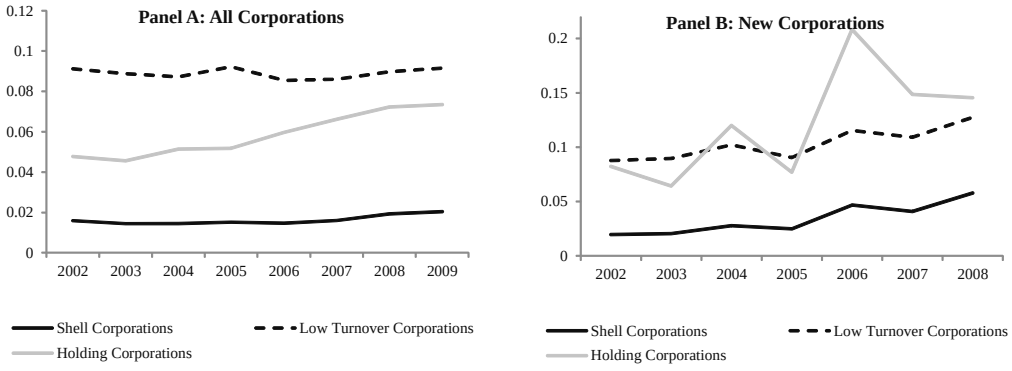
*Bolag grundas för att göra det möjligt för ägare att omvandla inkomst genom att utnyttja 3:12-reglerna. År 2006 var omkring en tredjedel av alla nybildade fåmansföretag holdingbolag, skalbolag eller företag med låg omsättning.*

För det fjärde ser vi att den genomsnittliga företagsstrukturen och fåmansföretagens reala investeringar ändrades efter 2006 års skattereform. Vi noterar särskilt att efter reformen har ett genomsnittligt nybildat fåmansföretag gjort färre reala investeringar, det har lägre totala tillgångar och ett mindre eget kapital än före reformen. Samtidigt ökade innehavet i kassan avsevärt. Över 90 procent av de nybildade fåmansföretagen har ett eget kapital i nominellt värde på exakt 100 000 SEK. Detta är omkring 21 procent mer än före 2006. Vi finner också att andelen fåmansföretag som är holdingbolag eller skalbolag har ökat efter 2006 års

skattereform. Ett holdingbolag kan användas för inkomstomvandling i syfte att sänka skatterna på utdelningar till passiva ägare från icke börsnoterade bolag från 25 procent till 20 procent på individuell nivå. I stället för att direkt inneha dessa andelar kan individen äga dem genom ett fåmansföretag där han eller hon är (eller påstår sig vara) aktiv ägare och redovisar sitt ägande på blankett K10 i deklarationen. Utdelning till holdingbolaget beskattas inte på bolagsnivå och kan delas ut till den aktiva ägaren och beskattas med 20 procent inom ramen för gränsbeloppet. Skalbolag kan användas för att ackumulera gränsbelopp inför kommande år. Vi visar denna utveckling för alla fåmansföretag (panel A) och för nybildade fåmansföretag (panel B) i figur 1.3.

Vi finner att den andel fåmansföretag som antingen är holdingbolag eller skalbolag har ökat från omkring en sjättedel före reformen till över en fjärdedel av alla nya fåmansföretag efter reformen. År 2006 var omkring en tredjedel av alla nybildade fåmansföretag holdingbolag, skalbolag eller företag med låg omsättning. En väsentlig andel av de företag som grundades efter reformen var sannolikt inte avsedda att fungera som företagarnas huvudsakliga inkomstkälla.

**Figur 1.3 Andelen fåmansföretag som är holdingbolag, skalbolag och företag med låg omsättning**




Anm: Denna figur visar andelen skalbolag (den svarta linjen), företag med låg omsättning (den streckade linjen) och holdingbolag (den gråa linjen) för perioden 2002–2009. Fält A inkluderar alla fåmansföretag. Fält B inkluderar bara nyligen grundade företag under det specifika året.

*Det är särskilt höginkomsttagare som grundar holdingbolag eller skalbolag efter reformen.*

Slutligen analyserar vi den ökade utbredningen av holdingbolag och skalbolag efter 2006 års skattereform. Vi granskar särskilt de fysiska personer som är aktiva i dessa företag. Det ökade antalet holdingbolag och företag med låg omsättning är i huvudsak resultatet av att höginkomsttagare bildar fåmansföretag. De gynnas mest av skattekilen mellan inkomst av tjänst och utdelningsinkomster. Vi finner att inkomsten för en fysisk person som är aktiv i ett holdingbolag är omkring dubbelt så hög som den för en genomsnittlig ägare i ett fåmansföretag. Ägare till skalbolag har också högre inkomster än en genomsnittlig ägare i ett fåmansföretag. Dessutom genererar de en mycket hög andel av sin totala inkomst utanför fåmansföretaget.

## Diskussion och policyimplikationer

Kapitel 5 avslutar rapporten med en granskning av inkomstomvandlingens aggregerade effekter,, särskilt vad gäller holdingbolag, och vi diskuterar potentiella effekter på skatteintäkterna. Inkomstomvandling och skatteundandragande kan få långtgående konsekvenser på aggregerad nivå. Vi kan sammanfatta dessa effekter enligt följande: 1) effektivitetseffekter, 2) fördelningseffekter, 3) inkomsteffekter och 4) vilseledande statistik.

*Inkomstomvandling innebär slöseri.*

Beskattningens effektivitetsproblem gäller möjligheten att minimera de så kallade dödviktsförlusterna som följer då företag och hushåll anpassar sig till skattereglerna. En skattebetalare som ägnar sig åt inkomstomvandling utnyttjar resurser för att omklassificera inkomst i syfte att minska den sammanlagda skattebelastningen. Detta medför ett icke-produktivt resursutnyttjande och således också en effektivitetsförlust. Den kraftiga ökningen av antalet holdingbolag efter 2006 kräver att betydande resurser ägnas åt registrering, administration och integrering av strategier för inkomstomvandling i holdingbolag eller skalbolag.

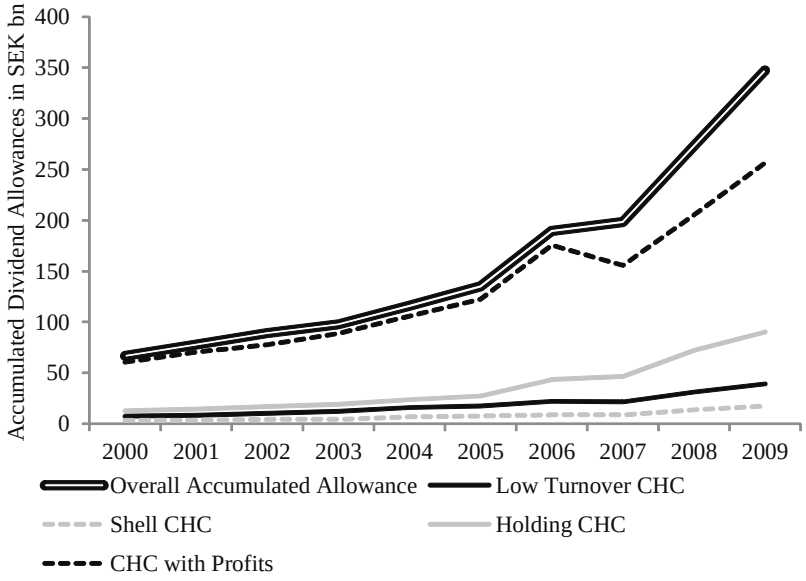
*Det är till största del höginkomsttagare som utför inkomstomvandlingen i enlighet med 3:12-reglerna. Detta ökar inkomstskillnaderna efter skatt.*

De empiriska beläggen för inkomstomvandling visar att såväl vertikal som horisontell rättvisa reduceras. Vi finner att det övervägande är höginkomstgrupper som ägnar sig åt inkomstomvandling, eftersom fördelarna för dem är större. Detta minskar i själva verket den vertikala rättvisan. Vi ser dessutom skillnader i inkomstomvandling när det gäller ålder, kön och utbildning.

*Outnyttjade gränsbelopp kan sparas till kommande år. Det sammanlagda gränsbeloppet för ett givet år är summan av det ackumulerade outnyttjade gränsbelopp som överförts från tidigare år och det beräknade gränsbeloppet för innevarande år.*

Om en aktiv ägare till ett fåmansföretag får en utdelning som är lägre än hans eller hennes gränsbelopp det aktuella året, kan det återstående outnyttjade gränsbeloppet sparas med uppräkning i form av ränta för att utnyttjas i framtiden. Det finns ingen tidpunkt då det inte längre är möjligt att utnyttja ackumulerade, outnyttjade gränsbelopp. Ackumulerade gränsbelopp i holdingbolag och skalbolag är i mycket hög grad koncentrerade till inkomsttagare med de högsta inkomsterna.

**Figur 1.4** **Utveckling för ackumulerade gränsbelopp under perioden 2000–2009 i miljarder kronor: uppdelning med hänsyn till kategori av fåmansföretag**




I figur 1.4 visas utvecklingen för ackumulerade gränsbelopp när det gäller alla fåmansföretag, holdingbolag och skalbolag.

*De ackumulerade outnyttjade gränsbeloppen i fåmansföretag utgör en stor framtida potentiell förlust av skatteintäkter.*

Vi ska nu göra en enkel kalkyl för att illustrera att totalt sett kan de outnyttjade ackumulerade gränsbeloppen utgöra en betydande framtida förlust av skatteintäkter. Detta ska enbart ses som ett exempel, inte som en exakt kalkyl av den potentiella förlusten av skatteintäkter. Genom att använda värdena från 2009 kan vi beräkna de undre och övre gränserna för de totala latenta framtida förlusterna av skatteintäkter från den fördelaktiga beskattningen på 20 procent av utdelningen inom ramen för gränsbeloppet till aktiva ägare i fåmansföretag. För att göra detta måste vi göra några antaganden om vad den alternativa skattesatsen är för utdelning som beskattas inom ramen för gränsbeloppet.

*Ackumulerade outnyttjade gränsbelopp i holdingbolag kan överslagsmässigt motsvara omkring 23 miljarder kronor i framtida totala förluster av skatteintäkter, baserat på uppgifter från 2009.*

Holdingbolagens roll är särskilt viktig. År 2009 hade fysiska personer sammanlagt ackumulerat omkring 90 miljarder kronor i outnyttjade gränsbelopp i dessa företag. Detta kan få betydande intäktseffekter framöver, eftersom fysiska personer kan minska skattebördan på kapitalinkomst från andelar i icke börsnoterade bolag, med en vidare ägarkrets, till 20 procent. Eftersom kapitalvinster lämnas som utdelning till ägaren, kan skattebördan för kapitalvinster sänkas med 5 procentenheter från 25 till 20 procent, vilket motsvarar den lägsta gränsen för förluster i skatteintäkter. Det framtida totala latenta intäktsbortfallet baserat på outnyttjade, ackumulerade gränsbelopp i holdingbolag uppgår till knappt 5 miljarder kronor.[3] Detta kan jämföras med att den sammanlagda skatteintäkten från utdelningar och kapitalvinster uppgick till omkring 20 miljarder kronor 2009. Om vi emellertid antar att aktiva ägares inkomster av tjänst också överförs till holdingbolag och fördelas till ägarna som utdelning inom ramen för gränsbeloppet, reduceras den totala skattebördan som mest med 25,4 procentenheter. Om man utnyttjar denna skillnad i skatt skulle den övre gränsen för den latenta förlusten i skatteintäkter uppgå till 23 miljarder kronor. Och om så lite som en fjärdedel av detta utnyttjas av ägarna uppgår fortfarande förlusten i skatteintäkter till omkring 6 miljarder kronor enbart från holdingbolagen. Som vi ser i tabell 1.1 finns det också väsentliga latenta förluster i skatteintäkter i företagen med låg omsättning och i skalbolagen, liksom i vanliga fåmansföretag. Detta är en särskild utmaning för de framtida prognoserna för skatteintäkter, eftersom dessa latenta förluster i skatteintäkter kan realiseras vid en viss tidpunkt.

[3] Observera att 5 procent är den under gränsen för skattebesparingar. Fysiska personer kan dessutom överföra inkomst av tjänst till holdingbolag. Skattebesparingarna uppgår till 25,4 procent i detta fall. Som nämnts i texten uppgår skatteinbesparingarna för kapitalvinster till 10 procent och kan vara lika så viktiga som de för utdelningar.

**Tabell 1.1 Totalt ackumulerade outnyttjade gränsbelopp för aktiva ägare till fåmansföretag och latent framtida förlust av skatteintäkter**

| | | Total latent framtida förlust i skatteintäkter, i miljarder kronor | |
|---|---|---|---|
| | **Ackumulerat outnyttjat gränsbelopp 2009, i miljarder kronor** | **Undre gräns** 5 procentenheters skatteskillnad | **Övre gräns** 25,4 procentenheters skatteskillnad |
| Alla fåmans-företag | 345 | 17 | 88 |
| Holdningbolag | 90 | 5 | 23 |
| Företag med låg omsättning | 39 | 2 | 10 |
| Skalbolag | 17 | 1 | 4 |

Det exakta beloppet för den latenta förlusten beror på hur omfattande inkomstomvandlingen är och på skillnaden i skattesats, oavsett om man antar den lägre gränsen på 5 procentenheter eller den övre gränsen på 25,4 procentenheter. Koncentrationen av gränsbelopp bland höginkomsttagare är ett starkt argument för att den övre gränsen är den relevanta inkomstomvandling som beräknats för majoriteten av gränsbelopp. Dessa uppgifter är dock grova uppskattningar och bör tolkas med försiktighet. Dessa latenta förluster i skatteintäkter ska inte ses som exakta beräkningar, utan snarare som ett exempel på de potentiella konsekvenserna av dessa ackumulerade gränsbelopp.

*Utvärdering av en skattereform kan leda till felaktiga slutsatser om beskattningsunderlagen betraktas isolerat. Samtidiga effekter på andra beskattningsunderlag måste beaktas för att ge en fullständig beskrivning av konsekvenserna.*

Inkomstomvandling leder också till vilseledande makroekonomisk statistik. Utifrån aggregerad statistik kan man dra slutsatsen att 2006 års reform har uppmuntrat till entreprenörskap och företagande. Företagande uppfattas generellt som viktigt för skapande av arbetstillfällen och ekonomisk tillväxt. Men företagande är svårt att mäta. Ett vanligt mått på företagande är nybildandet av aktiebolag och nybildandet av enskilda firmor. Vårt viktigaste argument mot detta enkla ”beräkningsmått” är att

löntagare grundar nya företag för att ägna sig åt inkomstomvandling för att minimera skatterna och för att omklassificera förvärvsinkomst till kapitalinkomst. Vi observerar ett ökat antal nybildade aktiebolag efter 2006. Men eftersom en tredjedel av denna ökning beror på nybildning av holdingbolag och företag med låg omsättning, ger inte en enkel uppskattning av antalet nya aktiebolag en användbar siffra.

*Det har inte gjorts en fullständig utvärdering av alla aspekter av 3:12-reglerna och 2006 års reform.*

I denna rapport har vi utvärderat vissa aspekter av 2006 års reform av 3:12-reglerna och beteendereaktionerna på denna. Men detta är inte en fullständig utvärdering av vare sig 3:12-reglerna eller 2006 års reform. Vi finner empiriska belägg för en utbredd användning av 3:12-reglerna i syfte att omvandla inkomst. Det huvudsakliga syftet med rapporten är att uppmärksamma fenomenet inkomstomvandling och de utmaningar som det skapar för det politiska beslutsfattandet, för att prognostisera skatteintäkter och för att tolka aggregerad statistik. Många fåmansföretag ägnar sig dock inte åt inkomstomvandling, utan återspeglar reell verksamhet och företagande. Inte alla fåmansföretag som bildades efter 2006 har grundats i syfte att sänka ägarens skattebelastning. Ändå är en viss del av det som förefaller vara företagande och värdeskapande i själva verket ett beteende som syftar till inkomstomvandling.

*För att minska inkomstomvandlingen enligt 3:12-reglerna bör gränsbeloppet vara mindre generöst och/eller så bör möjligheten att överföra outnyttjade gränsbelopp tas bort eller åtminstone begränsas. En revidering av Skatteverkets kontrollstrategier bör också övervägas.*

Enligt vår mening finns det tre huvudsakliga inslag i de gällande 3:12-reglerna som kombinerat ger både incitament till och tillfällen för inkomstomvandling. För det första fastställs mycket generösa gränsbelopp i de förenklade reglerna som inte är beroende av eget kapital, anställning och verksamhet. Fysiska personer kan erhålla gränsbelopp som årligen överstiger deras del av aktiekapitalet. För det andra är möjligheten att överföra gränsbelopp av särskilt intresse för ägare till skalbolag och holdingbolag. Detta gör det

möjligt för dem att omvandla inkomst över tiden. För det tredje är definition av vad som avses med en aktiv ägare inte klart fastställd i skattelagstiftningen. Det verkar dessutom som om det råder en bristande kontroll av om en fysisk person som påstår sig vara aktiv ägare faktiskt är aktiv i företagets generering av vinster i betydande omfattning.

# 1 Introduction and summary

## The Swedish dual income tax and the 2006 reform of the 3:12 rules

*The Swedish 1991 reform introduced the dual income tax*

The Swedish dual income tax levies a progressive tax on labor income and a proportional tax on capital income. In contrast, a global income tax system levies one tax schedule on the sum of income from all income sources. The dual income tax was introduced in Sweden in 1991, in Norway in 1992, and in Finland in 1993. These tax reforms broadened tax bases (by removing deductions and special regulations) and reduced marginal tax rates. Over the past two decades, numerous other countries have introduced versions of a dual income tax system. The Swedish 1991 reform is often referred to as "the tax reform of the century" and is analyzed among others by Agell, Englund, and Södersten (1996, 1998).

Preventing tax minimising income shifting across taxpayers, tax bases, and time is generally a challenge when designing tax systems. It is particularly prevalent under a dual income tax with large differences in marginal tax rates on capital and labor income. In its extreme form, all high wage earners would set up their own corporation to shift compensation for their labor supply to the corporate level. The taxation of small businesses is the so-called Achilles heel of the dual income tax (Sørensen, 1994). To prevent such income shifting, the Nordic countries implemented different versions of an income splitting system, where the income of owner-managers in smaller businesses is divided into an labor income component and a capital income component (see Lindhe, Södersten, and Öberg, 2002, 2004).

*The 3:12 rules apply to active owners in closely held corporations. Only dividends within the dividend allowance are taxed as dividend income. Dividends exceeding the dividend allowance are taxed as labor income.*

The Swedish income splitting system, *the 3:12 rules*, was introduced in 1991 and applies to active owners in corporations where four or less owners control at least 50 percent of the shares. The 3:12 rules impute a return to equity in the corporations, a "dividend allowance" (*Gränsbeloppet*). The dividend allowance is calculated in two parts: the wage based dividend allowance depends on the total wage bill of the corporation, while the equity based dividend allowance depends on the nominal equity of the corporation. Nominal equity consists of paid-in share capital and any unconditional shareholders' contribution. Dividends within the active shareholder's dividend allowance (based on his or her ownership share) are taxed as dividends at a flat rate of 20 per (from 2006 and onward). Dividends in excess of the dividend allowance are taxed as labor income, where the marginal tax rate depends on the shareholder's total wage income from all sources.

*The 2006 reform of the 3:12 rules were intended to stimulate entrepreneurship and employment in family owned businesses. The tax rate on dividends within the dividend allowance was reduced and at the same time the dividend allowance was substantially increased.*

The 3:12 rules have been the subject of many discussions over the years. One challenge was that a large part of the dividend allowance was based on the wage bill of the corporation and initially the definition excluded owner wages. This meant that active owners in corporations with high total wage costs received a high dividend allowance, while active owners in smaller corporations with few employees received a small dividend allowance, even if they had the same nominal equity level. In 1999, a government committee was appointed to evaluate the 3:12 rules and propose an alternative system. The report, *Beskattning av småföretag* (Taxation of small business), was presented in 2002 (SOU 2002:52). It suggested replacing the 3:12 rules with the "*BEK model*"[4]. However,

[4] The BEK-model (beskattat eget kapital) imputed a return to shareholders' equity, based not only on paid-up share capital (as under the existing system), but also to the firm's retained earnings. This allowed for the fact that retained earnings would be subject to tax if

following a public debate on the suitability of this suggested system, a new expert group was asked to make a suggestion for changes to the existing 3:12 rules in mid-2004. They handed in their report, "*Reformerad agarbeskattning – effektivitet, prevention, legitimitet*" (Reformed ownership taxation – *efficiency, prevention, legitimacy*, in January 2005 (Edin, Hansson, and Lodin, 2005). As stated by Lodin (2011b, pp. 169):

> *"Part of our responsibility was to explore options for exempting larger close companies from the rules. We got fairly far with such a rule, which would have exempted businesses with 10 or more employees. However, we discovered that virtually every conceivable grey area would contain a significant percentage of highly cyclical companies (such as construction firms), so that many of them were liable to enter or exit the system depending on the state of the economy."*

Based on Edin, Hansson, and Lodin (2005), the Government presented its proposal for changes in the 3:12 rules in late 2005 (Govt. Bill 2005/06:40). The main motivation for these changes was to increase the risk compensation under the 3:12 rules and to promote entrepreneurship and employment in corporations with concentrated ownership. The increase in the wage based dividend allowance and the reduced owner wage requirement to earn a wage based dividend allowance increased the wage based dividend allowance in closely held corporations with high wage costs. In practice this meant that active owners in such corporations would most likely avoid having their dividends or capital gains taxed as labor income.

Another intention of the rule changes was to simplify the 3:12 rules for smaller corporations. Hence, the simplification rule was introduced. These changes came into effect in January 2006. However, these changes have been recognized simply as smaller modifications of the 3:12 rules. It has received little or no attention from academics in economics. Yet these modifications sum up to substantial changes in taxpayers' incentive structure, as we describe in Chapter 3. The tax rate on dividends within the dividend allowance was reduced by 10 percentage points and the dividend allowance was drastically increased for active owners of closely held corporations. In particular the introduction of the simplification

distributed (either as dividends or as wage income of the owner). This part of the shareholders' equity was multiplied by a factor of 0.45. The imputed return to capital thus defined was the part of dividends to the active owner that was be taxed as dividend income.

rule increased the dividend allowance for smaller corporations with low nominal capital and low wage costs. Under this rule, a fixed level of dividend allowance per corporation is distributed to active owners according to their ownership share. Around 80 percent of active owners choose the simplification rule in calculating their dividend allowance. Subsequent changes in the rates for calculating dividend allowances after 2006 have made the 3:12 even more generous for certain groups.

## The concept of income shifting

*Income shifting is the process of transferring income between income categories and tax brackets in order to reduce total tax payments.*

Chapter 2 provides a theoretical overview and defines the phenomenon of *income shifting*. Income shifting is legal tax avoidance and does not involve immediate real effects; it is purely a relabeling of existing income. The three main types of income shifting are across time, tax bases, and taxpayers. We provide examples of these different types and an overview of the empirical literature within these different types.

To participate in income shifting, an individual needs a financial incentive in the form of a potential tax reduction. However, not all taxpayers participate in income shifting, even if they have an incentive to do so. Reasons for that can be that they are unaware of the incentives, or that they lack opportunity. Participation in income shifting can have large effects at the aggregate level. Income shifting by individuals increases after-tax income inequality as typically higher income groups reduce their total tax payments by participating in income shifting. Income shifting leads to misleading statistics. For instance, a reduction of the dividend tax rate could lead to an increase in reported profits and paid out dividends. Evaluated in isolation, one might conclude that the tax reform fosters entrepreneurship and raises tax revenue. However, if this increase in corporate profits is in fact owner-managers' labor income that has been shifted into the corporate sector to reduce individual tax payments, total tax revenue is actually reduced as income is shifted into a lower taxed type. When evaluating the effects of a tax reform, it is important to take into account the effects on *all* tax bases.

## Incentives for income shifting in Sweden: the 3:12 rules

*The 2006 reform made the 3:12 rules very generous for many owner-managers of smaller businesses. The dividend tax rate has been cut from 30 to 20 percent and the annual dividend allowance often exceeds nominal equity in a corporation.*

Chapter 3 describes the principles in the taxation of individuals and corporations in Sweden, as well as the development in tax rates in the period 2000-2012 and the corresponding incentives to shift income. We describe the 3:12 rules in detail. The 2006 reform both reduced the tax rate on dividends within the dividend allowance paid to active owners of closely held corporations and drastically increased the amount of the dividend allowance.

A further development since 2006 has been the steady increase in the dividend allowance under the simplification rule. In 2006, the dividend allowance under the simplification rule was SEK 64 950, while it amounts to SEK 143 275 in 2012. In many cases, and particularly after the 2010 reduction in the minimum nominal equity requirement to SEK 50 000, the annual dividend allowance by far exceeds the total nominal equity in the corporation. The possibility to carry forward unused dividend allowance with interest represents an option value that provides incentives to set up holding or shell corporations for the sole purpose of generating dividend allowances for future use, as we argue in Chapter 4. In Box 4.4, we explicitly calculate this option value using the 2007 rates and the 2012 rates. Due to the increase in the dividend allowance under the simplification rule, the reduced required minimum nominal equity in corporations and the removal of the accounting duty, the option value has increased considerably from 2007 to 2012.

*The effective difference in the top marginal tax rate on dividends and wages is 25.4 percentage points for active owners of closely held corporations.*

An ordinary wage earner has few possibilities to transfer his or her labor income to capital income. However, owner-managers in their own corporation determine their own wage and the amount of dividends. When comparing the tax burden on wages versus dividends for active owners in closely held corporations, it is

important to take into account taxes paid both at the individual level and at the corporate level in order to get the full picture. These different tax rates across tax bases and income types create incentives to shift income across tax bases, individuals, and over time to reduce total tax payments. At the personal level, active owners' dividend income from a closely held corporation is taxed at 20 percent while labor income is taxed at marginal tax rates ranging from 31.6 percent to 56.6 percent (2011 rates). For high income earners, there is a 36.6 percentage point difference in the top marginal tax rates on dividend income within the dividend allowance and wage income.

A point that is often overlooked in the public tax debate is that both wages and dividends are taxed twice; at the individual level *and* at the corporate level. All wage payments from corporations are subject to social security contributions. Including the tax component of social security contributions, the total marginal tax rate on wage income from closely held corporations ranges from 48.3 to 66.4 percent. Dividend payments have already been subject to taxation at the corporate level. The resulting total tax burden amounts to 41 percent for dividends within the dividend allowance. Hence, the difference in the top marginal tax rate on dividends and wages is 25.4 percentage points for active owners of closely held corporations and provides a substantial income shifting incentive.[5]

## Empirical evidence of income shifting in Sweden

Chapter 4 presents detailed empirical evidence on income shifting and the behavioral responses at the individual level and at the corporate level to the 2006 tax reform. We use the Firm Register and Individual Database (FRIDA), which covers all corporate tax returns, all income tax returns of closely held corporation owners and all K10-forms from 2000 to 2009. The data set enables us to link these three data sources and thus to identify income shifting and tax avoidance behavior.

[5] Throughout the report, we use average municipal tax rates. For high tax municipalities, the tax wedge is higher and results in higher incentives to shift income.

*The 2006 reform changed incentives along several dimensions at both the individual level and the corporate level. It is important to consider both corporate and individual level responses simultaneously when evaluating responses to a tax reform and to identify income shifting behavior.*

The 2006 tax changes are a very good example of the link between the corporate and the shareholder level, and the necessity of including both dimensions when evaluating responses to the tax changes. Even though the taxes were reformed only at the shareholder level, we would expect to find effects at the corporate level. The reform affected incentives along several dimensions:

1. Increased incentives to pay dividends as the tax rate on dividends within the dividend allowance was reduced and the amount of the dividend allowance was increased for active owners of closely held corporations.
2. Incentive to pay dividends instead of wages as compensation to active owners. We would thus expect to find that active owners of closely held firms receive more of their total income from the corporation as dividends.
3. Incentive to become an active owner in a closely held corporation either by shifting from passive to active ownership status, by reducing the number of owners in order to classify as a closely held corporation, by shifting organizational form for a self-employed individual, or by starting a new closely held corporation. As a consequence, we would expect higher ownership concentration in closely held corporations after the reform.
4. Increased value from the potential tax savings from setting up a holding or a shell corporation by accumulating unused dividend allowances. We would thus expect to see an increase in the number of smaller, inactive corporations and a tendency to less capital intensive corporations.

In the empirical analysis we get results that confirm the expected behavior responses listed above, and we now present some of the main empirical findings from Chapter 4.

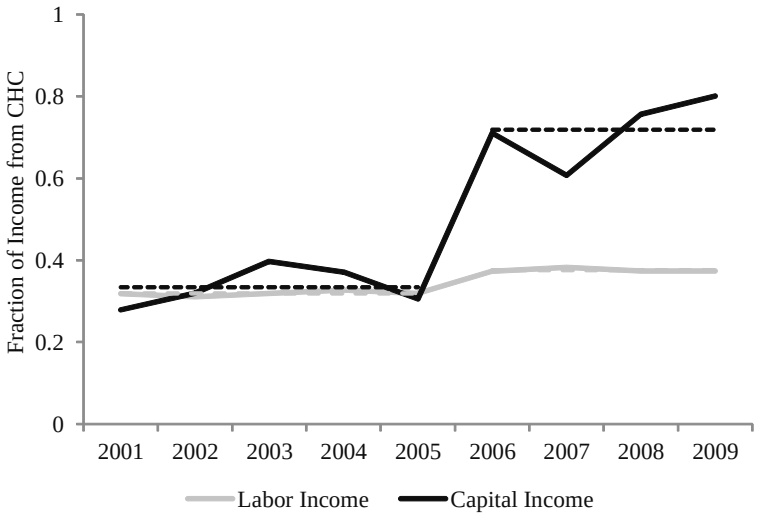
*Many closely held corporations that previously had not paid dividends started paying dividends in 2006.*

First, we find that many closely held corporations initiated dividend payments after the 10 percentage point dividend tax cut. More than 20 percent of all closely held corporations initiated dividend payments in 2006. Closely held corporations paid substantially higher dividends after the reform and overall dividends were constant despite the economic downturn in 2008.

*There is more income shifting from the labor income tax base to the capital income tax base after the tax reform. High-income active owners receive more in dividends and less in wages from their closely held corporations after 2006. This effectively reduces their total tax burden.*

Second, we find evidence of this income shifting behavior across tax bases in our aggregate statistics. While dividend income from widely held corporations decreased, dividends from closely held corporations increased by over 80 percent of the unconditional pre-2006 average. This high level of dividends is constant after the reform. We are therefore interested in the share of income that is earned through the closely held corporations. Figure 1.1 shows the share of total labor income earned in closely held corporations (grey line) and the share of total dividends that the individual receives from the closely held corporation.

**Figure 1.1 Share of labor and capital income from closely held corporations**




We find that the share of dividend income received from closely held corporations increases after the reform to over 70 percent of total dividends. Before the reform, entrepreneurs only received about 33 percent of all dividends from a closely held corporation. In contrast, the importance of labor income from closely held corporations changes only marginally. This suggests that the growth in total income is mainly due to increased dividends from closely held corporations and not from increased labor income. We also take a closer look at the wage-dividend mix of closely held corporation owners. If individuals capitalise tax minimisation opportunities in the tax code, we would expect taxpayers, who are subject to the state tax, to prefer dividends vis-à-vis wages as payout channel. This is precisely what we find in the data. High income individuals generate a substantial share of their income from capital income such as dividends and interest. They are more likely to receive dividends and are also more likely to give substantial shareholder loans to their closely held corporations. Individuals with wages but not dividends from closely held corporations have a labor income below the threshold for the state tax. Hence, individuals appear to optimize the wage-dividend mix for tax purposes.

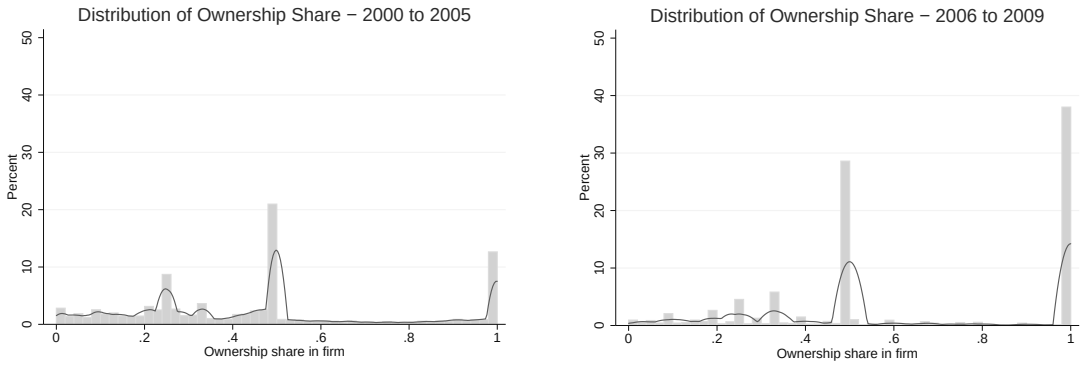
*Active shareholders hold larger shares of closely held corporations after 2006. This can be interpreted as a sign of income shifting. Existing passive owners re-classify as active, new holding firms are founded with concentrated active ownership, and more self-employed entrepreneurs incorporate.*

Third, we observe a higher concentration of active owners' ownership shares in closely held corporations after the 2006 reform, as seen in Figure 1.2. Before the reform, 47 percent of the closely held corporations had at least 50 percent active ownership. This share increased to 74 percent after the reform.

The strong tendency towards full active ownership in closely held corporations is an indication of income shifting by passive owners re-classifying as active by wage earners setting up consulting corporations, or by individuals setting up holding corporations to benefit from the option value of the accumulated dividend allowance.

The 2006 tax reform also provided self-employed individuals with strengthened tax minimizing incentives to incorporate, as shown by Edmark and Gordon in Appendix 3 of this report. They analyze how the difference in average tax rate when the firm is organized as a self-employed and as a closely held corporation affects the probability to incorporate. A one percent increase in this tax rate difference increases the probability that the self-employed individual incorporates by 0.75 percentage points. This increased incorporation of self-employed entrepreneurs also can contribute to the increase in active ownership concentration in the closely held corporations that we observe in the data.

**Figure 1.2 Distribution of active owners' ownership share of closely held corporations**




Further, we find that active owners of closely held corporations have higher income, higher dividends, and higher education than the average employed taxpayer. Hence, the 2006 tax reform potentially affects higher income individuals. We further find in our analysis that after the reform, individuals founding new closely held corporations are predominantly individuals with higher income. These are exactly the individuals we would expect to incorporate as they are subject to the state tax and have thus the largest tax saving potential from shifting labor income into closely held corporations.

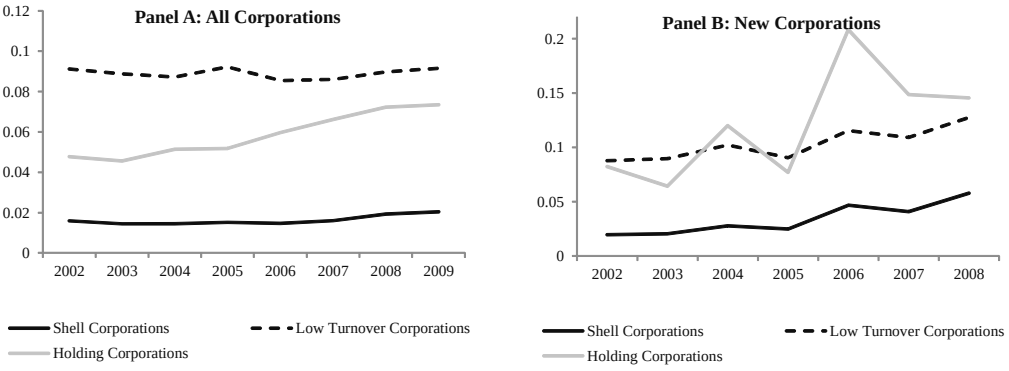
*Corporations are founded to enable owners to participate in income shifting using the 3:12 rules. In 2006, about a third of all newly founded closely held corporations were holding corporations, shell corporations or low turnover companies.*

Fourth, we observe that the average corporate structure and real investments of closely held corporations change after the 2006 tax reform. Specifically, we find that after the reform the average newly founded closely held corporation has less real investment, less total assets, and less equity than before the reform. At the same time, cash holdings substantially increased. Over 90 percent of newly founded closely held corporations have nominal equity of exactly SEK 100 000. This is about 21 percent more than before 2006. We also find that the percentage of closely held corporations that are holding corporations or shell companies increases after the 2006

tax reform. A holding corporation can be used as an income shifting device to reduce taxes on dividends to passive owners from non-listed corporations from 25 percent to 20 percent at the personal level. Instead of owning these shares directly, the individual can own them through a closely held corporation where he or she is (or claims to be) the active owner and files a k10 form. Dividends received by the holding corporation are not taxed at the corporate level and may be distributed to the active owner and taxed at 20 percent within the dividend allowance. Shell corporations can be used to accumulate dividend allowances for future years. We show this development for all closely held corporations (Panel A) and for newly founded closely held corporations (Panel B) in Figure 1.3.

We find that the share of closely held corporations being either holding corporations or shell corporations has increased from about a sixth before the reform to over a quarter of all new closely held corporations after the reform. In 2006, about a third of all newly founded closely held corporations were holding corporations, shell corporations or low turnover companies. Hence, a substantial share of the corporations founded after the reform are not designed to be the main income source for entrepreneurs.

**Figure 1.3: Share of CHCs that are holding corporations, shell corporations and low turnover corporations**




Note: This Figure shows the share of shell corporations (black line), low turnover corporations (dotted line), and holding corporations (grey line) for the period 2002-2009. Panel A includes all closely held corporations. Panel B only includes newly founded corporations in the specific year.

*It is high income individuals in particular who found holding corporations or shell corporations after the reform.*

Finally, we analyze the increased uptake of holding corporations and shell companies after the 2006 tax reform. Specifically, we look at the individuals actively participating in these corporations. The increasing number of holding companies and low turnover companies is mainly the result of high income individuals founding closely held corporations. They benefit the most from the tax wedge between labor income and dividend income. We find that an individual actively participating in a holding corporation has about twice the income of the average closely held corporation owner. Shell company owners also have higher income than the average closely held corporation owner. Furthermore, they generate a very high share of their total income outside the closely held corporation.

## Discussion and policy implications

Chapter 5 closes the report with a look at the aggregate effects of participation in income shifting with a particular emphasis on holding companies and gives an outlook on potential revenue effects. Income shifting and tax avoidance can have far reaching consequences at the aggregate level. We can summarize the effects as (1) efficiency effects, (2) distributional effects, (3) revenue effects, and (4) misleading statistics.

*Income shifting implies waste.*

Efficiency in taxation refers to minimising the excess burden that arises from behavioral responses to taxes. A taxpayer that participates in income shifting uses resources to reclassify income to reduce total tax payments. This implies non-productive use of resources and thus also efficiency loss. The strong increase in the number of holding corporations after 2006 requires a substantial amount of resources to be spent on registration, administration, and integration of income shifting strategies within holding or shell corporations.

*The majority of income shifting under the 3:12 rules is conducted by high income individuals. This increases after-tax income inequality.*

Our evidence on participation in income shifting shows that vertical as well as horizontal equity is reduced. We find that predominantly high income groups participate in income shifting as their benefits from these strategies are higher. This effectively reduces vertical equity. We further observe differences in income shifting with respect to age, gender, and education.

*Unused dividends allowances can be carried forward. The total dividend allowance for a given year is the sum of the accumulated unused dividend allowance carried forward from the past and the calculated dividend allowance for this year.*

If the active owner in a CHC receives dividends that are lower than his dividend allowance that year, the remaining unused dividend allowance can be carried forward with interest to be used in the future. There is no expiration date on the accumulated, unused dividend allowances. Accumulated dividend allowances in holding corporations and shell corporations are highly concentrated among the top incomes.

**Figure 1.4 Development of accumulated dividend allowances 2000-2009 in SEK billion: breakdown by types of closely held corporations**

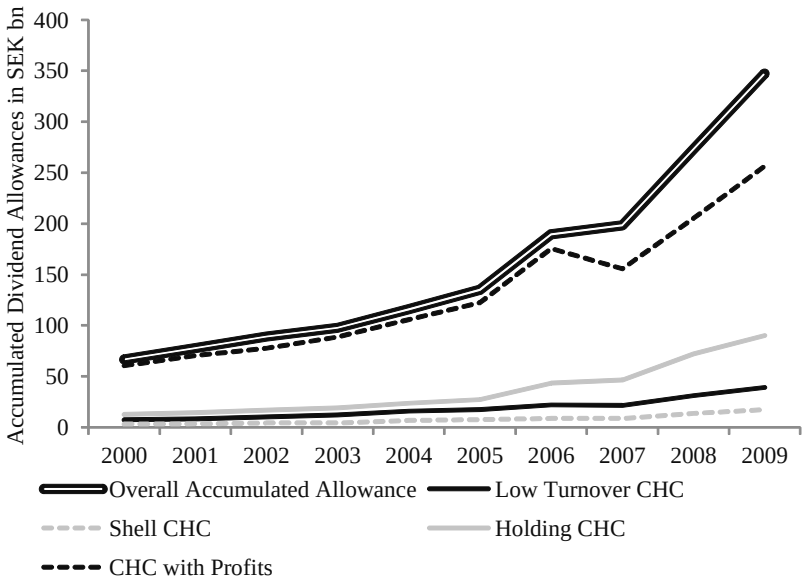



Figure 1.4 shows the development of accumulated dividend allowances by all closely held corporations and holding as well as shell corporations.

*The accumulated unused dividend allowances in closely held corporations represent a large potential loss of tax revenue in the future.*

We now make a simple calculation to illustrate that in total, the unused accumulated dividend allowances can represent a substantial future tax revenue loss. This is meant as an illustration only, not a precise estimate of the potential tax revenue loss. Using the 2009 values, we can compute a simple estimate of the upper and lower bounds on total latent future tax revenue losses from the beneficial taxation of dividends at 20 percent within the dividend allowance to active owners of closely held corporations. In order to do this, we need to make some assumptions on what the alternative tax rate is on the dividend that is taxed within the dividend allowance.

*Accumulated unused dividend allowances in holding companies can represent around SEK 23 billion in total lost tax revenue in the future, based on 2009 numbers and very simple calculations.*

The role of holding corporations is of particular importance. In 2009, individuals had in total accumulated about SEK 90 billion in unused dividend allowances in these corporations. This can have substantial revenue effects at some point in the future as individuals can reduce the tax burden on capital income from shares in unlisted widely held corporations to 20 percent. As capital gains are tax-exempt at the corporate level of the closely held corporation and as these gains are distributed as dividends to the owner, the capital gains tax burden can be reduced by 5 percentage points from 25t to 20 percent, which represents the lower bound of lost tax revenue. Total latent revenue losses in the future based on unused accumulated dividend allowances in holding companies amount to nearly SEK 5 billion in total.[6] To put this into perspective, the overall tax revenue from dividends and capital gains amounted to about SEK 20 billion in 2009. However, if we assume that active owners' labor income is also shifted into the holding company and distributed to the owners as dividends within the dividend allowance, the total tax burden is then at maximum reduced by 25.4 percentage points. Using this tax differential, the upper bound for the latent revenue loss would total SEK 23 billion. And if only a quarter of this is utilized by the owners, the revenue loss still amounts to around SEK 6 billion from the holding companies alone. And as we see from Table 1.1, there are also substantial latent revenue losses in the low turnover corporations and the shell corporations, as well as in ordinary closely held corporations. This poses a particular challenge for tax revenue forecasts in the future, as these latent revenue losses can be realised at any given point in time.

[6] Note that 5 percent is the lower bound of tax savings. Individuals can additionally shift labor income into holding corporations. The tax savings amount to 25.4 percent in this case. As mentioned in the text, the tax savings for capital gains amount to 10 percent and may be as important as dividends.

**Table 1.1 Total accumulated unused dividend allowances for active owners of closely held corporations and latent future tax revenue loss**

| | Accumulated unused dividend allowances 2009, in SEK billion | Total latent future tax revenue loss, in SEK billion | |
|---|---|---|---|
| | | Lower bound 5 pp tax differential | Upper bound 25.4 pp tax differential |
| All closely held corporations | 345 | 17 | 88 |
| Holding corporations | 90 | 5 | 23 |
| Low turnover corporations | 39 | 2 | 10 |
| Shell corporations | 17 | 1 | 4 |

The exact size of the latent loss depends on the extent of income shifting and on the tax rate differential, whether one assumes the lower bound of 5 percentage points or the upper bound of 25.4 percentage points. The concentration of dividend allowances among high income individuals is a strong argument in favor of the upper bound being the relevant income shifting estimate for the majority of dividend allowances. However, these numbers are rough estimates and should be interpreted with caution. These latent revenue losses are not intended to be exact estimates, but rather an illustration of the potential revenue consequences of these accumulated dividend allowances.

*Evaluation of a tax reform can lead to wrong conclusions if tax bases are considered in isolation. Simultaneous effects on other tax bases need to be considered to give a complete picture of responses.*

Income shifting also leads to misleading macroeconomic statistics. From aggregated statistics, one may conclude that the 2006 reform has encouraged entrepreneurship and business activity. Entrepreneurship is generally perceived to be important for job creation and overall economic growth in an economy. But entrepreneurship is hard to measure. A normal proxy for entrepreneurship is new corporate start-ups and start-ups by the newly self-employed. Our main argument against this simple

"count measure" is that wage earners set up new corporations to participate in tax minimising income shifting and to re-label labor income as capital income. We observe an increase in the number of newly founded corporations after 2006. However, as a third of this increase is driven by an uptake of holding and low turnover corporations, simply counting the number of new corporations does not yield a meaningful number.

*This has not been a full evaluation of all aspects of the 3:12 rules and the 2006 reform.*

In this report we have evaluated some aspects of the 2006 reform of the 3:12 and behavioral responses to them. But this is not a full evaluation of either the 3:12 rules or of the 2006 reform. We find empirical evidence of widespread use of the 3:12 rules for income shifting purposes. The main purpose of this report is to draw attention to the phenomena of income shifting and the challenges it creates for policymaking, tax revenue forecasting, and the interpretation of aggregate statistics. However, many closely held corporations are not based on income shifting and reflect real activity and entrepreneurship. Not all new closely held corporations after 2006 are founded for the purpose of reducing the owner's tax payments. Yet some part of what appears to be entrepreneurship and value creation is in fact income shifting behavior.

*To reduce income shifting under the 3:12 rules, the dividend allowance should be made less generous and/or the possibility to carry forward unused dividend allowances should be removed or at least restricted. A revision of control strategies at Skatteverket should also be considered.*

In our opinion, there are three main features of the existing 3:12 rules that combined provide both incentives and opportunities for income shifting through a closely held corporation. First, the simplification rule defines very generous dividend allowances, which do not depend on equity, employment, and activity. Individuals can receive dividend allowances in excess of their nominal equity each year. Second, the possibility to carry forward

dividend allowances is of particular interest to shell corporation and holding corporation owners. This allows them to shift income over time. Third, the definition of what constitutes an active owner is not clearly defined in the tax law. And it appears that there is a lack of control of whether an individual who claims to be an active owner is actually active in the corporation's profit generation to a considerable extent.

