Owner-Level Taxes and Business Activity

Magnus Henrekson
Research Institute of Industrial Economics,
Stockholm, Sweden
magnus.henrekson@ifn.se

Tino Sanandaji
Stockholm School of Economics,
Sweden
tino.sanandaji@gmail.com

the essence of knowledge
Boston — Delft

Foundations and Trends® in Entrepreneurship

Published, sold and distributed by:
now Publishers Inc.
PO Box 1024
Hanover, MA 02339
United States
Tel. +1-781-985-4510
www.nowpublishers.com
sales@nowpublishers.com

Outside North America:
now Publishers Inc.
PO Box 179
2600 AD Delft
The Netherlands
Tel. +31-6-51115274

The preferred citation for this publication is

M. Henrekson and T. Sanandaji. *Owner-Level Taxes and Business Activity.* Foundations and Trends® in Entrepreneurship, vol. 12, no. 1, pp. 1–94, 2016.

This Foundations and Trends® issue was typeset in LaTeX using a class file designed by Neal Parikh. Printed on acid-free paper.

ISBN: 978-1-68083-105-4

Full text available at: http://dx.doi.org/10.1561/0300000060

Foundations and Trends® in Entrepreneurship

Volume 12, Issue 1, 2016

Editorial Scope

Topics

Foundations and Trends® in Entrepreneurship publishes survey and tutorial articles in the following topics:

- Nascent and start-up entrepreneurs
- Opportunity recognition
- New venture creation process
- Business formation
- Firm ownership
- Market value and firm growth
- Franchising
- Managerial characteristics and behavior of entrepreneurs
- Strategic alliances and networks
- Government programs and public policy
- Gender and ethnicity
- New business financing
- Family-owned firms
- Management structure, governance and performance
- Corporate entrepreneurship
- High technology
- Small business and economic growth

Information for Librarians

Foundations and Trends® in Entrepreneurship, 2016, Volume 12, 6 issues. ISSN paper version 1551-3114. ISSN online version 1551-3122. Also available as a combined paper and online subscription.

Foundations and Trends® in Entrepreneurship
Vol. 12, No. 1 (2016) 1–94

DOI: 10.1561/0300000060

Owner-Level Taxes and Business Activity

Magnus Henrekson
Research Institute of Industrial Economics,
Stockholm, Sweden
magnus.henrekson@ifn.se

Tino Sanandaji
Stockholm School of Economics,
Sweden
tino.sanandaji@gmail.com

Full text available at: http://dx.doi.org/10.1561/0300000060

Contents

Abstract

In some classes of models, taxes at the owner level are "neutral" and have no effect on firm activity. However, this tax neutrality is sensitive to assumptions and no longer holds in more complex models. We review recent research that incorporates greater complexity in studying the link between taxes and business activity — particularly entrepreneurship.

Dividend taxes on owners of large firms affect firm activity in models that include agency conflicts between owners and managers. Similarly, after incorporating entrepreneurs' occupational choice into the model, taxes are no longer neutral. By forsaking lucrative alternative careers, skilled entrepreneurs tend to have high opportunity costs, which make the choice of attempting to start a business of first order importance. Moreover, in models where it is assumed that capital flows across borders without cost, taxes on domestic business owners do not alter business activity because foreign capital seamlessly compensates for tax-induced declines in investments. This theoretical notion is contradicted by the strong "home bias" observed in business ownership, in particular for small firms and startups without easy access to international capital markets.

Recent empirical work has emphasized that taxes have heterogeneous effects on mature firms, entrepreneurial startups, and owner-managed small firms. Lowering dividend taxes on firms with dispersed ownership has been shown to shift capital from mature firms into rapidly growing firms. Moreover, capital gains taxation tends to reduce the number of innovative startups and diminish venture capital activity, while high owner-level taxes encourage small business activity and non-entrepreneurial self-employment because such firms have more opportunities to avoid or evade taxes.

To obtain efficient incentives in entrepreneurial startups, contractual terms are required that *ex ante* guarantee that all providers of

critical inputs, especially equity-constrained entrepreneurs, are entitled to a share of the resulting capital value of the firm. Unless properly designed, owner-level taxes prevent such *ex ante* contracting and thus lower the likelihood of eventual success.

M. Henrekson and T. Sanandaji. *Owner-Level Taxes and Business Activity*. Foundations and Trends® in Entrepreneurship, vol. 12, no. 1, pp. 1–94, 2016.
DOI: 10.1561/0300000060.

Executive Summary

In recent years, advances in both theoretical and empirical research have painted a clearer picture of the effects of owner-level taxation on business activity. Commonly used macroeconomic models tend to find that taxes at the owner level are "neutral" and have little or no effect on firm activity. However, the conclusion that ownership taxation has no effect on firm behavior — and, as a corollary, on entrepreneurship — is derived from models based on certain (unrealistic) simplifications. Thus, the internal behavior of firms in these models is often treated as a black box, which effectively abstracts from certain features of firm activity. In general, models whose assumptions are simplified to exclude a dimension of choice or complexity cannot identify the distortionary effects of taxation on this dimension. When complex and more realistic dimensions such as entrepreneurship and corporate governance are incorporated into these models, taxes can affect business activity through these channels.

Dividend taxes on owners of large firms are no longer neutral in models that incorporate agency conflicts between owners and managers. Similarly, taxes are no longer neutral after incorporating the entrepreneur's occupational choice into the model. Potentially innovative entrepreneurs are few and not easily replaced. They have typically left secure and high-paying jobs to start their own companies — a proposition that entails a high risk of failure. Taxes largely determine how lucrative these choices are, which makes occupational choice a central variable in taxation models that incorporate entrepreneurship.

Taxes on domestic business owners do not affect business activity in small open economies when capital is assumed to flow without cost across countries. However, this assumption is not consistent with the strong observed "home bias" in business ownership. Due to information costs, network effects, proximity advantages, corporate governance, and other reasons, investors tend to prefer to invest in their home country. Such a persistent home bias indicates that the neutrality result for owner-level taxes in small open economies no longer holds because domestic business ownership can no longer be expected to be fully replaced by foreign ownership, in particular for those small firms and startups that do not have easy access to international capital markets.

Recent empirical research has emphasized the importance of distinguishing among various types of firms. Taxes do not have the same effect on mature firms, entrepreneurial startups, and small owner-managed firms. Although no robust link has been established empirically between the general tax rate and small business activity, studies consistently find that capital gains taxation tends to be associated with fewer innovative startups and diminished venture capital activity.

Taxes are often found to affect mature and cash-constrained firms in different or even opposite ways. Lower taxes on dividends lead to increased dividend payouts — and reduced investments — by mature firms with substantial cash flows, which in turn makes capital available to credit-constrained firms; in other words, large and mature firms are less likely to hold cash, freeing it up for investment in smaller and rapidly growing firms. Consequently, the effect of the tax cut on investments is not uniform. Mature firms may react differently to taxes than entrepreneurial startups that rely on external capital. To the extent that new and growing firms have a role as radical innovators and prime contributors to creative destruction [Schumpeter, 1934], this type of taxation hampers Schumpeterian creative destruction by favoring existing firms over new firms.

Similarly, small "mom-and-pop" businesses may differ significantly from high-tech startups in their behavioral responses to taxes. The group of firms that are ambitiously innovative and rapidly growing is far smaller and quite different from the broader group of firms. High levels of taxation may in fact promote small business activity and non-entrepreneurial self-employment because such firms have more opportunities to avoid or evade taxes. However, the potential for rapid growth and innovation is often low in business activities motivated by tax avoidance. By contrast, high tax rates tend to reduce the ability of new innovative startups to attract capital and entrepreneurial talent from competing sectors.

When the elasticity of taxable income is used as the relevant measure, virtually all studies find that business owners are more responsive to income tax than salaried employees, at least partly due to the greater flexibility in tax planning enjoyed by owners/entrepreneurs. There is also some evidence suggesting that entrepreneurs may be more responsive to taxation in real terms — perhaps because their efforts are rewarded with a greater share of firm profit than salaried employees.

Notably, the common notion that income emanates either from capital or from labor is derived from a simplified model of reality. In certain applications, it may be reasonable to consider entrepreneurship as a separate factor of production with unique features that make distinct contributions to value added. This clarifies that owner-level taxation is unlikely to be neutral with respect to allocating and utilizing entrepreneurial talent. When examining entrepreneurship, the return on labor cannot be distinguished from the return on capital because the value created emanates from the combination of entrepreneurial talent, labor effort, human capital, and financial capital. Likewise, the contribution that the capital from outside investors makes to value creation cannot be separated from the entrepreneurial insight, knowledge, and effort supplied by the founder(s) and key employees.