# 2 Defining income shifting

## 2.1 Chapter summary

When taxpayers behave differently in the presence of taxes than in the absence of taxes, we denote this as *behavioral responses* to taxes. *Income shifting* is the process of transferring income between income categories and tax brackets in order to reduce total tax payments. It is legal tax avoidance and does not involve immediate real effects; it is purely a relabeling of existing income. The three main types of income shifting are across time, across tax bases, and across taxpayers. We provide examples of these different types and an overview of the empirical literature for each of these types. Empirically identifying behavioral responses to taxes is generally a challenging endeavour. Tax reforms provide ample opportunities to identify behavioral responses to tax changes and thus also knowledge on behavioral responses to taxes in general. In this report, we use the Swedish tax changes from 2006 to identify income shifting behavior.

Not all taxpayers participate in tax avoidance. To participate in tax avoidance, an individual needs a financial incentive in the form of a potential tax reduction. The expected benefits of tax avoidance have to exceed the expected costs associated with the tax avoidance strategy. The taxpayer needs to be aware of both the tax rules and the possibility of participating in tax avoidance and to have an opportunity to participate in tax avoidance. Participation in income shifting at the individual level can have large effects at the aggregate level.

Income shifting is a challenge in most tax systems. Yet income shifting is a particularly prevalent problem under the dual income tax system with its large differences in marginal tax rates on labor income and on capital income for medium and high income earners. This provides strong incentives for income shifting from

labor income to capital income to minimise tax payments. Active owners of smaller firms in particular have the opportunity to participate in this kind of income shifting. The Nordic countries have implemented different systems for splitting business income for active owners in smaller businesses into a labor income component and a capital income component. In Sweden, these income splitting rules for active owners of closely held corporations are called the 3:12 rules.

## 2.2 Behavioral responses to taxes

A general definition of behavioral responses to taxes is that taxpayers behave differently in the presence of taxes than in the absence of taxes. In other words, taxes affect individuals' decisions and actions. Taxes thus distort economic decisions and the allocation of resources. This imposes an additional cost of taxation beyond the tax itself, the excess burden of taxes. Efficiency in taxation refers to minimising this excess burden. A neutral tax is commonly defined as a tax that does not change relative prices and imposes no behavioral substitution effects.[7] A neutral tax is, however, not necessarily efficient. Behavioral responses to corrective taxes, such as environmental taxes, correct for market failure and can increase efficiency and welfare.

Taxes can affect corporate as well as individual behavior. An important point is that a tax reform of individual income tax may affect behavior and decisions at the corporate level and vice versa. For example, when dividend taxes at the individual level change, corporations change their dividend payout policy (see, for example, Chetty and Saez, 2005, Alstadsæter and Fjærli, 2009 or Jacob and Jacob, 2012) and investment levels (Becker, Jacob and Jacob, 2012). We summarize some empirical evidence on responses to taxation at the individual as well as at the corporate level in Box 2.2 below.

## 2.3 Tax evasion, tax avoidance, and income shifting

Responses to taxes can be legal and illegal. *Tax evasion* is illegal activity for the purpose of reducing tax payments. The main

[7] However, all taxes reduce the income level of the taxpayer, and through the income effect and reduced consumption level impose behavioral responses.

characteristic of tax evasion is that the taxpayer wants to hide his or her actions from the tax collector. As formulated by Sandmo (2005, p. 545): "*When the taxpayer refrains from reporting income from labor or capital which is in principle taxable, he engages in an illegal activity that makes him liable to administrative or legal action from the authorities. In evading taxes, he worries about the possibility of his actions being detected.*" One of the key problems in the empirical literature (and for tax authorities) is the identification and detection of tax evasion. Available datasets cannot provide the user with information about tax evasion. Thus, research is still "*seeking to shed light on the magnitude and (especially policy) determinants of [tax evasion and the informal economy]*" (Slemrod and Weber, 2012, p. 25).

*Tax avoidance* is legal activity for the purpose of reducing tax payments.[8] As stated by Sandmo (2005, p. 545), tax avoidance "*consists in exploiting loopholes in the tax law. […] In engaging in tax avoidance, the taxpayer has no reason to worry about possible detection; quite the contrary, it is often imperative that he makes a detailed statement about his transactions in order to ensure that he gets the tax reduction that he desires.*" There is no uniform definition of tax avoidance in the academic literature, as pointed out by Hanlon and Heitzman (2010).[9] There are numerous ways of conducting tax avoidance, encompassing tax avoidance strategies at both the individual level and the corporate level.

Taxes change relative prices and consequently taxpayers change real decisions such as consumption composition, labor supply, investment portfolio, and real investments. For example, an increase in marginal tax rates on wage income may induce individuals to reduce their labor supply as the relative price on leisure declines. Taxes on alcohol or tobacco are another example where the main purpose is to reduce consumption. We characterize the effects of changes in these real decisions as *real effects*.

Different tax avoidance strategies involve different degrees of real effects. Let us now look at two extremes where tax avoidance has a full scale immediate real effect and where tax avoidance has no immediate real effect.

First, we consider the case where tax avoidance has large real effects. An example is the lock-in of capital in Swedish

[8] Often, the term tax planning is used to describe legal tax avoidance activity.
[9] See Slemrod and Yitzhaki (2002) for a much used definition of tax avoidance on at the individual level.

corporations prior to the 1991 tax reform. Statutory tax rates on corporate profits and dividends received by shareholders were high. As a result, Swedish corporations invested in non-productive real assets to reduce taxable profits, and avoided paying dividends. As stated by Lodin (2011b): *"Rather than see more than half of their profits go to tax, businesses invested in airplanes, tankers and other asset that merited major write-offs regardless of whether it bore any relation to their own activities. [...] Matters got so out of hand for a while that Swedish companies owned most of the international leased aircraft fleet, much of which ended up in the Nevada desert during the financial crash of early 1990."*

Second, we consider the case where tax avoidance has no immediate real effect. *Income shifting* is the process of transferring income across income categories, tax brackets, countries and/or tax regimes in order to reduce total tax payments. It is legal tax avoidance and does not involve immediate real effects. It is purely a relabeling of existing income while keeping labor supply and investments constant. Income shifting activity is often misinterpreted as real effects of taxes. For example, if the introduction of a higher marginal tax rate on wage income reduces total wages received by the high income group, this could be interpreted as a reduction in labor supply and thus a real effect. But it does not necessarily mean that labor supply is reduced. It could reflect a change in the composition of compensation. For instance, owner-managers in smaller companies can determine the payout composition themselves. If marginal tax rates on labor income increase, they have incentives to pay lower wages and more dividends to themselves while keeping their labor supply constant. However, these transactions increase the after-tax income of the active owner. This income effect can then induce the individual to change his or her consumption composition or labor supply decision. Box 2.1 summarizes the different definitions of illegal and legal means of reducing the tax burden.

**Box 2.1: Definitions: Various behavioral responses to taxes**

| | | |
|---|---|---|
| *ILLEGAL* | *Tax evasion* | Tax evasion is illegal activity for the purpose of reducing tax payments. The taxpayer attempts to hide his or her actions from the tax collector (Sandmo, 2005). |
| *LEGAL* | *Tax avoidance* | Tax avoidance is legal activity for the purpose of reducing tax payments. The reduction in tax liability from tax avoidance behavior is dependent on the taxpayer reporting his or her actions to the tax collector (Sandmo, 2005).<br>***Real effects*** of tax avoidance activity are behavioral responses that lead to changes in consumption composition, labor supply, investment portfolio, or real investments. Various tax avoidance strategies have different degrees of real effects.<br>***Income shifting***: Income shifting is the process of transferring income between income categories and tax brackets in order to reduce total tax payments. It is legal tax avoidance and does not involve immediate real effects; it is purely a relabeling of existing income. |

It can be challenging to determine whether an activity is legal or illegal. Many tax avoidance strategies may be borderline illegal. Also, the tax law may be ambiguous in what it classifies as evasion or avoidance.

There are three main types of income shifting, namely income shifting across time, across tax bases, and across taxpayers (Stiglitz, 1985):

I. *Income shifting across time* can be defined as reducing the present value of tax payments by altering the timing of transactions. For example, the announcement of a future dividend tax can induce corporations to pay extraordinary dividends before the reform and lower dividends after the reform. Then income is shifted within the same income class over time to reduce total tax payments. Also,

individuals respond to capital gains taxes by postponing the realisation of income such as capital gains. The resulting deferral of tax payments (*lock-in effect*) lowers the present value of capital gains taxes.

II. *Income shifting across tax bases* means that the taxpayer reduces overall tax payments by shifting income from highly taxed bases to lower taxed bases. Multinational corporations, for example, have incentives to shift profits to countries with low corporate tax rates and to shift expenses to countries with high corporate tax rates to maximise total after-tax profit. At the individual level, if a taxpayer faces high marginal tax rates on labor income, he or she has incentives to reclassify labor income as other types of income that are taxed at lower rates. Under the dual income tax system, the equivalent would be a shift from labor income to capital income.

III. *Income shifting across taxpayers* means that taxpayers reduce overall tax payments by shifting income from individuals with high marginal tax rates to individuals with low marginal tax rates. This would, for example, include the within-family transfer of assets and income.

Box 2.2 gives an overview of different types of income shifting strategies in these three main groups, including an overview of empirical evidence on the different types of income shifting.

Empirically identifying behavioral responses to taxes can be challenging. Tax reforms provide ample opportunities to identify behavioral responses to tax changes and thus also knowledge on behavioral responses to taxes in general. Following Slemrod (1990, 1995), there is a hierarchy of responses to announced tax changes, ranked by the expected frequency of occurrence:

1. Timing of a transaction: *shifting income across time*.
2. Avoidance, re-classification of income: *shifting income across income types and across tax schedules*.
3. Real responses, such as changes in labor supply or investments.

In addition, tax changes can spur increased participation in tax evasion where income is taken out of the formal, taxed sector and into the informal sector. There is a general consensus that timing

effects are the dominant behavioral responses to taxes (see Box 2.2).

Real effects of tax changes, such as the effects on labor supply and investments, are challenging to identify in data in a convincing manner (Saez, Slemrod, and Giertz, 2012). There are only a few recent examples. Becker, Jacob, and Jacob (2012), for example, show that the allocation of corporations' (real) investment is sensitive to payout taxes. They use multiple tax changes over the past two decades in the OECD to identify effects on real investment. Saez (2010) finds only small evidence of labor supply responses to different levels of wage taxes in the US.

## Box 2.2 Definitions of various types of income shifting

Income shifting is the process of transferring income between income categories and tax brackets in order to reduce total tax payments. It is legal tax avoidance and does not involve immediate real effects; it is purely a relabeling of existing income. The main types of income shifting are across time, across tax bases, and across taxpayers, as defined by Stiglitz (1985).

| *Type of income shifting* | *Empirical evidence* |
|---|---|
| **Across time:**<br>Reducing present value of tax payments by altering the timing of transactions. | **An announced increase in dividend tax would lead to increased dividend payments prior to the tax change:**<br>Auerbach and Hassett (2002, 2006, 2007), Chetty and Saez (2005, 2010), Poterba (2004), Bond, Devereux, and Klemm (2007), Kari, Karikallio, and Pirttilä. (2008, 2009), Alstadsæter and Fjærli (2009), Jacob and Jacob (2012).<br>**A tax on capital gains realisations can lead to a lock-in of capital and a deferral of capital gains tax liability:**<br>Burman, Clausing, and O'Hare (1994), Burman and Randolph (1994), Burman and Ricoy (1997), Goolsbee (2000), Ivkovic, Poterba, and Weisbenner (2005), Ayers, Li, and Robinson (2008), Jacob (2010, 2011).<br>**Setting up shell companies to defer tax liability:**<br>Alstadsæter, Kopczuk, and Telle (2011). |
| **Across tax bases:**<br>Reducing overall tax payments by shifting income from highly taxed bases to lower taxed bases. | **Shift in the wage-dividend mix to owner-mangers:**<br>Gordon and MacKie-Mason (1994), Gordon and Slemrod (2000), Fjærli and Lund (2001), De Mooij and Nicodeme (2008), Pirttilä and Selin (2011).<br>**Setting up new corporations to pay dividends instead of wages:**<br>Romanov (2004)<br>**Shift in a firm's legal organizational form in order to face a different tax schedule:**<br>Ayers, Cloyd, and Robinson (1996), MacKie-Mason and Gordon (1997), Goolsbee (1998, 2004), Gentry (1994), Egger, Keuschnigg, and Winner (2009), Thoresen and Alstadsæter (2010), Edmark and Gordon (2012)<br>**Shift in a corporation's ownership structure in order to shift income from the personal tax base to the corporate tax base:**<br>Alstadsæter and Wangen (2010), Alstadsæter, Kopczuk, and Telle (2011)<br>**Transfer pricing across corporations in the same group in order to shift profits to a low tax jurisdiction:**<br>Bartelsman and Beetsma (2003), Mintz and Smart (2004), Huizinga and Laeven (2008), and Clausing (2009)<br>**Thin capitalisation; intra-group loans and interest rates in order to shift profits to a low tax jurisdiction:**<br>Møen et al (2011), Lodin (2011a)<br>**Reclassifying inheritance as gifts within the family when gifts and bequests are taxed separately:**<br>Nordblom and Ohlsson (2006) |

| Box 2.2 cont. | |
|---|---|
| *Type of income shifting* | *Empirical evidence* |
| **Across taxpayers:**<br>Reducing overall tax payments by shifting income from individuals with high marginal tax rates to individuals with low marginal tax rates. | **Shifting of income across family members to benefit from lower marginal tax rates:**<br>Agell, Englund, and Södersten (1998, pp. 25-26).<br>**Shifting of assets across family members:**<br>Stephens and Ward-Batts (2004), Ohlsson (2007). |

## 2.4 Participation in tax avoidance

If tax avoidance is possible, why do not all taxpayers participate in tax avoidance and fully capitalise tax saving opportunities? Stiglitz (1985) states one reason why individuals pay taxes: taxpayers are uninformed/unaware of the tax rules and tax incentives. There are several conditions for individual to participate in income shifting. First, taxpayers need a clear and well defined tax incentive, for example, a substantial difference in tax rates. Second, the expected benefits of the tax avoidance strategy have to be higher than the expected costs of setting up this strategy. Third, the taxpayer needs access to the tax avoidance strategy. Ordinary wage earners have very few opportunities for participating in tax minimisation. For example, if wages and dividends are externally reported to authorities and if taxes are withheld by third parties (for example, by the employer or a bank), a reclassification of income or tax minimisation is hardly possible. In contrast, self-employed and owner-managers have more opportunities to avoid taxes as they self-report their income. In corporations, owner-managers can choose the channel for the distribution of profits. They are thus able to relabel wage income as capital income and vice versa to reduce their total tax burden. Fourth and finally, the taxpayer (corporation or individual) needs to be aware of the tax rules and the potential tax avoidance strategies. Tax illiteracy or tax unawareness may be important reasons why taxpayers do not fully capitalise tax savings opportunities. Only if all four conditions (incentive, profitability, opportunity and awareness) are met, are taxpayers likely to participate in income shifting and tax avoidance.

Recent empirical research suggests that there is substantial heterogeneity in participation in tax evasion and tax avoidance across individuals. Suggested reasons for this are the lack of opportunity (Kleven et al. 2010), inertia (Jones, 2010), salience (Chetty et al, 2009, Finkelstein, 2009), and costs as well as information (Alstadsæter, Kopczuk, and Telle, 2011).

## 2.5 Income shifting – Why does it matter?

Income shifting and tax avoidance can have far reaching consequences at the aggregate level, as discussed by Gordon and Slemrod (2000). We can summarize the effects as:

1. Efficiency effects
2. Distributional effects
3. Misleading statistics
4. Revenue effects

First, a taxpayer that participates in incomes shifting uses resources to reclassify income in order to reduce total tax payments. This implies non-productive use of resources and efficiency loss. Individuals could alternatively use these resources to increase labor supply or to allocate more resources to leisure. Both would increase welfare.

Second, income shifting can also have distributional effects. Typically, higher income groups participate in income shifting as their benefits from these strategies are higher. Income shifting thus reduces vertical equity (see Box 2.3 for definitions). It can also reduce horizontal equity if there is heterogeneity in the participation in income shifting within income groups. In particular, differences in tax unawareness and tax illiteracy can impose inequalities in participation in tax avoidance between informed and uninformed taxpayers and can thus lead to differences in tax payments and total after-tax income. Some of the reasons for the heterogeneity in the uptake of tax avoidance strategies are discussed in the previous section.

**Box 2.3: Definitions of Equity and Efficiency**

*Efficiency* in taxation refers to minimising the excess burden that arises from behavioral responses to taxes. *Equity* refers to fairness in tax payments across taxpayers. We distinguish between two main types:

1. *Horizontal equity* means that taxpayers with similar ability to pay should pay similar amounts in taxes. Or, put otherwise, taxpayers with the same income before taxes should also have the same income after taxes.
2. *Vertical equity* means that taxpayers with a greater ability to pay should pay more in taxes. Or, taxpayers with high before-tax income should pay more in taxes than taxpayers with low before-tax income.

When designing a tax system, there is a trade-off between equity and efficiency.

Third, income shifting leads to misleading statistics. For instance, a reduction of the dividend tax rate could lead to an increase in reported profits and paid out dividends. Evaluated in isolation, one might conclude that the tax reform fosters entrepreneurship and raises tax revenue. However, if this increase in corporate profits is in fact the labor income of owner-managers that has been shifted into the corporate sector to reduce individual tax payments, we would actually observe a reduction in tax revenues as income is shifted into a lower taxed type. When evaluating the effects of a tax reform, it is important to take into account the effects on all tax bases. Furthermore, an analysis like this has to include several years of data to capture all the effects from income shifting over time. An analysis based on cross-sectional data results in misleading conclusions of income inequality (Slemrod, 1995). An increase in any income inequality measure may to a large extent reflect income shifting across time, but may not necessarily reflect an actual change in the level of income inequality.

Fourth, income shifting reduces tax revenue. The magnitude of the tax revenue lost depends both on the design of the tax system and on the type of income shifting, (Saez, Slemrod, and Giertz, 2012). Income that is shifted out of one tax base does not necessarily result in its exclusion from tax revenue, as long as it is not shifted out of the tax base entirely (as is the case with tax evasion). But it will probably generate less revenue in the new tax base that the income is shifted into. Hence, when evaluating the

revenue effect of a tax reform, all types of income should be considered. A myopic focus on the effects of a particular income group or tax (income versus corporate tax) leads to incomplete and thus wrong conclusions. The welfare effect of income shifting depends on whether income is shifted across different tax bases or across time within the same tax base. If income is shifted out of taxation, as is the case for deductions for charitable contributions in many countries, the welfare effect is not clear as the recipient charities may be welfare enhancing. Tax systems with many possible deductions can experience more income shifting possibilities. As well as lowering marginal tax rates to reduce income shifting, the tax base could be broadened to reduce the efficiency costs of taxation, as argued by Kopczuk (2005).

We discuss the implications of income shifting in the Swedish tax system resulting from the change in incentives in the 2006 tax reform in more detail in Chapter 5 in this report.

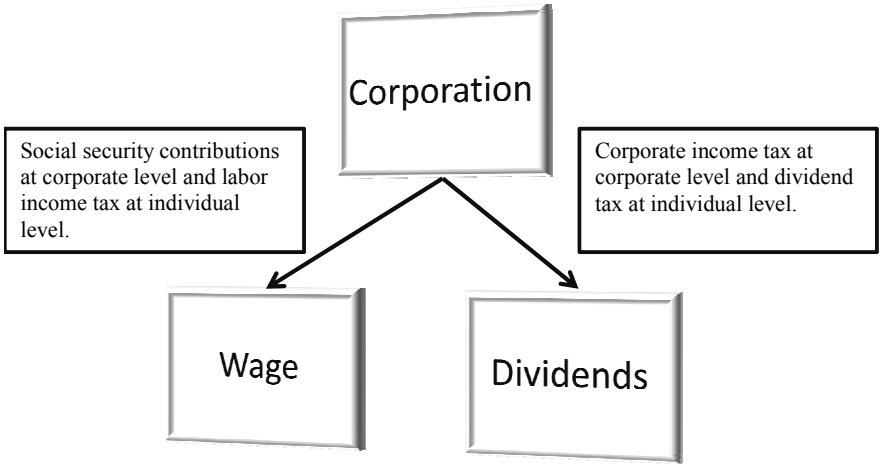
## 2.6 Challenges with the dual income tax system: income shifting

The dual income tax was introduced in Sweden in 1991, in Norway in 1992, and in Finland in 1993. These tax reforms broadened the tax base by removing deductions and special regulations and reduced marginal tax rates substantially. This simplification of the tax system and the removal of special regulations would be expected to reduce administrative costs for tax authorities. Many other countries have subsequently introduced versions of a dual income tax system.[10]

Income shifting is a challenge in most tax systems. However, income shifting is a particularly prevalent problem in a dual income tax system with large differences in marginal tax rates on labor income and capital income. The tax avoidance incentive is higher for medium and high income earners who can benefit from shifting labor income to capital income. In owner-managed corporations, the active owner chooses how much he or she takes in wages and how much in dividends, as illustrated in Figure 2.1.

[10] For more on the positive and negative features of a dual income tax system, see Sørensen (1994, 1998, 2005, 2007), Nielsen and Sørensen (1997), Lindhe, Öberg, and Södersten (2002, 2004), and Boadway (2004).

**Figure 2.1 An Active Owner's Choice between Wages and Dividends**




As stated by Sørensen (1994), the taxation of small businesses is the Achilles heel of the dual income tax system. A system for splitting the income of owner-managers in smaller businesses into a labor income part and a capital income part is required under the dual income tax system to counteract income shifting and the erosion of the tax base. The Nordic countries chose different models of income splitting systems for self-employed individuals and for active owners in corporations. These are described and analyzed in Hagen and Sørensen (1998) and Lindhe, Södersten and Öberg (2004). The main incentives in these models are presented in Table 2.1.

A system for splitting dividends from closely held corporations into capital and labor income parts in Finland was introduced in 1993. In 1990, Finland had adopted a full imputation system, which basically meant that dividends were tax free in the owner's hands. The income splitting rules, the "ISL 33b§-rules," apply to all non-listed corporations. The ISL 33b§-rules impute a return to the corporation's net assets, which then is taxed as capital income. The residual of dividends is taxed as labor income. Finland introduced a partial dividend tax in 2005 (see Kari, Karikallio, Pirttilä, 2008), but this was to comply with a ruling in the EU court and introduce

symmetry in the tax treatment of dividends from Finnish and foreign corporations.

In the dual income tax system introduced in Norway in 1992, dividends were in practice tax exempt in the owners' hands. With high marginal tax rates on labor income, this provided strong incentives to shift income from the individual tax base to the corporate tax base in order to pay earnings out as dividends. The Norwegian income splitting rules (*Delingsmodellen*) split dividend income into an imputed return to the shareholders' share of real capital in the corporation and into labor income. Corporations in which at least a third of the owners were passive owners (not including family members of active owners) were not taxed under the income splitting model. This created distortions in the choice of organizational form as corporate owners had incentives to be classified as passive owners to receive tax-exempt dividends (see Alstadsæter, 2007, and Thoresen and Alstadsæter, 2010). Preventing such income shifting was a major motivation behind the Norwegian 2006 tax reform, which introduced a partial double taxation of dividends paid to individual domestic shareholders (see NOU 2003:9, Sørensen, 2005 and Alstadsæter and Fjærli, 2009).

**Table 2.1 Incentives under the Nordic Split Models for Taxation of Dividends to Active Owners of Closely Held Corporations**

| | Definition of closely held corporation | Basis for calculating dividend allowance | Incentive to be taxed under the split model for high income owners | |
|---|---|---|---|---|
| | | | Corporations with low capital and wage costs | Corporations with high capital and wage costs |
| **Finland**<br>ISL 33b§ | Not listed on the stock exchange. | Net total assets.<br>Incentive to invest in the corporation, particularly in financial assets (Kari and Karikallio, 2007) | Not applicable.<br>Must be listed on the stock exchange to avoid the split model. | |
| **Norway**<br>*Delingsmodellen (removed 2006)* | Active owners holding 2/3 of the shares or more. | Gross non-financial assets and total wage costs.<br>Incentive to increase investments in real capital (Alstadsæter, 2007) | No | Yes |
| **Sweden**<br>*3:12-reglerna* | Four or fewer owners holding half or more of the shares. | Acquisition cost (incl. unconditional shareholders' contribution) of shares and total wage costs (excluding owner wages before 2006 but including them after).<br>No incentives for investment (Lindhe, Södersten, and Öberg, 2004) | Before 2006: No<br>From 2006: Yes | Yes |

In Sweden, double taxation of dividends has existed since the introduction of the dual income tax in 1991. The Swedish income splitting system, the 3:12, applies to active owners in corporations where four or less owners together control at least 50 percent of the shares. All active owners in total count as one owner when defining whether a corporation is closely held. The 3:12 rules impute a return to the active shareholders' share of equity in the corporations. Dividends within this dividend allowance are taxed as

dividend income at a lower tax rate than dividend income from widely held corporations. Dividends in excess of the dividend allowance are taxed as labor income. Before 2006, the dividend allowance depended on the level of nominal equity and wage payments in the corporation. The dividend allowance was high for owners in corporations with high equity levels and high wage costs. Owners in corporations with low nominal equity and low wage costs had no incentive to be classified as active owners as the dividend allowance calculated under the 3:12 rules was low. The changes in the 3:12 rules in 2006 and after gave these shareholders high dividend allowances and thus an incentive to be classified as active owners.

The heterogeneity in the taxation of small, domestically owned corporations, i.e. the different income splitting rules across the Nordic countries, can be explained with the Apel and Södersten (1999) model. If the correlation in returns between large corporation, which are predominantly owned by foreign investors, and small domestically owned corporations (i.e. the β-factor) is large, then a reduction in dividend taxes can increase the cost of capital. As there are substantial differences in foreign share ownership and the β-factor across the Nordic countries (see Södersten and Lindhe, 2011 and Jacob and Södersten, 2012), we would expect different income splitting and tax rules for small, domestically owned corporations.

# 3 Tax rules and income shifting incentives

## 3.1 Chapter Summary

This chapter describes the principles in the taxation of individuals and corporations in Sweden. We give a summary of tax rates, thresholds, and their development over time. We then derive the income shifting incentives from these rules.

The Swedish tax system distinguishes between labor income, which is taxed at progressive rates, and capital income, which is taxed at a lower proportional rate. This creates an income shifting incentive for high income individuals. They benefit from reclassifying labor income as capital income. An ordinary wage earner has few possibilities to transfer his or her labor income to capital income. However, an owner-manager in his or her own corporation determines how much to pay himself or herself in wages and how much to pay in dividends (if there are distributable profits and retained earnings). Dividends are first taxed at the corporate level (the corporate income tax) and then taxed at the individual level (the dividend tax), leading to a double taxation of distributed corporate profits. At the same time, labor income is taxed twice. It is taxed at the individual level (the income tax) and at the corporate level (the social security contribution). For individuals in the top tax bracket, the tax advantage of dividends as opposed to wage payments amounts to 25.4 percentage points (2011 rates) when taking the double taxation of income into account (see Table 3.3).

To reduce income shifting opportunities, active shareholders in closely held corporations (corporations with four or fewer shareholders who control at least 50 percent of the shares, and where all active shareholders in sum count as one shareholder), *Fåmansföretag*, are taxed under a separate tax schedule, the 3:12

rules. Under these rules, a shareholder specific dividend allowance is defined. Dividends in excess of this dividend allowance are taxed as labor income.[11] In 2006, there was a change in the 3:12 rules that reduced the tax rate on dividends within the dividend allowance and also substantially increased the dividend allowance for active owners. This reform provided stronger incentives for owners to use the closely held corporate form to transform labor income into capital income.

We will use the 3:12 rules as an example to identify income shifting behavior. We show how many taxpayers utilize these rules. The key question is whether individuals simply reclassify income or if they generate additional income. We will empirically address these questions in Chapters 4 and 5.

## 3.2 The Swedish tax system

We will now give a brief summary of the tax rules on labor income and capital income, as well as their development over time. The rules are described in more detail in Appendix I.

### 3.2.1 Labor income tax

Labor income in excess of the standard deduction and earned income tax credit is subject to a personal income tax consisting of three parts:

1) *Municipal income tax*. This is a flat rate that is set individually by each municipality. In 2010, the rates ranged from 28.9 percent to 34.2 percent with an average rate of 31.6 percent (weighted by the tax base). We report average municipal tax rates throughout this chapter.
2) *Central government income tax*, State tax 1. This has been a flat rate of 20 percent since the early 1990s and is only applicable to assessed income above a threshold ranging from SEK 254 600 in 2000 to SEK 414 000 in 2012.

[11] As of January 2012, dividends in excess of the dividend allowance are only taxed as labor income up to cap. This cap is similar to the rule for capital gains from closely held corporations (90 × Inkomstbasbelopp). During our sample period, this rule has not been implemented and we refer to dividend taxes being taxed as labor income throughout the report.

3) *Central government, State tax 2 (Värnskatten)*. This is a flat rate of 5 percent and was introduced in 1995 as a temporary tax increase but has since been made permanent. It is only applicable above a second, higher threshold for assessed income ranging from SEK 398 500 in 2000 to SEK 587 200 in 2012.

In 2009, total revenue from these taxes on labor income was SEK 551 billion. Of this, 92.7 percent was revenue from the local government income tax, and only 7.3 percent was revenue from the direct central government tax, (State tax 1 + State tax 2).

The total tax on labor income depends on the statutory tax rate, any deductions from taxable income, the earned income tax credit, and social security contributions. The latter is remitted by the employer and contributes to the total tax burden on wages. For each SEK 100 distributed as wages in 2011 the employer paid an additional SEK 31.42 in social security contributions.[12] The social security contribution adds to corporations' cost of employment and can affect overall employment in the economy. It has an insurance element as it entitles the employee to social security benefits (health insurance and unemployment benefits) and future pension payments. As argued by Fjærli and Lund (2001), this can explain why business owners pay themselves wages even at high marginal tax rates instead of paying cash out as dividend income. Above a specified threshold, social security contributions cease generating any marginal benefits to the employee. This part of the social security contribution then becomes a pure tax at the margin. So owner-managers have incentives to pay themselves wages up to this threshold in their own corporations in order to enjoy the benefits generated by social security contributions. In 2011, this threshold is set at a wage income of SEK 428 000(net of social security contributions). The top marginal effective tax rate on wage income including social security contributions was 67 percent in 2011.

[12] This is the general rate. There are special social security contribution rates for particular groups.

### 3.2.2 Capital income tax

Until 2006, capital income was taxed at a flat rate of 30 percent with some exceptions. Dividend income for active owners in closely held corporations that exceeded the dividend allowance was taxed as labor income. Owners of unlisted shares were entitled to a small, tax-exempt dividend allowance. The tax-exempt allowance was equal to the acquisition cost of the shares multiplied by 0.7 times the interest rate on long government bonds.[13]

From 2006, the tax rate on individual income from capital depends on the type of capital income. Interest income is still taxed at 30 percent. The taxation of income from shares depends on the type of corporation. Capital income from listed shares (dividends or capital gains) is still taxed at 30 percent. Capital income from unlisted shares is taxed at 25 percent as of 2006. Finally, capital income from closely held corporations received by active owners is taxed at 20 percent up to the dividend allowance (*Gränsbeloppet*). Excess dividends are still taxed as wage income at the shareholder's marginal tax rate. There are no social security contributions on excess dividends. These special rules for taxation of active owners' capital income from closely held corporations, the 3:12 rules, are described in more detail in Section 3.2 and in Appendix I.

### 3.2.3 Corporate income tax

Corporate income is taxed at a flat rate that was 28 percent until 2009. It was then lowered to 26.3 percent. Taxable corporate income is the sum of all incomes net of costs (including wages). Dividends are distributed to owners from after-tax corporate profit. Dividends are thus subject to corporate taxation before being distributed as dividends. They are then taxed in the owner's hand where the tax rate depends on characteristics of both the owner and the corporation. Table 3.1 provides an overview of the development in marginal tax rates by income type over time.

[13] These rules were abolished on 1 Jan 2006 but unused allowances for tax-exempt dividends could be used up until 2010.

**Table 3.1 Marginal Tax Rates by Type of Income, 2001-2012**

| Year | Labor Income[1] | | Capital income | | | | | | Corporate income |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Dividend Income | | | | |
| | Without social security contributions | With social security contributions | Interest income | Capital gains, not 3:12 | Listed shares | Unlisted shares[2] | CHC, 3:12 | CHC, 3:12 exceeding allowance | |
| 2000 | 30.4-55.4 | 47.6-66.4 | 30 | 30 | 30 | 30 | 30 | 30.4-55.4 | 28 |
| 2001 | 30.5-55.5 | 47.7-66.5 | 30 | 30 | 30 | 30 | 30 | 30.5-55.5 | 28 |
| 2002 | 30.5-55.5 | 47.7-66.5 | 30 | 30 | 30 | 30 | 30 | 30.5-55.5 | 28 |
| 2003 | 31.2-56.2 | 48.2-67.0 | 30 | 30 | 30 | 30 | 30 | 31.2-56.2 | 28 |
| 2004 | 31.5-56.5 | 48.4-67.2 | 30 | 30 | 30 | 30 | 30 | 31.5-56.5 | 28 |
| 2005 | 31.6-56.6 | 48.4-67.2 | 30 | 30 | 30 | 30 | 30 | 31.6-56.6 | 28 |
| 2006 | 31.6-56.6 | 48.3-67.2 | 30 | 30 | 30 | 25 | 20 | 31.6-56.6 | 28 |
| 2007 | 31.6-56.6 | 48.3-67.2 | 30 | 30 | 30 | 25 | 20 | 31.6-56.6 | 28 |
| 2008 | 31.4-56.4 | 48.2-67.1 | 30 | 30 | 30 | 25 | 20 | 31.4-56.4 | 28 |
| 2009 | 31.5-56.5 | 47.9-66.9 | 30 | 30 | 30 | 25 | 20 | 31.5-56.5 | 26.3 |
| 2010 | 31.6-56.6 | 47.9-67.0 | 30 | 30 | 30 | 25 | 20 | 31.6-56.6 | 26.3 |
| 2011 | 31.6-56.6 | 47.9-67.0 | 30 | 30 | 30 | 25 | 20 | 31.6-56.6 | 26.3 |
| 2012 | 31.6-56.6 | 47.9-67.0 | 30 | 30 | 30 | 25 | 20 | 31.6-56.6 | 26.3 |

[1] The minimum tax rate on earned income is the average local tax across all municipalities, corrected for population.

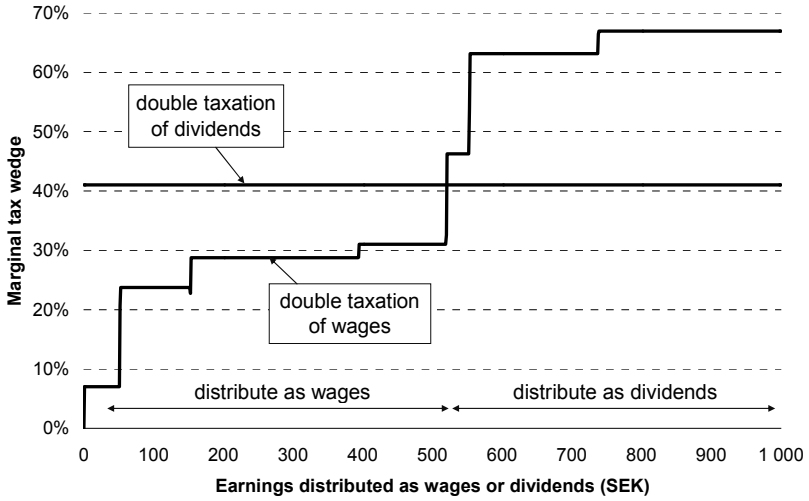
[2] In 2000-2005 the tax rate was 30 % but owners of unlisted shares were also entitled to some tax-exempt dividends. The tax-exempt allowance was basically equal to the acquisition cost of the shares multiplied by 0.7*SLR where SLR was the interest on long government bonds. These rules were abolished on 1 Jan 2006 but unused allowances for tax-exempt dividends could be used until 2010.

## 3.3 Income shifting incentives

The different tax treatment of labor income and capital income creates an incentive to transform one type of income into the other. The direction of this income shifting depends on the level of individual earnings, deductions, and the composition of income. At low income levels, the tax burden on labor income is much lower than on dividends. Thus, individuals should pay themselves wages to distribute profits. This creates social security benefits in addition to the tax wedge. At high income levels, the marginal tax rate on an individual's labor income is more than 20 percentage points higher than the marginal tax rate on individual capital income. Individuals with high wage income have strong incentives to reclassify labor income as capital income in order to minimise taxes.

For ordinary wage earners, the ability to participate in this income shifting is limited, as they receive their wage from the employer. They have little possibility of receiving compensation for their labor effort taxed in the form of capital income. Owners of closely held corporations can choose the distribution channel of corporate profits. They either distribute corporate earnings as wages or as dividends. In both cases, distributed earnings are taxed twice. Wages incur payroll tax at the corporate level and labor income tax at the personal level. Total taxes paid on corporate revenue distributed as dividends and wages differ from the tax rates at the individual level. Thus, for business owners the optimal payout composition (of corporate earnings) that minimises taxes depends on taxes at the corporate level as well as at the individual level. Figure 3.1 plots the overall tax burden on wages and dividends (within the allowance) for different income levels. We include social security contributions in the calculations. To the extent that these contributions do not generate benefits, we treat these contributions as taxes.

**Figure 3.1 Top Marginal Tax Rates for Individuals on Different Distribution Channels of Profit to the Active Owner, by Income Level in SEK thousands, 2011.**




Note: Marginal tax rate on wages includes social security contributions at the corporate level. The marginal tax rate on dividends includes corporate income tax.

In principle, the optimal payout strategy would be as described in Figure 3.1. Corporation owners should distribute earnings as wages until the marginal tax rate on wages (including social security contributions) is equal to the marginal tax on dividends (including corporate income). Above this threshold, earnings should be distributed as dividends. The opportunity to shift income through the own corporation is limited through the ownership share and financially through the availability of internal funds, retained earnings and profits. More owners require more coordination and consequently the more complicated income shifting gets. The 3:12 rules further limit the scope for income shifting for active owners of closely held corporations as the dividend allowance is the ceiling on how much can be taxed as dividends. We will now discuss these 3:12 rules in more detail.

### 3.3.1 Active owners in closely held corporations – the "3:12" rules

*A corporation is considered closely held if four or fewer persons own more than half of the votes*. Immediate family members count as one person. If an owner of a closely held corporation participates to a considerable extent in the corporation's profit generation, the owner is considered *active* and his or her shareholding as *qualified* (*kvalificerade andelar*). All active owners count only as one person when a corporation is classified as closely or widely held. Therefore there are also some closely held corporations with many owners. Active owners in closely held corporations are taxed according to the 3:12 rules. Even if an owner is considered passive, he or she is considered active for tax purposes if a close family member is active in the same corporation. The definitions of close family members and active owners are described in more detail in Appendix I.

Under the 3:12 rules, dividends within the dividend allowance are taxed at a reduced rate of 20 percent under the current tax rules, while dividends in excess of the dividend allowance are taxed as labor income at the marginal tax rate of the shareholder. Capital gains are taxed in a similar way (see Appendix I for more details). The rules also apply to the owner's immediate family.

The dividend allowance is calculated on an individual basis for each year. Each owner has to file a separate form (the K-10 form) for each of his or her closely held corporations. Unused dividend

allowances are carried forward with interest to the following year. Active owners in closely held corporations may calculate their dividend allowance according to either of two methods:

1. The general rule (*huvudregeln*)
2. The simplification rule (*förenklingsregeln*), from 2006 and onward.[14]

We describe these rules in more detail in Box 3.1. After the introduction of the simplification rule in 2006, almost 80 percent of the shareholders who are taxed under the 3:12 rules choose the simplification rule. We present these statistics at the bottom of Box 3.1.

[14] We have chosen to translate the Swedish term ”Förenklingsregeln” directly and use the English term ”simplification rule”. An alternative term that has been used in English for this rule is the”standard rule”, by Lodin (2011).

## Box 3.1: Calculating the dividend allowance under the 3:12 rules

**The general rule:**

The general rule calculates the dividend allowance according to the individual's nominal equity in the corporation and the corporation's wage bill. The equity base is the sum of the acquisition cost of the owner's shares and any capital injections made by the owner, carried forward with an interest rate. Prior to 2006, this carry forward interest rate was identical to the imputation rate for the equity base. From 2006 it has been lowered to the interest rate on government bonds plus 3 percentage points. This equity base is multiplied by the imputation rate to represent an imputed "normal return" to a risky investment. The wage based allowance is based on the corporation's aggregate wage bill (including subsidiaries). Before 2006, the wage base was calculated as 10 percent of the wage bill, excluding owner wages, above a given threshold. The general rule can be summarized as:

*Shareholder's equity base* × *Imputation rate*
+ *Total wage based allowance* × *Ownership share*
+ *Unused dividend allowance carry forward with interests from previous years*
= ***Dividend allowance under general rule***

The rules for calculating the dividend allowance under the general allowance has been altered over the years with a substantial change in 2006 as summarized below. The development in the rates and the base calculations sums are shown in Table 3.2.

| Year | Simplification rule | Imputation rate | Wage Base | Minimum owner wage under 3:12 for wage based dividend allowance |
|---|---|---|---|---|
| Before 2006 | - | 2000-2003: SLR + 5<br>2004-2005: SLR + 7 | 10 percent of WB above 10 PBB, excluding owner's wage | Lowest amount of 120 percent of Wmax and 10*PBB |
| 2006 and onward | 2006: 1.5*IBB<br>2007-2008: 2*IBB<br>2009-2011: 2.5*IBB | SLR + 9 | 25 percent of WB up to 60*IBB and 50 percent of WB above 60*IBB | 2006-2008: Lowest amount of 15*IBB or {6*IBB + 0.05*W}<br>2009 and onward: Lowest amount of 10*IBB or {6*IBB + 0.05*W} |

*FAC*: (Acquisition cost of share + capital injections)*(1+i); *SLR*: Interest rate on government bonds, *Statslåneräntan ;* Before 2006, i=(imputation rate), after 2006, i=(SLR+3);
*WB*: Wage base
*IBB*: *the income base amount (inkomstbasbelopp);*
*W*: Total wage bill of the corporation;
*Wmax*: The highest wage payment to an employee (not shareholder)

**The simplification rule (2006 and onward):**

From 2006 onwards, a shareholder taxed according to the 3:12 rules can choose between two ways of calculating the dividend allowance. The general rule is described above and depends on the nominal equity and wage bill of the corporation. The simplification rule is fixed at the corporation level and distributed to the active owner depending on total ownership share. The choice of the calculation rule is made each year and is independent of previous choices and of choices made by other active shareholders in the same corporation. The fixed corporation level dividend allowance is SEK 143 275 for income year 2012. The simplification rule can be summarized as:

*Fixed dividend allowance* × *Ownership share*
+ *Unused dividend allowance carry forward with interests from previous years*
= ***Dividend allowance under simplification rule***

**The simplification rule vs. the general rule:**

Around 80 percent of active owners of closely held corporations chose the simplification rule for computing the dividend allowance in the period 2006-2009.

| Choice of computing rule (in percent) | | |
|---|---|---|
| Year | Simplification rule | General rule |
| 2006 | 77.7 | 22.3 |
| 2007 | 83.4 | 16.6 |
| 2008 | 76.7 | 23.3 |
| 2009 | 79.4 | 20.6 |
| **Total** | **79.3** | **20.7** |

Since unused allowances can be carried forward with interest, the aggregate stock of dividend allowances can grow over time if distributed dividends are smaller than the current dividend allowances. This is discussed in more detail in Chapter 5. Table 3.2 summarizes the rates and thresholds under the 3:12 rules during the period 2000-2011.

**Table 3.2 Rates and Thresholds for Calculating the Dividend Allowance**

| Income year | Simplification rule | Imputation rate | Wage Base | Required owner wage under general rule for dividend allowance |
|---|---|---|---|---|
| 2000 | | 10.57 | 10 % of W above 364 000, Excluding owner wage | Lowest amount of 120 % of Wmax and 364 000 |
| 2001 | | 10.06 | 10 percent of W above 366 000, Excluding owner wage | Lowest amount of 120 % of Wmax and 366 000 |
| 2002 | | 9.94 | 10 % of W above 369 000, Excluding owner wage | Lowest amount of 120 % of Wmax and 369 000 |
| 2003 | | 9.85 | 10 % of W above 379 000, Excluding owner wage | Lowest amount of 120 % of Wmax and 379 000 |
| 2004 | | 11.71 | 10 % of W above 386 000, Excluding owner wage | Lowest amount of 120 % of Wmax and 386 000 |
| 2005 | | 10.95 | 10 % of W above 393 000, Excluding owner wage | Lowest amount of 120 % of Wmax and 393 000 |
| 2006 | 64 950 | 12.26 | 25 % of W up to 2 598 000, then 50 % of W | Lowest amount of 649 500 and {259 800 + 0.05*W} |
| 2007 | 89 000 | 12.54 | 25 % of W up to 2 670 000 then 50 % of W | Lowest amount of 667 500 and {267 000 + 0.05*W} |
| 2008 | 91 800 | 13.16 | 25 % of W up to 2 754 000 then 50 % of W | Lowest amount of 688 500 and {275 400 + 0.05*W} |
| 2009 | 120 000 | 11.89 | 25 % of W up to 2 880 000 then 50 % of W | Lowest amount of 480 000 and {288 000 + 0.05*W} |
| 2010 | 127 250 | 12.20 | 25 % of W up to 3 054 000 then 50 % of W | Lowest amount of 509 000 and {305 400 + 0.05*W} |
| 2011 | 127 750 | 11.84 | 25 % of W up to 3 066 000 then 50 % of W | Lowest amount of 511 000 and {306 600 + 0.05*W} |
| 2012[15] | 143 275 | 10.65 | 25 % of W up to 3 126 000 then 50 % of W | Lowest amount of 521 000 and {312 600 + 0.05*W} |

Note: W: The corporation's total wage bill, Wmax; the highest wage payment to an employee (not a shareholder). Wmax; The highest wage payment to an employee (not shareholder).

### 3.3.2 The 2006 tax reform and its implications for income shifting incentives and possibilities

The tax rules for personal dividend income were changed in 2006. The tax rate on dividends from unlisted widely held corporations

[15] As of January 1, 2012, there is an upper cap of 3:12-dividends in excess of the dividend allowance that are to be taxed as labor income in a particular year. Dividends above this threshold will be taxed as capital income at a tax rate of 30 percent.

was reduced. At the same time, the 3:12 rules were made more generous by lowering the tax rate on dividend income within the dividend allowance and by changing the method of calculating the dividend allowance. Furthermore, the earned income tax credit was introduced. These changes to the incentive structure of the tax system had significant consequences. Box 3.2 summarizes the main changes in 2006.

**Box 3.2: Rule changes in 2006**

1. An allowance for tax-exempt dividends from unlisted corporations, *Lättnadsreglerna*, was abolished. This allowance was calculated as an imputation rate times the shareholder's equity in the corporation, where the imputation rate was 0.7 times the interest rate on government bonds, SLR *(Statslåneräntan)*. When the rules were abolished, no further allowances were accrued but existing saved allowances could be used until end of 2010.
2. A reduction in the tax rate on dividends from unlisted corporations from 30 to 25 percent.
3. The tax rate for dividends to active owners in closely held corporations within the (regular) dividend allowance was lowered from 30 to 20 percent.
4. A more generous imputation rate on the equity base as part of dividend allowance under the general rule. The imputation rate was increased by 2 percentage points, from SLR+7 to SLR+9.
5. A reduction in the rate for carrying forward the acquisition price when setting the equity base under the general rule in 3:12 rules, from being the same as the imputation rate, SLR+7 in 2005, to a constant SLR+3 after 2006.
6. In the calculation of the wage allowance as part of the dividend allowance under the 3:12 rules, the owner's wage from 2006 onwards was included in the wage base, *WB*, whereas prior to this, it was excluded. Also, the wage based allowance became more generous, from {10 percent of WB above 10 *PBB*, excluding owner's wage} to {25 percent of WB up to 60**IBB* and 50 percent of WB above 60*IBB}. Both PBB (*the price-indexed base rate or Prisbasbeloppet*) and IBB are standard amounts determined by the government annually. IBB is slightly higher than PBB.
7. The simplification rule was introduced in the 3:12 rules. The general allowance was set to 1.5×IBB and then raised to 2 × IBB in 2007 and to 2.5 × IBB in 2009.

Apart from the 5 percentage point (widely held corporation) and 10 percentage point (closely held corporation) cut in nominal

dividend tax rates, the calculation of the dividend allowance has been made much more generous as of 2006. For example, before the reform, the wage based dividend allowance was 10 percent of the corporation's wage bill (excluding the owner's wage) above a given threshold. After the reform, the wage based dividend allowance is 25 percent of the total wage bill of the corporation (including the owner's wage). Above a certain threshold, this allowance increases to 50 percent of the wage bill. For corporations without wages (or a very low wage bill), the introduction of the simplification rule increased the imputed rate of return from about 10 percent of equity in 2005 to over 60 percent of equity in 2006, for an invested equity of SEK 100 000.[16] The dividend allowance under the simplification rule was SEK 64 950 in 2006. This is the maximum allowance per corporation. The dividend allowance is then divided among the shareholders according to their ownership share. The dividend allowance from the simplification rule has increased rapidly over the years. In 2012, the dividend allowance under the simplification rule is SEK 143 275. The minimum equity requirements for corporations have been reduced to SEK 50 000. Hence, an active shareholder who is the sole owner of a closely held corporation with minimum equity can in fact pay out a 287 percent return to equity as dividends under the dividend allowance in 2012.

In Box 3.3 below, we calculate the effect of the 2006 tax changes on the net dividend and the dividend allowance for two different cases. We assume that the owner is subject to the 3:12 rules. We distinguish between two types of corporations. The first corporate type (Case 1) reflects an active corporation with a substantial wage bill and profits. The second case refers to a holding corporation or a corporation with low and only temporary turnover. There may be doubts as to whether the latter corporation is a closely held corporation as the owner does not receive a salary. Hence, he could be classified as passive. However, the owner could participate without wage compensation. Empirically, we find (see Chapter 4) that a significant proportion of holding and low turnover corporations reflect our Case 2.

Box 3.3 shows that an owner of a capital intensive corporation with several employees (Case 1) should use the general rule when computing the dividend allowance. We see that for this type of

[16] The descriptive statistics in Appendix II show that the majority of corporations have nominal equity of less than SEK 150 000 and very few employees.

corporation, the dividend allowance more than tripled after the 2006 reform. The granted dividend allowance increases from SEK 309 850 to over SEK 1 000 000. This allowance is *higher* than invested equity. This shows the generosity of the rules. This particular corporation will only face labor income taxes on dividends if the dividend yield (i.e. dividends over nominal equity) and thus profitability is above 100 percent.

For a corporation that is less active, such as a holding company or a consulting company for the odd additional job for an ordinary wage earner (Case 2), the dividend allowance substantially increased after the introduction of the simplification rule for calculating the dividend allowance. An owner of such a company receives around twelve times the dividend allowance under the simplification rule that he or she receives under the general rule (2011 values). This advantage and generosity creates an incentive to set up a corporation to accumulate dividends for potential future additional earnings. We will consider this in more detail in Section 4.5 where we analyze the option value of accumulating dividend allowances in passive corporations.

**Box 3.3: After-tax dividend before and after the 2006 tax reform.**

What are the after-tax dividends received by an owner by type of corporation and ownership? We now consider how this developed over time, in two different cases. In Case 1, the shareholder owns half the shares in a corporation with substantial real capital and many employees, from which the shareholder also receives wages. In Case 2, we consider a typically holding company where the active owner is the sole owner, has the minimum required equity, has no employees and receives no wages from the corporation.

| | Case 1 | Case 2 |
|---|---|---|
| Shareholder's ownership share: | 50% | 100% |
| Shareholder's wage from the corporation: | 600 000 | 0 |
| Shareholder's wage from other sources: | 0 | 600 000 |
| Shareholder's dividends from the corporation: | 150 000 | 150 000 |
| Shareholder's equity base: | 1 000 000 | 100 000 |
| Forwarded unused dividend allowance: | 0 | 0 |
| Total wage bill in the corporation: | 6 000 000 | |

| | Dividend allowance of active owner of closely held corporation | | | |
|---|---|---|---|---|
| | Case 1 | | Case 2 | |
| Year | General rule | Simplification rule | General rule | Simplification rule |
| 2005 | 305 100 | - | 10 950 | - |
| 2006 | 1 236 550 | 32 475 | 12 260 | 64 950 |
| 2011 | 1 175 950 | 63 875 | 11 840 | 127 750 |

We here consider the individual level taxation in this example. We now calculate the dividend net of all taxes and the effective tax burden (ETR) on the individual level. We include the tax-exempt dividend allowance in the 2005 calculation. Excess dividends are taxed at 56.6%.

| Year | Case 1 | | | | Case 2 | | | |
|---|---|---|---|---|---|---|---|---|
| | General rule | | Simplification rule | | General rule | | Simplification rule | |
| | Dividend | ETR | Dividend | ETR | Dividend | ETR | Dividend | ETR |
| 2005 | 113 295 | 24% | - | | 69 578 | 54% | - | - |
| 2006 | 120 000 | 20% | 76 986 | 49% | 69 587 | 54% | 88 872 | 41% |
| 2011 | 120 000 | 20% | 88 478 | 41% | 69 433 | 54% | 111 857 | 25% |

## 3.4 Income shifting under the 3:12 rules

The tax wedge between labor income and capital income provides incentives to re-label labor income as capital income to reduce total tax payments. Let us consider the case of a closely held corporation with an active owner who owns 100 percent of the shares. The tax planning decisions of corporations and individuals and payout strategies are fully integrated. The owner determines how much to pay in wages and how much to pay in dividends. In this case, not only personal income taxes matter for the decision but also corporate taxes. These are social security contributions on wage payments and corporate taxes on profits. The opportunity to shift income through the own corporation is limited through the 3:12 rules. Yet the rules and especially the dividend allowances are very generous for most of the corporations with a non-trivial wage bill as shown above.

**Box 3.4: The double taxation of corporate earnings when distributed as wages, dividends, and interest income in a closely held corporation to an active, sole owner**

**Tax parameters**

**Individual level:**
$t_w$: labor income tax
$t_d$: dividend income tax
$t_k$: capital income tax

**Corporate level:**
$t_s$: social security contributions
$t_c$: corporate income tax

Tax wedge on paying out SEK 1 in before-tax profits as wages, dividends, or interest on loans:

| | **Distributed as wages** | **Distributed as dividends** | **Distributed as interest payments** |
|---|---|---|---|
| **Firm level taxation, CHC** | Wage costs are tax deductible at the corporate level. Therefore, the gross profit can be distributed as wage.<br>Social security contributions apply to all wages paid out; so for total wage costs of 1, paid out wages equal<br>$\frac{1}{1+t_s}$ | Corporate income tax applies before distribution as dividends:<br>Net profit to distribute:<br>$(1\text{-}t_c)$ | Interest costs are tax deductible at the corporate level. Therefore, gross profit can be distributed as interest |
| **After-tax income of the active, sole owner, CHC** | Personal level wage tax applies to this and after-tax wage income of the active shareholder is then<br>$\frac{1-t_w}{1+t_s}$ | Within dividend allowance:<br>$(1\text{-}t_c) \times (1 - t_d)$<br>Exceeding the allowance:<br>$(1\text{-}t_c) \times (1 - t_w)$ | Capital income tax applies to interest income at the individual level, such that total after-tax income from interest income is then<br>$(1 - t_k)$ |
| **Tax wedge, individual and corporate level taxes integrated** | $1-\frac{1-t_w}{1+t_s}$<br>$=\frac{t_s+t_w}{1+t_s}$ | Within dividend allowance:<br>$1-[(1-t_c)\times(1-t_d)]$<br>$=t_c-t_d+t_c\times t_d$<br>Exceeding the allowance:<br>$1-[(1-t_c)\times(1-t_w)]$<br>$=t_c-t_w+t_c\times t_w$ | $1-(1-t_k)$<br>$=t_k$ |

Alternatively, an owner may finance investments with a shareholder loan. The profits are paid out as interest to the owner. This channel is also regulated and there is an upward cap on the interest rate on shareholder loans. However, there is no formal cap on interest rates. The interest rate should, however, be in a reasonable range around the market interest rate adjusted for company risk. In some cases, this accepted interest rate on shareholder loans will be lower, if the risk is assumed to be lower because of the close connection between the corporation and the owner. Above this "cap", interest may not be expensed and is treated as dividends.

Box 3.4 presents the after-tax income from the three payout channels and summarizes the tax treatment at the corporate and the individual level from a theoretical perspective. The last row

shows the after-tax proceeds of each payout channel. We assume that the owner holds 100 percent of the shares and that all proceeds are within the respective allowances. We treat the social security contributions as a pure tax, i.e. they do not generate marginal benefits.

Box 3.5 calculates the after-tax income for different payout channels from a closely held corporation to an active owner. We assume that all payouts are within the relevant allowances.

**Box 3.5: Example, after-tax income from various payout channels, 2011 rates.**

Now consider a gross profit of SEK 100 in a closely held corporation where the active owner is the sole owner. What is the total tax burden for each distribution channel when this SEK 100 is paid to the owner?

| | | | Dividends and capital gains | |
|---|---|---|---|---|
| | **Wage income** | **Interest income, shareholder loan** | CHC, 3:12, within allowance | CHC, 3:12, exceeding allowance |
| Gross profit before payout | 100 | 100 | 100 | 100 |
| Gross Wage | 76.09 | - | - | - |
| Social Security contributions on gross wage | 23.91 | - | - | - |
| Interest expenses | - | 100 | - | - |
| Corporate Profit | 0 | 0 | 100 | 100 |
| Corporate Tax | 0 | 0 | 26.3 | 26.3 |
| Income at individual level | 76.09 | 100 | 73.7 | 73.7 |
| Income Tax | 24.05 – 43.07 | 30 | 14.74 | 23.29 – 41.71 |
| Net Payout | 52.05 – 33.02 | 70 | 58.96 | 50.41 – 31.99 |
| **Combined Tax Burden, SEK** | **47.95 – 66.98** | **30** | **41.04** | **49.59 – 68.01** |

Finally, we compare tax rates on payout channels depending on the levels (corporate and/or individual) included in the taxpayer's decision. When considering personal level taxes only (third row in Box 3.5), dividends are always the preferred means of distributing income. The marginal tax rate of 20 percent within the dividend allowance is the lowest taxed alternative from a narrow perspective. But, as shown in Table 3.3, the top marginal tax wedge changes when corporate level taxes are integrated with individual level tax rates (calculations are based on the formulas developed in Box 3.4). In that case, interest payments are the preferred means of distributing corporate earnings, followed by dividends within the dividend allowance and wage payments. Dividends exceeding the dividend allowance always trigger the highest tax burden and should be avoided. Within the dividend allowance, the tax wedge

between dividends and wages amounts to about 25.4 percentage points (2011 rates).

**Table 3.3 Marginal Tax Wedge on Capital and Labor Income for an Active Owner in a Closely Held Corporation, 2011**

| | | | Dividends and capital gains | |
|---|---|---|---|---|
| | **Wage income** | **Interest income** | CHC, 3:12, within allowance | CHC, 3:12, exceeding allowance |
| Individual level only | 31.6-56.6 | 30 | 20 | 31.6-56.6 |
| Integrated individual and corporate level | 48.3-66.4 | 30 | 41 | 49.6-68 |

There are still other reasons to pay wages. First, social security benefits provide incentives to pay wages up to the threshold where social security contributions cease generating further benefits. Second, there is a minimum owner wage required in order for the owner to be granted the wage based allowance. And finally, increased wage payments to the owner directly increase the dividend allowance. An increase in owner wages of SEK 1 increases the dividend allowance of the corporation by SEK 0.25 or SEK 0.50, depending on the total wage bill of the corporation.

In the next chapter, we will go into more detail on how the 3:12 rules can be used to shift income from labor income to capital income and how to identify the extent of this income shifting in micro data.

## 3.5 Conclusions

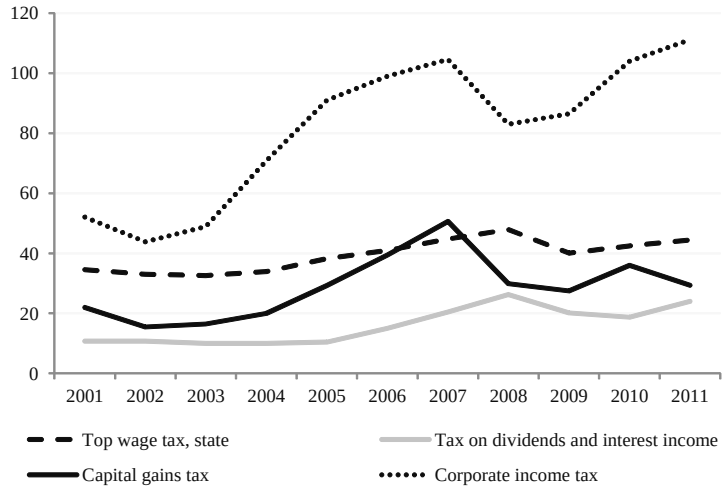
Under the Swedish dual income tax system, there are strong incentives for high income earners to re-label labor income as capital income. Active owners of closely held corporations have ample opportunity to participate in tax minimising income shifting. They have the opportunity to determine how much to pay themselves in wages and how much in dividends. This flexibility in payout composition increases in the active owner's ownership

share. However, these income-shifting possibilities are limited by the 3:12 rules.

The first indications of income shifting behavior can be found in aggregate statistics. Figure 3.2 shows the development of total tax revenue in Sweden by type of tax, in SEK billion. What stands out is the increase in revenue from the corporate income tax from 2003 onwards, with a dip at the time of the financial crisis in 2008. This can all be explained by expanding businesses in a booming economy. But it could also be that some of the increased corporate tax revenue is due to income shifting.

If owners shift labor supply from outside the closely held corporation into their corporation(s), the latter will report more corporate income. Hence, they pay corporate income tax and dividend taxes instead of income tax on labor income. We also see that while tax revenue from the dividend and interest income was stable until 2006, it increased rapidly thereafter and seems to have stabilised at about twice the 2005 level. In contrast, tax revenue from the state tax on labor income increased until 2008 and declined thereafter. This holds for both the basic state tax and the top state tax (*Värnskatten*).

**Figure 3.2 Tax Revenues from Different Income Types in 2001-2011 in SEK billion**




Note: This figure shows tax revenues from corporate income tax (dotted grey line), capital income tax from dividends and interest (solid grey line), capital gains tax (solid black line), and state tax on labor income (dashed black line) over the 2001 to 2011 period. Source: Swedish Ministry of Finance and own calculations.

In the next Chapter, we will take a closer look at specific means through which individual income can be shifted into the business sector and reported as corporate income and then distributed to the active owners. We use the 2006 tax changes to identify shareholders and corporations' behavioral responses.

# 4 Identifying income shifting

## 4.1 Chapter summary

This Chapter provides empirical evidence on the effects of the 2006 reform at both the corporate and the owner level. The rich micro datasets from Statistics Sweden enable us to link the corporate and the individual level and to identify income shifting and tax avoidance behavior. Using the tax changes discussed in Chapter 3, we then derive expected behavioral responses and look for empirical evidence using data on all corporations, all closely held corporation owners, and a representative sample of all individuals. We can summarize the main empirical results at the corporate level as:

1. **Dividend Payout**: Many closely held corporations initiated dividend payments after the cut. In 2006, for example, more than 20 percent of closely held corporations initiated dividend payments. Corporations paid higher dividends after the reform and overall dividends were constant despite the economic downturn.
2. **Asset Allocation**: The average newly founded closely held corporation has fewer real investments, fewer total assets, and less nominal equity than before the reform. At the same time, cash holdings have increased substantially and shareholder loans have become less important. Specifically, the average cash-to-asset ratio of new closely held corporations increased by over 3 percentage points and over 90 percent of newly founded closely held corporations have nominal equity of exactly SEK 100 000.
3. **Purpose of the Corporation:** The percentage of corporations that are either holding corporations or shell corporations has increased from about a sixth of all new closely held corporations before the reform to over a quarter after the

reform. We find that about a third of all newly founded closely held corporations in 2006 were holding companies, shell companies or low turnover companies.

We can summarize the main empirical results on the individual level as:

1. **Importance of CHC:** The fraction of total income earned through closely held corporations increases after the reform. This increase is mainly due to higher dividend payouts. The importance of labor income from closely held corporations changes only marginally. We find that average dividend income from closely held corporations increased by over 80 percent of the unconditional pre-2006 average.
2. **New CHC owners**: Individuals founding new closely held corporations are predominantly individuals with higher income, i.e. individuals subject to the state tax.
3. **Payout Mix**: High income individuals generate a large share of their income from capital income such as dividends and interest. They are more likely to receive substantial dividends and are also more likely to give substantial shareholder loans to their closely held corporations.
4. **Purpose of Corporation**: The increasing number of holding companies and low turnover companies results from high income individuals founding closely held corporations. They benefit most from the tax wedge between labor income and dividend income. As of 2006, an individual actively participating in a holding corporation has about twice as much income as the average closely held corporation owner.

We present our results in four steps. First (section 4.2), we present descriptive statistics on corporations and individuals in our data set. This section is supposed to give the reader a better impression on the corporate structure of our sample firms as well as on the individuals actively participating in closely held corporations.

Next (section 4.3), we are interested in the income composition of closely held corporation owners. This section focuses on our individual data. We are specifically interested in income shifting across time and income shifting across tax bases. We address the former by looking at the effect of the 2006 tax changes on payout composition. The latter is analyzed by comparing the importance

of labor and capital income around the 2006 tax reform. In Section 4.3, we focus on the wage-dividend-mix of firm owners and compare different groups of individuals according to the payout structure of their closely held corporation. We also run tests on the importance of shareholder loans.

Third (section 4.4.), we analyze whether the business structure of closely held corporations has changes around the 2006 tax reform. This section specifically focuses on firm-level data and analyzes the effects on the asset composition. The introduction of the simplification rule leads to very generous dividend allowances for firms without a significant payroll. Thus, we are interested if real investments and labor intensity has changed around the 2006 tax reform. We also evaluate aggregated statistics on incorporation of closely held corporations.

Finally (section 4.5), we evaluate changes in ownership characteristics around the 2006 tax reform. If the 2006 tax reform incentivized income shifting, we should observe differences in the "average" owner of a closely held corporation. We tackle this question in section 4.5 and use our unique dataset where we can link corporate and individual data. This enables us to analyze which individuals participate in holding or shell corporations designed for income shifting purposes. Section 4.6 closes with some concluding remarks on our findings in this chapter.

## 4.2 Characteristics of corporations and shareholders

This section provides an overview of the data and the basic characteristics of the datasets. We present summary statistics on (i) the corporate level and (ii) the individual level. The statistics are necessary for a basic understanding of the average corporate structure of closely held corporations versus widely held corporations as well as for a better understanding of the difference between individuals running a closely held corporation and individuals without any stake in a closely held corporation. This section presents only key summary statistics. Data description, sample selection, summary statistics, and variable definitions can be found in Appendix II of this report.

### 4.2.1 Data

We use the Firm Register and Individual Database (FRIDA) provided by Statistics Sweden. This panel data set is a combination of three main data sources: corporate tax statements, income tax statements and the K10-form for owners of closely held corporations. The dataset includes all corporate tax statements of widely and closely held corporations. Box 4.1 provides an overview of the legal and data definition of both organizational forms.

**Box 4.1: Definition of closely held corporations and widely held corporations**

At the corporate level, all corporations are taxed according to corporate rules. The taxation of shareholders' income from the corporations, however, depends on the ownership structure.

A corporation is defined as closely held if four or fewer owners (families count as one owner, and all active owners count in total as one owner) own more than 50 percent of the voting rights. Corporations that are not closely held are by definition widely held. If the shareholder (or a close family member) in a closely held corporation is active in the operation of the corporation, the shareholder is subject to the 3:12 rules. He or she then files a K10-form and his or her income from the corporation is taxed according to the 3:12 rules. In Appendix I, we present these definitions in more detail.

In our data, we use the filing of the K10-form as an indicator of a closely held corporation (CHC). If we can successfully link a K10-form to a corporation in the corporate tax data set, we consider the corporation a closely held corporation. If we cannot link a corporation to a K10-form, we consider the corporation to be a widely held corporation (WHC).

**CHC**: A corporation with 4 or fewer shareholders who control at least 50 percent of the corporation *and* which has at least one active owner.
**WHC**: All corporations that are not CHC.

This means that there can be corporations that are classified as WHC by our definition, which are actually CHC by the tax definition (controlled by four or fewer shareholders). The link between corporation and owner only exists for active owners in closely held corporations, through the K10-form, not for passive owners.

For the closely held corporations, we can link all income tax statements of closely held corporation owners with the corporate tax data and vice versa (*full sample of CHC owners*). We additionally use a representative panel of about 6.5 percent of all Swedish individuals (*representative panel*). This dataset includes the representative fraction of owners of closely held corporations.

In this report, we use both individual datasets, the *full sample of CHC owners* and *the representative panel*. To address certain questions, we need to compare the behavior of closely held corporation owners to decisions of other owners. In these cases, we use the representative panel. For other questions, such as income shifting over time or payout decisions, we use the full sample of CHC owners. We will explicitly state why we use a particular dataset for a specific question.

### 4.2.2 Differences between closely and widely held corporations

We first provide an overview of the differences and the importance of closely held versus widely held corporations. This is important for our basic understanding of the effects of tax changes, particularly if there are substantial and structural differences between closely held and widely held corporations with respect to the importance of certain assets types, profitability, and labor intensity. For an initial understanding of the difference across organizational forms, Table 4.1 presents descriptive statistics for our main corporate level variables. Summary statistics and variable definitions are reported in Appendix II, Table AII.5 and Table AII.8.

**Table 4.1 Differences between Closely Held and Widely Held Corporations**

| | Average Normalised Values | | | Aggregated Amount in SEK billion | | |
|---|---|---|---|---|---|---|
| | WHC (1) | CHC (2) | Diff. (3) | WHC (4) | CHC (5) | Fraction CHC (6) |
| **Panel A: Assets** *(All balance sheet items as a percent of total assets, total assets in SEK million)* | | | | | | |
| *Intangibles* | 0.020 | 0.017 | 0.3 % | 1 913.47 | 232.00 | 10.8 % |
| *Fixed Assets* | 0.178 | 0.204 | 2.6 % | 9 524.40 | 1 996.47 | 17.3 % |
| *Financials* | 0.120 | 0.135 | 1.5 % | 35 126.65 | 2 091.84 | 5.6 % |
| *Inventories* | 0.093 | 0.114 | 2.1 % | 3 671.24 | 1 012.87 | 21.6 % |
| *Receivables* | 0.407 | 0.318 | 8.9 % | 25 633.60 | 2 232.49 | 8.0 % |
| *Cash* | 0.192 | 0.259 | 6.6 % | 2 918.15 | 1 143.89 | 28.2 % |
| *Total Assets* | 83.057 | 5.181 | -77.88 | 78 787.51 | 8 709.56 | 10.0 % |
| **Panel B:** *Liabilities and Equity (Provisions Debt and Ret. Earnings in percent of total assets)* | | | | | | |
| *Nom Equity* | 9.410 | 0.398 | -9.01 | 9 144.98 | 733.81 | 7.4 % |
| *Min. Equity* | 0.184 | 0.133 | 5.2 % | - | - | - |
| *Equity<150k* | 0.693 | 0.852 | 15.9 % | - | - | - |
| *Ret. Earnings* | 0.086 | 0.209 | 12.3 % | 20 327.27 | 2 782.89 | 12.0 % |
| *Pensions* | 0.001 | 0.001 | 0.1 % | 4 052.02 | 414.44 | 9.3 % |
| *Provisions* | 0.025 | 0.041 | 1.5 % | 414.51 | 19.58 | 4.5 % |
| *Debt* | 0.528 | 0.519 | 0.8 % | 40 352.33 | 4 246.95 | 9.5 % |
| *Sh. Loan* | 0.051 | 0.057 | 0.6 % | 4 568.92 | 578.76 | 11.2 % |
| **Panel C: Profit and Turnover** (all items as a percent of total assets) | | | | | | |
| *Sales* | 1.360 | 1.730 | 37.0 % | 38 758.23 | 9 554.71 | 19.8 % |
| *Profits* | 0.197 | 0.235 | 3.8 % | 13 870.20 | 3 080.45 | 18.2 % |
| *Depreciation* | 0.033 | 0.046 | 1.3 % | 1 183.38 | 263.00 | 18.2 % |
| **Panel D: Corporation Characteristics** (labor costs as a percent of total assets) | | | | | | |
| *#Employees* | 15.566 | 3.846 | -11.72 % | 13.76 | 6.06 | 30.6 % |
| *Labor Costs* | 0.573 | 0.832 | 25.9 % | 8 906.73 | 3 208.14 | 26.5 % |
| *Age* | 16.664 | 14.354 | -2.31 | - | - | - |
| *Survival Rate* | 0.773 | 0.858 | 8.6 % | - | - | - |

Note: This table presents descriptive statistics on our main variables for corporations in the 2000 to 2009 sample period. In Column (1) to (3) we compare means for our main variables of widely held corporations and closely held corporations. Columns (4) to (6) present aggregated values (in SEK billion) for our main variables before normalising with total assets. Variables are described in Table AII.8 of Appendix II. Employee statistics in Panel B are in million.

In Column (1) to (3) in Table 4.1, we present averages of main variables. In Column (3) to (4), we calculate the total amount of balance sheet items as well as profit and loss statement items to compare the relative importance of organizational forms. Column (6) presents the percentage of the total amount of each variable

that can be attributed to closely held corporations. We sort variables into assets (Panel A), liabilities and equity (Panel B), profit and turnover statistics (Panel C), and corporation characteristics (Panel D). The structure follows the basic structure of the tax balance sheet, the profit and loss statement, and complementary company information.

There are several balance sheet items that indicate a substantial difference between closely held corporations and widely held corporations. For example, closely held corporations hold more cash (*Cash*) and have higher retained earnings (*Ret. Earnings*) than widely held corporations. The differences are economically significant. Specifically, closely held corporations have 6.63 percentage point higher cash to asset ratios. The difference is even higher for retained earnings (12.31 percentage points). In sum, closely held corporations hold more cash, have more fixed assets, and retain a larger fraction of their earnings.

Closely held corporations are substantially smaller and have less nominal equity than widely held corporations. The average closely held corporation has total assets of SEK 5.2 million (*Total Assets*) and nominal equity of SEK 398 000 (*Nom. Equity*). Average total assets (nominal equity) of widely held corporations amount to SEK 83.1 million (SEK 9.41 million). The percentage of corporations with nominal equity of less than SEK 150 000 (*Equity<150k*) is substantially higher for closely held than for widely held corporations (+16 percentage points). We find only small differences in financing structure (long-term and short-term liabilities, *Debt* and shareholder loans, *Sh. Loan*).

In Panel C and D, we compare profit and loss statement items and corporation characteristics. Closely held corporations have higher turnover relative to assets (Sales, +37 percentage points) and higher profits (*Profits*, +3.8 percentage points) compared with widely held corporations. Widely held corporations have on average more employees than closely held corporations (*#Employees*, +11.7 employees). This can be explained by the differences in company size. However, closely held corporations have a substantially higher labor costs to asset ratio (*Labor Costs*). The labor costs to total assets ratio of closely held corporations is 26 percentage points – or over 45 percent – higher than for widely held corporations. This suggests that closely held corporations are more labor intensive than widely held corporations. Closely held

corporations are also younger (*Age*, -2.3 years) and have a higher survival ratio (*Survival Rate*, 8.6 percentage points).[17]

In Column (4) to (6), we show statistics on the importance of closely held corporations relative to widely held corporations with respect to assets, equity and profit and loss statement items. For example, total assets of all sample corporations over the sample period amount to SEK 87.5 billion. Of that, 9.95 percent can be attributed to closely held corporations. In relation to company size, closely held corporations contribute significantly more to fixed assets, cash holdings, turnover, and operating profits. For example, even though only 10 percent of all assets are allocated to closely held corporations, they generate 18 percent of all profits and have 28 percent of total cash holdings in our sample. Of the approximately SEK 12 000 billion deducted for labor expenses in our sample period, SEK 3 208 billion – or 26.5 percent – are paid by closely held corporations. The statistic for the number of employees is more impressive. About 30 percent of all (reported) employees work in closely held corporations even though only 7.4 percent of equity and 10 percent of all assets are allocated to closely held corporations. This suggests that closely held corporations are important for the Swedish economy and the Swedish job market.

### 4.2.3 Difference between active owners in closely corporations and ordinary wage earners

We next compare closely held corporation owners to the rest of the population to get a better impression of differences between corporation owners and employed individuals. As with the company level statistics, this comparison is necessary for a correct understanding of the changes after 2006. For example, if we observe an income increase after 2006 of SEK 10 000, we need to know whether this is economically substantial or whether it reflects underlying macroeconomic developments.

Table 4.2 summarizes average values for our main individual variables and the difference (Column (1) to (3)). In Column (4) to (6), we compare the aggregated values of corporation owners (*CHC Owners*) to those of employed individuals without a share

[17] The survival ratio is defined as the percentage of corporations that exist and are not bankrupt until 2009, the final year of our sample period.

in a closely held corporation (*No CHC Owners*). With both statistics, we get a better understanding of the importance of closely held corporation owners. We compare statistics on income (Panel A) and on individual characteristics (Panel B). Summary statistics and variable definitions are reported in Appendix II, Table AII.7 and Table AII.9.

There are substantial differences between corporation owners and the rest of the population with respect to income elements (Panel A of Table 4.2) and to individual characteristics (Panel B of Table 4.2). The average income of closely held corporation owners is higher than the income of the average taxpayer (*total income*). The difference amounts to SEK 209 424. The same result holds for income excluding income from the closely held corporation (*income w/o CHC*, + SEK 17 849), labor income (*labor income* + SEK 124 397), business income (business income, + SEK 6 845), and capital income (*capital income* + SEK 78 182). Furthermore, 51 percent of employed taxpayers receive dividends from listed and unlisted corporations (*Div received?*). In contrast, 75 percent of closely held corporation owners receive dividends from any incorporated company and/or their closely held corporations.

**Table 4.2 Differences between Closely Held Corporation Owners and the Remaining Population, 2000-2009**

| Variable | Average Values | | | Aggregated Values | | |
|---|---|---|---|---|---|---|
| | No CHC Owners (N=5 929 194) (1) | CHC Owners (N=173 270) (2) | Difference (3) | No CHC Owners (N=5 929 194) (4) | CHC Owners (N=173 270) (5) | Share Owners (2.84 %) (6) |
| **Panel A: Income elements** | | | | | | |
| *Total income* | 168 171 | 377 595 | 209 424 | 993.43 | 77.34 | 7.2 % |
| *Income w/o CHC* | 168 171 | 186 020 | 17 849 | 993.43 | 39.28 | 3.8 % |
| *Labor income* | 161 550 | 285 947 | 124 397 | 955.39 | 60.94 | 6.0 % |
| *Business income* | 3 838 | 10 683 | 6 845 | 22.72 | 1.83 | 7.4 % |
| *Capital income* | 2 783 | 80 965 | 78 182 | 15.31 | 14.57 | 48.8 % |
| *Dividends* | 1 859 | 41 057 | 39 198 | 10.09 | 7.73 | 43.4 % |
| *Div received?* | 0.509 | 0.748 | 0.240 | - | - | - |
| **Panel B: Individual characteristics** | | | | | | |
| *Age* | 40.31 | 49.35 | 9.04 | - | - | - |
| *Female* | 0.511 | 0.251 | -0.260 | - | - | - |
| *Married* | 0.327 | 0.630 | 0.303 | - | - | - |
| *Tertiary Education* | 0.095 | 0.181 | 0.086 | - | - | - |
| *- Business degree* | 0.070 | 0.164 | 0.094 | - | - | - |
| *- Law degree* | 0.005 | 0.015 | 0.010 | - | - | - |
| *- IT degree* | 0.007 | 0.011 | 0.004 | - | - | - |
| *- Medical degree* | 0.009 | 0.024 | 0.015 | - | - | - |
| *City* | 0.732 | 0.704 | -0.029 | - | - | - |

Note: This table presents differences between closely held corporation owners and the remaining population. Columns (1) to (3) present statistics on the difference in average values. In Column (4) to (6), we present statistics on the importance of closely held corporation owners in the population. We present values for income measures in SEK billion. Variables are described in Table AII.9 of Appendix II.

The statistics in Column (4) to (6) of Table 4.2 show that closely held corporation owners contribute a large share to overall taxable income, particularly to capital income and dividends. Only 2.84 percent of all taxpayers in our sample are active owners of closely held corporations. However, they realise about 7.2 percent of total income in our sample. This share is much higher for dividends and capital income. These individuals realise about 48.8 percent of total capital income and 43.4 percent of all dividends from incorporated companies including closely held corporations. This shows the importance of closely held corporation owners for tax revenue from *flat taxed* capital income. However, these statistics also shows

that their share in *progressively taxed* labor income (6.0 percent) is much smaller than their share in capital income such as interest, capital gains, and dividends (48.8 percent).

The fraction of income realised by closely held corporation owners is rather constant around the tax reform with one key exception (not reported in Table 4.2). The share of total dividends realised by closely held share owners increased by 22.4 percentage points. Before the reform, they realised about 32 percent of total dividends. After the 2006 tax change, closely held corporation owners receive over 54 percent of all dividends. In other words, more than half of all dividends are realised by only 2.8 percent of all taxpayers after the reform.

Panel B shows differences in demographic characteristics across individuals. Closely held corporation owners are on average 8.9 years older than the average taxpayer (*Age*). This can be explained by the large percentage of children in the representative panel which hardly holds any shares in closely held corporations.[18] Only 25 percent of closely held corporation owners are women (*Female*) and corporation owners are very likely to be married (*Married*). The difference in tertiary education degrees is even more striking. About one tenth of the average population holds a university degree of at least 4 years of tertiary education (*Tertiary education*). This fraction is 8.6 percentage points or 90 percent higher for corporation owners. The percentage of individuals holding a business degree is substantially higher (*Business degree*, +9.4 percentage points) among closely held corporation owners. In contrast, the distribution across regions is very similar across individuals. Closely held corporation owners appear to be less likely to live in the bigger cities (*City*, -2.9 percentage points) or in the county capital (-1.6 percentage points, not reported).

## 4.3 Identifying income shifting: Payout composition from the closely held corporation to active owners

In Chapter 3, we described income shifting incentives in the Swedish tax system using the example of the closely held corporation. The main outcome of Table 3.4 and Box 3.5 is that

[18] We will further address this argument in Section 4.3.4 of this chapter.

individuals have an incentive to reclassify labor income as capital income above a certain income level. This is particularly true after the 2006 tax reform. We are thus interested in the payout composition of individuals. This may give us a better understanding of the tax revenue statistics in Figure 3.2. Revenue from the top tax on labor income has a smaller increase than revenue from the corporate income tax and the income tax on capital gains, interests, and dividend income. This may be an indication that income is shifted out of the state income tax base into the corporate income tax base.

Active owners of closely held corporations can decide whether to compensate themselves for their labor effort in wages or dividends. Thus they shift income between the labor income and capital income tax bases to potentially reduce their marginal tax burden by 25 percentage points. Alternatively, they can give their corporation a shareholder loan instead of equity and pay out profits as interest income. Active owners are also in a position to shift income across time by determining when to initiate and pay dividends. They can also shift income across individuals in order to benefit from lower individual marginal tax rates. When paying excess dividends, owners can distribute dividends to spouses and children with lower marginal tax rates on labor income and thus reduce the total tax burden.

### 4.3.1 Aggregated Evidence on Payout Composition

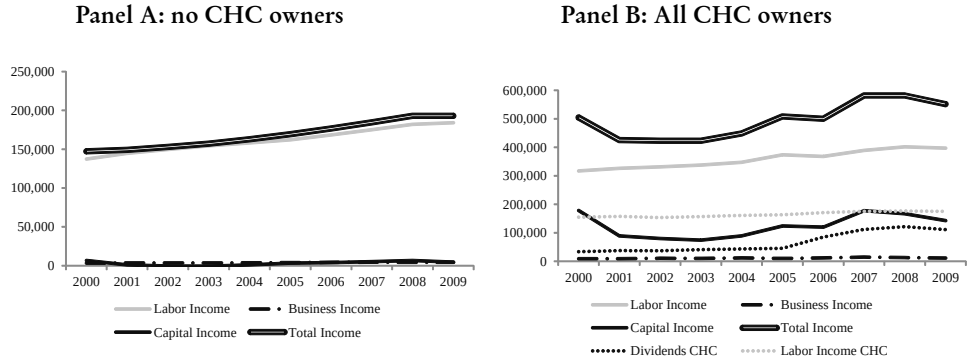
First, we turn to aggregated statistics on incidences of income shifting over time and across tax bases. The payout composition (i.e. dividends versus wages) from closely held corporations to active owners appears to be a useful way of identifying both types of income shifting around the 2006 tax changes. Specifically, we expect corporations to pay out higher dividends following the dividend tax cut. Empirical research (Poterba, 2004; Chetty and Saez, 2005; Brown, Liang, and Weisbenner, 2007; Alstadsæter and Fjærli, 2009; Jacob and Jacob, 2012) shows that when dividend taxes are cut, more corporations pay dividends and dividend volumes increase.

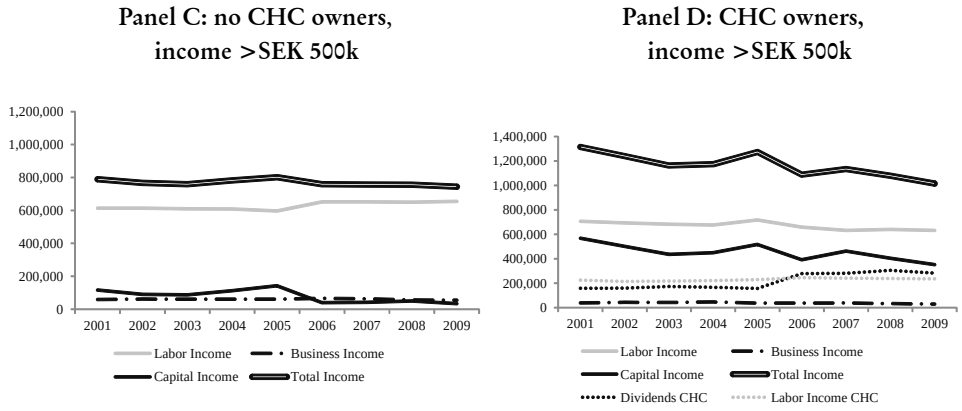
In our sample of all closely held corporation owners, we would expect more individuals to receive dividends from closely held corporations and the average dividend paid out to increase in

volume. In our corporate tax data, we should observe more corporations paying dividends to their shareholders. Corporations are likely to initiate dividend payments as payout taxes decrease by 10 percentage points.

We further expect an effect on the wage-dividend-mix. As dividend taxes increase while labor income taxes are constant, the relative importance of shifting labor income to dividends should decrease. Hence, the proportion of cash transferred from closely held corporations to their shareholder(s) through dividends is expected to increase after 2006 vis-à-vis labor income. Finally, we expect shareholder loans to be less prevalent after the reform. The tax wedge between interest and dividends decreases (but is still positive). Hence, closely held corporation owners may substitute shareholder loans for equity, i.e. they transform internal debt to equity. This effectively increases the equity base when computing the general dividend allowance and increases the amount which can be distributed as dividends.

**Figure 4.1 Relevance of labor income, capital income, business income and income from closely held corporations 2000-2009**






Note: This figure shows average income from labor income (*solid grey line*), business income (dash-dot black line), and capital income (*solid black line*) for the 2000-2009 representative panel of individuals. We also present total income (*split black line*). Panel A plots average income for all individuals who do not hold any shares in a closely held corporation. Panel B plots these statistics for closely held corporation owners. The dotted lines represent the labor income from CHC (*dotted grey line*) and dividend income from CHC (*dotted black line*). The values are included in labor income and capital income respectively. Panel C and D repeat statistics from Panel and Panel B respectively but only include individuals with an annual income of SEK 500 000.

The simplest way of testing how payout taxes impact payout composition and the income levels of individuals with and without shares in CHCs is to track individuals' income around the tax reform. Figure 4.1 summarizes the development of the main income elements over the 2000-2009 sample period. This enables us to address the relative importance of dividends and the growth in dividends received around the 2006 reform. We use the representative panel of individuals to compare income development for all individuals (Panel A) to those of closely held corporation owners (Panel B). Panels C and D repeat the comparison of income elements for individuals with total income above SEK 500 000. In all figures, we include total income (*split black line*), labor income (*grey line*), capital income (*solid black line*) and business income (*dash-dot black line*). Capital income is the sum of all income from interest, capital gains, and dividends. Labor income, capital income and business income add up to total income. Hence, we can directly derive the relative importance of income sources from the graph. For closely held corporation owners, we additionally plot labor income (*dotted grey line*) and dividends from the closely held corporation (*dotted black line*). Both values are included in total labor income and total capital income respectively. The dotted lines thus show the proportion of

labor income and capital income earned through the closely held corporation.

Figure 4.1 shows that average labor income (labor income) and total income increases steadily for all individuals as well as for closely held corporation owners (Panel A and B). Capital income and business income are irrelevant for the average taxpayer. In contrast, capital income accounts for a large share of the CHC owners' total income. This share increases after the 2006 tax change as average dividends substantially increase (+85.6 percent) within one year from 2005 to 2006. This suggests that after the 2006 tax reform, a larger share of income is generated by capital income. In other words, the additional post-reform income is generated through dividends and not through increased wage income. This effectively reduces tax revenues from the top tax.

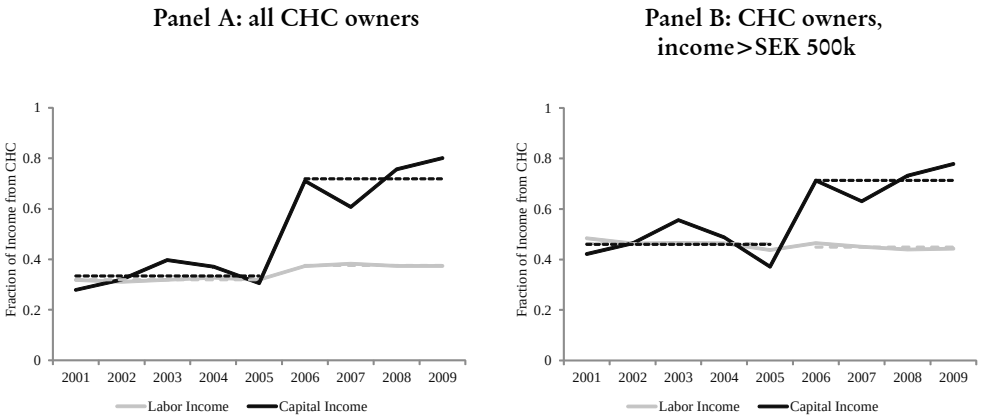
In Panel C and Panel D, we focus on individuals with a total income above SEK 500 000. These taxpayers are potentially subject to the state tax if they generate income from labor or business income. We can observe a different trend for total income and overall capital income. On average, capital income as well as total income decreases in this group. Labor income is quite stable and increases by small one digit growth rates (around +3 percent). Even though overall capital income is generally decreasing, dividends from closely held corporations increase by about 80 percent to a constant post-reform level for closely held corporation owners with income over SEK 500 000. Prior to the reform, dividends from closely held corporations contributed about 14.7 percent to total income. After the 2006 reform, this percentage doubles to about 29.8 percent. This is an indication of income shifting from labor income to capital income by the payment of dividends instead of wages to high income active owners of closely held corporations. The *increase* in dividends of closely held corporations is quite remarkable as dividends and other capital income of individuals without a closely held corporation (thus reflecting widely held corporations including listed firms) *declined* after 2006.

To shed more light on the discussion of the relative importance of dividends and wages from closely held corporations, we evaluate the relative importance of closely held corporations for their owners. Figure 4.2 shows the percentage of labor income that is generated within the closely held corporation (*grey line*). The *black line* shows the share of capital income that can be attributed to

dividends from closely held corporations. We use all closely held corporation owners (Panel A) and those with income above SEK 500 000 (Panel B). There is no apparent trend in the share of labor income from closely held corporations. On average, about 56 percent of total labor income comes from closely held corporations. This share is lower (43 percent) for high income individuals for the income shifting reasons discussed in Chapter 3. The 2006 tax reform does not change this relationship.

For dividends, however, we observe a sharp increase in capital income that can be attributed to the closely held corporation. Before the reform, about 46 percent (33 percent) of total capital income was received from closely held corporations in Panel A (Panel B). After the reform, dividends from the closely held corporation account for 71 percent of total capital income for the average closely held corporation owner and for 72 percent if total income is above SEK 500 000. We find no apparent time trend in these shares after the reform. In other words, the effects of the tax reform are *not* short term. Individuals appear to generate a constantly larger share of their income from closely held corporations. The almost constant labor income for higher income individual around the reform (see Figure 4.1) and the increase in capital income, particularly from dividends from closely held corporations (see Figure 4.2) may partly explain the sluggish growth in state tax revenues.

**Figure 4.2 Share of earned and capital income generated from closely held corporations, 2001-2009**




Note: This figure shows the percentage of labor income (labor income) realised within closely held corporations (*solid grey line*) and the percentage of capital income realised within closely held corporations (*solid black line*) for the 2001-2009 representative panel of individuals. We show pre-reform and post-reform differences with dotted lines. Panel A plots average income for all closely held corporation owners. Panel B shows closely held corporation owners with an annual income of SEK 500,000.

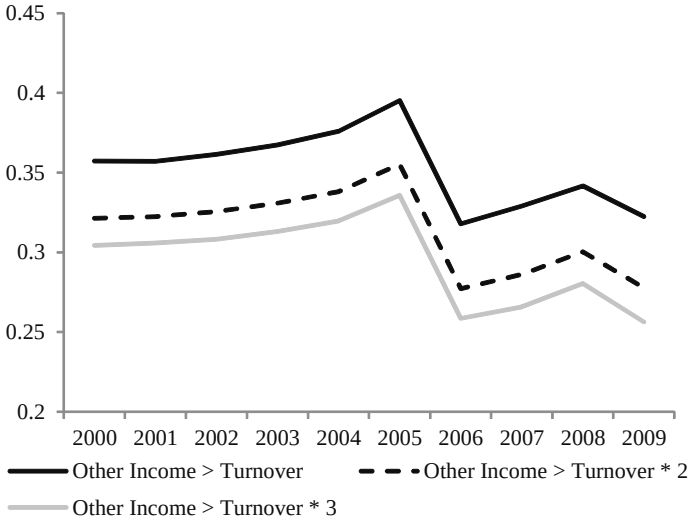
Yet there remains the question of how increased dividend payments can be financed in a period (2008 and 2009) of economic cooling.

Figure 4.3 shows the percentage of individuals for which income from sources other than closely held corporation exceeds the turnover of the closely held corporation. These are closely held corporation owners where the closely held corporation constitutes only a minor fraction of total income. The reduction after 2006 indicates that income is shifted into the closely held corporations. That is, before the reform more than 35 percent of active owners have income from other sources that exceeds the turnover of the closely held corporation they have invested in. After the reform, this share drops to about 30 percent.

Figure 4.3 indicate that income is shifted into closely held corporations. The results and patterns are very similar for other conditions where we require other income to be at least twice (dotted line) or three times (grey line) the turnover of the closely held corporation. This indicates that a substantial amount of the increased turnover in the corporate sector may not be actual value creation but the result of tax minimising income shifting between

the private and corporate sector. In other words, it appears as if labor effort is shifted into closely held corporations. This could explain constantly higher dividend levels from closely held corporations during the financial crisis despite lower turnover and profits.

**Figure 4.3 Importance of corporate and individual income 2000 to 2009**




Note: This figure shows the percentage of active owners who have a higher income from other sources (labor income, business income, and capital income other than from closely held corporations) than turnover in their closely held corporations in the period 2000-2009. The dotted (grey) line shows the share of active owners with other income of at least 200 percent (300 percent) of turnover from the closely held corporation.

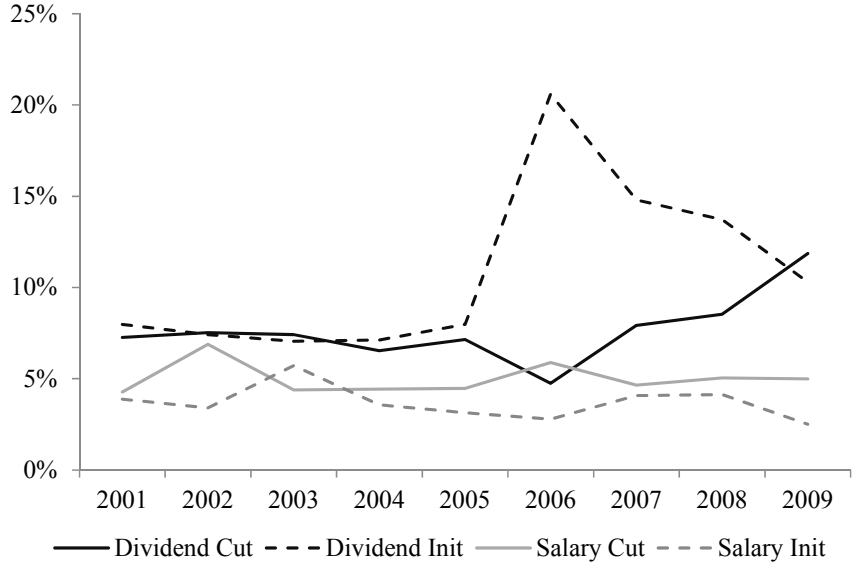
### 4.3.2 Income shifting and payout clienteles

We next focus on payout clienteles and use the individual dataset on all closely held corporation owners. Different groups of shareholders (*payout clienteles*) have different demands for the dividend payout policy of the corporation. This demand may be driven by taxes (see for example Allen, Bernado, and Welch, 2000) and non-tax factors (Becker, Ivkovic, and Weisbenner, 2011). We now take a closer look at the effect of the 2006 reform on the payout policy of corporations and how this varies across different types of corporations and owners. This section mainly concerns income shifting over time. Individuals can postpone the payment of dividends to (i) years with higher marginal tax rates on labor

income or to (ii) years with lower tax rates on dividends. The 2006 tax cut thus provided an incentive to initiate dividend payments as the tax rate decreases by 10 percentage points and dividend allowances were made more generous.

In contrast to publicly listed corporations, CHCs' payouts are more flexible per se. There is no signaling effect of dividends from closely held corporations. There should thus be a difference in payout policies between widely held and publicly listed corporations. Even within closely held corporations, dividends are more flexible than salary payments. The latter may reflect the "normal" return to labor effect. Dividends may represent residual income of CHCs' owners that have not been paid out as salary. As this residual income is very noisy and uncertain, dividends are expected to be more flexible than salary payments. We present statistics on the flexibility of dividends and wages in closely held corporations in Figure 4.4.

**Figure 4.4 Flexibility of dividends and salaries from closely held corporations**




Note: This figure presents statistics on the flexibility of payout of closely held corporations around the 2006 tax change. The black lines refer to dividends. The grey lines refer to salaries. The solid lines represent the fraction of individuals with a cut of the respective payout channel from prior year to current year. The dashed lines refer to the initiation of a dividend payment or a salary payment.

In Figure 4.4, we compare changes in dividend policy (black lines) and in salaries (grey lines). The solid lines represent the omission or cut in dividend payments and salaries respectively. That is, an individual received dividends or salary from his or her closely held corporation in year *t-1* but not in *t*. The dotted lines represent the initiation (*Init*) of dividend payments or salaries in year *t*. Figure 4.4 shows that initiation as well as omission rates are always higher for dividends than for salaries. We would expect more corporations to change their dividend payout policies than change owner wages as dividends are more flexible than salaries. We observe exactly this in the data in almost all years. The year 2006 is an exception. More corporation owners cut their salaries than cut their dividends. The latter can be explained by the 12.5 percentage point increase in dividend initiations in 2006 – this is equivalent to over 150 percent of the pre-reform level. In line with the results from above, it appears that individuals substitute dividends for salaries after the 2006 tax cut.

To gain more insight into the differences in individual characteristics of the owner across payout clienteles, Table 4.3 presents summary statistics for five different payout clienteles. In Column (1) we focus on individuals receiving wages from their closely held corporation (*with wage from CHC*). Individuals with dividends from the closely held corporation within the dividend allowance are summarized in Column (2) (*With dividends from CHC*). Column (3) summarizes individuals with excess dividends (*with excess dividends*). We also present summary statistics for corporation owners who do not receive dividends (Column (4), *without dividends*) and who do not receive any payout in the form of dividends or wages respectively (Column (5), *without any payout*).

Table 4.3 presents descriptive statistics on basic income elements (Panel A), characteristics of the closely held corporation in which the individual actively participates (Panel B), and demographic characteristics (Panel C). We use the full sample of all closely held corporation owners. Summary statistics and variable definitions are reported in Appendix II, Table AII.6 and Table AII.9.

Table 4.3 shows that there are substantial differences in income elements and in the importance of the closely held corporation across payout clienteles. There are several noteworthy observations. First, individuals without dividends have the lowest

average income. Individuals receiving dividends have the highest overall income. This is consistent with our expectations. Above a certain threshold (about SEK 522 000 in 2009), individuals should use dividends instead of wages as the preferred payout channel. The average income without income from the closely held corporation is far below this threshold. This (and the inclusion of the wage base in the dividend allowance calculation) explains the substantial amount of labor income from the closely held corporations (about SEK 228 000) in Column (2).

**Table 4.3 Summary statistics for corporation owners – breakdown by payout clienteles**

| | (1) With wage from CHC | (2) With dividends from CHC | (3) With excess dividends | (4) Without dividends | (5) Without any payout |
|---|---|---|---|---|---|
| **Panel A: Income elements** | | | | | |
| *Total income* | 440 291 | 704 099 | 713 385 | 389 374 | 446 178 |
| *Income w/o CHC* | 124 217 | 335 091 | 309 196 | 247 014 | 445 472 |
| *Labor income* | 303 451 | 359 471 | 358 361 | 269 419 | 263 764 |
| *Business income* | 6 790 | 8 698 | 8 621 | 11 729 | 17 934 |
| *Capital income* | 94 578 | 258 923 | 187 215 | 58 623 | 85 413 |
| *Dividends* | 46 262 | 145 072 | 123 870 | 14 664 | 21 524 |
| *Dividends received?* | 0.748 | 0.902 | 0.868 | 0.697 | 0.717 |
| **Panel B: Closely held corporation characteristics** | | | | | |
| *Number of Firms* | 1.157 | 1.201 | 1.263 | 1.124 | 1.108 |
| *Labor CHC* | 277 623 | 228 444 | 225 695 | 141 930 | 0 |
| *Salary CHC paid?* | 1.000 | 0.669 | 0.649 | 0.569 | 0.000 |
| *Dividend CHC* | 35 017 | 128 754 | 80 807 | 0 | 0 |
| *Div CHC received?* | 0.306 | 1.000 | 0.977 | 0.000 | 0.000 |
| *Excess dividend* | 3 436 | 11 811 | 97 687 | 431 | 706 |
| *Excess div paid?* | 0.039 | 0.130 | 1.000 | 0.001 | 0.001 |
| *Acc DivAllowance* | 610 472 | 1 020 868 | 171 089 | 507 947 | 556 244 |
| *Invested equity* | 117 568 | 137 619 | 94 038 | 112 999 | 113 340 |
| *Shareholder loan* | 168 386 | 227 825 | 210 923 | 213 121 | 280 449 |
| *Low turnover Firm* | 0.026 | 0.059 | 0.064 | 0.102 | 0.204 |
| *Holding corporation* | 0.018 | 0.095 | 0.107 | 0.052 | 0.101 |
| *Profits CHC (mean)* | 810 419 | 921 407 | 1 034 763 | 479 838 | 231 654 |
| *Profits CHC (median)* | 31 973 | 78 344 | 62 537 | 0 | 0 |
| **Panel C: Individual characteristics** | | | | | |
| *Age* | 48.43 | 50.62 | 49.25 | 48.85 | 50.23 |
| *Female* | 0.202 | 0.225 | 0.240 | 0.263 | 0.334 |
| *Tertiary Education* | 0.144 | 0.217 | 0.239 | 0.172 | 0.234 |
| *- Business Degree* | 0.151 | 0.174 | 0.187 | 0.159 | 0.176 |
| *City* | 0.697 | 0.718 | 0.727 | 0.703 | 0.719 |
| **N** | **1 419 932** | **649 560** | **86 179** | **1 731 966** | **746 842** |

Note: This table presents summary statistics for our main variable from Table AII.9 of Appendix II for different dividend and wage clienteles. In column (1) we focus on individuals receiving wages from their closely held corporation. Individuals with dividends taxed at 20 percent are summarised in column (2). Column (3) summarises individuals with excess dividends. In column (4) and (5), we present summary statistics for corporation owners who do not receive dividends and any payout in the form of dividends or wages respectively. We additionally present summary statistics on income before CHC dividends (*income w/o div*) and income before any income transfer (dividends and wage) from CHC to the corporation owner (*income w/o CHC*). N is the number of individual-year observations.

Second, labor income from closely held corporations is the most important income source for individuals paying wages to themselves (Column (1)). On average, only SEK 25 828 – or 8.5 percent of total labor income – is generated outside the closely held corporation. Third, individuals without any payments from closely held corporations already have an income that is around the threshold of the state tax. Fourth, we find that closely held corporations with any form of payout (Column (1) to (3)) have the highest profits among closely held corporations. This result holds for the mean (*profits CHC (mean*)) and the median profit (*profits CHC (median*)). Fifth, we find that about 30 percent of all closely held corporations, where owners pay neither wages nor dividends to themselves, are either holding corporations or low turnover corporations (see Box 4.2. below for definitions). These corporations can be used for income shifting purposes. We discuss this in Section 4.5 in more detail. With respect to demographic factors, we find small differences in age across payout clienteles. The fraction of female owners and the percentage of individuals with tertiary education are higher in Column (5) than in Column (1) or (2). That is, female and/or highly educated individuals appear to be more likely to own shares in corporations which do not distribute any cash through salaries or through dividends. These corporations also have the lowest profits (the median is 0) and the largest share of low turnover corporations, i.e. corporations which are can be used to realise additional, temporary work alongside normal employment.

**Box 4.2: Holding corporation, shell corporations, and low turnover corporation**

**Holding Corporation:**
A corporation with the purpose of owning assets and shares in other corporations. The main source of income and turnover arises from financial income (dividends and profit distributions from other corporations) from affiliated companies. The holding corporation has:

1. No sales over the sample period and an average financial income from affiliated companies of SEK 10 000.

**OR**

2. Average turnover from business is less than 20 percent of financial income.

**Shell corporation**:
A corporation that does not have significant transactions. Its purpose it is to serve as a vehicle for business transactions. The shell corporation is:

1. Not classified as a holding corporation.
2. No turnover over the sample period.
3. Average wage bill of the corporations is below SEK 100 000 over the sample period (to account for the possibility that an entrepreneurial corporation will not generate turnover in the first years).

**Low Turnover Corporation:**
The definition follows the definition of a shell corporation, but the no turnover requirement is relaxed. Features of the low turnover corporation are:

1. Not classified as holding corporation.
2. Average turnover < SEK 200 000.
3. Average wages < SEK 100 000.
4. Average depreciation < SEK 100 000.

The statistics on payout clienteles and individual characteristics are in line with the simple predictions in Chapter 3. Individuals appear to pay dividends if the labor income is above the threshold for the top tax. Without dividends from the K10-form, individuals with dividends (Column 2) have an average income of SEK 575 270. Income above this level is attributable to dividends from closely held corporations. This is the part of income where entrepreneurs

can decide on the wage-dividend-mix on their own. It thus appears that individuals at least to some extent capitalise tax saving mechanisms inherent in the 3:12 rules.

### 4.3.3 Income shifting and shareholder loans

We have considered the choice between distributing returns to the active owner's labor effort in a closely held corporation as wages or dividends. A third payout channel is interest payments on shareholder loans. Interest income is taxed at a combined rate of 30 percent and is the least taxed payout channel (see Table 3.3). We find that about 18 percent of all closely held corporations have substantial shareholder loans above SEK 100 000. About 15 percent of all closely held corporations have shareholder loans that are above the nominal equity injected by the owners.

We now turn to individual characteristics of those closely held corporation owners who substantially finance their corporations with shareholder loans. One would expect shareholder loans to be an attractive channel for distributing income to the owner. However, there are certain restrictions on the interest rate (see Appendix I for more details). Furthermore, external debt holders, such as banks, may put restrictions on shareholder loans and require these loans to be reclassified as equity. Shareholder loans increase total debt and can make it less attractive for external investors and banks to provide debt funding as bankruptcy risk increases in the debt-to-equity ratio. For non-tax reasons, shareholder loans are thus not as attractive for distributing income to the active owner as one might initially think.

Table 4.4 presents summary statistics for different investor groups. We sort individuals according to the shareholder loans they give to their closely held corporations. We observe that individuals granting shareholder loans above MSEK 2 have the highest overall income (over MSEK 1). The tax benefit from shareholder loans is highest in this group. High-income individuals are also very likely to provide collateral other than corporate equity for external debt funding. Hence, they may face less pressure from external debt holders when they give their closely held corporation a shareholder loan. The result is very similar in Column (4). Individuals granting their corporation a shareholder loan between SEK 500 000 and SEK 2 000 000 have a total income of about SEK 550 000 and thus a

clear tax incentive for distributing cash through shareholder loans. We further observe that individuals in Column (4) and (5) provide a shareholder loan to their company that is substantially higher than the nominal equity they inject. On average, the shareholder-loan-to-nominal-equity ratio is about 5.7 in Column (4) and 9.8 in Column (5). In other words, some high income individuals inject only about a tenth of their capital as equity vis-à-vis shareholder loans. Furthermore, individuals with substantial shareholder loans are on average invested in 1.6 closely held corporations (*row Number of Firms*). We will discuss income shifting with multiple corporations in more detail below (Table 4.10 and Table 4.11).

**Table 4.4 Closely held corporation owners: breakdown by shareholder loan**

| | Loan <10k | Loan 10k - 100k | Loan 100k - 500k | Loan 500k – 2m | Loan >2m |
|---|---|---|---|---|---|
| # Observations | 1 532 830 | 45 362 | 296 681 | 136 165 | 136 165 |
| **Panel A: income elements** | | | | | |
| *Total income* | 476 490 | 358 307 | 405 144 | 550 920 | 1 341 321 |
| *Income w/o CHC* | 265 137 | 223 411 | 224 550 | 354 246 | 1 007 055 |
| *Labor income* | 304 095 | 273 561 | 262 800 | 286 841 | 360 691 |
| *Business income* | 11 117 | 14 724 | 9 578 | 12 208 | 21 168 |
| *Capital income* | 105 169 | 32 952 | 81 252 | 182 031 | 800 413 |
| *Dividends* | 48 825 | 15 669 | 37 323 | 73 283 | 272 886 |
| *Div received?* | 0.745 | 0.663 | 0.764 | 0.798 | 0.841 |
| **Panel B: closely held corporation characteristics** | | | | | |
| *Number of firms* | 1.11 | 1.07 | 1.19 | 1.33 | 1.59 |
| *Labor CHC* | 171 957 | 126 822 | 153 963 | 144 896 | 145 690 |
| *Salary CHC paid?* | 0.600 | 0.522 | 0.604 | 0.529 | 0.414 |
| *Dividend CHC* | 35 715 | 6 944 | 24 215 | 48 024 | 171 432 |
| *Div CHC paid?* | 0.287 | 0.114 | 0.239 | 0.244 | 0.293 |
| *Excess dividend* | 3 681 | 1 129 | 2 417 | 3 754 | 17 144 |
| *Excess Div paid?* | 0.039 | 0.019 | 0.028 | 0.031 | 0.036 |
| *Acc div allowance* | 561 468 | 132 476 | 537 095 | 1 135 668 | 4 734 324 |
| *Invested equity* | 113 339 | 65 618 | 95 335 | 167 535 | 632 595 |
| *Shareholder loan* | 548 | 41 986 | 235 200 | 961 423 | 6 189 618 |
| *Low turnover* | 0.088 | 0.114 | 0.091 | 0.100 | 0.108 |
| *Holding corporation* | 0.060 | 0.025 | 0.052 | 0.127 | 0.279 |
| *profit CHC* | 599 208 | 312 109 | 621 737 | 989 085 | 2 935 003 |
| **Panel C: individual characteristics** | | | | | |
| *Age* | 49.07 | 45.27 | 49.90 | 50.28 | 50.32 |
| *Female* | 0.251 | 0.279 | 0.256 | 0.244 | 0.244 |
| *Tertiary education* | 0.186 | 0.216 | 0.165 | 0.176 | 0.226 |
| *- Business degree* | 0.163 | 0.157 | 0.158 | 0.181 | 0.240 |
| *- Law degree* | 0.017 | 0.015 | 0.012 | 0.014 | 0.020 |
| *- IT degree* | 0.012 | 0.014 | 0.008 | 0.007 | 0.005 |
| *- Medical degree* | 0.024 | 0.027 | 0.023 | 0.020 | 0.020 |
| *City* | 0.710 | 0.716 | 0.697 | 0.710 | 0.720 |

Note: This table presents summary statistics for individuals for selected main variables from Table AII.5 of Appendix II. We sort individuals into groups of the shareholder loan to the closely held corporation.

In the two groups with high shareholder loans, a high percentage of taxpayers have higher education and the majority holds a business degree. A very high share (over 38 percent) of individuals with loans above MSEK 2 is invested in low turnover firms or holding companies. One would have to study this in more detail to determine whether the shareholder loans are a real source of finance to these corporations or whether they are in fact based on income shifting. This is, however, beyond the scope of this report. From Table 4.4, we can conclude that there is a substantial fraction of individuals (about 9 percent of all individual-year observations) using shareholder loans as a major source of financing of their closely held corporations. As these are predominantly high income individuals, it appears that this decision is at least partly driven by the tax wedge between dividends, wages, and interest.

## 4.4 Identifying income shifting: effects on business structure

Tax incentives can affect the corporation's choice of organizational form, its ownership composition, and its asset allocation. The concentration of active owners in a corporation determines whether it is classified as closely held or widely held. The tax rate on dividends from unlisted corporations – 20 percent versus 25 percent – depends on the corporation's ownership structure. This can affect the ownership structure of existing corporations as ownership concentration could be adjusted to be classified as closely held. It also can provide an incentive for existing sole proprietors to incorporate. Wage earners can also participate in income shifting from the labor income tax base to the capital income tax base by incorporating and conducting consulting services for their previous employer. They could set up holding companies and/or shell corporations to benefit from the option value inherent in the carry forward of unused dividend allowances.

We now attempt to identify income shifting through various dimensions of changing business structure. If income shifting can be identified through a change in the business structure, we would expect more individuals to found closely held corporations relative to widely held corporations. When starting a business, individuals may try to shift into the 3:12 rules with their generous dividend allowances. The same holds true for self-employed people

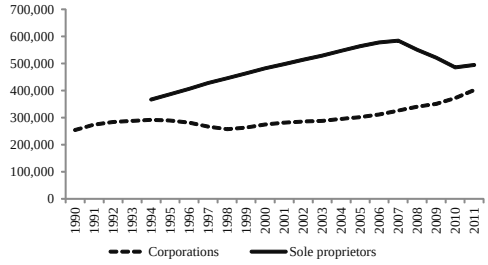
considering incorporating their businesses. Due to the generous standard allowance, we would expect some individuals to set up corporations with very low equity, assets, few employees and low real investments. This would be in line with anecdotal evidence of small "consulting" businesses alongside normal jobs. We will analyze these expectations below.

### 4.4.1 Business structure: choice of organizational form

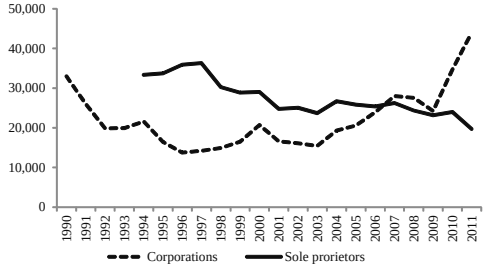
The relative popularity of a corporation as a legal organizational form compared to a sole proprietorship increases over time. We show this empirically in Figure 4.5 based on aggregate data from Statistics Sweden. Panel B shows that over the sample period, there is a downward trend in the number of new sole proprietors. In contrast, after stagnating in the 1990s and early 2000s, the number of newly founded corporations appears to increase after 2004. From 2010, there is a dramatic increase in the number of new corporations. This can be explained by the reduced costs of starting up and running a small corporation and with easier access to the F-tax card (see Box A1.3 and Box A1.4 in Appendix I).

**Figure 4.5 Development of different organizational forms 1990-2011**

**Panel A: all corporations and sole proprietorships**




**Panel B: newly founded corporations and sole proprietorships**

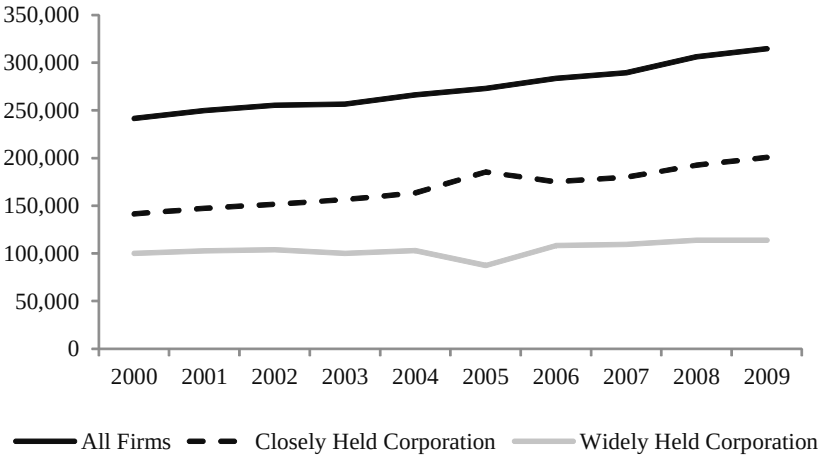



Note: This figure shows the number of corporations (dotted lines) and sole proprietors (solid black line) over the period 1990 to 2011. Panel A shows developments for the full sample. Panel B shows the number of new corporations. The data are from Statistics Sweden (SCB; http://www.bolagsverket.se/om_bolagsverket/statistik/index.asp, assessed April 2012).

We now take a closer look at the composition of corporations to find out whether the development is driven mainly by new closely

held or new widely held corporations. Figure 4.6 shows that the number of widely held corporations is rather stable (+14 percent) between 2000 and 2009 while the number of closely held corporations increases by 42 percent from 2000 to 2009. We derive these numbers from FRIDA. We only have data until 2009 but expect this trend to be in line with the aforementioned trend. The relative increase in popularity of the closely held corporate form is a first indication that the tax system affects the ownership constellation of Swedish corporations and induces them to be taxed according to the 3:12 rules after 2006.[19]

**Figure 4.6 Development of closely held vs. widely held corporations**




Note: This figure shows the total number of corporations (black line) filing a corporate tax return over the period 2000-2009. The grey (dotted) line shows the number of closely held corporations (widely held corporations).

### 4.4.2 Business structure: tax incentive to shift organizational form from a self-employed to a closely held corporation.

Changing the corporation's legal form of organisation, can change the applicable tax code. What may appear as newly founded corporations in the statistics may in fact be sole proprietors who

[19] In contrast, the previous Norwegian income splitting rules provided incentives to shift out of the closely held form for corporations. Alstadsæter (2007), Alstadsæter and Wangen (2010) and Thoresen and Alstadsæter (2010) shows that individuals react according to expectations.

have decided to incorporate. In that case, sole proprietors would move from the income tax code to the corporate tax code. The reasons can be manifold and range from natural expansion to risk aversion (limited versus unlimited liability) to tax incentives. We now take a closer look at the Swedish corporation owners' choice between being self-employed or incorporated. This section is a summary of the results reported in Appendix III, based on Edmark and Gordon (2012) who find evidence of income shifting through the choice of business organizational form. The tax rules for self-employed individuals are also described in Appendix III.

Edmark and Gordon (2012) calculate average tax rates (the share of total income that is paid in taxes) of owner-managers of corporations, both as self-employed and as an owner of a closely held corporation. They find that the Swedish tax system favors the closely held corporate form and that this advantage has increased since the 2006 tax reform. The potential tax savings are greater in high income groups and increase over time (see Figure AIII.1 in Appendix III). The income gain of the top income percentile of self-employed individuals increases by about 3 percentage points between 2004 and 2007, to 14.6 percent. The percentage point increase in income gain for the top quartile of the income distribution increases by 2.5 percentage points over the period to a fairly low level of 6.7 percent in 2007.

They then analyze how these tax differentials affect sole-proprietors' choice of organizational form. They use data on sole proprietorships and closely held corporations in the period 2004-2008. They have detailed information at both individual level and the corporate level and are able to identify a shift in business organizational form. They find that taxes do affect the choice of organizational form of the corporation even when they control for non-tax factors. They estimate that a 1 percent increase in the after-tax income gain from incorporation leads to a 0.75 percentage point increase in the probability of a sole-proprietor incorporating.

### 4.4.3 Income shifting by setting up a new closely held corporation – evidence from asset allocation

We next turn to descriptive statistics on the influence of the 2006 tax reform for closely held corporations on asset allocation and the importance of different organizational forms. We have seen that

more closely held corporations have been founded after the reform. This increase is partly due to the self-employed incorporating but it is also due to employed individuals founding closely held companies. This raises the question of whether company characteristics have changed with the tax reform. Table 4.6 presents summary statistics on the pre- and the post-reform periods (Column (1) and (4) and Column (2) and (5) respectively) as well as the difference between the two periods (Column (3) and (6)). We split the sample into existing corporations ("old") and newly founded ("new") closely held corporations. This is to ensure that the effects we document are not driven by new corporations that have been founded after the reform.

From 2006 onwards, the average closely held corporation – existing as well as newly founded – has less equity, fewer assets, and fewer employees than before the 2006 reform. In contrast, cash holdings for existing closely held corporations increased by 3.2 percentage points (Column (3), *cash*) – or 13 percent of the pre-reform average. This increase is even larger for newly founded corporations. Prior to the reform, about 28 percent of all assets of new closely held corporations consisted of cash and equivalents (Column (4), *cash*). After the reform, the share of cash and equivalents increased to 35.5 percent (Column (5), *cash*). Moreover, in contrast to existing corporations, the importance of financial assets increased by 2.5 percentage points of total assets (Column (6), *financials*) to 16.4 percent after the reform (Column (5), *financials*).

**Table 4.5 Asset allocation of closely held corporations around the 2006 tax reform**

| Variable | Old Closely Held Corporations | | | New Closely Held Corporations | | |
|---|---|---|---|---|---|---|
| | Before Reform | After Reform | Difference post to pre | Before Reform | After Reform | Difference post to pre |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| **Panel A: assets** *(all balance sheet items in percent of total assets, total assets in SEK million)* | | | | | | |
| *Intangibles* | 0.022 | 0.010 | -0.012 | 0.026 | 0.017 | -0.009 |
| *Fixed assets* | 0.210 | 0.196 | -0.014 | 0.202 | 0.178 | -0.023 |
| *Financials* | 0.136 | 0.135 | -0.001 | 0.139 | 0.164 | 0.025 |
| *Inventories* | 0.121 | 0.106 | -0.015 | 0.091 | 0.075 | -0.015 |
| *Receivables* | 0.312 | 0.324 | 0.012 | 0.344 | 0.354 | 0.010 |
| *Cash* | 0.244 | 0.276 | 0.032 | 0.280 | 0.355 | 0.075 |
| *Total assets* | 4.878 | 5.521 | 0.643 | 7.811 | 2.819 | -4.992 |
| **Panel B:** *Liabilities and equity (provisions, debt, and ret. earnings as a percent of total assets)* | | | | | | |
| *Nom equity* | 0.445 | 0.346 | -0.100 | 0.862 | 0.155 | -0.707 |
| *Min. equity* | 0.073 | 0.200 | 0.126 | 0.757 | 0.918 | 0.161 |
| *Equity<150k* | 0.842 | 0.863 | 0.020 | 0.895 | 0.950 | 0.054 |
| *Ret. earnings* | 0.176 | 0.246 | 0.070 | 0.101 | 0.208 | 0.107 |
| *Pensions* | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| *Provisions* | 0.025 | 0.059 | 0.034 | 0.022 | 0.055 | 0.033 |
| *Debt* | 0.509 | 0.531 | 0.022 | 0.595 | 0.667 | 0.073 |
| *Sh. loan* | 0.062 | 0.052 | -0.010 | 0.075 | 0.061 | -0.015 |
| **Panel C: Profit and turnover** *(All Items as a percent of total assets)* | | | | | | |
| *Sales* | 1.744 | 1.714 | -0.031 | 1.959 | 1.976 | 0.017 |
| *Profits* | 0.385 | 0.067 | -0.317 | 0.344 | 0.037 | -0.308 |
| *Depreciation* | 0.051 | 0.041 | -0.010 | 0.047 | 0.035 | -0.012 |
| **Panel D: Corporation characteristics** *(labor costs in percent of total assets)* | | | | | | |
| *#Employees* | 3.946 | 3.734 | -0.213 | 2.602 | 1.848 | -0.754 |
| *Labor costs* | 0.978 | 0.668 | -0.310 | 1.159 | 0.713 | -0.445 |
| *Survival rate* | 0.786 | 0.940 | 0.155 | 0.760 | 0.932 | 0.172 |

Note: This table presents differences in means between the post- and the pre-reform period for our main variable from Table AII.5 of Appendix II. In Column (1) to (3), we compare means existing closely held corporations before and after the reform. Column (4) to (6) presents aggregated statistics for newly founded corporations. Variables are described in Table AII.8 of Appendix II.

We also observe that profits substantially declined after 2006. This is attributable more to the economic downturn than to the tax reform. More importantly for our income shifting focus, total assets and nominal equity of newly founded corporations

substantially decreased after the 2006 reform.[20] After the reform, the average newly founded closely held corporation has total assets of MSEK 2.8 – a 64 percent decline – and equity of SEK 155 000 – a decrease of 82 percent. This is a substantial decrease. After the reform, over 91 percent of all corporations founded have equity of exactly SEK 100 000 (Column (5), *minimum equity*), the minimum nominal equity requirement. This is a 16 percentage point increase (Column (6), *minimum equity*). This observation and the fact that after the reform 50 percent of all assets are either cash or financial assets are first indicators of potential income shifting. Individuals can incorporate and found a corporation with the least possible equity, very few assets, very few employees (a decline of 0.75 on average, Column (6), *#employees*), and substantial cash and financial assets.

Remember that a corporation with nominal equity of SEK 100 000 generates an annual dividend allowance under the simplification rule of SEK 89 000 in 2007 and of SEK 143 275 in 2012. In other words, the "imputed return" under this rule is over 100 percent as of 2009 in such a corporation. As over 90 percent of the newly founded corporations after 2006 have nominal equity of exactly SEK 100 000 and as the majority of individuals opt for the simplification rule, many (new) corporation owners benefit substantially from this rule.

To obtain more compelling results, we need to compare closely held corporations with widely held corporations around the reform. Newly founded widely held corporations serve as our control group. That is, they are not affected by the changes in the generosity of dividend allowances, thus, giving fewer incentives to shift income into this type of corporation. To provide meaningful measures of the effects, we use difference-in-difference estimates. We explain this approach using a simple example in Box 4.3.

[20] This result is not driven by the 2010 reduction in minimum equity from SEK 100 000 to SEK 50 000 for corporations, as our data only extends to 2009.

Box 4.3: Difference-in-Difference analysis

A difference-in-difference analysis is a useful estimation method to measure the effect of a certain event (in this case a tax reform) on a certain treatment group, i.e. a group of corporations affected by this tax reform. As the effect of a tax reform may overlap with external effects such as economic growth, we need to contrast corporations that benefit from the tax reform (*treatment group*) to corporations that are not affected by the tax reform (*control group*) but have similar corporate characteristics. The key assumption is that no confounding factor other than the tax reform changes the differences in characteristics around the reform.

Below we consider a case where the payout taxes of some corporations are cut. We are interested in the capital investments relative to assets of these corporations. We know that on average, corporations invest 5 percent of their assets. A focus on corporations receiving the tax cut (*treatment*) would indicate that investment increases by 7 percent. At the same time investment increases by 2 percent for corporations that do not benefit from the reform. The pure effect of the tax reform in this example is thus lower.

The main effect of the tax reform is the difference in the change in investment of treated corporations (7 percent) and the change in investment of control corporations (2 percent). This difference-in-difference estimate (7 percent-2 percent = **5 percent**) is an isolated effect of the tax reform.

| | Before the reform | After the reform | Difference in time |
|---|---|---|---|
| Treatment | 5 | 12 | 7 |
| Control | 5 | 7 | 2 |
| Difference in Groups | 0 | 5 | **5** |

We apply this approach to newly founded closely held companies and confirm that the tax reform of 2006 had a substantial influence on the cash holdings, fixed assets, nominal equity, and corporation size of closely held corporations. As our *control group*, we use newly founded widely held corporations and compare their asset structure to those of new closely held corporations (*treatment group*) around the tax reform. This way we ensure that we absorb the changes in the economy over the sample period. We present our results in Table 4.6 for four main assets. First, we analyze the fixed assets to total assets ratio (Panel A). The statistics for the variable indicate whether the importance of real investments across

organizational forms changed around the reform. Second, we evaluate the cash to assets ratio (Panel B). Finally, we are interested in changes in average corporation size (Panel C) and nominal equity (Panel D).[21]

Table 4.6 shows that there is a substantial decrease in the real investments of closely held corporations. The results in Panel A indicate that the importance of fixed assets in closely held companies, i.e. real investments, has decreased by 2.3 percentage points after the reform. At the same time, widely held corporations increased real investments by about 5 percentage points when founding a corporation. The resulting difference-in-difference estimate of minus 7.2 percentage points shows that the relative effect on real investment of closely held corporations is even larger. While widely held corporations hold more fixed assets after the reform, closely held corporations hold fewer fixed assets. In contrast, for cash holdings, the real effect (i.e. the difference-in-difference estimate) on closely held corporations is smaller than mentioned above. Relative to the increase in cash holdings of widely held corporations, closely held corporations increased their cash to assets ratio by 3.7 percentage points.

[21] Throughout the report, we present difference-in-difference estimates without any further control variables. Hence, we base our estimates on the assumption that no other potential confounding factors that vary across treatment and control group affect our result. This is a simplification and may bias our results. We rerun our major analysis (e.g. Table 4.6, 4.7, and 4.8) and estimate the effects with control variables. Results (not reported) are similar to our results without control variables and make us confident that presenting results without controls provides meaningful results.

**Table 4.6 Changes in fixed assets, cash holdings, total assets and nominal equity around the 2006 tax reform – closely versus widely held corporations**

| | Panel A: Fixed assets/total assets | | | Panel B: Cash/total assets | | |
|---|---|---|---|---|---|---|
| | Before Reform | After Reform | Difference post to pre | Before Reform | After Reform | Difference post to pre |
| WHC | 0.173 | 0.221 | 0.048 | 0.252 | 0.290 | 0.038 |
| CHC | 0.202 | 0.178 | -0.023 | 0.280 | 0.355 | 0.075 |
| Difference | | | | | | |
| WHC – CHC | 0.029 | -0.043 | **-0.072** | 0.028 | 0.065 | **0.037** |
| | **Panel C: Total assets in MSEK** | | | **Panel D: Nominal equity in MSEK** | | |
| | Before Reform | After Reform | Difference post to pre | Before Reform | After Reform | Difference post to pre |
| WHC | 43.979 | 57.537 | 13.558 | 7.648 | 6.610 | -1.039 |
| CHC | 7.811 | 2.819 | -4.992 | 0.862 | 0.155 | -0.707 |
| Difference | | | | | | |
| WHC – CHC | -36.168 | -54.718 | **-18.550** | -6.786 | -6.455 | **0.332** |

Note: This table presents difference-in-difference estimates for four balance sheet items for closely held corporations (CHC) versus widely held corporations (WHC) around the 2006 tax reform. The results are for newly founded corporations only. Panel A presents results for fixed assets. In Panel B, we present results for cash holdings. In Panel C and D, we analyse differences in total assets and nominal equity. The results are based on all observations.

After the reform, closely held corporations are substantially smaller in size (measured by total assets). In contrast, average firm size of widely held corporations increased by MSEK 13.6. This effectively increased the gap in firm size (total assets) between closely held and widely held corporations by MSEK 18.6 (difference-in-difference estimate). On average, both types of corporations experienced a drop in nominal equity after the tax reform. However, the numbers in Table 4.6 are in absolute terms and may provide an incomplete picture of the effects. As nominal equity of widely held corporations decreased by only 14 percent, the relative decline in nominal equity of closely held corporations of 82 percent is much larger. In other words, individuals put substantially less nominal equity into a new closely held corporation after the reform than entrepreneurs inject into widely held corporations.

Using simple statistics, this shows that the 2006 tax reform and the tax incentive to incorporate for tax avoidance purposes had a substantial effect on the amount of equity injected into a newly founded closely held corporation. Also, real investments decreased

and cash holdings increased. The results for fixed assets, cash holdings, and firm size are very similar if we focus on existing corporations. In contrast, we find that nominal equity increased for both types of corporations. This could be due to a reclassification of shareholder loans as nominal equity. External debt holders may have required this during the economic downturn and the credit crunch of 2008 and 2009.

## 4.5 Income shifting and ownership characteristics of closely held corporations around the 2006 tax reform

The 2006 reform of the 3:12 rules changed incentives and induced owners to be classified as active owners to take advantage of the beneficial taxation of dividend income. The last section focused on changes in corporate characteristics. We now turn to effects at the individual level. Specifically, we focus on three main effects. First, if individuals act on the incentives, as suggested by anecdotal evidence, we should observe a change in the average taxpayer setting up a corporation. Specifically, we expect high income individuals in particular to set up corporations as they benefit to the largest extent from the reform. We have already seen above that the average newly founded corporation is smaller and has less real investment. Hence, we may observe changes not only at the corporate level but also at the individual level. Second, we focus on ownership concentration of closely held corporations and expect ownership of closely held corporations to be more concentrated among single owners. Multiple owners increase the costs of coordination and at the same time reduce payout flexibility in both dividends and wages.

Finally, we expect that individuals are more likely to set up holding companies and shell corporations with low or no turnover for additional (or substitute) jobs. We calculate the specific tax savings value of such a corporation. As the value increases in the marginal tax rate, we would expect high income individuals to set up shell corporations. We additionally expect more shell corporations with low or no turnover and more holding corporations to be founded after the 2006 tax changes.

### 4.5.1 Changes in Owner Characteristics around the 2006 reform

The 2006 tax reform substantially changed payout incentives to active owners of closely held corporations as well as the incentives to start up a closely held corporation. We now analyze how this reform affected the income levels and characteristics of active owners of closely held corporations compared to ordinary wage earners (individuals not being active owners of closely held corporations).

Table 4.7 presents average values for active owners of closely held corporations (Column (4) to (6)) and other taxpayers (Column (1) to (3)) before and after the reform. In the last column, we report the difference-in-difference. This is a more precise measure of the effect of the 2006 tax reform as it separates the effects of the tax reform from other confounding factors.

For both groups we find an increase in total income, labor income, business income and capital income. The positive difference-in-difference estimates suggest that the growth in income is higher for active owners of closely held corporations (+ SEK 68,272). One explanation for this finding is that the tax incentive to shift income into closely held is more prevalent for higher income individuals. We find that the increase in income is mainly derived from higher dividends (+ SEK 49,915) and less from labor income (+ SEK 18,190). Furthermore, we find that the gap in average age increases after the reform (+0.8 years).[22]

[22] Note that all differences are statistically significant using parametric t-tests as well as non-parametric Mann Whitney U-tests.

**Table 4.7 Changes in characteristics of active owners of closely held corporations around the 2006 reform**

| Variable | Panel A: No CHC Owners | | | Panel B: CHC Owners | | | |
|---|---|---|---|---|---|---|---|
| | Before Reform | After Reform | Diff. | Before Reform | After Reform | Diff. | Diff-in-Diff |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| **Panel A: Income elements** | | | | | | | |
| *Total Income* | 155 849 | 186 146 | 30 297 | 335 141 | 433 710 | 98 569 | **68 272** |
| *Income w/o CHC* | 155 849 | 186 146 | 30 297 | 152 534 | 186 417 | 33 883 | **3 586** |
| *Labor Income* | 150 966 | 176 990 | 26 024 | 266 904 | 311 118 | 44 214 | **18 190** |
| *Business income* | 3 529 | 4 289 | 760 | 9 638 | 12 063 | 2 425 | **1 665** |
| *Capital income* | 1 355 | 4 867 | 3 512 | 58 599 | 110 528 | 51 929 | **48 417** |
| *Dividends* | 1 469 | 2 428 | 959 | 19 146 | 70 020 | 50 874 | **49 915** |
| *Div received?* | 0.521 | 0.490 | -0.032 | 0.740 | 0.760 | 0.021 | **0.052** |
| **Panel B: Individual characteristics** | | | | | | | |
| *Age* | 40.17 | 40.51 | 0.34 | 48.85 | 50.02 | 1.17 | 0.830 |
| *Female* | 0.511 | 0.511 | 0.000 | 0.257 | 0.243 | -0.014 | -0.014 |
| *Married* | 0.330 | 0.322 | -0.009 | 0.643 | 0.613 | -0.030 | -0.021 |
| *Tertiary Education* | 0.087 | 0.107 | 0.020 | 0.170 | 0.195 | 0.025 | 0.005 |
| *- Business degree* | 0.069 | 0.071 | 0.003 | 0.162 | 0.166 | 0.004 | 0.001 |
| *- Law degree* | 0.005 | 0.005 | 0.001 | 0.015 | 0.016 | 0.001 | 0.000 |
| *- IT degree* | 0.007 | 0.008 | 0.001 | 0.010 | 0.012 | 0.002 | 0.001 |
| *- Medical degree* | 0.008 | 0.010 | 0.001 | 0.023 | 0.026 | 0.003 | 0.002 |
| *City* | 0.731 | 0.733 | 0.002 | 0.700 | 0.708 | 0.008 | 0.005 |

Note: This table presents changes in individual's characteristics around the 2006 reform. Columns (1) to (3) present averages for all individuals except active owners of CHCs before the reform (Column 1), after the reform (Column 2) and the difference (Column 3, *Diff*) between the post- and pre-reform period. Column (4) to (6) replicates these statistics for the sample of active owners of CHCs. In Column (7), we present the difference in difference estimate for the 2000-2009 period around the 2006 tax reform. All differences are statistically significant at the 1 percent level (not indicated in the table).

We now take a closer look at active owners of closely held corporations to find whether this increased income is a general trend or if it is driven by individuals founding new closely held corporations. In Table 4.8, we compare total income (Panel A) and labor income (Panel B) of active owners of closely held corporation owners around the reform. We spilt the sample into two groups: existing active owners (owners) and new active owners (founders). We classify someone as a founder if he files his or her first K10-form in the founding year.

From Panel A, Table 4.8, we can conclude that even before the reform, founders have a higher income than existing owners (+ SEK 62 081). But their labor income is very similar and differs by less than SEK 1 000. Even though both groups experience an increase in total income and labor income, the growth is stronger for founders (+ SEK 81 275 in total income and + SEK 56 418 in labor income) than for existing active owners (+ SEK 68 790 in total income and +SEK 45 200 in labor income). The resulting difference-in-difference estimates (SEK 12 485 and SEK 11 218) confirm this observation.

**Table 4.8 Changes in corporation owner characteristics around the 2006 tax reform – new active owners of CHCs versus existing active owners of CHCs**

| | Panel A: Total income | | | Panel B: Labor income | | |
|---|---|---|---|---|---|---|
| | Before Reform | After Reform | Difference post to pre | Before Reform | After Reform | Difference post to pre |
| Owners | 337 675 | 406 465 | 68 790 | 271 361 | 316 562 | 45 200 |
| Founders | 399 755 | 481 031 | 81 275 | 270 387 | 326 805 | 56 418 |
| Difference: | | | | | | |
| Founders - Owners | 62 081 | 74 566 | **12 485** | -975 | 10 243 | **11 218** |

Note: This table presents difference-in-difference estimates for total income and earned income of existing corporation owners (*owners*) and new corporation owners (f*ounders*) around the 2006 tax reform. Panel A presents results for total income. In Panel B, we present results for prior year's earned income.

There are several potential reasons why active owners starting a closely held corporation have a higher income than existing active owners. First, the tax reform encouraged entrepreneurship. Income growth of the active owners could thus reflect real income generation. However, we control for this effect by using a difference-in-difference estimator. The tax reform provided incentives for high income individuals to start a closely held corporation in order to transform labor income into capital income. Consequently, more high income individuals have founded closely held corporations after the reform than before. After the reform, high income shareholders have incentives to re-classify labor income as dividend income from closely held corporations as active owners enjoy the reduced tax rate on dividends under the 3:12 rules.

### 4.5.2 Ownership concentration in closely held corporations

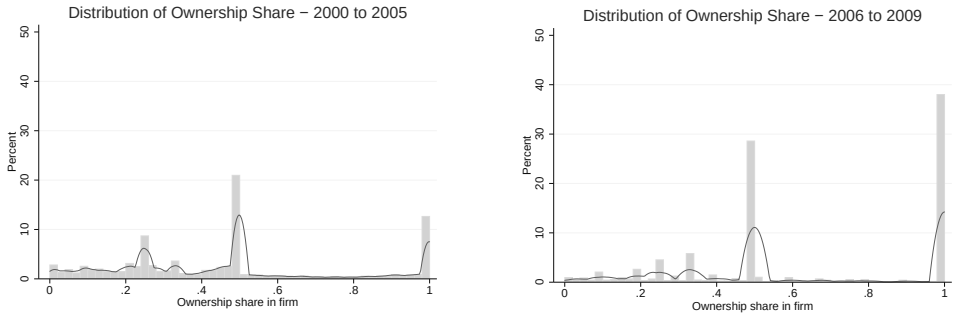
We now take a closer look at developments in the ownership share of active owners around the reform. All aforementioned effects and tax incentives can result in a higher concentration of active owners in closely held corporations.

Figure 4.7 shows the distribution of the ownership shares of active owners over time. Panel A shows active ownership concentration before and after the reform for all closely held corporations. According to our definition, these are all corporations with at least one shareholder taxed under the 3:12 rules. Before the reform, 47 percent of the closely held corporations had at least 50 percent active ownership. This share increased to 74 percent after the reform. After the reform, active owners held exactly half of the shares in 30 percent of all closely held corporations. In about 40 percent of the closely held corporations, we find a single owner holding all the shares. The strong tendency towards full active ownership of closely held corporations is an indication of income shifting either by the re-classification of passive owners as active owners, by wage earners setting up consulting corporations, or by individuals setting up holding corporations to benefit from the option value of the accumulated dividend allowance.

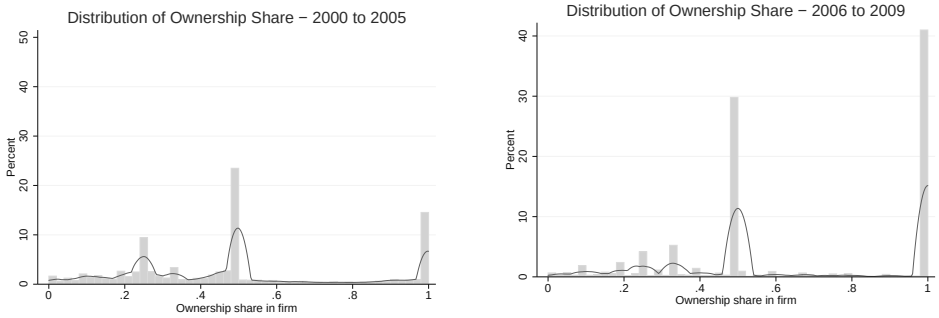
The 2006 tax reform also provided self-employed individuals with strengthened tax minimizing incentives to incorporate, as shown by Edmark and Gordon in Appendix 3 of this report. They analyze how the difference in average tax rate when the firm is organized as a self-employed and as a closely held corporation affects the probability to incorporate. A one percent increase in this tax rate difference increases the probability that the self-employed individual incorporates by 0.75 percentage points. This increased incorporation of self-employed entrepreneurs also can contribute to the increase in active ownership concentration in the closely held corporations that we observe in the data.

**Figure 4.7 Distribution of ownership share of active owners of closely held corporations**

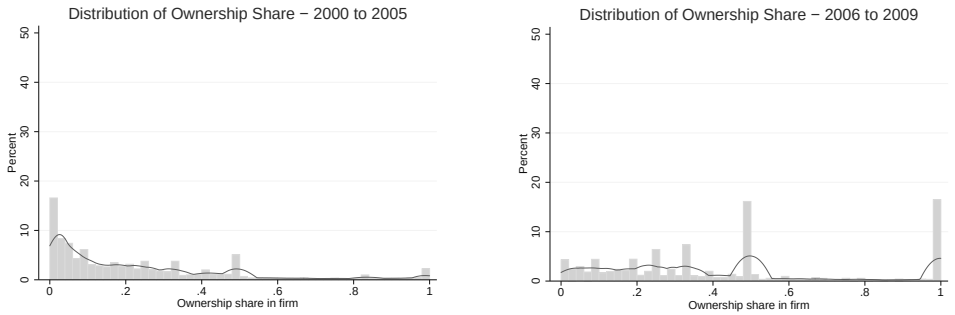
**Panel A: All closely held corporations**




**Panel B: Closely held corporations with nominal equity below SEK 150 000**




**Panel C: Closely held corporations with nominal equity above SEK 500 000**




Note: This figure shows the distribution of the active ownership shares in closely held corporations for the 2000 to 2009 sample. In Panel A, we use the full sample of closely held corporations. Panel B uses small corporations and includes only corporations with nominal equity below SEK 150 000. Panel C focuses on closely held corporations with nominal equity above SEK 500 000. In all panels, the left figure shows ownership distribution for the pre-reform period.

The majority of closely held corporations have less than SEK 150 000 in equity. This share increases over time. After the reform, 86 percent of all existing closely held corporations and 95 percent of all new corporations have less than SEK 150 000. Panel B in Figure 4.7 shows the distribution of the ownership shares of active owners in closely held corporations with less than SEK 150 000 in equity. The concentration of active ownership increases in this group. Prior to the reform, 51 percent of the closely held corporations had active owners with a share of 50 percent or more. After the reform, we observe this in 78 percent of all closely held corporations. This increased active ownership concentration is similar for larger corporations with at least SEK 500 000 in nominal equity. Yet ownership is less concentrated among single owners. The distribution of active ownership for larger closely held corporations is shown in Panel C.

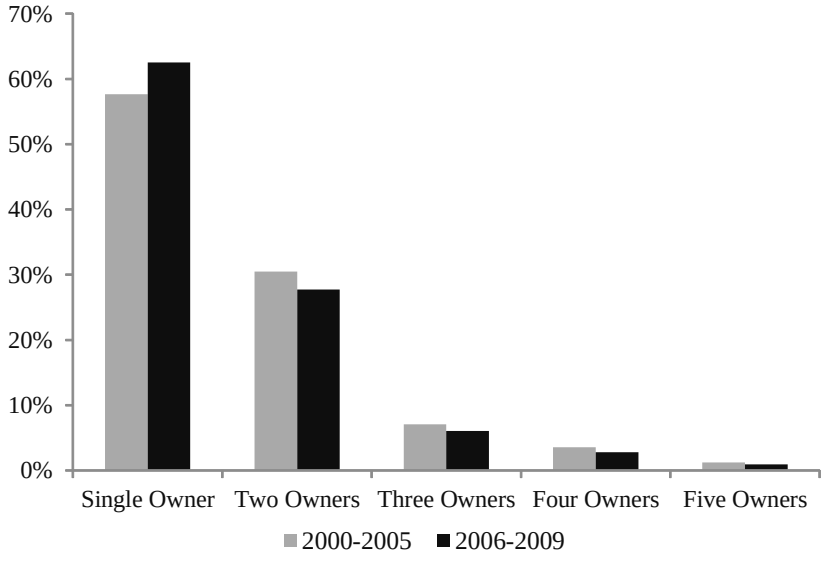
There may be two main explanations for this development. First, there can be a measurement error in the data. Ownership share is not a direct variable in the data. It has to be derived from the (i) reported equity in the corporate tax data and (ii) the standard dividend allowance granted, the equity based allowance, or the wage based allowance. These calculations were much more complex and thus not fail-safe before the 2006 tax changes. Second, the 2006 tax cut and the increase in allowances may have increased awareness of the rules and intensified filing of K10-forms. Taxpayers may start to claim eligibility for dividend allowances following the reform.

Both effects can explain our observations in Figure 4.7. Therefore, before and after comparisons of these statistics should be interpreted with care. However, we can compare ownership concentration across corporations in either of the two periods. From this, we can conclude that ownership is much more concentrated in smaller corporations than it is in corporations with nominal equity over SEK 500 000. Also, the results after the reform show that there is some ownership concentration around fixed shares such as 20 percent (1/5), 25 percent (1/4), 33 percent (1/3), 50 percent (1/2) and 100 percent (1/1).

We next turn to corporate level analyzes of the effect of ownership structure on the asset allocation of closely held companies. If a corporation is held by a single owner, he or she has control over asset allocation, payout policy, and potential tax

optimization strategies, unlike a corporation in which many individuals may have more equity to invest.

**Figure 4.8 Distribution of number of active owners per closely held corporation around the 2006 tax reform**




Note: This figure presents the distribution of active owners per CHC before (grey bar) and after (black bar) the 2006 tax reform for the full sample of closely held corporations.

The vast majority of closely held corporations are run by single active owners. More than four active owners are involved in only very few closely held companies. Figure 4.8 plots the distribution of the number of active owners around the 2006 tax reform. Note that this does not necessarily give the total number of owners in the corporation. We can only observe active owners (filing a K10-form) and cannot identify passive owners. From the original set of corporations, about 60 percent of the corporations have only one active owner. About 30 percent of all closely held corporations have two active owners. The remaining 10 percent have three or more active owners. In contrast to the legal definition, we (have to) treat family members filing separate K10-forms as separate owners. After the reform, the distribution changes and moves towards a higher concentration of corporations with one active owner.

**Table 4.9 Summary statistics on closely held corporations:**

| | Single owner | Two owners | Three owners | Four owners | Five owners |
|---|---|---|---|---|---|
| # Observations | 781 296 | 391 265 | 90 973 | 44 604 | 15 738 |
| **Panel A: Assets** *(All balance sheet items in percent of total assets, total assets in SEK m)* | | | | | |
| *Intangibles* | 0.016 | 0.018 | 0.019 | 0.021 | 0.023 |
| *Fixed assets* | 0.194 | 0.215 | 0.224 | 0.223 | 0.215 |
| *Financials* | 0.136 | 0.127 | 0.143 | 0.161 | 0.184 |
| *Inventories* | 0.105 | 0.127 | 0.132 | 0.122 | 0.105 |
| *Receivables* | 0.322 | 0.310 | 0.319 | 0.313 | 0.316 |
| *Cash* | 0.271 | 0.250 | 0.220 | 0.220 | 0.211 |
| *Total assets* | 4.349 | 4.778 | 9.575 | 10.774 | 15.227 |
| **Panel B: Liabilities and equity** *(provisions, debt, and ret. earnings in percent of Total assets)* | | | | | |
| *Nom equity* | 0.361 | 0.304 | 0.819 | 0.702 | 1.280 |
| *Min. equity* | 0.149 | 0.121 | 0.086 | 0.074 | 0.068 |
| *Equity<150k* | 0.885 | 0.844 | 0.718 | 0.692 | 0.625 |
| *Ret. earnings* | 0.195 | 0.217 | 0.247 | 0.283 | 0.289 |
| *Pensions* | 0.000 | 0.001 | 0.001 | 0.001 | 0.001 |
| *Provisions* | 0.039 | 0.042 | 0.045 | 0.045 | 0.044 |
| *Debt* | 0.510 | 0.535 | 0.541 | 0.511 | 0.504 |
| *Sh. loan* | 0.061 | 0.054 | 0.047 | 0.047 | 0.049 |
| **Panel C: Profit and turnover** *(all items in percent of total assets)* | | | | | |
| *Sales* | 1.650 | 1.881 | 1.834 | 1.656 | 1.530 |
| *Profits* | 0.206 | 0.274 | 0.305 | 0.273 | 0.253 |
| *Depreciation* | 0.046 | 0.047 | 0.045 | 0.043 | 0.040 |
| **Panel D: Corporation characteristics** *(labor costs in percent of total assets)* | | | | | |
| *#Employees* | 3.005 | 4.245 | 6.634 | 7.331 | 9.768 |
| *Labor costs* | 0.780 | 0.922 | 0.896 | 0.837 | 0.792 |
| *Age* | 13.904 | 14.373 | 16.306 | 16.952 | 17.540 |
| *Survival rate* | 0.857 | 0.858 | 0.868 | 0.871 | 0.874 |

Note: This table presents summary statistics for individuals for selected main variables from Table AII.5 of Appendix II. We sort corporations into groups according to the number of active owners.

Table 4.9 presents summary statistics for closely held corporations with one to five owners for our main company variables. A breakdown by number of active owners can tell us about structural differences across corporations. Firm size and nominal equity increases with the number of active owners as more owners can provide more capital to the corporation. We also find that closely held corporations with two or three active owners have the highest

profitability rates (sales and profits over total assets). Closely held corporations with five active owners have the lowest turnover to asset ratio. Closely held corporations with one active owner have the lowest profit to asset ratio. Finally, there are several differences in the importance of various asset types. For example, cash contributes 27.1 percent of assets in closely held corporations with one active owner. This fraction is substantially lower for closely held corporations with three or more active owners (22 percent and less). Furthermore, the importance of financial assets increases with the number of active owners, from 13.6 percent to 18.4 percent. In sum, we find that asset types, profitability, and firm size vary across closely held corporations with different number of active owners.

### 4.5.3 Individuals' active ownership in multiple corporations

There are various reasons why an active owner chooses to hold multiple closely held corporations. First, starting a new type of activity in a separate closely held corporation protects values in existing closely held corporations from a potential bankruptcy of the new closely held corporation. Second, it can be useful to separate different types of activity in different closely held corporations to reduce the complexity of activity within a corporation. Third, for tax avoidance purposes, it can be useful to have several corporations. Using several corporations becomes particularly attractive with the introduction of the generous simplification rule. Under this method, a dividend allowance is granted to each closely held corporation independent of equity and employment level. The dividend allowance is then distributed among the shareholders according to their ownership share. By setting up several closely held corporations and by claiming to be active in all of them, the shareholder is granted the fixed dividend allowance in each corporation. This effectively multiplies the total amount of dividends that can be taxed as dividend income under the 3:12 rules. However, as of January 1, 2012, an individual can only use the simplification rule to compute the dividend allowance in one of the closely held corporations he or she owns. This effectively limits the possibility of accumulating dividend allowances through multiple corporations. We present evidence of this behavior in our data to show behavior prior to this rule change.

To test these effects, we split the full sample of closely held corporation owners into groups according to the number of corporations in which an individual actively participates under the 3:12 rules. We provide descriptive statistics on each group (Table 4.10) for our main variables of interest.

About 88 percent of the active shareholders participate in one closely held corporation. Only 0.5 percent of the whole population are active owners in more than three closely held corporations in the same year (Column (4) and (5)). Our extreme observations are two individuals with nineteen closely held corporations.[23] We combine all active shareholders with more than five corporations into one group (3,886 individual-year observations).

[23] In sum, individuals with more than five closely held corporations account for 0.03% of the whole population.

**Table 4.10 Summary statistics on active owners of closely held corporations: Breakdown by number of corporations**

| | One CHC | Two CHCs | Three CHCs | Four CHCs | Five + CHCs |
|---|---|---|---|---|---|
| # Observations | 2 103 831 | 229 031 | 36 481 | 8 297 | 3 886 |
| **Panel A: Income elements** | | | | | |
| *Total income* | 427 336 | 759 278 | 1 084 204 | 1 391 715 | 1 980 894 |
| *Income w/o CHC* | 238 007 | 460 624 | 717 777 | 916 697 | 1 406 538 |
| *Labor income* | 285 229 | 352 985 | 385 693 | 409 188 | 447 410 |
| *Business income* | 10 385 | 13 184 | 20 639 | 17 278 | 51 341 |
| *Capital income* | 81 492 | 292 034 | 541 605 | 787 151 | 1 312 544 |
| *Dividends* | 40 106 | 108 574 | 176 469 | 274 567 | 430 214 |
| *Dividends received?* | 0.745 | 0.802 | 0.833 | 0.838 | 0.831 |
| **Panel B: Closely held corporation characteristics** | | | | | |
| *Number of firms* | 1.00 | 2.00 | 3.00 | 4.00 | 5.73 |
| *Labor CHC* | 159 009 | 211 067 | 226 764 | 249 919 | 254 889 |
| *Salary CHC paid?* | 0.590 | 0.647 | 0.641 | 0.642 | 0.619 |
| *Dividend CHC* | 27 567 | 78 346 | 130 821 | 207 391 | 308 752 |
| *Div CHC received?* | 0.260 | 0.363 | 0.402 | 0.405 | 0.422 |
| *Excess dividend* | 2 753 | 9 241 | 8 841 | 17 708 | 10 715 |
| *Excess div paid?* | 0.033 | 0.061 | 0.071 | 0.077 | 0.080 |
| *Acc. div. allowance* | 485 975 | 1 456 208 | 3 073 674 | 3 512 603 | 11 750 196 |
| *Invested equity* | 87 321 | 298 708 | 641 555 | 689 213 | 992 824 |
| *Shareholder loan* | 162 164 | 507 806 | 1 035 209 | 1 449 766 | 2 532 719 |
| *Low Turnover* | 0.074 | 0.197 | 0.292 | 0.379 | 0.461 |
| *Holding* | 0.049 | 0.158 | 0.235 | 0.303 | 0.368 |
| *Profit CHC* | 519 718 | 1 403 711 | 2 370 399 | 3 026 648 | 4 863 869 |
| **Panel C: Individual characteristics** | | | | | |
| *Age* | 49.30 | 49.38 | 50.00 | 50.73 | 51.63 |
| *Female* | 0.265 | 0.173 | 0.128 | 0.094 | 0.070 |
| *Tertiary Education* | 0.179 | 0.217 | 0.232 | 0.255 | 0.261 |
| *- Business Degree* | 0.156 | 0.205 | 0.237 | 0.248 | 0.268 |
| *- Law Degree* | 0.014 | 0.025 | 0.029 | 0.034 | 0.030 |
| *- IT Degree* | 0.011 | 0.012 | 0.011 | 0.010 | 0.007 |
| *- Medical Degree* | 0.025 | 0.025 | 0.015 | 0.017 | 0.014 |
| *City* | 0.706 | 0.718 | 0.727 | 0.749 | 0.756 |
| **Panel D: Choice of calculation method for dividend allowance after 2006** | | | | | |
| *Simplification rule* | 0.789 | 0.800 | 0.816 | 0.816 | 0.818 |

Note: This table presents summary statistics for individuals for main variable from Table AII.9 of Appendix II. We sort individuals according to the number of closely held corporations in which they actively participate.

We first observe the average total i increase in income in the number of closely held corporations in which the owner actively participates. Individuals with five or more corporations have an average income of about MSEK 2. In contrast, individuals with one closely held corporation have an average income of about SEK 430 000. However, differences in labor income across ownership groups are much smaller than differences in dividend income. It appears that taxpayers with multiple corporations are more likely to distribute cash as dividends as opposed to wages. For example, the average dividend of active owners with one closely held corporation is SEK 26 567. The corresponding dividends from closely held corporations are more than eleven times higher for individuals with five or more closely held corporations. We observe similar trends for equity, shareholder loans, and accumulated dividend allowances. A very high proportion (46 percent) of individuals with five or more corporations has at least one corporation with low turnover. About one third of them run a holding company as a closely held corporation. This is an indication that some of the closely held corporations in a portfolio are designed for income shifting purposes (see the detailed analysis in Section 4.5.4).

We can further observe substantial differences in demographic characteristics. Only 7 percent of multi-corporation owners are female. In contrast, more than a fourth of single-corporations owner are female. Multi-corporation owners are also more likely to hold a tertiary university degree with a strong emphasis on business degrees. We observe only small differences in age and some differences in our regional variable. About 76 percent of multi-corporation owners live in bigger cities, while about 71 percent of individuals with only one corporation reside in cities.

In Panel D of Table 4.10, we present statistics on the likelihood of closely held corporation owners choosing the simplification rule when calculating dividend allowances. If an individual owns multiple corporations, we use the average use of the simplification rule in all his or her corporations. For example, individuals with five or more closely held corporations use the simplification rule for 82 percent of their corporations. Among individuals with one closely held corporation, use of the simplification rule is 3 percentage points lower.

Table 4.10 provides some indication of income shifting and tax avoidance behavior, but focuses on the full sample period of 2000

to 2009. We therefore make a before and after comparison of individual characteristics and compute the difference for our variables of interest. Table 4.11 presents post-reform to pre-reform differences in average values for the variables in Table 4.10. We split our sample into groups sorted by the number of closely held corporations owned by an active owner.

There are several noteworthy observations in Table 4.11. Average income decreases for multi-corporation owners (with three or more corporations), while it increases for single corporation owners by about SEK 114 000. There are several possible explanations for this. It could be due to high income individuals incorporating after 2006 and thus shifting income into the corporate sector. The results shown above in Table 4.9 further support this argument. The decline in overall income for individuals with more than two corporations could be due to the economic downturn and lower profits. Entrepreneurs earn less during the crisis and we would expect total income at the individual level to decrease. The decreasing profits (*profit CHC*) across all groups support this argument.

**Table 4.11 Changes in summary statistics on active owners of closely held corporations: Breakdown by number of corporations**

| | Single firm | Two firms | Three firms | Four firms | Five and more firms |
|---|---|---|---|---|---|
| **Panel A: Income elements** | | | | | |
| *Total income* | 113 961 | 42 245 | -36 555 | -56 640 | -47 086 |
| *Income w/o CHC* | 62 391 | -62 189 | -205 816 | -239 273 | -283 316 |
| *Labor income* | 48 495 | 55 753 | 42 548 | 62 631 | 47 868 |
| *Business income* | 1 960 | 2 381 | 2 561 | -5 287 | 25 346 |
| *Capital income* | 56 156 | 17 754 | -26 520 | -74 912 | -58 705 |
| *Dividends* | 52 821 | 131 497 | 204 440 | 342 573 | 492 950 |
| *Dividends received?* | 0.027 | 0.028 | 0.018 | 0.012 | -0.012 |
| **Panel B: Closely held corporation characteristics** | | | | | |
| *Number of firms* | 0.000 | 0.000 | 0.000 | 0.000 | -0.100 |
| *Labor CHC* | 17 072 | 20 931 | 24 712 | 22 208 | 25 766 |
| *Salary CHC paid?* | -0.031 | -0.037 | -0.030 | -0.010 | -0.063 |
| *Dividend CHC* | 35 899 | 86 982 | 145 594 | 156 039 | 211 827 |
| *Div CHC received?* | 0.184 | 0.216 | 0.216 | 0.195 | 0.187 |
| *Excess dividend* | -1 402 | -3 481 | -1 045 | 4 385 | -1 363 |
| *Excess div. paid?* | -0.017 | -0.011 | -0.003 | -0.001 | -0.009 |
| *Acc div allowance* | 422 059 | 1 177 193 | 2 510 704 | 2 594 338 | 18 489 655 |
| *Invested equity* | 50 821 | 202 954 | 607 757 | 555 120 | 333 165 |
| *Shareholder loan* | -656 | -87 223 | -206 526 | -419 744 | -810 658 |
| *Low turnover* | -0.003 | 0.004 | 0.020 | 0.031 | 0.063 |
| *Holding* | 0.020 | 0.016 | 0.011 | -0.011 | -0.023 |
| *Profit CHC* | -255 332 | -690 158 | -831 977 | -851 468 | -1 811 617 |
| **Panel C: Individual characteristics** | | | | | |
| *Age* | 1.19 | 1.09 | 1.13 | 1.02 | 1.25 |
| *Female* | -0.014 | -0.016 | -0.015 | -0.011 | -0.004 |
| *Tertiary education* | 0.025 | 0.022 | 0.016 | 0.004 | 0.014 |
| *- Business degree* | 0.006 | 0.002 | -0.005 | 0.010 | 0.018 |
| *- Law degree* | 0.001 | 0.009 | 0.008 | -0.009 | 0.002 |
| *- IT degree* | 0.003 | 0.003 | 0.004 | -0.002 | 0.001 |
| *- Medical degree* | 0.002 | 0.000 | 0.002 | 0.010 | 0.005 |
| *City* | 0.006 | 0.004 | 0.016 | -0.021 | 0.016 |

Note: This table presents differences between before and after the 2006 tax reform, selected main variables from Table AII.9 of Appendix II. We sort active owners into groups according to the number of closely held corporations they are active owners in.

Yet there are many indications that income is shifted from labor income (inside and outside the closely held corporation) to capital income. There is a huge difference in income growth between individuals who are active owners in closely held corporations (+ SEK 42 245) and individuals who are not (– SEK 62 189). For example, shareholders who are active in two closely held corporations experience a *decline* in income generated outside the closely held corporation. When adding income from closely held corporations to the total income (i.e. dividends and salary), we observe an *increase* in total income (+SEK 42 245). As corporate profits declined at the same time, it appears that this is driven by shifting income into closely held corporations. The development in labor income and dividends support this conclusion. While labor income from closely held corporations increased by about SEK 17 000 to SEK 25 700 across all groups, dividends from closely held corporations increased between SEK 35 899 (one firm) and SEK 211 827 (five or more firms).

We further observe that nominal equity vis-à-vis shareholder loans gained importance. This could be driven by external debt holders requiring corporation owners to transform internal debt to equity. It could also be driven by the generous dividend allowances. Corporation owners may respond to the reform and substitute debt with equity as the relative price (i.e. cost of capital) of nominal equity vis-à-vis shareholder loans decreases after the reform. Finally, we can observe an increased uptake of low turnover corporations among active owners with multiple corporations. That is, the share of active owners with five or more corporations that have a low turnover corporation in their portfolio of CHCs increases by 6.3 percentage points. We discuss the tax avoidance mechanism of low turnover as well as holding corporations in the next section.

### 4.5.4 Holding corporations, shell corporations, and low turnover corporations as vehicles for income shifting

We will now take a close look at the uptake of specific income shifting vehicles. We analyze corporate structures that we classify as holding corporations, low turnover corporations and shell corporations. We have presented definitions for these types of closely held corporations in Box 4.2.

These three types of corporations reflect income shifting behavior to a certain, non-trivial degree. However, holding corporations, for example, have a clear non-tax component. A holding corporation can help simplify corporate structures, particularly within families. Instead of holding shares in several companies, family members may hold shares in only one company, the holding company. This company then holds all shares in subsidiaries. However, there is a clear tax incentive for holding companies. As dividends are (usually) tax-exempt at the corporate level (*participation exemption*) to avoid triple taxation of profits (or even quadruple and more if there are more companies in between), a holding company allows the postponement of dividend taxation at the personal level.[24] With the 2006 tax cut, receiving dividends through a holding company that is run as a closely held corporation not only helps postpone dividend taxation, it also effectively reduces dividend taxes on payouts from widely held corporations from 25 percent to 20 percent. The tax burden on capital gains from widely held corporations can similarly be reduced from 25 percent to 20 percent. Capital gains are recognized as financial income at the corporate level of the closely held corporation and are then distributed as dividends subject to 3:12 rules.

In other words, shares in an unlisted widely held corporation can be treated as shares in a closely held corporation if these are held in a holding corporation subject to the 3:12 rules. Hence, we believe that there is a clear tax incentive to run holding corporations as closely held corporations. We therefore expect an increase in the uptake of holding corporations after the reform for tax reasons. But we do not believe that the organizational argument for having a holding corporation has changed. Therefore, any behavioral change is very like to be tax induced.

Second, we refer to low turnover and shell corporations for other than organizational reasons. These corporations are designed to shift additional labor effort to the corporate level. Our definitions of these corporations rule out the possibility that low turnover or shell corporations are holding corporations. Whenever

[24] The tax exemption for dividends and capital gains applies to income from business related corporations (*participation exemption*). By definition, shares in unlisted corporations qualify for the participation exemption. Listed shares qualify for the participation exemption if a company holds at least 10 percent of the voting rights in the other company or if the shares are held for organizational purposes, in the course of the business. In sum, there are very generous rules for holding companies. These rules and their generosity have also been widely recognized by the non-Swedish community (see, for example, Deloitte Tax Guide, *Taxation and Investment in Sweden 2011*).

a corporation is considered a holding corporation, we do not treat this corporation as a low turnover or a shell corporation. Hence, we consider only corporations that have neither turnover nor financial income (*shell corporations*) or have very low turnover and very low wages (*low turnover corporations*). Shell and low turnover corporations are founded for the purpose of reducing the owners' tax payments. They can be used to shift income across tax bases, taxpayers, and tax jurisdictions. As we discussed in Chapter 3, the potential tax savings from the dividend allowance can be carried forward to be used in the future. Hence, an individual can accumulate dividend allowances and transfer temporary income into closely held corporations.

**Box 4.4: Potential tax savings value of setting up a passive closely held corporation – The option value of the accumulated dividend allowance**

Individuals can set up a corporation to accumulate dividend allowances using the simplification rule without any real activity in the corporation. We now calculate the value of the tax saving opportunities from a shell company like this. We assume that the costs of setting up the corporation, for example, registration costs, are C. There are annual costs for accountants, etc. which amount to $c_t$. Furthermore, an individual needs to invest at least SEK 100 000 as nominal capital $E$. We assume that he or she invests this money in treasury bonds with a gross return of $r$. As the combined corporate tax rate on these earnings is higher than the tax rate on interest at the individual level, the investor has tax costs of *(41% - 30%) * r * E* for the capital trapped in the corporation.

The tax wedge between 41 percent on profits from the closely held corporation and the income tax rate ($\tau^{Marg}$) is the benefit from the shell corporation. This benefit is limited to the standard dividend allowance *DivAll,* which can be accumulated over several years ($T$). We assume that the discount rate is equal to the return on treasury bonds, which is subject to capital income tax of 30 percent. This gives us the present value of the tax savings from the shell corporation *PV(TS)*:

$$PV(TS) = -C + \sum_{t=1}^{T} \frac{(\tau^{Marg} - 41\%) \cdot DivAll - c_t - r(41\% - 30\%)E}{\big(1 + r(1 - 30\%)\big)^t}$$

In the following, we calculate the option value for 2007 and 2012. We assume that C is SEK 10 000 and that the annual costs, $c_t$, are SEK 10 000. The annual dividend allowance is SEK 89 900. We compute the value of the tax savings for different planning periods and different tax brackets. The interest rate is assumed to be 3 percent in both cases.

| | Planning Period in Years | | | |
|---|---|---|---|---|
| **Tax Rate** | **1** | **2** | **5** | **10** |
| **31.6%** | *-28 311* | *-46 246* | *-97 868* | *-177 063* |
| **51.6%** | *-10 878* | *-11 737* | *-14 211* | *-18 006* |
| **56.6%** | *-6 519* | *-3 110* | 6 703 | 21 758 |
| **67.3%** | 2 764 | 15 266 | 51 250 | 106 455 |

Next, we repeat the computation using values for 2012. The required nominal capital has been reduced to SEK 50 000. The annual dividend allowance has been increased to SEK 143 275. The accountant duty has been removed for smaller corporations. This effectively lowers the annual costs, $c_t$, to SEK 5 000.

| | Planning Period in Years | | | |
|---|---|---|---|---|
| **Tax Rate** | **1** | **2** | **5** | **10** |
| **31.6%** | *-28 250* | -46 124 | -97 571 | -176 499 |
| **51.6%** | *-184* | 9 430 | 37 102 | 79 556 |
| **56.6%** | 6 832 | 23 319 | 70 770 | 143 569 |
| **67.3%** | 21 777 | 52 901 | 142 484 | 279 918 |

The accumulated unused dividend allowance represents an option value, which provides incentives to found companies mainly for the purpose of accumulating dividend allowances to be used in the future. The tax wedge between labor income tax rates and tax rates on dividends is the benefit from the company. The costs of the tax avoidance strategy include the costs of setting up the corporation and annual costs such as accountancy costs. In Box 4.4 we explicitly calculate this option value using the 2007 rates and the 2012 rates. Due to the increase in the dividend allowance under the simplification rule, the reduced required minimum equity in corporations and the removal of the accounting duty, the option value has increased considerably. We calculate these tax savings

under the assumption that these accumulated dividend allowances are used, i.e. that dividends are being paid out to the owners.

Our 2007 calculations suggest that individuals in the top tax bracket always create a positive tax savings value from a shell corporation when they take social security contributions into account. The value increases considerably over time due to the accumulation of dividend allowances. After 5 years, individuals with a marginal tax of 56.6 percent also create a positive net present value from the potential tax savings. The option value for using the accumulated dividend allowance for shifting income from the labor income tax base to the dividend income tax base substantially increases from 2007 to 2012 due to the generous dividend allowances under the simplification rule. As soon as the first level of the state tax sets in, an individual can benefit from setting up a shell corporation if he or she accumulates dividend allowances for at least two years. The simple calculations in Box 4.4 show that with the introduction of the simplification rule and the dividend tax reduction in 2006, founding a shell corporation for accumulating dividend allowances can benefit the taxpayer.

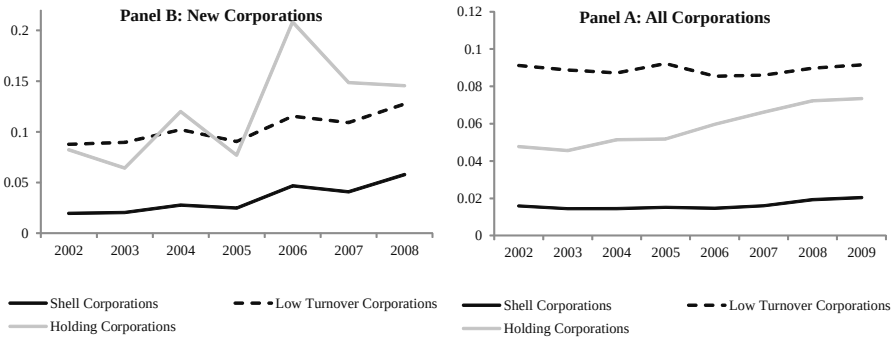
There are also non-tax reasons for setting up a corporation. A corporation may make organisation of side businesses (e.g. consulting) easier. Hence, there is also an organizational component in using low turnover or shell corporations. As for holding companies, this organizational argument does not change in 2006. Hence, any behavioral response or change in individual characteristics around the tax reform can be attributed to taxes.

In the following discussion, we take a closer look at the share of closely held corporations that can be characterized as either holding corporations or low turnover/shell corporations. Figure 4.9 shows the percentage of closely held corporations that are (1) shell corporations (*black line*), (2) low turnover corporations (*dotted line*), and (3) holding corporations (*grey line*) according to our definitions in Box 4.2. Panel A shows statistics for all closely held corporations over the 2000-2009 period. We observe a growing number of holding corporations over the sample period. Furthermore, the fraction of corporations being shell corporations increases from 1.5 percent to over 2 percent in 2009. In sum, more than 18 percent of all closely held corporations are shell corporations, low turnover corporations or holding companies.

In Panel B of Figure 4.9, we restrict our sample to newly founded closely held corporations. We can observe a substantial

increase in the uptake of shell corporations, low turnover corporations, and holding companies immediately after the reform. Prior to the reform, about 2.3 percent (9.2 percent) of all newly founded closely held corporations can be characterized as shell corporations (low turnover corporations). After the reform, this share increases to 4.9 percent (11.7 percent). We can also observe a sharp increase in new holding corporations after the 2006 tax reform. In 2006, over 20 percent of all closely held corporations founded were holding corporations. This declines to about 15 percent in 2007 and 2008. Still, these shares are well above the averages prior to the reform. Furthermore, the observed spike in the uptake of holding corporations in 2004 is also very likely to be tax induced. In 2004, the aforementioned participation exemption for dividends and capital gains at the corporate level was introduced. We would therefore expect an increase in the uptake of holding companies.

**Figure 4.9 Percentage of holding corporations, shell corporations, and low turnover corporations of all closely held corporations**




Note: This figure shows the fraction of shell corporations (black line), low turnover corporations (dotted line), and holding corporations (grey line) for the period 2002-2009. Panel A includes all closely held corporations. Panel B only includes corporations newly founded in the specific year.

In sum, about a third of all newly founded corporations can be considered some form of income shifting vehicle. These corporations do not fully reflect the basic understanding of entrepreneurship. Any macroeconomic statistics on the number of newly founded corporations after the 2006 tax change is potentially

biased. A third of the corporations are not designed to be the corporation owner's main source of income.

We will now present more details on the individuals setting up these corporations and how their characteristics changed around the 2006 tax reform. We link the corporate characteristic of being (i) a holding, (ii) a low turnover, or (iii) a shell corporation to our individual dataset of all closely held corporation owners. We then compare individual characteristics of the owners before and after the reform for indications of income shifting and tax avoidance.

**Table 4.12 Low turnover corporation owner characteristics around the 2006 reform**

| Variable | Low Turnover Corp. Owners | | | Other CHC Owners | | | |
|---|---|---|---|---|---|---|---|
| | Before 2006 | After 2006 | Diff. | Before 2006 | After 2006 | Diff. | Diff-in-Diff |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| **Panel A: Income elements** | | | | | | | |
| *Total income* | 511 895 | 580 942 | 69 047 | 424 486 | 526 903 | 102 417 | **-33 370** |
| *Income w/o CHC* | 444 965 | 478 755 | 33 790 | 233 738 | 276 752 | 43 014 | **-9 224** |
| *Labor income* | 259 043 | 325 529 | 66 486 | 274 566 | 321 175 | 46 609 | **19 877** |
| *Business income* | 12 295 | 14 423 | 2 128 | 9 840 | 11 774 | 1 934 | **194** |
| *Capital income* | 142 121 | 145 116 | 2 995 | 87 979 | 139 618 | 51 639 | **-48 644** |
| *Dividends* | 26 619 | 82 057 | 55 438 | 22 735 | 86 543 | 63 808 | **-8 370** |
| *Div received?* | 0.759 | 0.761 | 0.001 | 0.740 | 0.768 | 0.029 | **-0.027** |
| **Panel B: Closely held corporation characteristics** | | | | | | | |
| *Number of firms* | 1.401 | 1.378 | -0.023 | 1.126 | 1.113 | -0.013 | **-0.010** |
| *Labor CHC* | 46 576 | 50 577 | 4 001 | 169 486 | 187 387 | 17 901 | **-13 900** |
| *Salary CHC paid?* | 0.181 | 0.158 | -0.023 | 0.653 | 0.619 | -0.034 | **0.011** |
| *Dividend CHC* | 17 295 | 48 399 | 31 104 | 16 905 | 60 217 | 43 312 | **-12 208** |
| *Div CHC received?* | 0.134 | 0.241 | 0.107 | 0.199 | 0.392 | 0.194 | **-0.087** |
| *Excess dividend* | 3 059 | 3 210 | 151 | 4 357 | 2 546 | -1 811 | **1 962** |
| *Excess Div paid?* | 0.030 | 0.019 | -0.010 | 0.044 | 0.028 | -0.017 | **0.006** |
| *Acc DivAllowance* | 486 964 | 1 115 367 | 628 403 | 410 098 | 937 288 | 527 190 | **101 213** |
| *Invested equity* | 104 969 | 196 137 | 91 168 | 86 890 | 157 522 | 70 632 | **20 536** |
| *Shareholder loan* | 261 836 | 251 160 | -10 676 | 222 538 | 200 719 | -21 819 | **11 143** |
| *Profit CHC* | 365 028 | 217 052 | -147 976 | 830 773 | 489 102 | -341 671 | **193 695** |
| **Panel C: Individual characteristics** | | | | | | | |
| *Age* | 51.92 | 52.43 | 0.51 | 48.52 | 49.76 | 1.24 | **-0.73** |
| *Female* | 0.272 | 0.254 | -0.018 | 0.257 | 0.244 | -0.013 | **-0.005** |
| *Tertiary education* | 0.276 | 0.303 | 0.027 | 0.163 | 0.188 | 0.025 | **0.002** |
| *- Business degree* | 0.194 | 0.206 | 0.012 | 0.157 | 0.162 | 0.004 | **0.008** |
| *- Law degree* | 0.021 | 0.022 | 0.001 | 0.014 | 0.017 | 0.002 | **-0.001** |
| *- IT degree* | 0.011 | 0.013 | 0.002 | 0.010 | 0.013 | 0.003 | **0.000** |
| *- Medical degree* | 0.034 | 0.035 | 0.000 | 0.023 | 0.025 | 0.002 | **-0.002** |
| *City* | 0.366 | 0.377 | 0.011 | 0.319 | 0.330 | 0.011 | **0.000** |

Note: This table presents changes in individual's characteristics around the 2006 reform. Column (1) to (3) presents averages for individuals owning low turnover corporations before the reform (column 2), after the reform (column 3) and the difference (column 4, Diff) between the post- and pre-reform period. Panel B replicates these statistics for the sample of corporation owners which are not involved in low turnover corporations. In Column 7, we present the difference-in-difference estimate for the period 2000-2009 around the 2006 tax reform.

Table 4.12 summarizes individual characteristics of corporation owners of low turnover corporations (Column (1) to (3)) and the remaining population of closely held corporation owners (Column (4) to (6)) as a control group.[25] We present average values before the reform (Column (1) and (4)), after the reform (Column (2) and (5)), and the difference between periods within the respective groups (Column (3) and (6)). We present the difference-in-difference estimate in Column (7).

There are some interesting differences between low turnover corporation owners and the "average" closely held corporation owner. Individuals with a low turnover firm are more likely to have a university degree, have substantially higher income, and have higher capital income. However, the gap in total income (– SEK 33 370) and capital income (– SEK 48 644) between individuals with low turnover firms and the remaining population decreases after the reform (values in Column (7)). However, individuals with a low turnover corporation still have a higher income (and thus higher tax rates and incentives) than the remaining population of corporation owners. The decreasing gap in income (– SEK 33 370) is partly due to more individuals founding low turnover and shell corporations after the 2006 tax reform. The average income (+ SEK 580 942) and the average labor income (+ SEK 325 529) after the reform suggest that individuals with a low turnover corporation are very likely to face the state tax. Thus, these are exactly the individuals who can derive a positive net present value from accumulating dividend allowances for tax saving purposes.

We next turn to ownership characteristics of holding corporation owners. Table 4.13 summarizes individual characteristics of corporation owners of holding companies (Column (1) to (3)) and the remaining population of closely held corporation owners (Column (4) to (6)) serves as a control group. We present average values before the reform (Column (1) and (4)), after the reform (Column (2) and (5)), and the difference between periods within the respective groups (Column (3) and (6)). We present the difference-in-difference estimate in Column (7).

Again, there are some interesting differences between a holding corporation owner and the "average" closely held corporation owner. Individuals with a holding corporation are more likely to have a university degree, have substantially higher income, and have

[25] We present results for low turnover corporations only. Results are very similar for shell corporations.

higher capital income. Individuals with a holding company have more than twice as much income as the average entrepreneur. Even though the income gap slightly decreases around the reform (– SEK 22 901), individuals with a holding company have a very high income. Furthermore, individuals with a holding corporation appear to shift income into these corporations. Average income without CHC decreases for individuals with a holding company (– SEK 43 212). At the same time, their overall income increases by about SEK 68 000. They experience a sharp increase in dividends, particularly from closely held corporations (+ SEK 132 674). Labor income from closely held corporations, however, decreases after the reform by SEK 17 576. This is patently different for the average closely held corporation owner. They experience increasing labor income from closely held corporation around the reform (SEK +21 615) and slightly higher dividends (+ SEK 33 868).

**Table 4.13 Holding corporation owners' characteristics around the 2006 reform**

| Variable | Holding Corporation Owners | | | Other CHC Owners | | | |
|---|---|---|---|---|---|---|---|
| | Before 2006 | After 2006 | Diff. | Before 2006 | After 2006 | Diff. | Diff-in-Diff |
| **Panel A: Income elements** | | | | | | | |
| *Total income* | 932 792 | 1 001 006 | 68 214 | 403 111 | 494 226 | 91 115 | **-22 901** |
| *Income w/o CHC* | 775 360 | 732 148 | -43 212 | 222 472 | 259 733 | 37 261 | **-80 473** |
| *Labor income* | 371 997 | 442 962 | 70 965 | 267 323 | 311 868 | 44 545 | **26 420** |
| *Business income* | 12 277 | 8 641 | -3 636 | 9 936 | 12 278 | 2 342 | **-5 978** |
| *Capital income* | 419 279 | 455 281 | 36 002 | 73 772 | 114 942 | 41 170 | **-5 168** |
| *Dividends* | 86 181 | 271 645 | 185 464 | 19 382 | 71 335 | 51 953 | **133 511** |
| *Div received?* | 0.823 | 0.848 | 0.025 | 0.737 | 0.761 | 0.024 | **0.001** |
| **Panel B: Closely held corporation characteristics** | | | | | | | |
| *Number of firms* | 1.533 | 1.366 | -0.167 | 1.129 | 1.118 | -0.011 | **-0.156** |
| *Labor CHC* | 74 422 | 56 846 | -17 576 | 163 097 | 184 712 | 21 615 | **-39 191** |
| *Salary CHC paid?* | 0.206 | 0.129 | -0.077 | 0.634 | 0.614 | -0.019 | **-0.058** |
| *Dividend CHC* | 71 171 | 203 845 | 132 674 | 13 751 | 47 619 | 33 868 | **98 806** |
| *Div CHC received?* | 0.283 | 0.536 | 0.254 | 0.187 | 0.366 | 0.179 | **0.075** |
| *Excess dividend* | 11 838 | 8 167 | -3 671 | 3 791 | 2 161 | -1 630 | **-2 041** |
| *Excess Div paid?* | 0.067 | 0.054 | -0.013 | 0.042 | 0.025 | -0.017 | **0.004** |
| *Acc DivAllowance* | 1 311 666 | 2 957 268 | 1 645 602 | 364 567 | 793 067 | 428 500 | **1 217 102** |
| *Invested equity* | 181 135 | 501 640 | 320 505 | 83 110 | 133 745 | 50 635 | **269 870** |
| *Shareholder loan* | 989 493 | 670 709 | -318 784 | 181 262 | 168 025 | -13 237 | **-305 547** |
| *Profit CHC* | 824 533 | 567 444 | -257 089 | 785 744 | 456 803 | -328 941 | **71 852** |
| **Panel C: Individual characteristics** | | | | | | | |
| *Age* | 48.92 | 50.06 | 1.14 | 48.82 | 49.99 | 1.17 | **-0.03** |
| *Female* | 0.209 | 0.195 | -0.014 | 0.262 | 0.249 | -0.013 | **-0.001** |
| *Tertiary education* | 0.229 | 0.240 | 0.011 | 0.170 | 0.195 | 0.024 | **-0.014** |
| *- Business degree* | 0.229 | 0.228 | -0.001 | 0.157 | 0.161 | 0.004 | **-0.005** |
| *- Law degree* | 0.028 | 0.032 | 0.004 | 0.014 | 0.016 | 0.002 | **0.002** |
| *- IT degree* | 0.008 | 0.013 | 0.005 | 0.010 | 0.013 | 0.003 | **0.003** |
| *- Medical degree* | 0.019 | 0.022 | 0.003 | 0.024 | 0.026 | 0.002 | **0.001** |
| *City* | 0.357 | 0.362 | 0.005 | 0.321 | 0.332 | 0.011 | **-0.005** |

Note: This table presents changes in individuals' characteristics around the 2006 reform. Column (1) to (3) presents averages for individuals owning holding corporations before the reform (column 2), after the reform (column 3) and the difference (column 4, Diff) between the post- and pre-reform period. Panel B replicates these statistics for the sample of corporation owners who are not involved in holding corporations. In Column 7, we present the difference-in-difference estimate for the period 2000-2009 around the 2006 tax reform.

The demographic characteristics indicate that holding corporation owners are more likely to be male, have a higher education (especially business degrees) and live in larger cities. These differences do not change much around the reform.

The statistics in this section show that individuals participating in holding companies and shell corporations are different from the average closely held corporation owner. They have a higher overall income, a higher marginal tax rate and generate more income outside the closely held corporations. As expected, corporations with an income shifting motive are predominantly held by individuals in higher tax brackets and with higher educations. Closely held corporations are less important for their overall income. Hence, accumulated dividend allowances (on average MSEK 5 for holding corporation owners) have a very high tax savings value.

## 4.6 Conclusions

The 2006 tax reform has changed tax incentives for entrepreneurs and owners of closely held corporations. It has reduced dividend taxes and has increased dividend allowances. This chapter provided empirical evidence of the effects of this particular reform at the corporate as well as at the owner level. The rich micro dataset from Statistics Sweden enabled us to link these two levels and to identify income shifting and tax avoidance behavior.

Our results concerning responses at the corporate level (dividend payout, asset allocation, purpose of corporation) and the individual level (importance of CHC, new owners, payout clienteles, purpose of CHC) reveal income shifting and tax avoidance behavior through closely held corporations. These responses to the 2006 reform can have considerable effects on distribution, equity, tax revenues, and statistics on entrepreneurship. We summarize these effects and present an outlook on potential consequences in Chapter 5.

# 5 Aggregate effects of income shifting – discussion and conclusions

A taxpayer who participates in income shifting actively uses resources to reclassify income to reduce total tax payments. This implies non-productive use of resources and an efficiency loss. Income shifting also reduces public tax revenue. In the Swedish case, the accumulation of unused dividend allowances represents a latent future revenue loss. The magnitude of the tax revenue loss depends on the type of income shifting. For example, if income is shifted from the labor income tax base to the dividend income tax base, the total loss in tax revenue is greater than if dividend income is shifted from being classified as dividends to a passive owner to dividends within the dividend allowance of an active owner. When evaluating the potential revenue effects from income shifting, the effects on all types of income need to be considered. A focus on a separate tax, for example the state wage tax, leads to wrong conclusions and estimates.

The 2006 reform increased the incentives and opportunities for income shifting via the closely held corporation, mainly through the following changes:

1. Reducing the tax rate on dividends within the allowance.
2. Increasing the dividend allowance under the general rule.
3. Introducing a standard dividend allowance that was independent of the equity, wage bill, and activity in the corporation.

These changes made the 3:12 rules beneficial for many groups of owners and provided income shifting incentives to shift income into the corporate sector and to be classified as an active owner of a closely held corporation. It also simplified the calculation of the

dividend allowance for the majority of closely held corporation owners. By choosing the simplification rule, compliance costs associated with K10-forms decreased. This holds for both the taxpayer and the tax authority. Around 80 percent of the active owners in closely held corporations choose the simplification rule. Yet this 2006 reform of the 3:12 rules has not received the close scrutiny of either the academic community or the authorities. To our knowledge, the effects of the reform have not been analyzed in a comprehensive manner until now. However, taxpayers and tax consultants appear to have been familiar with the changes in incentives as we observe large behavioral responses in 2006 and thereafter.

There is heterogeneity in the uptake of these incentives, as we show in Chapter 4. After the 2006 reform, owners of smaller corporations with low equity and/or low wage costs had incentives to be taxed under the 3:12 rules. The motivation for this was to transform highly taxed wage income into lower taxed dividend income. In other words, individuals have an incentive to be active instead of *passive* owners.

It appears that the tax authorities, *Skatteverket*, have not integrated the change in incentives into their control strategy. According to our information, the main focus of *Skatteverket* regarding controlling the ownership classification under the 3:12 rules is to make sure that a shareholder that registers as *passive* is in fact not *active*. This is the opposite of the tax incentive. Tax authorities apparently do not check whether a self-claimed active owner is really active or whether he or she is actually *passive*.[26] This means that there are potentially many shareholders who are in reality passive but who claim to be active. They file K10-forms to be subject to the 3:12 rules and are not challenged on this status. One indication of this behavior is the widespread use of shell companies and holding companies. Shareholders in these corporations still claim to be active in the daily operation and the profit generation of the corporation. According to the law, a shareholder is considered to be an active owner in a holding company if he or she is also active in the subsidiary of a holding company, but this does not explain all of the increase in the number of active owners in holding/shell companies after 2006. A

[26] We have contacted the legal department in Skatteverket on this issue. They confirmed that claimed activity in practice is approved and that only the status of being a passive owner is controlled.

further complicating factor is the unclear definition in the tax code of what constitutes an active owner. A total of 9 percent of all closely held corporations are shell companies with little or no activity. The share of total closely held corporations over time that is characterized as holding corporations was around 5 percent in the period 2002-2005 but increased after 2006 to about 7.3 percent in 2009. In 2006, over 20 percent of all new closely held corporations were holding companies. These corporations benefit from the accumulation of the very generous dividend allowances with potential imputed returns of over 100 percent of external equity.[27]

The differences between employed individuals and closely held corporation owners indicate that predominantly high income individuals benefit from the tax reductions inherent in the 2006 tax changes. Individuals incorporating after the 2006 tax reform are very likely to be subject to the state tax. As we have data until 2009, our report may even underestimate the effect of income shifting on vertical equity for several reasons. First, the years 2008 and 2009 are affected by the financial crisis. This decreases the likelihood of incorporation as individuals may then be generally more reluctant to take the risk of starting their own corporation. Second, we have no data for the years after 2009. Hence, we cannot capture the even more generous dividend allowance under the simplification rule over time along with the 2010 removal of the accountant requirement and the reduction in required equity. These changes are very likely to have a positive effect on participation in income shifting. Still, we find evidence of extensive income shifting in the data, as presented in Chapter 4.

We now take a closer look at the aggregate effects of individuals' participation in income shifting with a particular emphasis on holding companies.

[27] In 2009, the requirements for receiving an F-tax card (to be recognized as a corporation) were relaxed. This simplified the incorporation of employees. They could more easily run a consulting corporation under the 3:12 rules and provide services to their previous employers. This makes participation in income shifting through the closely held corporation easier for ordinary wage earners. This is particularly relevant for high income individuals with higher education in IT, business administration, medicine, law or engineering. Our sample is however restricted to 2009. Consequently, we cannot identify income shifting effects of the relaxed F-tax card regulations.

## 5.1 Aggregate effects of taxpayers' income shifting

Income shifting and tax avoidance can have far reaching consequences at an aggregate level, as discussed by Gordon and Slemrod (2000). We can summarize the effects as:

1. Efficiency effects.
2. Distributional effects.
3. Revenue effects.
4. Misleading statistics.

### 5.1.1 Efficiency effects

Efficiency in taxation refers to minimising the excess burden that arises from behavioral responses to taxes. The excess burden of taxation is the additional cost of taxation associated with the remission of taxes and it arises from behavioral responses to taxes. A taxpayer who participates in income shifting uses resources to reclassify income to reduce total tax payments. This implies non-productive use of resources and thus also an efficiency loss (for a more general discussion, see Gordon and Slemrod, 2000 and Hines, 2007). The available dataset does not enable us to present a precise estimate of the excess burden from the increased income shifting behavior. However, we observe about 10,000 new corporations in 2006 and 2008 that are characterized as either holding corporations or low turnover corporations.[28] We thus believe that a substantial amount of time and money is spent on registration, administration, and integration of income shifting strategies with holding corporations.

### 5.1.2 Distributional effects

Income shifting can have substantial distributional effects. In line with the literature and our expectations, we find that predominantly high income groups participate in income shifting as they benefit the most from these strategies. Income shifting reduces both vertical and horizontal equity. The former results

[28] The number of corporations is the result of the number of newly founded closely held corporations multiplied by the percentage of firms we characterize as either holding corporations or low turnover corporations.

from more high income than low-income individuals participating in income shifting. The reduction of horizontal equity results from the heterogeneity in the participation in income shifting within the same income group. Reasons for heterogeneity in participation in income shifting can be lack of awareness of the tax rules, lack of opportunity, slowness in response, and associated costs.

We now take a closer look at the distributional effects of participating in income shifting by setting up a holding or shell corporation. This analysis helps us to evaluate the effects on both horizontal and vertical equity. Figure 5.1 shows the distribution of four variables across quintiles of the total income distribution for the year 2009.[29] We show the distribution of total accumulated dividend allowances in all closely held corporations (Panel A), distribution of total income (Panel B), distribution of accumulated dividend allowances in low turnover corporations (Panel C), and finally the distribution of accumulated dividend allowances in holding corporations (Panel D).

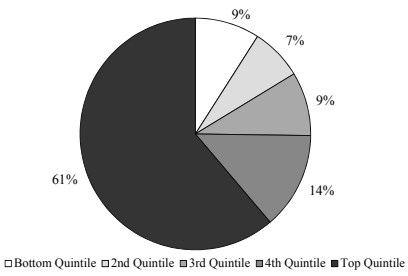
We find that the top quintile of the income distribution has accumulated about 61 percent of all dividend allowances. The bottom quintile, i.e. closely held corporation owners with lower income, own about 9 percent of all dividend allowances in 2009. As the top quintile generates about 50 percent of total income, they hold a larger share in dividend allowances than in income. This shows that dividend allowances and thus tax saving opportunities through the reduced dividend tax rate are concentrated among high income closely held corporation owners (*reduction of vertical equity*).[30]

[29] Results are very similar for 2006 to 2008. However, we want to show the development over the longest possible time period.

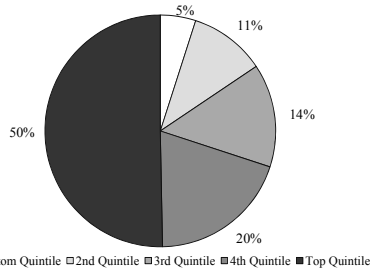
[30] This concentration would become more apparent if we include all individuals. In Panel B of Figure 5.1 we focus on closely held corporation owners.

**Figure 5.1 Distribution of allowances and income, 2009**

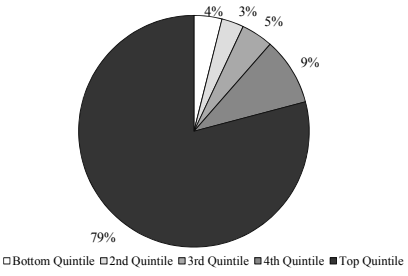
**Panel A: Distribution of total dividend allowances**



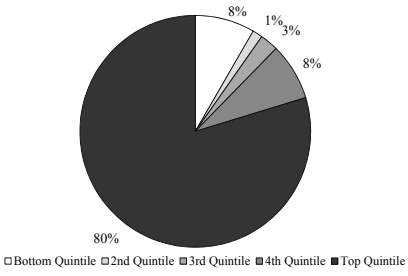

**Panel B: Distribution of total income**




**Panel C: Distribution of dividend allowances in holding CHCs**




**Panel D: Distribution of dividend allowances in low turnover CHCs**




Note: This figure shows the distribution of dividends allowances and income in 2009 for the sample of all closely held corporation owners. We split the data into quintiles of the total income distributions. We have computed the respective quintiles' share in (i) total accumulated dividend allowances (Panel A), (ii) total income (Panel B), (iii) allowances in low turnover corporations (Panel C), and (iv) allowances in holding companies (Panel D)

The concentration is even stronger when we evaluate dividend allowances in low turnover and holding corporations (Panel C and Panel D). Almost 90 percent of all dividend allowances in these types of corporations have been accumulated by the top two quintiles of the total income distribution.

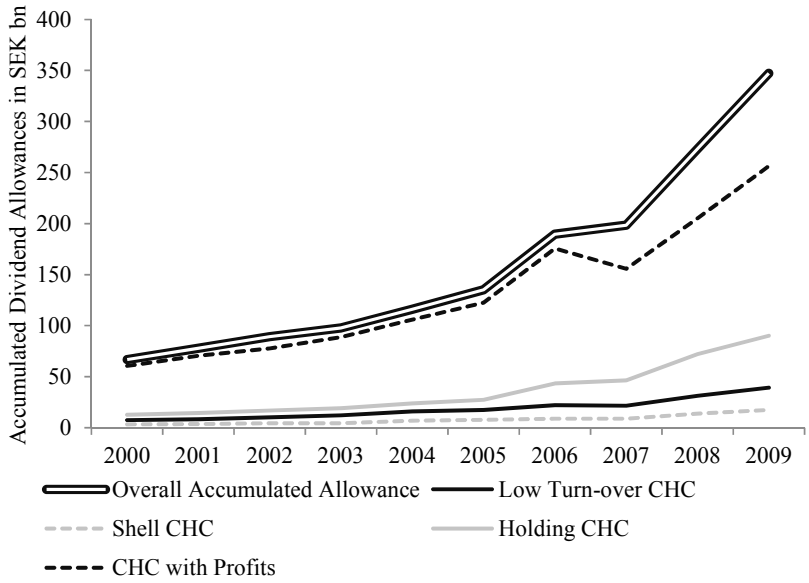
Our univariate results in Table 4.13 show that there are certain differences in the use of low turnover and holding corporations with respect to education, gender, and age. This heterogeneity in uptake implies a reduction in horizontal equity among the high income individuals, as some high income individuals reduce their tax burden through income shifting and others do not.

### 5.1.3 Revenue effects

If the active owner in a CHC receives dividends that are lower than his dividend allowance that year, the remaining unused dividend allowance can be forwarded with interest to be used in the future. The total dividend allowance in any given year of an active owner in a CHC is the sum of forwarded unused dividend allowances from previous years and this year's dividend allowance. Thus the dividend allowance under the 3:12 rules not only reduces tax revenue in the year it is calculated; it also represents a potential, but unrealized, tax revenue loss in the future. This potential revenue loss will only be realized if shareholder receives dividends, at any point in time in the future. There is no expiration date on the accumulated, unused dividend allowances. In this section we focus the discussion on the latent future revenue loss from the accumulated unused dividend allowances. Figure 5.2 shows the development of aggregated unused dividend allowances for the sample of all closely held corporation owners. As we use the full sample of owners, we are able to give a precise overview on the true state of the art in the accumulation of dividend allowances. We present the development for all closely held corporations (*split black line*), all closely held corporations with profits (*dashed black line*), holding corporations (*solid grey line*), low turnover corporations (*solid black line*), and shell corporations with no turnover (*dashed grey line*).[31] We present numbers in SEK billion.

[31] Note that the values for the subgroups do *not* add up to the overall dividend allowances as low turnover CHC and holding CHC can have positive profits and can thus be included in the allowance of corporations with profits.

**Figure 5.2 Development of accumulated dividend allowances 2000-2009 in SEK billion: Breakdown by types of closely held corporations**




Note: This Figure shows the development of accumulated dividend allowances over the period 2000-2009. We use the sample of all closely held corporation owners. The split black line represents the dividend allowances of all closely held corporation owners. We further show accumulated dividend allowances in corporations with positive profits (*dashed black line*), in holding closely held corporations (*solid grey line*), low turnover corporation (*solid black line*), and in shell corporations (*dashed grey line*). Note that the values for the four subgroups do not add up to the overall dividend allowances as low turnover CHCs and holding CHCs can have positive profits and can thus be included in the allowance of corporations with profits.

We observe that overall unused accumulated dividend allowances are increasing rapidly over the sample period. In 2000, closely held corporation owners accumulated about SEK 67 billion in dividend allowances. This number doubled until 2005 to SEK 135 billion and has since increased to over SEK 345 billion in 2009. The post-reform increase in dividend allowances is even more impressive as dividend payouts have been substantially increased after the reform.

The growth in accumulated unused dividend allowances in low turnover and holding corporations has also increased substantially after the 2006 tax changes. Accumulated dividend allowances have more than tripled since 2005 and have reached very high values. We find that individuals had accumulated SEK 90 billion in dividend allowances in holding corporations by the end of 2009. There is

about SEK 39 billion (SEK 17 billion) in accumulated dividend allowances in low turnover corporations (shell corporations with no turnover). As the simplification rule became even more generous after 2009, we expect this trend not only to continue, but to continue growing.

We now make a simple calculation to illustrate that in total, the unused accumulated dividend allowances can represent a substantial future tax revenue loss. This is meant as an illustration only, and not a precise estimate on the potential tax revenue loss. Using the 2009 values, we can compute a simple estimate of upper and lower bounds on total latent future tax revenue losses from the beneficial taxation of dividends at 20% within the dividend allowance to active owners of closely held corporations. In order to do this, we need to make some assumptions on what the alternative tax rate is on dividend that is taxed within the dividend allowance. We do this by calculating and upper and lower bound on the latent tax revenue loss:

1. **Upper bound**
   The alternative tax rate on the dividends within the dividend allowance is the top marginal tax rate on wage income, which means that the tax differential is 25.4 percentage points. We assume that full dividend allowances are used to shift income from the labor income tax base to the corporate income tax base and that all individuals are in the top tax bracket.
2. **Lower bound**
   The alternative tax rate on the dividends within the dividend allowance is the ordinary tax rate on dividends from unlisted corporations, which means that the tax differential is 5 percentage points. As capital gains are tax-exempt at the corporate level, these gains are distributed as dividends to the active owners of a closely held corporation at a tax rate of 20 percent within the dividend allowance instead of the ordinary 25 percent.

As we see in Table 5.1, total latent revenue loss from the accumulated dividend allowances (2009) amounts to somewhere between SEK 17 billion and SEK 88 billion. This poses a particular challenge for the tax revenue forecasts in the future, as these latent revenue losses can be realised at any given point in time. However,

remember that we assume in this calculation that all accumulated dividends are fully utilized. This will probably not be the case, as the corporation needs to generate profits in order to distribute dividends. Still, as we see in the figure above, a substantial amount of the accumulated, unused dividend allowances are in profit generating corporations, which indicate that they will be utilized at some point in time.

Holding corporations play a particularly important role. In 2009, individuals have accumulated about SEK 90 billion in dividend allowances in these corporations. This can have substantial revenue effects as individuals can reduce the tax burden on capital income from shares in unlisted widely held corporations to 20 percent. As capital gains are tax-exempt at the corporate level of the closely held corporation and as these gains are distributed as dividends to the owner, the capital gains tax burden can be reduced by 5 percentage points from 25 percent to 20 percent. Even if we only consider this lower bound for the latent revenue loss, it amounts to nearly SEK 5 billion.[32] Even if just one quarter of these dividend allowances are utilized, the revenue loss from the generous dividend allowances is over SEK 1 billion. To put this into perspective, the overall tax revenue from dividends and capital gains amounted to about SEK 20 billion in 2009. However, if we assume that active owners' labor income is shifted into a holding company and distributed to the owner as dividends within the dividend allowance, the upper bound for this latent revenue loss would amount to SEK 23 billion. And if these owners use only a quarter of this, the revenue loss still amounts to about SEK 6 billion from the holding companies alone. And as we see, there are also substantial latent tax revenue losses attributable to low-turnover corporations and shell corporations as well.

[32] Note that 5 percent is the lower bound of tax savings. Individuals can additionally shift labor income into holding corporations. The tax savings amount to 25.4 percent in this case. As mentioned in the text, the tax savings for capital gains amount to 10 percent and may be as important as dividends.

**Table 5.1 Total accumulated unused dividend allowances for active owners of closely held corporations and latent future tax revenue loss**

| | Accumulated unused dividend allowances 2009, in SEK billion | Total latent future tax revenue loss, in SEK billion | |
|---|---|---|---|
| | | Lower bound 5 pp tax differential | Upper bound 25.4 pp tax differential |
| All closely held corporations | 345 | 17 | 88 |
| Holding corporations | 90 | 5 | 23 |
| Low turnover corporations | 39 | 2 | 10 |
| Shell corporations | 17 | 1 | 4 |

The exact size of the latent loss depends on the extent of income shifting and on the tax rate differential, i.e. whether the lower bound of 5 percentage points or the upper bound of 25.4 percentage points is assumed. The concentration of dividend allowances among high income individuals, as discussed in the previous section, is a strong argument in favor of the upper bound being the relevant income shifting estimate for the majority of dividend allowances. However, these numbers are rough estimates and should be interpreted with caution. These latent revenue losses are not intended to be exact estimates, but rather an illustration of the potential revenue consequences of these accumulated dividend allowances.

We further expect the revenue loss from income shifting with holding companies to be much higher in the years after 2009 for two reasons. First, dividend allowances have been increased and accounting duties have been relaxed. Second and most important, the growing economy leads to more corporate profits and thus to higher dividends and higher capital gains from widely held corporations.

### 5.1.4 Misleading statistics

Income shifting leads to misleading macroeconomic statistics. From the aggregated statistics, it could be concluded that the 2006 reform has encouraged entrepreneurship and business activity.

Entrepreneurship is generally perceived to be important for job creation and overall economic growth in an economy. But entrepreneurship is hard to measure. Corporate start-ups and start-ups by the self-employed are the normal proxy for entrepreneurship. Our main argument against this simple "count measure" is that wage earners set up new corporations to participate in tax minimising income shifting and to re-label labor income as capital income. We observe an increase in the number of newly founded corporations after 2006. However, as a third of this increase is driven by an uptake of holding and low turnover corporations, simply counting the number of new corporations does not yield a meaningful number. In any macroeconomic statistics on entrepreneurship and start-ups of new corporations, it has to be acknowledged that a certain percentage of new corporations are founded for income shifting. Hence, the entrepreneurial background of these corporations may not fully reflect the entrepreneurship desired.

Furthermore, tax revenue statistics from capital income, labor income, and corporate income tax can potentially be biased by income shifting across tax bases and over time. To identify the full impact of the 2006 tax reform on tax revenue, we have to take into account the effects on reported corporate profits and the effect on reported personal income. Furthermore, such an analysis needs to include several years to capture all the effects from income shifting over time. This, in turn, makes it very difficult to disentangle the effects of the 2006 tax reform from the macroeconomic effects. Apart from the economic downturn at the time of the credit crisis, a tax reform has overall general equilibrium effects on investment, dividends, and labor supply. Therefore, it is a challenge to estimate the effects from the reform, namely the direct effect and the indirect effect via macroeconomic growth.

Finally, income shifting in general and especially the reclassification of labor income as corporate income can bias inferences from labor supply and corporate income statistics. What may appear as increasing corporate profits may simply reflect labor supply that is shifted into corporations. The case of holding corporations show us that the observed decline in dividend income and capital gains from widely held corporations among high income individuals can reflect income shifting. If taxpayers hold shares in holding corporations to receive dividends and to realise capital gains at the corporate level (and to save 5 percentage points

in capital income tax), this income "disappears" at the personal income tax level. It does not show up in the corporate income tax data either as it is not included in taxable income. If these proceeds are reinvested, income will only be reported when there is a dividend distribution to the owner of the holding corporation (income shifting over time). Hence, aggregated income statistics can be severely biased, depending on the type of income shifting.

## 5.2 Did the 2006-reform of the 3:12 rules meet its objectives?

In the present report we have analyzed how the 2006 rules changed incentives for participation in income shifting and also how they changed actual taxpayer behavior. In light of our findings we will now discuss how the intentions of the 2006-reform seem to have been translated into practice.

The main motivations for the 2006 reform of the 3:12 rules were:

1. To increase the risk compensation under the 3:12 rules.
2. To promote entrepreneurship.
3. To promote employment in corporations with concentrated ownership.
4. To simplify compliance with the 3:12 rules for owners of smaller corporations.

First, the dividend allowance was increased under the 2006 reform. Both the equity based and wage based dividend allowance under the general rule were made more generous, and the requirements for receiving the wage based dividend allowance were reduced. The simplification rule increased the dividend allowance for active owners in closely held corporations with low nominal equity and/or low wage costs. At the same time the tax rate on dividends within the dividend allowance was reduced by 10 percentage points for active owners, to a level 5 percentage points below the tax rate on dividend income to passive owners. This means that the general tax level on capital income to active owners from their closely held corporation was reduced, which then decreases the taxation of the return to entrepreneurship and risky start-ups.

Second, as active owners in closely held corporations are able to distribute more income from the firm within the dividend allowance at a reduced dividend tax rate, the incentives to be an owner-manager in a closely held corporation increase. At first glance this may seem to have promoted entrepreneurship as there is a large increase in the number of closely held corporations after 2006. However, as show shown in Chapter 4 and in Appendix 3 (by Edmark and Gordon), much of this increase in the number of closely held corporations originates with self-employed individuals incorporating to reduce taxes and individuals setting up holding corporations and shell corporations to reduce taxes and accumulate dividend allowances. The statistics are thus misleading. A part of what seems to be entrepreneurship is actually income shifting and corporations are founded for the sole purpose of reducing the tax payments of the owner(s). Our results indicate that a substantial fraction of corporations founded after the reform appear not to be designed to be the main income source for entrepreneurs. Yet a large proportion of newly created corporations still reflect real entrepreneurship, but this share could be lower than intended.

Related to the issue of promoting entrepreneurship is the observation that the 3:12 rules may induce ordinary wage earners to set up a closely held corporation in which they are the owner-manager and may sell their services to a previous employer (and others). Using the 3:12 rules, they can determine the payout composition from their consulting company and find a tax-optimal mix of wages and dividends. The opportunities to set up a consulting company like this increased in 2009 when the requirements on the number of clients a company had to have in order to receive an F-tax card were reduced. The 2010 changes in required equity and the removal of the accountant duty for smaller corporations additionally reduced the costs of setting up and operating this type of consulting corporation. We would classify this behavior as tax minimising income shifting as the corporation was set up to re-label labor income as capital income. However, if this consulting company enables productive individuals to charge higher fees for their services than the total wage costs in their previous employment, they create new income. In this case, the tax reduction incentivized an individual to incorporate. Tax revenues could then potentially grow as (a) individuals either receive a higher wage for the same labor supply or (b) increase their labor

supply at a constant wage rate. This illustrates that classifying and identifying income shifting is not always straightforward.

Third, the intention of the reform was to increase the wage based dividend allowance so that dividends and capital gains from closely held corporations (realised by active owners) with high wage costs would in practice be taxed at 20 percent. This was accomplished through the reform. This reform had the effect, most likely unintended, of reducing the taxes of active owners of a particular type of corporation: incorporated human capital intensive firms with many active owners, such as law firms, consulting firms etc.[33] As all active owners in a corporation count as one owner in the classification of a corporation as closely or widely held, this group of corporations with up to several hundred active owners is classified as closely held and the shareholders taxed according to the 3:12 rules. Due to high wage costs in these corporations and high wage based allowances under the general rule, active owners in these types of corporations have all their dividends from this corporation taxed as dividend income within the dividend allowance, at 20 percent. In contrast, capital intense firms will benefit less from these rules as the generosity of the dividend allowance from the general rule is driven solely by the wage base.

Fourth, with the introduction of the simplification rule, the calculation of the dividend allowance was considerably simplified for many smaller corporations. This appears to be a welcome change as around 80 percent of K10-filers chooses to use the simplification rule. However, this high number may also be affected by the generous nature of the dividend allowance under the simplification rule. It is also driven by the increasing number of holding corporations and shell corporations in which individuals accumulate dividend allowances.

## 5.3 Main contributors to income shifting with the 3:12 rules – concluding remarks

Income shifting is reduced by limiting the opportunities for shifting income across time, tax bases, and individuals. However, in practice this is not that easy to do. One of the main principles in

[33] See Lodin (2011).

the tax reform of 1991 was to broaden the tax base and reduce tax rates. For each special rule or regulation that is introduced, individuals potentially come up with a tax avoidance strategy. Prior to 2006, there were no incentives to be taxed under the 3:12 rules for owners of small businesses with few employees as dividend allowances applied to this type of corporation. The 2006 tax reform and subsequent adjustments changed the incentive structure as we document in Chapter 3. This has led to widespread participation in income shifting (Chapter 4) and more individuals filing K10-forms. In our opinion, three elements of the existing 3:12 rules in combination provide both incentives and opportunities for income shifting participation through a closely held corporation. In order to reduce the income shifting behavior documented in this report, the following components of the current 3:12 rules should be reconsidered.

First, the simplification rule defines very generous dividend allowances that do not depend on capital, employment, or activity. Individuals can receive dividend allowances in excess of their nominal equity each year. Second, the possibility to carry forward dividend allowances is of particular interest to shell corporation and holding corporation owners. This allows them to shift income over time. Third, it appears that there is a lack of specific definition of what constitutes an "active owner", and also, there appears to be a lack of control of the accuracy of the classification of an owner as active. Shareholders in closely held corporations define themselves as active by filing a K10-form. We observe that many shareholders file K10-forms for corporations with no turnover and profits for several years. Hence, tax authorities should not focus on checking whether passive owners are active, they should check whether a shareholder who files a K10-form actually is active in the corporation's profit generation to a considerable extent.

In this report we have evaluated the main aspects of the 2006 reform of the 3:12 rules with a focus on behavioral responses and income shifting. Our main intention, however, is not a full evaluation either of the 3:12 rules or of the 2006 reform. We are interested in income shifting and use the reform for identification and find empirical evidence of widespread use of the 3:12 rules for income shifting purposes. We also document large accumulated, unused dividend allowances among active owners of closely held corporations that translate into large potential tax revenue losses in the future. The main purpose of this report is to draw attention to

the phenomena of income shifting and the challenges it creates for policymaking, tax revenue forecasting, and interpretation of aggregate statistics.

It is important to note that by far not all closely held corporations are based on income shifting. They have real activity and reflect what we understand as entrepreneurship. Not all new closely held corporations are founded for the main purpose of reducing the owner's tax payments. However, some part of what appears to be entrepreneurship and value creation is in fact income shifting behavior. We have data until 2009, spanning the financial crisis, and thus our time series is too short to draw conclusions on any potential positive long term effects of the 2006 reform on employment and the investment level. More research is required to determine how much of the responses to the reform are actual value creation and what is income shifting, and what the long-term effects of the reform are.

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# Appendix I
# The Swedish dual income tax system

The Swedish dual tax system distinguishes between three main types of income:

I. Labor income
II. Capital income
III. Business income

This chapter outlines some of the key features and recent developments of the Swedish dual tax system, with a focus on the tax treatment of personal income and business income in closely held corporations (*Fåmansföretag*). The duality of the tax system is achieved by applying separate tax schedules for income from capital and labor. Income from capital is taxed at a proportional tax rate. In contrast, a progressive tax schedule applies to personal income from labor. This is clearly different from the traditional, global tax system which applies one progressive tax schedule to total personal income from all sources.[34]

## AI.1. Taxation of labor income

The total tax on labor income depends on the statutory tax rate, any deductions from taxable income, the earned income tax credit, and social security contributions. We describe all elements in detail in the following text.

[34] For a more detailed discussion of various aspects of the tax rules discussed in this chapter, see Lindhe, Södersten, and Öberg (2004), Sørensen (2008, 2010) and Finansdepartementet (2011).

### AI.1.1. The statutory tax rate on labor income

Income in excess of the standard deduction and earned income tax credit (EITC) is subject to a personal income tax that consists of three parts:

1) *Local government income tax or municipality tax*. This is a flat rate that is set individually by each municipality. In 2010, the rates ranged from 28.9 percent to 34.2 percent, with an average rate of 31.6 percent (weighted by tax base). We use average local tax rates throughout this chapter.
2) *Central government income tax*, State tax 1. This has been a flat rate of 20 percent since the early 1990s and is only applicable to assessed income above a threshold ranging from SEK 254 600 in 2000 to SEK 414 000 in 2012.
3) *Central government surtax, State tax 2 (Värnskatten)*. This is a flat rate of 5 percent and was introduced in 1995 as a temporary tax increase but has been made permanent. It is only applicable above a second, higher threshold for assessed income ranging from SEK 398,500 in 2000 to SEK 587,200 in 2012.

Taxable income *(beskattningsbar förvärvsinkomst)* is defined as assessed income *(taxerad förvärvsinkomst)* net of the basic allowance. The tax rates and thresholds for the last decade are presented in Table AI.2. For example, in 2011 the statutory personal income tax rate on wage income is approximately 32 percent up to an income of SEK 395 600. Thereafter it increases to 52 percent up to a second threshold of SEK 560 900 and it is 57 percent on all wage income in excess of this threshold. However, these tax rates only apply for income above the standard deduction and in addition individuals are allowed to deduct the EITC when calculating the total income tax burden on labor income. We now present this in detail.

### AI.1.2. Standard deduction and earned income tax credit (EITC)

The standard deduction is a function of income. It increases with income at low income levels. It begins to decrease for income above a threshold but is not phased out. The statutory tax rates for wage income apply to taxable income after this standard deduction.

**Table AI.1 Deductions in the calculation of taxable income and EITC**

| Panel A: Standard deducation for individuals 2011, in SEK | | | | | |
|---|---|---|---|---|---|
| **Assessed earned income** | | **Below age of 65** | **Assessed earned income** | | **Below age of 65** |
| | – 42 800 | 18 200 | | – 42 500 | 42 000 |
| 42 900 | – 116 300 | 18 300 increasing to 32 900 | 42 600 | – 164 500 | 42 100 increasing to 54 200 |
| 116 400 | – 133 600 | 33 000 | 164 600 | – 206 200 | 54 300 |
| 133 700 | – 336 600 | 32 900 decreasing to 12 700 | 206 300 | – 522 500 | 54 200 decreasing to 25 800 |
| 336 700 | – | 12 600 | 522 600 | – | 25 700 |

Source: *Ministry of Finance Beräkningskonventioner* (Calculation conventions) *2011*

| Panel B: Earned income tax credit for individuals 2011, in SEK | | | | | |
|---|---|---|---|---|---|
| **Earned income** | | **Below age of 65** | **Earned income** | | **Age 65 or above** |
| | – 38 900 | (AI – SD)*LT | | – 100 000 | 0.2*AI |
| 38 900 | – 116 400 | 38 948+0.304*(AI–38 948)–SD)*LT | 100 000 | – 300 000 | 15 000+0.05*AI |
| 116 400 | – 299 600 | (62 531+0.095*(AI–116 416)–SD)*LT | 300 000 | – | 30 000 |
| 299 600 | – | (79 950–SD)*LT | | | |

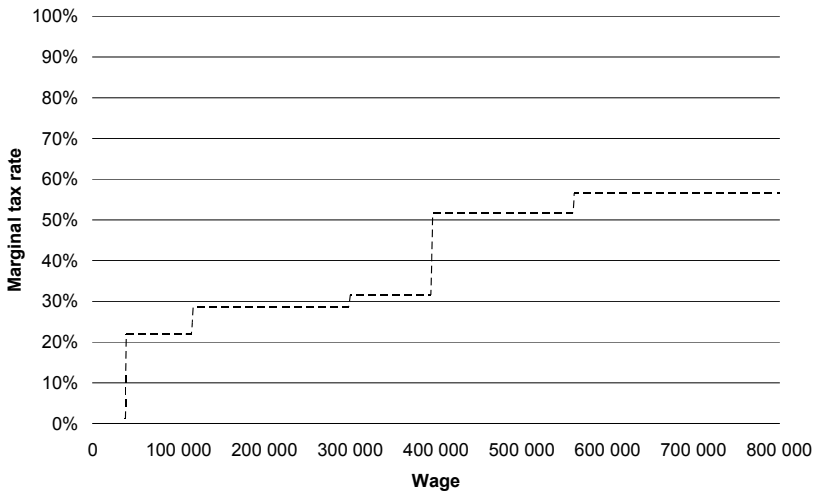
Source: Own calculations based on Finansdepartementets Beräkningskonventioner 2011. Assumption: Prisbasbeloppet ((PBB, the price-indexed base rate) = SEK 42 800.

AI – assessed income; SD – standard deduction; LT – local municipality tax rate

In addition, payable tax is reduced by an earned income tax credit (EITC) introduced in 2007 and expanded in 2008, 2009, and 2010. The EITC increases in income up to a given maximum threshold. Table AI.1 summarizes both the standard deduction rules and the EITC rules for 2011.

Figure AI.1 plots the marginal tax rates for labor income in 2011 by assessed income level, taking into account the statutory tax rate, the standard deduction, and the EITC.

**Figure AI.1 Marginal personal income tax rate on labor income, 2011**




## AI.1.3. The social security contributions on wages

The statutory tax on wages described above determines the after-tax wage income by wage earners, based on their wages before taxes. However, a substantial tax on wages is also remitted by the employer and contributes to the total tax burden on wages, namely the social security contributions. For each SEK 100 distributed as wages in 2011, the employer paid an additional SEK 31.42 in social security contributions.

The social security contributions add to corporations' cost of employment and can have effects on the overall employment in the economy. It also has an insurance element as it entitles the employee to social security benefits and future pension payments. The social security contributions are calibrated each year by the Ministry of Finance to reflect changes in the economy. The tax component is calculated as the residual that keeps the sum of these two charges (i.e. the social security contributions) at the desired level. In 2011, the 31.42 percent social security contributions consisted of social security contributions of 22.19 percentage points and a pure tax component of 9.23 percentage points. Above a threshold, however, the social security contributions cease to generate any marginal benefits to the employee. Hence, the social security contribution then becomes a pure tax at the margin. In

2011, this threshold occurred at a wage of SEK 428 000 (net of social security contributions). The development in the social security contributions and the threshold where social security contribution do not generate any marginal benefits are described in Table AI.2.

For ordinary wage earners, social security contributions have only marginal behavioral effects as they are paid by the employer and are thus "invisible" to the employee. However, for an active owner in a corporation who has the option of paying the compensation for his or her labor effort either as wages or as dividends, the tax component of social security contributions has to be added to the total tax burden on wage payments. This can be an important factor in income shifting strategies, as we discussed in detail in Chapter 3 and 4 of this report.

Two important exceptions to the rules described above are based on the taxpayer's age. Since 2007, individuals aged under 26 enjoy a reduced rate but with full benefits. The reduced rate was introduced in July 2007 and was 21.30 percent until the end of 2008. In 2009, it was reduced further to 15.49 percent. Individuals aged 65 years or above are not eligible for some parts of the social insurance such as unemployment benefits. Reflecting this, they pay only the pension part of the social security contributions (10.21 percent in 2011).

### AI.1.4. Total taxes on wage income, including social security contributions

Figure AI.2 shows the total marginal tax rates on wage income for 2011 when social security contributions are included. This corresponds to the effective tax burden for active ownesr if they pay themselves a wage instead of distributing dividends as compensation for their labor effect. The tax component of the social security contributions is assumed to be 9.23 percentage points up to SEK 420 400 and 31.42 percent above this, based on the discussion in the previous section (see Sørensen, 2010, Chapter 5.1 for more on this).

**Figure AI.2 Marginal income tax burden, including standard seduction, earned income tax credit and social security contributions**

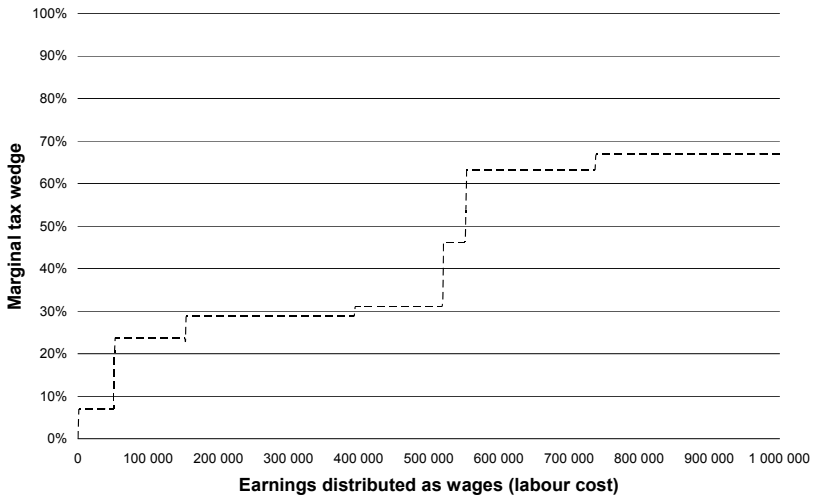


**Table AI.2 Thresholds and top marginal tax rates, 2000-2012**

| | Top marginal tax rates | | | | | | Thresholds, SEK of assessed income [3] | | |
|---|---|---|---|---|---|---|---|---|---|
| Year | Local tax[1] | State tax 1 | State tax 2 | Labor income | Social security Contr. | Labor income, with social security [2] | State tax 1 | State tax 2 | Social security contrib. ceases to generate benefits |
| 2000 | 30.4 | 20 | 5 | 55.4 | 32.9 | 66.4 | 254 600 | 398 500 | 301 000 |
| 2001 | 30.5 | 20 | 5 | 55.5 | 32.8 | 66.4 | 271 500 | 411 100 | 304 200 |
| 2002 | 30.5 | 20 | 5 | 55.5 | 32.8 | 66.5 | 290 100 | 430 900 | 313 100 |
| 2003 | 31.2 | 20 | 5 | 56.2 | 32.8 | 66.5 | 301 000 | 447 200 | 330 000 |
| 2004 | 31.5 | 20 | 5 | 56.5 | 32.7 | 67.0 | 308 800 | 458 900 | 341 300 |
| 2005 | 31.6 | 20 | 5 | 56.6 | 32.5 | 67.2 | 313 000 | 465 200 | 349 500 |
| 2006 | 31.6 | 20 | 5 | 56.6 | 32.3 | 67.2 | 317 700 | 472 300 | 359 100 |
| 2007 | 31.6 | 20 | 5 | 56.6 | 32.4 | 67.2 | 328 600 | 488 600 | 403 000 |
| 2008 | 31.4 | 20 | 5 | 56.4 | 32.4 | 67.1 | 340 900 | 507 100 | 410 000 |
| 2009 | 31.5 | 20 | 5 | 56.5 | 31.4 | 66.9 | 380 200 | 538 800 | 428 000 |
| 2010 | 31.6 | 20 | 5 | 56.6 | 31.4 | 67.0 | 384 600 | 545 200 | 424 000 |
| 2011 | 31.6 | 20 | 5 | 56.6 | 31.4 | 67.0 | 395 600 | 560 900 | 428 000 |
| 2012 | 31.6 | 20 | 5 | 56.6 | 31.4 | 67.0 | 414 000 | 587 200 | 440 600 |

1) Average municipal tax rate

2) Effective tax rates on wage income are calculated as total taxes paid on wage income over gross wage income: (wage taxes + social security contributions)/(wage payments + social security contribution payments). For year 2012 this corresponds to: SEK 100 in wage payments to the employee, which means an additional SEK 31.4 in social security contributions for the employer, amounting to a total of SEK 131.4 in gross wage costs. The employee pays wage taxes of a maximum of SEK 56.6, meaning that the maximum total wage tax payment amounts to SEK 56.6 + SEK 31.4 = SEK 88. The effective tax rate on wage income is the share of gross wage that is paid in taxes, in this case SEK 88 / SEK 131.4 = 0.67

3) Taxable labor income is the base for the state taxes 1 and 2 threshold and for benefits generated by social security contributions in wage payments

## AI.2. Taxation of capital income

Until 2006, capital income was taxed at a flat rate of 30 percent. Capital income includes interest income, capital gains, and dividends. There were only a few exceptions, for example, for dividends and capital gains from closely held corporations. Dividend income for active owners in closely held corporations that exceeded the dividend allowance (Gränsbeloppet) was taxed as labor income. Owners of unlisted shares were entitled to some tax-exempt dividends. The tax-exempt allowance was equal to the

acquisition cost of the shares multiplied by 0.7 times the interest rate on long government bonds. These rules were abolished on 1 January 2006. Unused allowances for tax-exempt dividends could be used until 2010.

From 2006, the tax rate on individual income from capital depends on the type of capital income. Interest income and capital gains (other than from closely held corporations) are still taxed at 30 percent. The taxation of capital income from shares depends on the type of corporation the income comes from. Income from unlisted shares (dividends or capital gains) is effectively taxed at 25 percent through a provision that says that only 5/6 of such income is taxable. Income from closely held corporations received by active owners is taxed at 20 percent up to a cap (the dividend allowance) through a provision that says that only 2/3 of such income is taxable. Dividend income and capital gains in excess of this dividend allowance are taxed as wage income. As of 2012, excess dividends are only taxed as labor income up to the same cap as for capital gains. These special rules, the 3:12 rules, are described in more detail below.

Interest expenses and capital losses are deductible against positive capital income at the individual level. Interest expenses are fully deductible. Capital losses may be fully deducted against capital gains within the same asset class but only 7/10 may be deducted against other sources of capital income. If deductions for capital losses exceed positive capital income, remaining losses are offset against the labor income tax. In this case, for capital losses up to SEK 100 000 a tax credit of 30 percent against labor income taxes is allowed. Thereafter, the tax credit is only 70 percent of 30 percent of remaining capital losses. The tax credit is capped at the level of labor income tax paid, i.e. there is no restitution, and unused tax credits may not be carried forward.

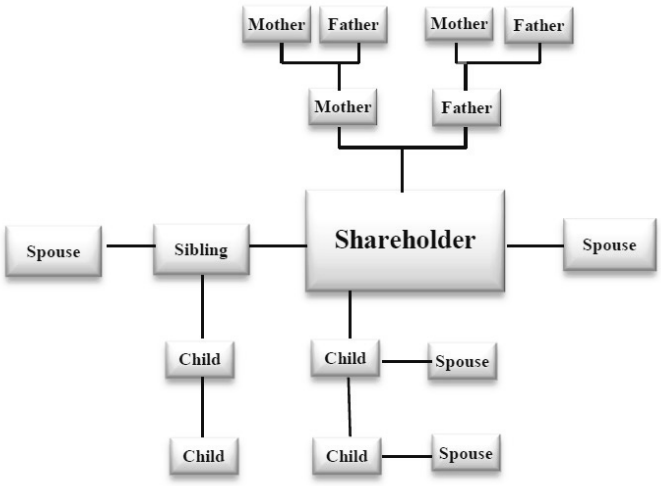
### AI.2.1. Active owners in closely held corporations – the "3:12" rules

A corporation is considered a closely held corporation (Fåmansföretag) if four or less people own more than half of the voting rights. Close family members count as one person (see Box AI.1 for details). In practice, most closely held corporations are small and the owner is the employee. There is no theoretical size

limit and there are some very large closely held corporations. All active owners (see Box AI.2 for details) count only as one person when a corporation is defined as closely or widely held. Therefore there are also some closely held corporations with many owners. These typically are incorporated corporations with many partners, such as consulting corporations.

**Box AI.1: Definition of close family members**

According to the tax code, the following family members are regarded as close (Närstående):




Married spouses, cohabiting spouses with common children, and divorced spouses are all recognized as spouses, as are registered partners of same sex. Step children and foster children are also recognized as family members.
Source: Skatteverket (2011), section 9.2.3.

The status of being a closely held corporation does not affect the tax treatment for corporate tax purposes. Profits are taxed at the statutory corporate income tax rate. The income from shares in closely held corporations is taxed differently at the owner level, depending on the owner's involvement in the corporation. For passive owners, dividends from corporations are taxed at 30 percent if they are received from a listed company and at 25 percent otherwise.

If an owner of a closely held corporation is active in the corporation to a considerable extent, the 3:12 rules apply. According to these rules, dividends and capital gains up to the aforementioned cap, the dividend allowance, are taxed at a reduced rate of 20 percent. Dividends and capital gains in excess to the dividend allowance are taxed as labor income. The rules also apply to the owner's immediate family members with shares in the corporation. This means that even if a family member does not own shares in a corporation where he works, this will still affect the classification of a close family member who only owns shares in the same corporation. This family member will then usually be considered active.

**Box AI.2: Definition of active owner (aktiv ägare)**

A shareholder is considered to be an active owner if he or she or a close family member is, or has during the past five years been, active in the corporation to a "considerable extent" in the income generation of the corporation.

The concept of being "active to a considerable extent" is not precisely defined in the tax law.

The Government Bill (1989/90:110 p. 703)specifies the basis for interpreting "active to a considerable extent", which is the activity's importance for profit generation in the corporations:

*"En person ska alltid anses* ***verksam i betydande omfattning*** *i ett företag om hans arbetsinsatser har stor betydelse för vinstgenereringen i företaget. Till denna grupp av kvalificerat verksamma hör naturligtvis företagsledare och andra högre befattningshavare. I mindre företag kan arbetsledare och ibland även anställda utan någon ledarbefattning räknas till samma kategori. Detta gäller särskilt i sådana fall där delägarna kan anses bedriva en gemensam verksamhet. Det behöver inte vara fråga om ett heltidsarbete utan arbetsinsatsen måste ses i relation till företagets omfattning och övriga omständigheter. En styrelsemedlem som inte utför kontinuerligt arbete kan dock inte utan vidare anses kvalificerat verksam, även om han gjort enstaka insatser av stor betydelse t.ex. för att skaffa en viktig order till företaget."*

**Box AI.2 cont.**

Examples of persons that normally are classified as active in the corporation in the information material of the tax authorities are:

- The CEO of the corporation
- Managers and leaders in the corporation
- Supervisors in smaller corporations

Together with court rulings, this serves as the basis for defining whether or not a shareholder is an active owner.

All shareholders who consider themselves as active to a considerable extent, or who are close family members of an active shareholder (see Box A1.1), file a K10-form, which is used in calculating taxes. All other shareholders of unlisted shares file K12-forms and are not entitled to a tax of 20 percent on dividends and capital gains within the dividend allowance.

Prior to the 2006-tax reform, it was generally considered to be disadvantageous to be taxed as an active owner. The control routines of Skatteverket are based on the assumption that shareholders try to be classified as passive owners. It appears that the change in incentives in 2006 has not been taken into account, namely that the reform made it advantageous for many shareholders to be taxed as active owners. The main control activity of Skatteverket is focused on checking whether shareholders who file K12-forms in reality should file K10-forms. Only in rare cases are K10-filers reclassified as passive owners.

A shareholder in a holding corporation is considered to be active if he or she is an active owner in any of the corporations that the holding corporation owns shares in.

Source: Skatteverket

The dividend allowance is calculated on an individual basis for each year for each closely held corporation. Unused dividend allowances (part or whole) can be carried forward with interest to the following year. Active owners in closely held corporations may calculate their dividend allowance according to two methods, the general rule or the simplification rule (from 2006 onwards).

### AI.2.2. The general rule (huvudregeln)

According to the general rule, the dividend allowance consists of two elements. First, there is an imputed return to the equity base. Second, there is a wage based allowance.

The equity base is the sum of the acquisition cost of the owner's shares and any capital injections made by the owner, carried forward with interest. Prior to 2006, this carry forward interest rate was identical to the imputation rate for the equity base. From 2006 it has been reduced to the interest rate on government bonds plus 3 percentage points. This equity base is then multiplied by the imputation rate, which represents an imputed "normal return" to a risky investment. Since 2006, this has been equal to the government's interest rate + 9 percentage points. Prior to 2006, this risk premium was lower.

The second element, the wage based allowance, depends on the corporation's aggregate wage bill (including subsidiaries). Before 2006, the wage base was calculated as 10 percent of the wage bill, excluding wage payments to the owner, above a given threshold. From 2006, the wage base is calculated as one quarter of the wage bill up to a threshold and half of the wage bill above that. We report these thresholds for the period 2000-2009 in Table AI.3. The wage based allowance is calculated as the product of this base and the individual's ownership share. After 2006, the wage based allowance may only be used if the owner receives a wage from the corporation that is above a specified threshold. For a dividend that was decided in 2011, this threshold was the lowest amount of either SEK 511 000 or SEK {306 600 + 0.05× (total wage bill of the corporation, including the owner's wage)}.

We can summarize the general rule as

| | |
|---|---|
| | *imputed return to equity* |
| + | *wage based allowance × ownership share* |
| + | *unused dividend allowance from previous year* |
| = | *dividend allowance* |

### AI.2.3. The simplification rule (förenklingsregeln), from 2006 and onward

The simplification rule defines the dividend allowance as a fixed amount regardless of the amount of capital invested or the wage bill of the corporation. An active corporation owner is entitled to a fixed allowance (it was SEK 130 250 in 2011) multiplied by his or her share in equity. For example, in a corporation with two active owners with equal shares, both can use 50 percent of the fixed dividend allowance. This dividend allowance is not related either to total equity or to activity in the corporation. That is, the dividend allowance does not depend on the sum of wages to employees or to the owner(s).

We can summarize the simplification rule as

| | |
|---|---|
| | *generic allowance* × *ownership share* |
| + | *unused dividend allowance from previous year* |
| = | *dividend allowance* |

**Table AI.3 Overview of rules and rates for dividend allowances in closely held corporations, 2000-2012**

| Year | Simplification rule | Imputation rate | SLR [1)] | IBB [1] | PBB [1] | Wage base | Minimum owner wage for wage based dividend allowance |
|---|---|---|---|---|---|---|---|
| 2000 | | SLR + 5 | 5.57 | | 36 400 | 10% of WB above 10 PBB, excluding owner's wage | Lowest amount of 120% of Wmax and 10*PBB |
| 2001 | | SLR + 5 | 5.06 | | 36 600 | 10% of WB above 10 PBB, excluding owner's wage | Lowest amount of 120% of Wmax and 10*PBB |
| 2002 | | SLR + 5 | 4.94 | 37 700 | 36 900 | 10% of WB above 10 PBB, excluding owner's wage | Lowest amount of 120% of Wmax and 10*PBB |
| 2003 | | SLR + 5 | 4.85 | 38 800 | 37 900 | 10% of WB above 10 PBB, excluding owner's wage | Lowest amount of 120% of Wmax and 10*PBB |
| 2004 | | SLR + 7 | 4.71 | 40 900 | 38 600 | 10% of WB above 10 PBB, excluding owner's wage | Lowest amount of 120% of Wmax and 10*PBB |
| 2005 | | SLR + 7 | 3.95 | 42 300 | 39 300 | 10% of WB above 10 PBB, excluding owner's wage | Lowest amount of 120% of Wmax and 10*PBB |
| 2006 | 1.5 * IBB | SLR + 9 | 3.26 | 43 300 | 39 400 | 25% of WB < 60*IBB and 50% of WB > 60*IBB | Lowest amount of 15*IBB and 6*IBB + 0.05*W |
| 2007 | 2 * IBB | SLR + 9 | 3.54 | 44 500 | 39 700 | 25% of WB < 60*IBB and 50% of WB > 60*IBB | Lowest amount of 15*IBB and 6*IBB + 0.05*W |
| 2008 | 2 * IBB | SLR + 9 | 4.16 | 45 900 | 40 300 | 25% of WB < 60*IBB and 50% of WB > 60*IBB | Lowest amount of 15*IBB and 6*IBB + 0.05*W |
| 2009 | 2.5 * IBB | SLR + 9 | 2.89 | 48 000 | 41 000 | 25% of WB < 60*IBB and 50% of WB > 60*IBB | Lowest amount of 10*IBB and 6*IBB + 0.05*W |
| 2010 | 2.5 * IBB | SLR + 9 | 3.2 | 50 900 | 42 800 | 25% of WB < 60*IBB and 50% of WB > 60*IBB | Lowest amount of 10*IBB and 6*IBB + 0.05*W |
| 2011 | 2.5 * IBB | SLR + 9 | 2.84 | 51 100 | 42 400 | 25% of WB < 60*IBB and 50% of WB > 60*IBB | Lowest amount of 10*IBB and 6*IBB + 0.05*W |
| 2012 | 2.75 * IBB | SLR + 9 | 1.65 | 52 100 | 42 800 | 25% of WB < 60*IBB and 50% of WB > 60*IBB | Lowest amount of 10*IBB and 6*IBB + 0.05*W |

FAC: (Acquisition cost of share + capital injections)*(1+i)
SLR: Interest rate on government bonds, *Statslåneräntan*, Before 2006, i=(imputation rate), after 2006, i=(SLR+3)
WB: Wage base
IBB: *Inkomstbasbeloppet*
W: Total wage bill of the corporation
Wmax: The highest wage payment to an employee (not shareholder)
[1)] Rates presented here to be used in calculations in year t are actually rates from year (t-1).

As of January 1, 2012, an individual can only use the simplification rule to compute the dividend allowance in one of the closely held corporations he or she owns. At the same time, an upper cap of SEK 4.9 million (90 IBB) on dividends in excess of the dividend allowance has been introduced to limit the amount of dividends that are to be taxed as labor income in a particular year. Dividends above this threshold will be taxed as capital income with a tax rate of 30 percent.

## AI.2.4. Capital gains under the 3:12 rules

Capital gains from the sale of shares covered by the 3:12 rules are treated very similar to dividends. Capital gains within the dividend allowance are taxed at a reduced rate of 20 percent. Excess capital gains are taxed as labor income. The amount of capital gains that is subject to being taxed as labor income is capped at around SEK 5 000 000 (as are dividends since January 2012). The cap applies to the sum of capital gains over a five year period. Capital gains above the cap are taxed as capital income but at the statutory rate of 30 percent. The resulting tax schedule for capital gains from closely held corporations is hump-shaped. Dividend allowances are linked to the individual owner and hence foregone when shares change ownership unless the shares are passed on (by gift or donation) to family members in which case they retain their full value. Table AI.4 summarizes the marginal tax rates on capital income sources over the 2000-2012 period.

**Table AI.4 Overview of top marginal income tax rates on capital income, 2000-2012**

| Year | Interest income | Capital gains[1)] | Dividend income | | | |
|---|---|---|---|---|---|---|
| | | | Public corporations | Private corporations[2)] | CHC, 3:12 | CHC, 3:12 exceeding allowance |
| 2000 | 30 | 30 | 30 | 30 | 30 | 55.4 |
| 2001 | 30 | 30 | 30 | 30 | 30 | 55.5 |
| 2002 | 30 | 30 | 30 | 30 | 30 | 55.5 |
| 2003 | 30 | 30 | 30 | 30 | 30 | 56.2 |
| 2004 | 30 | 30 | 30 | 30 | 30 | 56.5 |
| 2005 | 30 | 30 | 30 | 30 | 30 | 56.6 |
| 2006 | 30 | 30 | 30 | 25 | 20 | 56.6 |
| 2007 | 30 | 30 | 30 | 25 | 20 | 56.6 |
| 2008 | 30 | 30 | 30 | 25 | 20 | 56.4 |
| 2009 | 30 | 30 | 30 | 25 | 20 | 56.5 |
| 2010 | 30 | 30 | 30 | 25 | 20 | 56.6 |
| 2011 | 30 | 30 | 30 | 25 | 20 | 56.6 |
| 2012 | 30 | 30 | 30 | 25 | 20 | 56.6 |

[1)] Capital gains for shares taxed under the 3:12 rules are taxed very similar to dividend income from these shares.

[2)] All owners of unlisted shares were entitled to a tax-exempt allowance in the taxation of dividends, which was equal to the acquisition cost of the shares multiplied by 0.7 times the interest rate on long term government bonds, "Statslåneräntan". These rules were abolished on January 1, 2006, but unused allowances could be used until 2010.

### AI.2.5. Exiting 3:12

As pointed out above, two criteria need to be fulfilled for the 3:12 rules to apply. First, the corporation must be closely held. Second, the owner must be active in the corporation to a considerable extent.

If an owner goes from being active to being passive the shares eventually cease to be covered by the 3:12 rules. The requirement is that the owner must have little involvement in the corporation's activities for a period of five years. Then the shares can be sold and the entire capital gain is taxed at the standard reduced rate of 25 percent (assuming the company is not listed).

### AI.2.6. Special rules for shareholder loans

*Loans from the corporation to the shareholder.*

In general, shareholders are not allowed to lend money to their corporation, unless the terms are "commercial". For loans that are not recognized as commercial, the benefit is taxed as labor income.

*Loans from the shareholder to the corporation.*

If a shareholder lends money to the corporation, ordinary tax rules apply. That is, interest income is taxed as ordinary interest income at the individual level. A tax rate of 30 percent applies to interest received. The corporation can deduct interest payments up to the market level of interest rates as ordinary costs. In sum, for loan agreements at around the risk-adjusted market interest rate, the effective tax burden for the owner is 30 percent. The true market interest rate of a corporation has to be determined for each case individually by estimating the interest rate the corporation would have to pay for a comparable loan from a third party. The market interest rate, risk, and collateral can, for example, affect the determination of the interest rate. However, there is no formal cap on interest rates but the interest rate should be in a reasonable range around the market interest rate adjusted for company risk. Interest payments in excess of a reasonably high interest rate are considered and reclassified as hidden dividend payments. In some cases, the accepted interest rate on shareholder loans will be lower,

if the risk is assumed to be lower because of the close connection between the corporation and the owner. These "excess interest payments" are first subject to corporate income tax at the corporate level. They are then taxed as dividend income at the shareholder level.

Table AI.5 summarizes the marginal tax burden on different sources of income over the 2000-2012 sample period.

### AI.2.7. Taxation of capital gains and dividends at the corporate level – the participation exemption rules

On July 1, 2003, Sweden introduced participation exemption rules for the taxation of corporations' income from shares. In particular, given some restrictions, no corporate tax is levied on dividends or realised capital gains from shares in:

- Non-listed corporations
- Listed corporations where the corporations hold at least 10 percent of voting rights (or relevant for business purposes)
- Subsidiaries or corporations in the same group as the holder of the shares

As of 2010, these rules also apply to partnerships.

**Table AI.5 Taxation of income by type, 2000-2012**

| | Labor Income | | Capital income, individuals | | | | | | Corporate income |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Dividend Income | | | | |
| Year | Without social security contributions | With social security contributions | Interest income | Capital gains, not 3:12 | Listed shares | Unlisted shares[2)] | CHC, 3:12 | CHC, 3:12 exceeding allowance | |
| 2000 | 30.4-55.4 | 47.6-66.4 | 30 | 30 | 30 | 30 | 30 | 30.4-55.4 | 28 |
| 2001 | 30.5-55.5 | 47.7-66.5 | 30 | 30 | 30 | 30 | 30 | 30.5-55.5 | 28 |
| 2002 | 30.5-55.5 | 47.7-66.5 | 30 | 30 | 30 | 30 | 30 | 30.5-55.5 | 28 |
| 2003 | 31.2-56.2 | 48.2-67.0 | 30 | 30 | 30 | 30 | 30 | 31.2-56.2 | 28 |
| 2004 | 31.5-56.5 | 48.4-67.2 | 30 | 30 | 30 | 30 | 30 | 31.5-56.5 | 28 |
| 2005 | 31.6-56.6 | 48.4-67.2 | 30 | 30 | 30 | 30 | 30 | 31.6-56.6 | 28 |
| 2006 | 31.6-56.6 | 48.3-67.2 | 30 | 30 | 30 | 25 | 20 | 31.6-56.6 | 28 |
| 2007 | 31.6-56.6 | 48.3-67.2 | 30 | 30 | 30 | 25 | 20 | 31.6-56.6 | 28 |
| 2008 | 31.4-56.4 | 48.2-67.1 | 30 | 30 | 30 | 25 | 20 | 31.4-56.4 | 28 |
| 2009 | 31.5-56.5 | 47.9-66.9 | 30 | 30 | 30 | 25 | 20 | 31.5-56.5 | 26.3 |
| 2010 | 31.6-56.6 | 47.9-67.0 | 30 | 30 | 30 | 25 | 20 | 31.6-56.6 | 26.3 |
| 2011 | 31.6-56.6 | 47.9-67.0 | 30 | 30 | 30 | 25 | 20 | 31.6-56.6 | 26.3 |
| 2012 | 31.6-56.6 | 47.9-67.0 | 30 | 30 | 30 | 25 | 20 | 31.6-56.6 | 26.3 |

[1)] The minimum tax rate on labor income is the average local tax across all municipalities, corrected for population.

[2)] from 2000-2005, the tax rate was 30 percent but owners of unlisted shares were also entitled to some tax-exempt dividends. The tax-exempt allowance was basically equal to the acquisition cost of the shares multiplied by 0.7*SLR where SLR was the interest on long-term government bonds. These rules were abolished on 1 Jan 2006 but unused allowances for tax-exempt dividends could be used until 2010.

### AI.2.8. The wealth tax

Until the end of 2006, Sweden had a wealth tax of 1.5 percent on taxable wealth above SEK 1.5 million. In the calculation of taxable wealth, equity in unlisted corporations was not included. The wealth tax was abolished from the income year 2007. Table AI.6 summarizes the rules.

**Table AI.6 Overview of wealth tax**

| Year | Taxable wealth threshold, in SEK | Treatment of specific assets in calculation of taxable wealth | | Tax rate on taxable wealth |
|---|---|---|---|---|
| | | Equity in unlisted corporations | Real estate | |
| 2000 | 1 500 000 | Exempt[1] | Included | 1.5 |
| 2001 | 1 500 000 | Exempt | Included | 1.5 |
| 2002 | 1 500 000 | Exempt | Included | 1.5 |
| 2003 | 1 500 000 | Exempt | Included | 1.5 |
| 2004 | 1 500 000 | Exempt | Included | 1.5 |
| 2005 | 1 500 000 | Exempt | Included | 1.5 |
| **2006** | **1 500 000** | **Exempt** | **Included** | **1.5** |
| 2007 | N/A | N/A | N/A | 0 |
| 2008 | N/A | N/A | N/A | 0 |
| 2009 | N/A | N/A | N/A | 0 |

[1)] Exempt unless financial assets held by the corporation were clearly just portfolio investments that had little connection to the main purpose of the corporation (tax avoidance).

## AI.3. Taxation of business income

Businesses can be either unincorporated or incorporated. Incorporated firms can be listed or non-listed, private or public, widely or closely held. The most common form of unincorporated business is the sole proprietorship (*enskild näringsidkare*). Unlike corporations, sole proprietorships are not separate legal entities. The sole proprietor is financially responsible for the corporation and faces unlimited liability. Business income accruing to a sole proprietorship is taxed at the personal level only and is not subject to corporate income tax. An imputed return to equity may be taxed as capital income at the statutory rate of 30 percent and the remainder is taxed as labor income. Sole proprietors with positive equity (assets minus debt) in excess of SEK 50 000 are allowed an imputed return to equity of 5 percent. The business owner is liable for social security contributions on the part of this business income that is taxed as labor income. The social security contributions differ slightly from the social security contributions on other wages. In 2011, social security contributions amounted to 28.97 percent for sole proprietors and to 31.42 percent for employees.

Other relatively common organizational forms are partnerships and economic associations. These are less relevant to this report and are not described in this chapter. For more details on these organizational forms, see Sørensen (2008).

**Box AI.3: F-tax (F-skatt)**

There are two types of tax cards for individuals under the Swedish tax code:

- A-tax card (*A-skattsedel*): This is held by individuals employed by others and implies that the employer withholds and remits income taxes payable on wage income.
- F-tax card (*F-skattsedel*): This is held by individuals who run their own corporations. It implies that no income taxes are withheld by the employer and that the individual who provides the labor effort also remits income taxes through his or her own corporation.

The conditions for getting an F-tax card are that the individual must work as an independent person and that he or she either runs a business or has the intention to run a business. There are also conditions for the minimum number of clients an individual must have in order to qualify for an F-tax card. In 2008, around 750 F-tax cards were issued, half of which were issued to individuals, the other half to corporations.

The conditions for getting an F-tax card were made more liberal from income year 2009, when the minimum number of different clients required to receive an F-tax card was reduced to one. This makes it significantly easier for an employer to quit his or her job and set up a consulting company. However, the previous employer can only be a client for a limited period of time if he or she is the only client, in order for this new consulting corporation to be recognized as a legitimate business under the F-card conditions.

**Box AI.4: Regulation changes: accountant requirement and minimum equity**

Two regulation changes took place in 2010 that reduced the costs of both setting up and running a corporation:

1. April 1, 2010: The minimum required equity of a corporation was lowered from SEK 100 000 to SEK 50 000.
2. November 1, 2010: The auditor requirement was abolished for corporations that fulfill the following requirements (more than one criterion in the two most recent financial years):
   -Less than 3 employees
   -Assets should be less than MSEK 1,5
   -Net sales should be less than MSEK 3

This effectively reduced the annual costs of running a smaller corporation by SEK 10 000 – SEK 20 000.

# Appendix II: Data, sample selection and overall descriptive statistics

## AII.1. Description of data, sample selection & variables

In our study, we use the Firm Register and Individual Database (FRIDA) provided by Statistics Sweden. This panel data set is a combination of three main data sources: corporate tax statements, income tax statements and the "K10-form" for owners of closely held corporations. The latter enables us to link company data to individual information about the owners and vice versa for the subset of closely held corporations. In the following, we individually describe the three data sources and how we match information between the data sets.

### AII.1.1. Corporate Tax Data

Our corporate data are based on corporate tax returns filed using the INK 2 form (*Inkomstdeklaration 2*)[35] which is relevant for listed and unlisted widely held corporations as well as for closely held corporations (*aktie- och handelsbolag*). The tax returns include information on tax balance sheet items as well as the profit and loss statement. Furthermore, there is a unique, anonymized identifier for each corporation that allows us to draw our inferences from a panel data set. The raw data contains 442 772 corporations and 2 904 123 corporation-year observations during the period 2000 to 2009. This is a sample of all Swedish corporations filing a corporate tax return.

[35] See for example http://www.skatteverket.se/download/18.6fdde64a12cc4eee23080004599/200220.pdf for the corporate income tax declaration for 2010. (retrieved October 20, 2011).

Table AII.1 describes our sample selection for the corporate tax data set on corporations. First, we include only corporations who have filed an INK2 declaration (or SD2 before 2003). This reduces our sample size by 12 301 corporation-years. Second, we exclude corporation-years with multiple entries in one year. We find 10 703 entries where one corporation filed two (or even more) tax statements in one tax year. Third, we exclude corporations without information on dividends, share capital and capital increases or decreases in the period 2005-2009. Fourth, we keep only limited companies and exclude banks (e.g. *sparbanker*, *bankaktiebolag*), funds (e.g. *värdepappersfonder*, *övriga fonder*), foundations (*familjestiftelser*) and government owned entities (*kommunalförbund*, *arbetslöshetskassor*) which we identify by either organizational form (*juridisk form and ägarkategori*) and sector (*sektor*). Finally, we drop observations with data inconsistencies and missing information. More specifically, we exclude observations include a negative shareholder loan, negative nominal capital, negative debt, negative turnover, negative labor costs, negative scheduled depreciation, negative pensions and provisions in the liability account, negative loss carry forward, missing organizational form and corporations without any assets. This returns our final sample of 426 949 corporations and 2 736,747 corporation-year observations.

**Table AII.1 Sample selection statistics – corporation data**

| **Initial sample** | **# Observations 2 904 123** | **# Corporations 442 712** |
|---|---|---|
| Corporations which have not filed INK2 or SD2 | -12 301 | -175 |
| Observations with multiple entries in one year | -10 703 | 0 |
| Excluding funds, banks, government owned entities, foundations | -66 342 | -9 910 |
| Data failures (negative shareholder loan, negative nominal capital, no total assets, negative debt, negative turnover, negative labor costs, negative scheduled depreciation, negative pensions & provisions, negative loss carry forward, missing organizational form) | -78 030 | - 5 678 |
| **Final corporate sample** | **2 736 747** | **426 949** |

Note: This table presents sample selection information for the sample of corporation data during the sample period 2000 to 2009. Our initial sample consists of all corporation-year observations in the Firm Register and Individual Database (FRIDA).

For this sample, we obtain information on intangible assets (*immateriella anläggningstillgångar*), fixed assets (*materiella anläggningstillgångar*), financial assets (*finansiella anläggningstillgångar*), accounts receivables (*kortfristiga fordringar*), cash holdings (*kassa, bank och redovisningsmedel*), equity (*bundet och fritt eget kapital*), long-term and short-term debt (*långfristiga och kortfristiga skulder*), shareholder loan (*lån från aktieägare*), provisions (*reserveringar*) and tax loss carry forward (*outnyttjat underskott från tidigare år*) from the balance sheet items. We further add information on the organizational form (*juridisk form*), sector, region, and whether or not the corporation is listed on any Swedish stock market. Finally, we include the number of employees (*antal anställda*).

For the period 2005 to 2009, we additionally obtain information on dividends (utdelningar), new share issues and capital increases (*nyemission, ökning av kapital*), capital decreases (*minskning av kapital*,), date and status of liquidation and bankruptcy (l*ikvidation, konkurs*), and registration date.

From the profit and loss statement, we extract information on turnover (*nettoomsättning*), other income (*övriga rörelseintäkter*), labor costs (*personalkostnader*), regular depreciation (*av- och nedskrivning av materiella och immateriella anläggningstillgångar*), special depreciation (*nedskrivning av omsättningstillgångar utöver normal nedskrivning*), financial income (*finansiella intäkter och kostnader*), financial income from group affiliates (*resultat från andelar i koncern- och intresseföretag*) and the resulting taxable profit.[36] For our empirical analysis, we normalize balance sheet as well as profit and loss statement items by total assets of the preceding year.

### AII.1.2. Income tax data

The second data source in FRIDA contains information from the income tax statement for individuals (*Inkomstdeklaration 1*).[37] We have two different data sets that we describe below. The first data

[36] The tax statement distinguishes between taxable profits (*skattepliktig vinst*) and taxable losses (*skattemässigt avdragsgilla förluster*). We combine both variables and report a negative profit in case of losses.

[37] See for example http://www.skatteverket.se/download/18.6fdde64a12cc4eee23080004597/200020.pdf for the individual income tax declaration for 2010. (retrieved October 20, 2011).

set is the full sample of owners of closely held corporations. The second data set is a representative panel data set of the Swedish population.

### *AII.1.2.1. Full Sample of Corporation Owners*

The raw data set of corporation owners during the period 2000 to 2009 contains 2 686 060 observations and 470 804 individuals. We restrict our analysis to individuals with information on demographic characteristics, non-negative wealth and non-negative tax payments. This returns our final sample of 342 343 individuals and 2 464 945 individual-year observations. In the final sample, we have information on all ten (six to nine) years for about 42 percent (33 percent) of all individuals. Table AII.2 summarizes the sample selection.

**Table AII.2 Sample selection statistics – individual data**

| | # Observations | # Corporations |
|---|---|---|
| **Initial sample** | **2 686 060** | **470 804** |
| Data inconsistencies (negative tax payment; missing age, gender or marital status; missing information on region) | -5,771 | -14 |
| **Final Induvidual sample** | **2 680 289** | **470 490** |

Note: This table presents sample selection information for the sample of individual data during the sample period 2000 to 2009. Our initial sample consists of all individual-year observations in the Firm Register and Individual Database.

From the original variables in the data set (*over 600*), we focus on individual characteristics and income as well as wealth measures. Our demographic control variables include marital status (*civilstånd*), gender (here female, *kvinna*), region (*kommunkod*), country of birth (*födelseland*), number of children (*antal barn*), highest education (*högsta utbildnings nivå*), subject of highest education (*högsta utbildnings inriktning*), and the year of graduation (*examensår*). As income measures, we include labor income (*arbetsinkomst*), business income (*näringsinkomst*), capital income (*kapitalinkomst, räntor och utdelningar*), capital gains (*kapitalvinst*), capital losses (*kapitalförlust*), dividend income (*aktieutdelning*), dividends from K10 (*aktieutdelning från K10*), excess dividends from K10 (*överutdelning, tjänst från K10*) and salary received from

closely held corporations (l*ön från fåmansbolag*). Furthermore, we include income tax payment (*slutlig skatt*), real estate as well as wealth tax payments (*fastighetsskatt and förmögenhetsskatt*), and taxable wealth (*skattepliktig förmögenhet*).[38]

### *AII.1.2.2. Representative Sample of Swedish Population*

The second data set is a representative income tax panel data set of about 6.6 percent of the Swedish population. From the original variables in the data set, we include the same variables as described in the preceding paragraph. The raw data set contains 2 060 359 individuals and 15 026 231 observations, including the spouse and children from the sample household.[39] For the representative panel, we have 452 809 successful links to the K10 data (about 2.6 percent of the sample, see below). Of these, 6 118 061 observations and 702 077 individuals are from the original representative sample.

Table AII.3 summarizes the sample selection for the representative sample. We exclude observations in two steps. First, as for the full sample of corporation owners, we exclude observations with negative tax payments and missing age, gender or marital status. Second, we exclude all individuals that are not in the representative sample, i.e. spouses and children. This returns our final sample of 702 048 individuals and 6 106 054 observations. Over 85 percent of the individuals are represented in all sample years.

**Table AII.3 Sample selection statistics – representative sample**

| **Initial sample** | **# Observations 15 026 231** | **# Corporations 2 060 359** |
|---|---|---|
| Spouses and children who are not included in the representative sample | -8 908 170 | -1 358 282 |
| Data inconsistencies (negative tax payments; missing age, gender or marital status) | -12 007 | -29 |
| **Final Individual sample** | **6 106 054** | **702 048** |

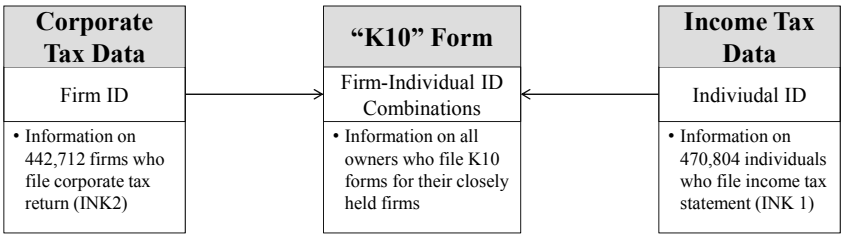
Note: This table presents sample selection information for the sample of individual data during the 2000 to 2009 sample period. Our initial sample consists of all individual-year observations in the Firm Register and Individual Database

[38] Information on wealth is only available if the total taxable wealth exceeds SEK 900 000.
[39] We have unique identifiers for individuals as well as households. With these identifiers, we are able to link individual and household information for the representative sample.

### AII.1.3. The "K10-form" data

The third pillar of our data set is the "K10-Form" data. Each owner of a closely held corporation has to file this form for each of his or her closely held corporations. Via unique identifiers for corporations as well as individuals, we are able to link corporate tax data with income tax data for all closely held corporations and for all owners of closely held corporations. These unique identifiers further allow us to maintain the panel structure of our data set. Figure AII.1 illustrates this matching procedure for our sample of closely held corporations during the period 2000 to 2009.

**Figure AII.1 Matching of corporate and income tax information via K10-form**




Note: This figure illustrates the structure of the Firm Register and Individual Database (FRIDA). Corporate tax data are described in Section XY. Income tax data are described in Section XY. We link both data sets for the subsample of closely held corporations via unique corporate as well as individual identifiers.

The raw data set contains 3 062 221 owner-corporation-year observations, i.e. K10 filings by one individual for one corporation in one year. We count 470 895 different owners and 328,569 unique corporations in the K10-files. For 340 501 owners and 259 830 corporations, we have unique identifiers from the corporate and income tax data respectively, which we can successfully link to the K10-files.

We exclude observations that we cannot successfully link to either the corporate income tax data set or to the individual income tax data set. As a result, sample size reduces by 259 754 observations, 130 394 owners, and 68 739 corporations. Second, we drop multiple entries for one owner and one corporation in one year. Third, we restrict our analysis to corporations with less than six owners. This reduces sample size by 165 834 observations, 14 028 owners, and 1 064 corporations. Some corporations, for example consulting corporations, have more than a thousand

owners. Finally, we control for data inconsistencies such as negative dividends, negative dividend allowances or negative wages. This returns our final sample of 2 826 871 observations, 435 113 individuals and 312 607 closely held corporations.

**Table AII.4 Sample selection statistics – K10 data**

| Initial sample | # Observations 3 062 221 | # Individuals 470 895 | # Corporations 328 569 |
|---|---|---|---|
| Missing match with corporation data | -32 922 | -12 308 | -14 432 |
| Missing match with individual data | -509 | -365 | -94 |
| Multiple entries for one individual and one corporation in one year | -8 475 | -63 | -57 |
| Drop corporations with more than 5 owners | -191 213 | -22 954 | -1 332 |
| Data inconsistencies, e.g. negative dividends, negative dividend allowance, etc. | -2 231 | -92 | -47 |
| **K10 sample** | **2 826 871** | **435 113** | **312 607** |

Note: This table presents sample selection information for the sample of K10 filings during the sample period 2000 to 2009. Our initial sample consists of all corporation-individual-year observations in the Firm Register and Individual Database.

From the K10 data, we extract information on dividend payments as well as cumulated allowances. Before the 2006 reform, we collect information on dividend payment (*utdelning*), cumulated dividend allowance (*kvarstående sparat utdelningsutrymme / lättnadsutrymme från tidigare år*), excess dividends (*överutdelning*) and the saved dividends allowance in the current year (*sparat utdelningsutrymme / lättnadsutrymme till följande år*). We collect similar variables for the period 2006-2009 and distinguish between the simplification rule and the general rule. As of 2006, we also collect information on the selling price (*ersättning*), capital gain (*vinst*), capital loss (*förlust*), and the fraction of the capital gain that is taxed at 20 percent (*fördelningsvinst*), 30 percent (*vinst i inkomstslaget kapital*) and as labor income (*belopp som beskattas i tjänst*).

## AII.2. Descriptive statistics

In this paragraph, we provide basic descriptive statistics on the corporate as well as the income tax data set for results presented in

the report. Statistics for the income tax data set are provided for both the representative sample and the full sample of closely held corporation owners.

### AII.2.1. Corporate tax

In Table AII.5, we present statistics for our main variables. We truncate variables at the 1st and 99th percentile. The table summarizes information on widely held as well as closely held corporations. From the sample, 60.65 percent of the corporation-year observations are closely held corporations. We define a corporation as closely held if we have a successful link from the K10 data to the corporate income tax data.

Table AII.5 shows that fixed assets, receivables, and cash are the most important balance sheet items. On average, they account for more than three quarters of the total assets. Other items such as intangibles, inventories, and financial assets are less important. For example, intangibles account for only 1.78 percent of total assets. On average, 52 percent of total assets are debt financed. However, more than 10 percent of the corporations have more debt than assets. Furthermore, 5.5 percent of total assets are financed by shareholder loans. The descriptive statistics indicate that this source of financing is concentrated among a specific group as the median has a value of zero. Our profitability measures show that Swedish corporations have an average turnover to asset ratio exceeding one. That is, their revenues are on average higher than the prior year's total assets. The average operating profit amounts to 21 percent. The standard deviation of 0.99 indicates that profits are very volatile. The average total assets amount to SEK 33 080 000 with a standard deviation of SEK 1 087 100 000. Average nominal capital amounts to SEK 3 627 000. The median is SEK 120 000 and thus very close to the required minimum of injected capital. The average corporation has 8 employees but the standard deviation is very high compared to the average. This indicates that there are few corporations with many employees. The dummy variables *minimum equity and equity<150k* show that 15.12 percent of all corporations have share capital of exactly SEK 100 000 and that about 80 percent of the corporations have equity of less than SEK 150 000.

**Table AII.5 Summary statistics for corporate sample**

| Variable | N | Mean | Standard Deviation | 10th percentile | Medain | 90th percentile |
|---|---|---|---|---|---|---|
| **Panel A: Assets** | | | | | | |
| *Intangibles* | 2 063 050 | 0.018 | 0.065 | 0.000 | 0.000 | 0.038 |
| *Fixed Assets* | 2 063 050 | 0.195 | 0.282 | 0.000 | 0.057 | 0.645 |
| *Financials* | 2 063 050 | 0.130 | 0.267 | 0.000 | 0.000 | 0.543 |
| *Inventories* | 2 063 050 | 0.107 | 0.205 | 0.000 | 0.000 | 0.407 |
| *Receivables* | 2 063 050 | 0.350 | 0.363 | 0.011 | 0.243 | 0.857 |
| *Cash* | 2 063 050 | 0.235 | 0.305 | 0.000 | 0.108 | 0.673 |
| *Total Assets* | 2 063 050 | 33.080 | 952.500 | 0.175 | 1.467 | 15.480 |
| **Panel B: Liabilities and Equity** | | | | | | |
| *Nom Equity* | 2 063 050 | 3.627 | 161.900 | 0.100 | 0.120 | 0.515 |
| *Min. Equity* | 2 063 050 | 0.151 | 0.358 | 0.000 | 0.000 | 1.000 |
| *Equity<150k* | 2 063 050 | 0.795 | 0.404 | 0.000 | 1.000 | 1.000 |
| *Ret. Earnings* | 2 063 050 | 0.165 | 0.517 | -0.119 | 0.157 | 0.642 |
| *Pensions* | 2 063 050 | 0.001 | 0.011 | 0.000 | 0.000 | 0.000 |
| *Provisions* | 2 063 050 | 0.035 | 0.073 | 0.000 | 0.000 | 0.134 |
| *Debt* | 2 063 050 | 0.522 | 0.465 | 0.032 | 0.459 | 1.003 |
| *Sh. Loan* | 2 063 050 | 0.055 | 0.155 | 0.000 | 0.000 | 0.170 |
| **Panel C: Profit and Turnover** | | | | | | |
| *Sales* | 2 063 050 | 1.597 | 1.808 | 0.000 | 1.106 | 3.897 |
| *Profits* | 2 063 050 | 0.222 | 0.990 | -0.461 | 0.024 | 1.150 |
| *Depreciation* | 2 063 050 | 0.042 | 0.057 | 0.000 | 0.020 | 0.119 |
| **Panel D: Corporation Characteristics** | | | | | | |
| *#Employees* | 2 038 696 | 8.012 | 102.300 | 0.000 | 1.000 | 11.000 |
| *Labor Costs* | 2 063 050 | 0.739 | 1.083 | 0.000 | 0.350 | 2.012 |
| *CHC* | 2 063 050 | 0.642 | 0.480 | 0.000 | 1.000 | 1.000 |
| *Age* | 1 964 570 | 15.160 | 13.530 | 3.000 | 12.000 | 33.000 |
| *Survival Rate* | 2 063 050 | 0.828 | 0.378 | 0.000 | 1.000 | 1.000 |

Note: This table presents descriptive statistics on our main variables for corporations during the 2000 to 2009 sample period. *Intangibles* is the ratio of intangible assets in year t relative to prior year total assets. *Fixed Assets* is the ratio of fixed assets in year t relative to prior year total assets. *Financials* is defined as financial assets normalized by prior year total assets. *Inventories* is the ratio of (short-term) inventory relative to prior year total assets. *Receivables* is defined as accounts receivables relative to prior year total assets. *Cash* measures cash holdings relative to prior year total assets. *Total Assets* is the value of total assets in SEK million. *Nom Equity* is the nominal capital in in SEK million. *Min. Equity* is a dummy variable taking the value 1 if the corporation has equity of SEK 100 000. *Equity<150k* is an indicator variable taking the value 1 if nominal equity is below SEK 150 000. *Ret. Earnings* is the ratio of retained earnings to prior year total assets. *Pensions* is defined as the pension provisions normalized by prior year total assets. *Provisions* is the ratio of provisions other than pensions in year t relative to prior year total assets. *Debt* is defined as the long-term and short-term debt normalized by prior year total assets. *Sh. Loan* measures the amount of shareholder loan relative to prior year total assets. *Sales* is defined as the turnover normalized by prior year total assets. *Profits* is defined as the operating profit normalized by prior year total assets. *Depreciation* is the ratio of scheduled depreciation in year t relative to prior year total assets. *#Employees* is the number of employees. *Labor Costs* is the ration of labor costs to total assets. *CHC* is an indicator variable taking the value 1 if the corporation has a link to the K10-statement and 0 otherwise. *Age* is the corporation age in years. Survival Rate is an indicator variable taking the value 1 if the exists until 2009 and 0 otherwise. We truncate all variables at the 1st and 99th percentile.

## AII.2.2. Income tax

### *AII.2.2.1. Full sample of corporation owners*

In this section, we present descriptive statistics on the full sample of closely held corporation owners. For our descriptive statistics, we further eliminate observations of total income that are not within the 0.01st and the 99.9th percentile of observations as well as individuals with more than SEK 1 billion in dividends from closely held corporations.[40] As additional variables, we include total income (earned plus capital plus business income) as well as four dummy variables indicating (i) whether an individual receives dividends, (ii) whether an individual receives dividends from his or her closely held corporation, (iii) whether an individual receives excess dividends from his or her closely held corporation, and (iv) whether an owner pays himself or herself a salary. Table AII.7 presents descriptive statistics for our main variables.

There are a few noteworthy observations from the descriptive statistics in Table AII.7. First, only 26 percent of the individuals are female. On average, owners are about 49 years old (median 50 years). About 70 percent of corporation owners are from larger cities (*stad*) and about a third reside in the respective county (*län*) capital (not reported in Table AII.7). About a quarter of the individuals have a university degree or higher. Their average total income amounts to SEK 475 215. The largest fraction arises from labor income (SEK 293 981) and capital income (SEK 113 255). Many individuals receive dividends (75 percent) but only a few receive dividends from their closely held corporation(s) (27 percent). Very few individuals pay excess dividends that are taxed as wages (3.6 percent). 60 percent of the tax statements contain wage income from the closely held corporation(s). On average, wages from the closely held corporations amount to SEK 165 526. Hence, for the average corporation owner, labor income from the closely held corporation is the most important income source.

[40] These nine observations increase the average CHC dividend from SEK 35 118 to SEK 174 679. The standard deviation increases from SEK 279 703 to SEK 212 335 302 when including these nine observations. This could also potentially be a data failure. By dropping these observations, we ensure that our means and standard deviations are not biased.

**Table AII.6 Summary statistics for all individuals with K10-forms**

| Variable | N | Mean | Standard Deviation | 10th percentile | Median | 90th percentile |
|---|---|---|---|---|---|---|
| **Panel A: Income elements** | | | | | | |
| *Total income* | 2 381 526 | 475 215 | 1 008 189 | 128 567 | 323 417 | 787 679 |
| *Income w/o CHC* | 2 381 526 | 271 037 | 936 113 | -14 950 | 110 696 | 592 776 |
| *Earned income* | 2 381 526 | 293 981 | 301 880 | 13 034 | 270 573 | 531 598 |
| *Business income* | 2 381 526 | 10 903 | 103 010 | 0 | 0 | 13 698 |
| *Capital income* | 2 381 526 | 113 255 | 847 074 | -28 596 | 3 821 | 199 265 |
| *Dividends* | 2 381 526 | 50 233 | 403 983 | 0 | 1 000 | 89 000 |
| *Dividends received?* | 2 381 526 | 0.7525 | 0.4315 | 0.0000 | 1.0000 | 1.0000 |
| **Panel B: Closely held corporation characteristics** | | | | | | |
| *Number of Firms* | 2 381 526 | 1.1450 | 0.4557 | 1.0000 | 1.0000 | 2.0000 |
| *Labor CHC* | 2 381 526 | 165 526 | 195 654 | 0 | 126 500 | 390 950 |
| *Salary CHC paid?* | 2 381 526 | 0.5962 | 0.4907 | 0.0000 | 1.0000 | 1.0000 |
| *Dividend CHC* | 2 381 526 | 35 118 | 279 703 | 0 | 0 | 61 200 |
| *Div CHC received?* | 2 381 526 | 0.2727 | 0.4454 | 0.0000 | 0.0000 | 1.0000 |
| *Excess Dividend* | 2 381 526 | 3 535 | 253 185 | 0 | 0 | 0 |
| *Excess Div paid?* | 2 381 526 | 0.0362 | 0.1868 | 0.0000 | 0.0000 | 0.0000 |
| *Acc Div Allowance* | 2 381 526 | 647 846 | 11 106 051 | 67 | 94 932 | 808 128 |
| *Invested Equity* | 2 381 526 | 119 714 | 4 587 213 | 0 | 59 000 | 120 000 |
| *Shareholder Loan* | 2 381 526 | 217 132 | 1 495 849 | 0 | 0 | 352 188 |
| *Low Turnover Firm* | 2 381 526 | 0.0906 | 0.2870 | 0.0000 | 0.0000 | 0.0000 |
| *Holding Corporation* | 2 381 526 | 0.0635 | 0.2438 | 0.0000 | 0.0000 | 0.0000 |
| *Profits CHC* | 2 381 526 | 648 904 | 10 583 979 | -189 273 | 4 873 | 1 088 332 |
| **Panel C: Individual characteristics** | | | | | | |
| *Age* | 2 381 526 | 49.3300 | 12.0900 | 33.0000 | 50.0000 | 64.0000 |
| *Female* | 2 381 526 | 0.2528 | 0.4346 | 0.0000 | 0.0000 | 1.0000 |
| *Tertiary education* | 2 381 526 | 0.1842 | 0.3876 | 0.0000 | 0.0000 | 1.0000 |
| *- Business degree* | 2 381 526 | 0.1628 | 0.3692 | 0.0000 | 0.0000 | 1.0000 |
| *- Law degree* | 2 381 526 | 0.0158 | 0.1247 | 0.0000 | 0.0000 | 0.0000 |
| *- IT degree* | 2 381 526 | 0.0111 | 0.1046 | 0.0000 | 0.0000 | 0.0000 |
| *- Medical degree* | 2 381 526 | 0.0247 | 0.1552 | 0.0000 | 0.0000 | 0.0000 |
| *City* | 2 381 526 | 0.7072 | 0.4550 | 0.0000 | 1.0000 | 1.0000 |

Note: This table presents descriptive statistics on our main variables using the full sample of closely held corporation owners for the period 2000-2009. Variables are described in Table AII.9.

### *AII.2.2.2. Representative panel of individuals*

Finally, we evaluate the representative panel of individuals. This panel enables us to contrast closely held corporation owners with the rest of the population. As for the full sample of corporation owners, we exclude all individuals that are not within the 0.01st and the 99.9th percentile of observations as well as individuals with more than SEK 1 billion in dividends from closely held corporations. We evaluate the same variables as in the previous section.

**Table AII.7 Summary statistics for representative sample**

| Variable | N | Mean | Standard Deviation | 10th percentile | Median | 90th percentile |
|---|---|---|---|---|---|---|
| **Panel A: Income elements** | | | | | | |
| *Total income* | 6102459 | 175465 | 200346 | 0 | 154506 | 362431 |
| *income w/o CHC* | 6102459 | 169228 | 191419 | 0 | 149466 | 354237 |
| *Labor income* | 6102459 | 166545 | 168280 | 0 | 151800 | 346169 |
| *Business income* | 6102459 | 4023 | 33193 | 0 | 0 | 0 |
| *Capital income* | 6102459 | 4897 | 79646 | -12338 | 1 | 8965 |
| *Dividends* | 6102459 | 2919 | 40258 | 0 | 3 | 3080 |
| *Dividends received?* | 6102459 | 0.5150 | 0.4998 | 0.0000 | 1.0000 | 1.0000 |
| **Panel B: Individual characteristics** | | | | | | |
| *Age* | 6102459 | 40.5500 | 23.6700 | 9.0000 | 40.0000 | 74.0000 |
| *Female* | 6102459 | 0.5041 | 0.5000 | 0.0000 | 1.0000 | 1.0000 |
| *Tertiary education* | 6102459 | 0.0973 | 0.2964 | 0.0000 | 0.0000 | 0.0000 |
| *- Business degree* | 6102459 | 0.0723 | 0.2589 | 0.0000 | 0.0000 | 0.0000 |
| *- Law degree* | 6102459 | 0.0052 | 0.0721 | 0.0000 | 0.0000 | 0.0000 |
| *- IT degree* | 6102459 | 0.0072 | 0.0843 | 0.0000 | 0.0000 | 0.0000 |
| *- Medical degree* | 6102459 | 0.0092 | 0.0957 | 0.0000 | 0.0000 | 0.0000 |
| *City* | 6102459 | 0.7312 | 0.4433 | 0.0000 | 1.0000 | 1.0000 |

Note: This table presents descriptive statistics on our main variables using the representative sample of individuals for the period 2000-2009. Variables are described in Table AII.9.

Table AII.7 presents statistics for the average taxpayer. On average, individuals are about 40.6 years old (median 40 years). About 73 percent of individuals are from larger cities (*stad*) and about 35 percent reside in the respective county (*län*) capital. About one tenth of the population has a tertiary degree (at least four years at a

university) or higher. Average total income amounts to SEK 175 465. The largest share of that income comes from labor income (SEK 166 545). Many individuals receive dividends (51.5 percent). Dividend income appears to be highly concentrated. Average dividends amount to SEK 2 919 and the standard deviation is SEK 40 258.

## AII.3 List of variables

### Table AII.8 List of corporation-level variables

| Label | Name in English | Name in Swedish | Description |
|---|---|---|---|
| *Intangibles* | Intangibles | Immateriella tillgångar | Ratio of intangible assets to prior year total assets |
| *Fixed assets* | Fixed assets | Materiella tillgångar | Ratio of fixed assets to prior year total assets |
| *Financials* | Financial assets | Finansiella tillgånga | Ratio of financial assets to prior year total assets |
| *Inventories* | Inventories | Varulager | Ratio of inventories to prior year total assets |
| *Receivables* | Receivables | Kortfristiga fordringar | Ratio of receivables to prior year total assets |
| *Cash* | Cash holdings | Kassa-, bank- och redovisningsmedel | Ratio of cash holdings and equivalents to prior year total assets |
| *Ret. earnings* | Retained earnings | Fritt eget kapital | Ratio of retained earnings (distributable profits) to prior year total assets |
| *Pensions* | Pensions | Pensioner | Ratio of pension provisions to prior year total assets |
| *Provisions* | Provisions | Reserveringar | Ratio of other provisions to prior year total assets |
| *Debt* | Debt | Långfristiga och kortfristiga skulder | Ratio of short-term and long-term debt to prior year total assets |
| *Sh. loan* | Shareholder loan | Lån från aktieägare | Ratio of shareholder loan to prior year total assets |
| *Sales* | Sales & turnover | Nettoomsättning | Ratio of turnover from operations to prior year total assets |
| *Profits* | Operating profit | Redovisad vinst/förlust | Ratio of operation profits/loss to prior year total assets |
| *Depreciation* | Depreciation | Av- och nedskrivningar | Ratio of depreciation to prior year total assets |
| *#Employees* | Number of employees | Antal anställda | Number of employees |
| *Labor costs* | Labor costs | Personalkostnader | Ratio of labor costs to prior year total assets |
| *Total assets* | Total assets | Totala tillgångar | Total assets in SEK million |
| *Nom equity* | Nominal capital | Bundet eget kapital | Share capital (not for distribution purposes) in SEK million |
| *Min. equity* | Minimum equity | Bundet eget kapital = SEK 100 000 | Dummy variable taking the value 1 if share capital is SEK 100 000 |
| *Equity<150k* | Low equity | Bundet eget kapital < SEK 150 000 | Dummy variable taking the value 1 if share capital is below SEK 150 000 |
| *Age* | Firm age | Bolagets ålder | Firm age in years |
| *CHC* | Closely held corporation | Fåmansbolag | Dummy variable taking the value 1 if any owner filed K10-form |
| *Survival rate* | Survival rate | Överlevnad till 2009 | Dummy variable taking the value 1 if firm exists until 2009 |

## Table AII.9 List of variables in the individual-level tests

| Label | Name in English | Name in Swedish | Description |
|---|---|---|---|
| *Total income* | Total income | Sammanräknad inkomst | Total income in SEK |
| *Income w/o CHC* | Total income without CHC | Sammanräknad inkomst utan K10-inkomst | Total income in SEK without any payments (dividend and salary) from closely held corporations |
| *Labor income* | Labor income | Inkomst av tjänst | Labor income in SEK |
| *Business income* | Business income | Näringsinkomst | Business income in SEK |
| *Capital income* | Capital income | Inkomst av kapital | Capital income in SEK |
| *Dividends* | Dividend | Aktieutdelning | Total dividends in SEK |
| *Dividends received?* | Dividend received? | Aktieutdelning > 0 | Dummy variable equal to1 if individual received dividend |
| *Number of Firms* | Number of CHCs(?) | Antal fåmansbolag | Number of CHCs invested in |
| *Labor CHC* | Wage from closely held firm | Lön från fåmansbolag | Salary from closely held firm in SEK |
| *Salary CHC paid?* | Wage received from closel held firm | Lön från fåmansbolag > 0 | Dummy variable equal to1 if individual received wage from K10 firm |
| *Dividend CHC* | Dividend from K10 | K10-utdelning | Dividends from K10 firm(s) in SEK |
| *Div CHC received?* | Dividend from K10 received? | K10-utdelning > 0 | Dummy variable equal to 1 if individual received dividend from K10 firm(s) |
| *Excess dividend* | Dividends from K10 taxed as wage | Överutdelning aktier, tjänst, från K10 | Total dividends that are taxed as wage in SEK |
| *Excess div paid?* | Dividend from K10 taxed as wage? | Överutdelning aktier, tjänst, från K10 > 0 | Dummy variable equal to 1 if individual received dividend that is taxed as wage |
| *Acc DivAllowance* | Accumulated dividend allowance | Sparat utdelnings-utrymme | Accumulated dividend allowance over sample years |
| *Invested equity* | Nominal equity in CHC | Aktiekapital i CHC | Invested nominal equity in a closely held corporations |
| *Shareholder loan* | Shareholder loans | Lån från aktieägare | Shareholder loans to CHC |
| *Low turnover firm* | CHC with low turnover | CHC med låg omsettning | Dummy variable equal to 1 if invested in CHC with low turnover |
| *Holding corporation* | Invested in holding CHC? | Investerad i holdingbolag? | Dummy variable equal to 1 if invested in holding CHC |
| *Profits CHC* | Profits of CHC | Rörelseresultat CHC | Sum of profits (weighted by share) |
| *Age* | Age | Ålder | Individual age in years |
| *Female* | Female | Kvinna | Dummy variable for female |
| *Tertiary education* | University degree | Eftergymnasial utbildning | Dummy variable for university degree |
| *- Business degree* | Business degree | Företagsekonomi-utbildning | Dummy variable for business degree |
| *- Law degree* | Law degree | Juristutbildning | Dummy variable for law degree |
| *- IT degree* | IT degree | IT-utbildning | Dummy variable for IT degree |
| *- Medical degree* | Medical degree | Medicinutbildning | Dummy variable for medical degree |
| *City* | City | Stad | Dummy variable equal to 1 if individual lives in city (codes ending 80 to 99) |

# Appendix III: Taxes and the choice of organizational form by Swedish business owners

by Karin Edmark and Roger Gordon

## AIII.1. Chapter summary

This chapter reports the findings in Edmark and Gordon (2012), who analyze the effect of taxes on Swedish small business owners' choice of the non-corporate[41] or closely held corporate form for their firm[42]. The results suggest that the effective tax rate for closely held corporations (CHCs) has decreased in recent years, particularly after 2006, and that many business owners would be subject to lower taxes if they choose to incorporate. Studying data on business owners in 2004–2008, we also find empirical evidence that this has led to more business owners choosing to incorporate.

The taxation of small businesses is an often discussed topic. In Sweden, the so called 3.12-rules in particular have been debated. The rules cap the amount of income that can be taxed as capital at the proportional 30 percent capital tax rate. The rules, critics have argued, mean that successful business may end up having a large part of their income taxed according to the progressive labor income tax rate, which exceeds 50 percent at high levels of income, instead of being subject to the lower flat capital tax rate. Moreover, it has been argued that this puts CHCs at a disadvantage compared to widely-held corporations and harms risk-taking and innovation in the small business sector.

[41] The most common types of non-corporate firms are sole proprietorships and partnerships. Sole proprietors are most common, and make up 80 percent of all non-corporate firms.
[42] A corporate firm is classified as closely held if no more than four owners own more than half of the shares and the firm is not traded on a regulated exchange.

In response to this critique, the amount of CHC-income that can be classified – and taxed – as capital was increased in 2006.[43] In addition, the capital tax rate on this allowed capital income amount was set at 20 percent instead of the ordinary 30 percent capital tax rate.[44] As a result, CHC-tax rates have decreased dramatically, particularly for firms with high capital and wage sums.

The reforms however did not apply to income from non-corporate firms. While they are also allowed to have a certain amount of income taxed as capital, this amount is considerably lower, and is furthermore subject to the ordinary 30 percent capital tax rate.

As a result, we find that the Swedish small business tax system in general favors CHCs over non-corporate firms. That is, when we calculate how the effective tax rate[45] on business income differs due to the choice to organize as non-corporate or CHC, we find that the average tax would often be lower if the firm were corporate. This is particularly true from year 2006 onwards, when firms with high business incomes and high capital and/or wage sums, can make substantial tax gains from incorporating. The exception is at low levels of income, where average tax rates on labor income are low due to the basic allowance[46] and (from 2007 on) the earned income tax credit. Here, both types of firms can take full advantage of these low tax rates on labor income, yielding very similar outcomes for both types of firms. Firms with losses furthermore face some tax advantages from being non-corporate.

We then test whether the different tax treatment of corporate and non-corporate closely held firms has affected the owners' choice of business organizational form. In order to answer this question, we use regression analysis where we can control for the influence of non-tax factors that also affect the choice to incorporate or not. The analysis is conducted on data on sole proprietorships[47] and closely held firms for the period 2004–2008,

[43] See Chapter 3 in this report for more details on the 2006 reform.
[44] Technically, this is achieved by taxing only 2/3 of income.
[45] This expression for the effective tax rate takes all taxes (including corporate and payroll taxes) into account, and assumes that the business owner makes decisions to classify income as earned or unearned and to make use of for example periodic and expansion funds ("periodiseringsfonder" and "expansionsfonder") in order to minimise total tax payments. See Edmark and Gordon (2012) for more details.
[46] The Swedish term is "Grundavdraget".
[47] Sole proprietorships account for 80 percent of all non-corporate firms (see the Swedish Companies Registration Office, www.bolagsverket.se).

and it contains detailed information both at the level of the firm and at the level of the business owner.

Taking into account a large set of non-tax factors, we find that tax incentives do influence the choice of business organizational form: The size of the estimates suggests that a one percent increase in net-of-tax income if closely held corporate instead of non-corporate, leads to a 0.75 percentage point increase in the likelihood that a firm organizes as closely held corporate. The incentives to incorporate are strongest for firms that face a mild tax advantage (i.e. a 0–3 percent increase in net-of-tax income) from being corporate: For these firms, a one percent increase in net-of-tax income if corporate, is associated with a 3.3 percentage point increase in the likelihood that the firm is closely held corporate.

Compared to the findings in the previous, mainly American, literature[48] these are fairly large effects. For example, MacKie-Mason and Gordon (1997) found, using aggregate time-series data for the United States, that a one percentage point increase in the corporate tax rate reduced the share of capital allocated to corporate firms by 0.2 percent. Studies using aggregate data, though, are dominated by large firms, which rarely change organizational form due to taxes, as a result of the large non-tax advantages they face from being corporate. Our study, in contrast, is confined to closely-held firms, where non-tax factors are a less dominant consideration. Our results are approximately half the size of those found in Goolsbee (2004), who found that a one percentage point increase in the corporate tax rate would reduce the share of retail firms that incorporated by 2.5 percent.

Our study is also related to Thoresen and Alstadsæter (2010), who study the choice of Norwegian self-employed individuals to incorporate. They have access to excellent individual and firm level data, and find that the Norwegian tax system has encouraged small business owners to organize as widely held corporations.

The remainder of this appendix is organized as follows: Section 2 gives a short overview of the tax rules for non-corporate firms, and Section 3 shows our calculations of the effective tax rates on business income that apply to non-corporate and closely-held corporate firms, respectively. Section AIII.3 presents and discusses the results of the empirical analysis.

[48] See Gordon and MacKie-Mason (1994), MacKie-Mason and Gordon (1997), and Goolsbee (1998, 2004).

## AIII.2. Tax rules for non-corporate firms

This section gives a brief description of the tax rules for the most common type of non-corporate firm, sole proprietorship[49], but similar rules apply to other non-corporate firms such as unlimited partnerships[50]. Since the tax rules for closely held corporations are described in Appendix 1 of this report, we refer to that section for the tax treatment of CHCs. We also refer to Edmark and Gordon (2012) for a more detailed description of the tax schedule for both the non-corporate and the closely held corporate case. The focus is on income from running a business, that is, we abstain from the case where the business owner makes a capital gain from selling the firm.[51]

The main rule is that income of a sole proprietor is classified as labor income, and hence subject to the following tax rates:

1) a payroll tax, with a rate equal to 22.9 percent in 2009, applied to gross earnings, or 29.71 percent on earnings net of payroll taxes.[52]
2) a municipal income tax, at a rate between 28 percent and 34 percent across municipalities.[53]
3) a slightly-progressive central government income tax, at rates of 0 percent, 20 percent and 25 percent.

Taxable income for municipal and central government income taxes is measured net of deductions for: the payroll tax; a basic allowance (varies with income; with a minimum of 11 000 and a maximum of SEK 18 000); and, from 2007 on, an EITC (which reduces taxable labor income at all income levels). The cumulative tax rate on labor income for a small business owner is hence roughly 0.51-0.685 percent, depending on income bracket.[54]

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[49] The Swedish term is ”Enskild näringsidkare”.
[50] The Swedish term is ”Handelsbolag”.
[51] For a more detailed description, see Edmark and Gordon (2012).
[52] he payroll tax for self-employed non-corporate business owners is slightly lower than that for employees (23.9 percent in 2009). Up to a certain earnings level, approximately SEK 429 500 in 2009, higher payroll tax payments make the individual eligible for higher social benefits, reducing the effective tax rate. Above this wage level, however, there is no link between payroll taxes and the level of social benefits, so that the individual faces the full statutory rate.
[53] In the empirical work, we set this rate equal to the average rate across municipalities each year.
[54] The marginal tax rates for lower-mid level income intervals are also affected by the fact that the basic allowance varies with income up to approximately SEK 300 000.

Sole proprietors are also allowed to classify a limited amount of income as capital, which is subject to a flat tax rate of 30 percent. This amount is calculated as the capital invested in the firm times a presumed rate of return, which is set equal to the long-term government bond rate + 5 percent. This so called "positive interest allocation"[55] is voluntary and can be made only if the net capital held in the firm at the beginning of the year is above SEK 50 000.

If there is a net capital deficit > SEK 50 000 at the beginning of the year, the firm is on the other hand required to report interest income on this deficit, the "negative interest allocation".

Sole proprietors are also allowed to allocate some business income to "expansion funds"[56] and "periodic funds"[57]. The periodic funds are a means to postpone taxation, and can be held for a maximum of six years until they are returned as taxable earnings. The expansion funds are taxed at the corporate rate, and aim to imitate the tax treatment of retained earnings in a corporation. When these funds are returned and subject to personal income tax, the corporate rate tax payments are returned.

## AIII.3. Tax rates for CHCs and sole proprietors

In order to estimate the effects of the tax system on the choice of organizational form, we first need to calculate the effective tax rates that apply to business owners of corporate and non-corporate closely held firms.

Given the complexity of the tax system, making some simplifying assumptions is inevitable: We calculate the tax rates that apply to business income from running a firm; that is, we do not treat the case where the business owner sells the firm and makes a capital gain. Moreover, we use a two-year model where business income can be funded within the firm during year 1 (in periodisation or expansion funds), but where all business income is taken out and taxed by the end of year 2.[58] Finally, we assume that the business owner classifies income as either earned or unearned (capital income) in a manner that minimises tax payments.

[55] The Swedish term is "Positiv räntefördelning".
[56] The Swedish term is "Expansionsfonder".
[57] The Swedish term is "Periodiseringsfonder".
[58] More detailed information on how we calculate the effective tax rates can be found in Edmark and Gordon (2012).

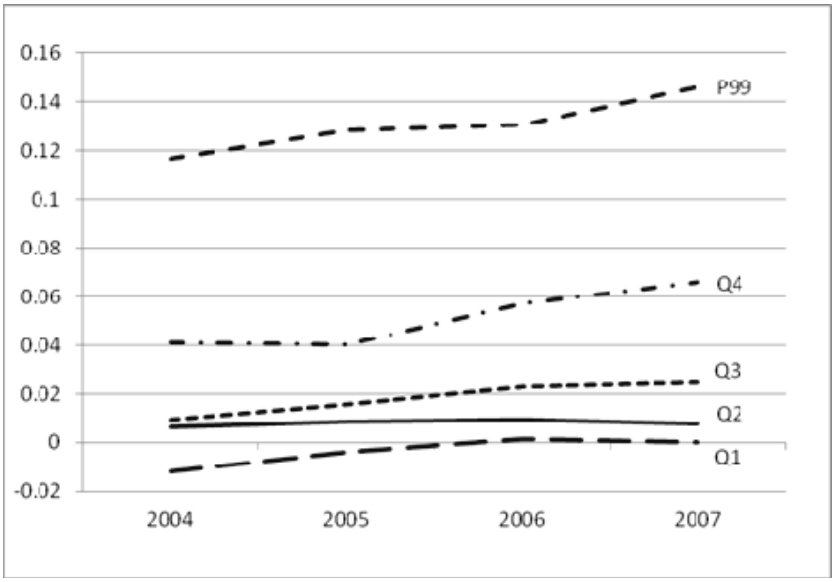
Using this two-year set-up, we calculate the average tax rates, i.e. total tax payments as a share of total business income, under the assumption first, that the firm is closely held corporate, and then, that the firm is non-corporate. That is, we calculate the tax rates that would apply under each alternative.

More specifically, our key tax variable in the regression analysis, denoted *YTdiff*, is defined as the percent drop in two-year after-tax income if the firm chooses to operate under the non-corporate instead of the corporate form (see Edmark and Gordon (2012) for the formal derivation of this expression). In other words, this measure shows how much a firm would gain in net-of-tax income from being a CHC instead of a sole proprietorship.

Figure AIII.1 shows how this variable varies over time, calculated for all business owners in our data and shown separately for owners with business revenue in each quartile (Q1–Q4).[59] In order to illustrate the much larger tax differential for high income firms, it also shows the measure separately for the top percentile of business income (P99).

[59] Note that the taxes depend not only on income but also on capital assets and wage sums. The tax rates are computed using an effective payroll tax of 20 percent for taxable income up to 7.5 basic amounts, following the calculations of Du Rietz (2003) regarding the size of offsetting social benefits over this range of incomes.

**Figure AIII.1 The difference in present value 2-period net-of-tax income of being corporate instead of non-corporate, as a share of the net-of-tax income if corporate: *YTdiff***




Note: Q1 denotes the lower 25 percentiles of firms with respect to business income in t; Q2 denotes percentiles 26-50; Q3 percentiles 51-75; and Q4 the upper 25 percent of the income distribution. P99 denotes the top percentile of the business income distribution.

As can be seen in Figure AIII.1, there is a clear tax advantage of being corporate instead of non-corporate at all levels of income except for the lowest income quartile, where there is in fact a small tax advantage of being non-corporate for the first couple of years of the data. The corporate tax advantage increases over time, and is particularly pronounced for firms with more business income. This is likely due to the high income firms also having high capital and wage sums. As noted in Section 1, high capital and wage sums give rise to a much more lenient tax treatment for CHCs, compared to non-corporate firms, from year 2006 on.

Our calculations hence show that firms face a different tax treatment depending on whether they are non-corporate or closely-held corporate, and Figure AIII.1 suggests that this tax differential varies both over time and between levels of business income.

## AIII.4. Empirical analysis

In this section, we test empirically whether the tax differentials, shown in the previous section, have affected business owners' choice of organizational form. In order to do so, we estimate the effect of our measure of tax incentives, *YTdiff* in Figure AIII.1, on the likelihood that a firm is closely-held corporate instead of non-corporate.

The analysis is conducted using data on business owners and firms for the period 2004–2008.[60,61] At the individual level, the data contain information on annual incomes, as well as socio-demographic characteristics, and an indicator for whether the individual is self-employed in a non-corporate business[62] or in a closely-held corporation. At the firm level, the data include tax return information on annual business revenues, total wage payments, and business assets. The data also include detailed information on business sector, and whether the business is corporate or non-corporate. The combination of these sources of data provides a broad base of information about both business owners and firms.[63]

In the estimations, we want to control for all non-tax factors that are likely to affect the decision to incorporate, and that could hence distort our estimates if omitted from the analysis. We therefore include the following variables in the analysis. At the firm level, we first include dummy variables for each decile of the distribution of capital assets, since firms with more capital are likely to gain more from incorporating due to their resulting improved access to risk sharing through outside equity finance. Second, during our sample period, capital assets of SEK 100 000 were required for a firm to be eligible to incorporate, leading us to include a dummy variable if this condition is satisfied. Third,

[60] Since our measure of the net-of-tax income differential is calculated over 2 years, we will be left with *t–1* years of data in the regressions, 2004–2007.
[61] The empirical analysis excludes firms that are owned by the government sector, as well as firms in the agricultural, forestry and fishing sectors. Only working-age individuals aged 20–64 are included in the data.
[62] Our data is limited to sole proprietorships, which is the most common form of non-corporate business.
[63] A key issue is how we link the individual business owners to their businesses. For owners of non-corporate sole proprietorships, this is straightforward, as the firm identification code in the business level data coincides with the personal identification code in the individual data. For owners of closely-held firms, no such direct link is available, and we need to rely on indirect information to obtain an approximate link between owners and firms. Detailed information about how this is done is given in Edmark and Gordon (2012).

corporations tend to be more common in some industries than in others; we therefore include dummy variables for each one-digit industry. Fourth, firms that have employees, and thereby face a fixed liability, gain more from having access to equity finance in order to diversify risks; we include a dummy for having employees. We also include the owner's average income during the five previous years (measured in SEK million) as an additional indicator of the expected scale of the business. The sector information is measured in period *t*, while the dummy variables for capital assets and employees are based on lagged values.[64]

It is also possible that personal characteristics, such as gender, age, education and marital status may affect the choice of organizational form, perhaps by serving as proxies for the expected size of the firm. We therefore add dummy variables to some of the specifications for gender, five-year age-groups, marital status, and being a college graduate, all measured in period *t*.

Finally, we include year dummies in some of the specifications, to check if aggregate time trends in the choice of organizational form affect the results.

Table AIII.1 shows descriptive statistics for the variables that are included in our analysis, divided into owners of non-corporate sole proprietorships, and closely-held corporate firms. The table first shows our main variable of interest, YTdiff, which measures the percent impact on net-of-tax income if a corporation were to instead choose to be a sole proprietorship. The table also gives summary statistics for the firm-level characteristics that are needed for the tax calculations, and/or are included in the regression analysis, and owner background characteristics.

[64] However, since we lack information on year 2003, for 2004, the current values are used for all variables. We will therefore test the robustness of the results to excluding year 2004.

**Table AIII.1 Descriptive statistics regression sample**

| Variables | Sole proprietors (SP) | | | Closely-held corporations (CHC) | | |
|---|---|---|---|---|---|---|
| | Obs | Mean | Std.dev. | Obs | Mean | Std.dev. |
| *Net-of-tax business revenue variables* | | | | | | |
| *YTdiff* | 209 580 | 0.97 | 4.25 | 159 288 | 3.08 | 5.37 |
| *Firm level characteristics* | | | | | | |
| Wage sum employees$_{t-1}$ | 209 498 | 29 959 | 148 968 | 159 220 | 564 745 | 1 567 499 |
| Wage sum owner $_{t-1}$[65] | 209 580 | 175 525 | 149 216 | 159 288 | 307 910 | 160 568 |
| Capital assets $_{t-1}$ | 209 580 | 119 105 | 552 081 | 159 288 | 871 657 | 1 682 306 |
| Business revenue$_{t-1}$ | 209 580 | 245 046 | 237 477 | 159 288 | 625 413 | 526 790 |
| *Owner background characteristics* | | | | | | |
| Average personal income previous 5 years | 209 580 | 179 447 | 158 089 | 159 288 | 329 966 | 209 161 |
| Age | 209 580 | 46 | 11 | 159 288 | 48 | 9 |
| Dummy male | 209 580 | 0.63 | 0.48 | 159 288 | 0.83 | 0.38 |
| Dummy university education | 208 682 | 0.52 | 0.50 | 158 913 | 0.57 | 0.50 |
| Dummy married/cohabiting[66] | 209 580 | 0.61 | 0.49 | 159 288 | 0.73 | 0.44 |

Using these data, we will estimate the following regression specification: A firm chooses to incorporate if and only if:

$$(1) \qquad \alpha + \beta \cdot YTdiff_{it} + Z_{it}\gamma + X_{it}\delta + \kappa_t\lambda_t + \tilde{\varepsilon}_{it} > 0\,,$$

In equation (1), $YTdiff_{it}$ is our variable of main interest; as explained above it denotes the percent drop in after-tax income if a corporation chooses instead to be non-corporate. $Z_{it}$ contains the business level non-tax factors described above (dummy variables for capital assets; industry sector dummies, and having employees), while $X_{it}$ is a matrix of the personal background dummy variables for gender, five-year age-groups, marital status and being a college graduate. $\kappa_t$ contains yearly dummy variables, and $\varepsilon_{it}$ is a normally distributed regression error term.

[65] For sole proprietors, who technically do not receive wage income, this refers to the personal income that is taxed as labor income.
[66] In the data, we can only observe if a non-married couple is cohabiting if they have common children. Cohabiting individuals without common children will be classified as single.

If tax incentives affect business owners' choice of organizational form, we expect a positive $\beta$ – all else equal, a higher net-of-tax return to being corporate rather than non-corporate increases the incentive for a business owner to incorporate.

Table AIII.2 shows the result of the regression specification in equation (1). The coefficients shown are the average marginal effects in percent from a probit-estimation.[67] We also show in column (5) the results when we assume that business owners evade part of their business income. Based on the estimates of Engström and Holmlund (2009), who estimate the tax evasion for closely held business owners and sole proprietors using expenditure data, we here assume that owners of CHCs evade 15 percent of income, while sole proprietors evade 40 percent of income.

The estimates in Table AIII.2 suggest that a one percent increase in net income from operating in corporate rather than non-corporate form leads, on average, to a 0.75 percentage point increase in the probability that the firm incorporates. The size of the coefficient is robust across specifications in columns (2)–(4), i.e. when gradually more non-tax factors, as well as time dummies, are added to the regression. The coefficient obtained when no non-tax factors are included in the specification, column (1), is more than double in size, which confirms that tax incentives favoring incorporation are positively correlated with non-tax incentives favoring incorporation. This suggests that it is important to control for these non-tax factors in the analysis.

[67] Note that these coefficients measure the average across sample observations of the impact of a one percent change in *YTdiff* on the probability of incorporating. Given the probit specification, the estimated effect of a change in *YTdiff* varies across firms, with larger effects for firms that otherwise are close to indifferent about their choice of organsational form.

**Table AIII.2 Regression results[68] Dependent variable: dCHC**

| VARIABLES | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| *Ytdiff* | 2.366*** | 0.732*** | 0.762*** | 0.750*** | 0.126*** |
| | (0.029) | (0.020) | (0.021) | (0.021) | (0.006) |
| Average income 5 years (in SEK m) | | 0.143*** | 0.142*** | 0.115*** | 0.163*** |
| | | (0.007) | (0.007) | (0.007) | (0.007) |
| $Employees_{t-1} > 0$ | | 0.230*** | 0.229*** | 0.229*** | 0.240*** |
| | | (0.002) | (0.002) | (0.002) | (0.002) |
| $Capital_{t-1} > 100k$ | | 0.0758*** | 0.0758*** | 0.0746*** | 0.0746*** |
| | | (0.0044) | (0.0044) | (0.0044) | (0.0044) |
| Capital asset dummies | No | Yes | Yes | Yes | Yes |
| Sector dummies | No | Yes | Yes | Yes | Yes |
| Year dummies | No | No | Yes | Yes | Yes |
| Owner background covariates | No | No | No | Yes | Yes |
| Tax evasion | No | No | No | No | Yes |
| Log likelihood | −243 703 | −131 248 | −131 138 | −129 701 | −130 319 |
| Observations | 368 868 | 368 859 | 368 859 | 367 589 | 367 594 |

Note: Robust standard errors in parentheses, clustered at the firm level, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

When we adjust reported business income for tax evasion, according to the estimates in Engström and Holmlund (2009), the coefficient of the tax-variable *YTdiff* decreases dramatically. A likely explanation is that our assumption of tax evasion was too crude, and therefore, rather than improving the tax measure, gave rise to more measurement error and a worse fit of the regression model (as indicated by the lower Log likelihood statistic).

Among the non-tax factors, we find that having employees in particular is strongly correlated with being corporate. Having more capital also leads more firms to incorporate. Owners with higher previous average income, and who are male, married, in their 40s or 50s, and have a college degree, are all much more likely to incorporate.

The results so far assume that the impact of taxes is the same regardless of the characteristics of the firm, or the magnitude of the tax differential. In Table AIII.3, we allow for variation in the

[68] The table shows the marginal effect averaged over the sample observations, obtained using the Stata command margins. The full set of coefficients is available in Edmark and Gordon (2012).

impact of taxes across types of firms.[69] In particular, we allow for differential effects: i) for firms with sufficient capital to have the option of being corporate (column (2)); ii) for firms with employees (in addition to the owner(s)); iii) for firms in the service sector, and iv) for different segments of the net-of-tax income measure *YTdiff*. The latter is done by introducing a piece-wise linear function of *YTdiff*, with changes in the slope at values 0 percent and 3 percent.

[69] More specifically, the estimates were obtained by adding the interaction of *YTdiff* and the categorical variable (along with dummies for the categories) to the model.

**Table AIII.3 Regression results[70] Dependent variable: dCHC**

| VARIABLES | Baseline | Capital | Employees | /Non/ Service sector | Spline *YTdiff* |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| YTdiff | 0.750*** | | | | |
| | (0.021) | | | | |
| YTdiff: $Capital_{t-1} \leq 100k$ | | 0.395*** | | | |
| | | (0.019) | | | |
| YTdiff: $Capital_{t-1} > 100k$ | | 1.108*** | | | |
| | | (0.037) | | | |
| YTdiff:$Employees_{t-1} = 0$ | | | 0.789*** | | |
| | | | (0.024) | | |
| YTdiff:$Employees_{t-1} > 0$ | | | 0.661*** | | |
| | | | (0.036) | | |
| YTdiff: Non Service Sector | | | | 1.143*** | |
| | | | | (0.044) | |
| *YTdiff*: Service Sector | | | | 0.589*** | |
| | | | | (0.022) | |
| *YTdiff*: *YTdiff*<0 percent | | | | | 0.190*** |
| | | | | | (0.051) |
| *YTdiff*: *YTdiff* 0-3 percent | | | | | 3.254*** |
| | | | | | (0.126) |
| *YTdiff*: *YTdiff*>3 percent | | | | | 0.069*** |
| | | | | | (0.029) |
| Firm characteristics | Yes | Yes | Yes | Yes | Yes |
| Capital asset dummies | Yes | Yes | Yes | Yes | Yes |
| Sector dummies | Yes | Yes | Yes | Yes | Yes |
| Year dummies | Yes | Yes | Yes | Yes | Yes |
| Owner background covariates | Yes | Yes | Yes | Yes | Yes |
| Log likelihood | −129701 | −129670 | −129701 | −129638 | −128663 |
| Observations | 367 589 | 367 589 | 367 589 | 367 589 | 367 589 |

Note: Robust standard errors in parentheses, clustered at the firm level, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table AIII.3 shows the average marginal effects of *YTdiff* for the respective categories, that is, column (2) shows the marginal effects

[70] The table shows the marginal effect averaged over the sample observations, obtained using the Stata command margins. The full set of coefficients is available in Edmark and Gordon (2012).

for the firms without and with sufficient capital to be corporate, respectively, column (3) shows the same for firms without and with employees, et cetera. For reference, Column (1) reproduces the baseline result from column (4) in Table 3.

The results in column 2 indicate that the response to tax differences is larger among firms with sufficient capital (in the previous year) to incorporate, while those in column 4 suggest that the effect is smaller for firms in the service sector. As seen in column 3, tax effects on average do not vary much between firms with or without employees.

The most striking result, as seen in column 5, is that taxes matter at the margin only for firms that already face a small tax advantage in being corporate (a gain of zero to three percent of income if corporate). Here, a 1 percent increase in income if corporate, increases the share of firms that are corporate by 3.3 percent. For other firms, both those with a tax advantage to being non-corporate and those already facing a larger tax advantage to being corporate, tax changes have a minimal effect. Presumably, these firms are already mostly non-corporate or corporate, so marginal changes in the tax rate differential in these intervals do not induce any further changes.

In addition to the specifications shown above, we have also run a set of alternative specifications to test the robustness of the results. First, we used an alternative assumption for the effective payroll tax. Second, in order to avoid any chance that business owners are linked to the wrong firm, we included only business owners with links to one workplace, and third, we excluded all CHCs with more than one owner, since it is less clear how the decision on organizational form is made when there are several owners. Finally, we omitted year 2004 from the estimation, since for 2004 we do not have access to information on lagged variables that are needed for the tax calculations, and instead used current values for that year. The results, available in Edmark and Gordon (2012), yield qualitatively similar impacts of tax changes on the choice of organizational form.

## AIII.5. Conclusions

In sum, our study shows that high income owners of closely held firms face strong tax incentives to incorporate, while at low income

levels, the tax treatment of corporate and non-corporate closely held corporations is fairly neutral. An empirical analysis on data for 2004–2008, furthermore suggests that business owners react strongly in response to these tax incentives.

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*1997*

- Fisk och Fusk - Mål, medel och makt i fiskeripolitiken.
- Ramar, regler, resultat - vem bestämmer över statens budget?
- Lönar sig arbete?
- Egenföretagande och manna från himlen.
- Jordbruksstödet - efter Sveriges EU-inträde.

*1996*

- Kommunerna och decentraliseringen - Tre fallstudier.
- Novemberrevolutionen - om rationalitet och makt i beslutet att avreglera kreditmarknaden 1985.
- Kan myndigheter utvärdera sig själva?
- Nästa steg i telepolitiken.
- Reglering som spel - Universiteten som förebild för offentliga sektorn?
- Hur effektivt är EU:s stöd till forskning och utveckling? - En principdiskussion.

*1995*

- Kapitalets rörlighet Den svenska skatte- och utgiftsstrukturen i ett integrerat Europa.
- Generationsräkenskaper.
- Invandring, sysselsättning och ekonomiska effekter.
- Hushållning med knappa naturresurser Exemplet sportfiske.

- Kostnader, produktivitet och måluppfyllelse för Sveriges Television AB.
- Vad blev det av de enskilda alternativen? En kartläggning av verksamheten inom skolan, vården och omsorgen.
- Hushållning med knappa naturresurser Exemplen allemansrätten, fjällen och skotertrafik i naturen.
- Företagsstödet Vad kostar det egentligen?
- Försvarets kostnader och produktivitet.

*1994*

- En effektiv försvarspolitik? Fredsvinst, beredskap och återtagning.
- Skatter och socialförsäkringar över livscykeln En simuleringsmodell.
- Nettokostnader för transfereringar i Sverige och några andra länder.
- Fördelningseffekter av offentliga tjänster.
- En Social Försäkring.
- Valfrihet inom skolan Konsekvenser för kostnader, resultat och segregation.
- Skolans kostnader, effektivitet och resultat En branschstudie.
- Bensinskatteförändringens effekter.
- Budgetunderskott och statsskuld Hur farliga är de?
- Den svenska insolvensrätten Några förslag till förbättringar inom konkurshanteringen m.m.
- Det offentliga stödet till partierna Inriktning och omfattning.
- Den offentliga sektorns produktivitetsutveckling 1980 – 1992.
- Kvalitet och produktivitet - Teori och metod för kvalitetsjusterande produktivitetsmått.
- Kvalitets- och produktivitetsutvecklingen i sjukvården 1960 – 1992.
- Varför kulturstöd? Ekonomisk teori och svensk verklighet.
- Att rädda liv Kostnader och effekter.

*1993*

- Idrott åt alla? Kartläggning och analys av idrottsstödet.

- Social Security in Sweden and Other European Countries Three Essays.
- Lönar sig förebyggande åtgärder? Exempel från hälso- och sjukvården och trafiken.
- Hur välja rätt investeringar i transportinfrastrukturen?
- Presstödets effekter en utvärdering.

*1992*

- Statsskulden och budgetprocessen.
- Press och ekonomisk politik tre fallstudier.
- Kommunerna som företagsägare - aktiv koncernledning i kommunal regi.
- Slutbudsmetoden ett sätt att lösa tvister på arbetsmarknaden utan konflikter.
- Hur bra är vi? Den svenska arbetskraftens kompetens i internationell belysning.
- Statliga bidrag motiv, kostnader, effekter?
- Vad vill vi med socialförsäkringarna?
- Fattigdomsfällor.
- Växthuseffekten slutsatser för jordbruks-, energi- och skattepolitiken.
- Frihandeln ett hot mot miljöpolitiken eller tvärtom?
- Skatteförmåner och särregler i inkomst- och mervärdesskatten.

*1991*

- SJ, Televerket och Posten bättre som bolag?
- Marginaleffekter och tröskeleffekter barnfamiljerna och barnomsorgen.
- Ostyriga projekt att styra stora kommunala satsningar.
- Prestationsbaserad ersättning i hälso- och sjukvården vad blir effekterna?
- Skogspolitik för ett nytt sekel.
- Det framtida pensionssystemet två alternativ.
- Vad kostar det? Prislista för statliga tjänster.
- Metoder i forskning om produktivitet och effektivitet med tillämpningar på offentlig sektor.
- Målstyrning och resultatuppföljning i offentlig förvaltning.

*1990*

- Läkemedelsförmånen.
- Sjukvårdskostnader i framtiden vad betyder åldersfaktorn?
- Statens dolda kapital. Aktivt ägande: exemplet Vattenfall.
- Skola? Förskola? Barnskola?
- Bostadskarriären som en förmögenhetsmaskin.

*1989*

- Arbetsmarknadsförsäkringar.
- Hur ska vi få råd att bli gamla?
- Kommunal förmögenhetsförvaltning i förändring – city-kommunerna Stockholm, Göteborg och Malmö.
- Bostadsstödet - alternativ och konsekvenser.
- Produktivitetsmätning av folkbibliotekens utlåningsverksamhet.
- Statsbidrag till kommuner: allt på en check eller lite av varje? En jämförelse mellan Norge och Sverige.
- Vad ska staten äga? De statliga företagen inför 90-talet.
- Beställare-utförare - ett alternativ till entreprenad i kommuner.
- Lönestrukturen och den "dubbla obalansen" - en empirisk studie av löneskillnader mellan privat och offentlig sektor.
- Hur man mäter sjukvård - exempel på kvalitet- och effektivitets-mätning.

*1988*

- Vad kan vi lära av grannen? Det svenska pensionssystemet i nordisk belysning.
- Kvalitet och kostnader i offentlig tjänsteproduktion.
- Alternativ i jordbrukspolitiken.
- Effektiv realkapitalanvändning i kommuner och landsting.
- Hur stor blev tvåprocentaren? Erfarenheten från en besparings-teknik.
- Subventioner i kritisk belysning.
- Prestationer och belöningar i offentlig sektor.
- Produktivitetsutveckling i kommunal barnomsorg.
- Från patriark till part - spelregler och lönepolitik för staten som arbetsgivare.
- Kvalitetsutveckling inom den kommunala barnomsorgen.

*1987*

- Integrering av sjukvård och sjukförsäkring.
- Produktkostnader för offentliga tjänster - med tillämpningar på kulturområdet.
- Kvalitetsutvecklingen inom den kommunala äldreomsorgen 1970-1980.
- Vägar ut ur jordbruksregleringen - några idéskisser.
- Att leva på avgifter - vad innebär en övergång till avgiftsfinansiering?

*1986*

- Offentliga utgifter och sysselsättning.
- Produktions-, kostnads-, och produktivitetsutveckling inom den offentliga finansierade utbildningssektorn 1960-1980.
- Socialbidrag. Bidragsmottagarna: antal och inkomster. Socialbidragen i bidragssystemet.
- Regler och teknisk utveckling.
- Kostnader och resultat i grundskolan - en jämförelse av kommuner.
- Offentliga tjänster - sökarljus mot produktivitet och användare.
- Svensk inkomstfördelning i internationell jämförelse.
- Byråkratiseringstendenser i Sverige.
- Effekter av statsbidrag till kommuner.
- Effektivare sjukvård genom bättre ekonomistyrning.
- Samhällsekonomiskt beslutsunderlag - en hjälp att fatta bättre beslut.
- Produktions-, kostnads- och produktivitetsutveckling inom armén och flygvapnet 1972-1982.

*1985*

- Egen regi eller entreprenad i kommunal verksamhet – möjligheter, problem och erfarenheter.
- Sociala avgifter - problem och möjligheter inom färdtjänst och hemtjänst.
- Skatter och arbetsutbud.
- Produktions-, kostnads- och produktivitetsutveckling inom vägsektorn.

- Organisationer på gränsen mellan privat och offentlig sektor – förstudie.
- Frivilligorganisationer alternativ till den offentliga sektorn?
- Transfereringar mellan den förvärvsarbetande och den äldre generationen.
- Produktions-, kostnads- och produktivitetsutveckling inom den sociala sektorn 1970-1980.
- Produktions-, kostnads- och produktivitetsutveckling inom offentligt bedriven hälso- och sjukvård 1960-1980.
- Statsskuldräntorna och ekonomin effekter på den samlade efterfrågan i samhället.

*1984*

- Återkommande kostnads- och prestationsjämförelser - en metod att främja effektivitet i offentlig tjänsteproduktion.
- Parlamentet och statsutgifterna hur finansmakten utövas i nio länder.
- Transfereringar och inkomstskatt samt hushållens materiella standard.
- Marginella expansionsstöd ekonomiska och administrativa effekter.
- Är subventioner effektiva?
- Konstitutionella begränsningar i riksdagens finansmakt - behov och tänkbara utformningar.
- Perspektiv på budgetunderskottet, del 4. Budgetunderskott, utlandsupplåning och framtida konsumtionsmöjligheter. Budgetunderskott, efterfrågan och inflation.
- Vem utnyttjar den offentliga sektorns tjänster.

*1983*

- Administrationskostnader för våra skatter.
- Fördelningseffekter av kommunal barnomsorg.
- Perspektiv på budgetunderskottet, del 3. Budgetunderskott, portföljeval och tillgångsmarknader. Modellsimuleringar av offentliga besparingar m.m.
- Produktivitet i privat och offentliga tandvård.
- Generellt statsbidrag till kommuner – modellskisser.

- Administrationskostnader för några transfereringar.
- Driver subventioner upp kostnader - prisbildningseffekter av statligt stöd.
- Minskad produktivitet i offentlig sektor - en studie av patent- och registreringsverket.
- Perspektiv på budgetunderskottet, del 2. Fördelningseffekter av budgetunderskott. Hushållsekonomi och budgetunderskott.
- Enhetligt barnstöd? några variationer på statligt ekonomiskt stöd till barnfamiljer.
- Staten och kommunernas expansion några olika styrmedel.

*1982*

- Ökad produktivitet i offentlig sektor - en studie av de allmänna domstolarna.
- Offentliga tjänster på fritids-, idrotts- och kulturområdena.
- Perspektiv på budgetunderskottet, del 1. Budgetunderskottens teori och politik. Statens budgetfinansiering och penning-politiken.
- Inkomstomfördelningseffekter av livsmedelssubventioner.
- Perspektiv på besparingspolitiken.