Great value can be created if the concerted effort of this inseparable bundle of inputs results in the emergence of a successful firm. To obtain efficient incentives, contractual terms are required that *ex ante* guarantee that all providers of inputs to the inseparable bundle will receive a share of the capital value that may be created by building the firm. Unless properly designed, owner-level taxes prevent such *ex ante* contracting and lessen the likelihood of eventual success.

Startups funded by venture capital rely heavily on stock options and convertible equity to compensate owners and design contracts that harmonize incentives across agents — founders, financiers, and key employees. These types of financial instruments are believed to be well suited for addressing the complex contractual problems characterizing venture capital-funded firms and are widely used when they are taxed at a low rate. We show that there is a strong cross-country association between the *de facto* tax on stock options and venture capital activity.

A key lesson from this essay is that the models used in economics are necessarily simplified. Moreover, it is important for political decision makers to be conscious of these simplifications when the conclusions derived from economic models motivate or are used to justify tax policy decisions. Conclusions from overly simplified models — such as the model that concludes that dividend taxes do not influence firm behavior — may thus change when additional factors are considered.

Introduction

Most countries tax business activity at both the firm and owner levels. Unlike corporations, which pay a tax on their profits, owners of corporations pay a tax on both *dividends* and *realized capital gains*. There is an extensive literature on the effects of ownership taxation on mature corporations with dispersed ownership. Although less extensive, the research on how dividend and capital gains taxation influences business creation and entrepreneurship is steadily growing.

There is no consensus on how ownership taxation influences the behavior of large public firms. Instead, various schools of thought — or "views" — have emerged and come to quite different conclusions regarding the effects of owner-level taxation. The school of thought known as the "new view" concludes that ownership taxation is relatively unimportant to firm and investment behavior, whereas the "traditional" or "old view" concludes that such taxes have significant distortionary effects on such behavior. The differences in these conclusions depend on how business activities are modeled theoretically and on the assumptions they make regarding the firm's sources of finance.

The conclusion that ownership taxation has no effect on firm behavior — and, as a corollary, on entrepreneurship — derives from macroeconomic models in which firms are modeled in a simplified manner or are simply absent. The internal behavior of firms is often treated as a black box, which effectively abstracts from certain features of firm activity. However, this class of taxation models ignores three particular and important factors: entrepreneurship, corporate governance, and the imperfect mobility of capital between countries. The effect of ownership taxation on new and entrepreneurial firms is shown to be sensitive to whether entrepreneurs are incorporated into the models. The predicted effects of owner-level taxation on public firms with dispersed ownership can, for example, be reversed by considering the effects on corporate governance. Another empirically questionable assumption that can lead to the conclusion that ownership taxation is unimportant for both large companies and entrepreneurship is that foreign capital is a perfect substitute for domestic capital.

In recent years, the pendulum has swung back in the sense that theoretical and empirical research has reverted to the position that ownership taxation does affect firm activity. New models that incorporate complex dimensions (such as entrepreneurship and corporate governance) find the effect of taxes operating through these dimensions. Meanwhile, in the wake of both major changes in capital taxation in the United States and methodological advances, many new empirical studies on ownership taxation have been published.

Most of the new theoretical and empirical work focuses on how dividend taxation affects the behavior of large public firms. Dividend taxes mainly affect large established firms with dispersed ownership but also impact entrepreneurial firms. The literature on dividend taxation has some direct relevance for entrepreneurs who also pay dividend taxes, but these taxes are generally of far greater indirect relevance for entrepreneurs. The small research field of entrepreneurial taxation has largely relied on the same class of theoretical models that study dividend taxation. One important purpose of this essay is to summarize the large body of work on dividend taxation and draw parallels to the smaller related literature on entrepreneurial firm taxation.

The most important development in empirical research related to dividend taxation is the consideration of firm heterogeneity. In this context, firm heterogeneity is relevant to the extent that different types of firms react differently to taxes. Notably, reductions in dividend taxes tend to reduce investments by mature, well-financed firms and increase investment by rapidly growing, cash-constrained firms. The importance of taking firm heterogeneity into account is at least as important in the study of taxation of entrepreneurial activity. Owner-level taxes do not appear to affect the self-employed and small "mom-and-pop" firms in the same manner in which they affect high-growth startups and other Schumpeterian entrepreneurial firms.

We divide firms into three broad categories to examine how they are influenced by taxation:

- *Established or mature large firms* tend to account for most of the value added, exports, and research and development (R&D). These companies tend to have dispersed ownership and are largely controlled by management, at least in the United Kingdom and the United States.

- *Schumpeterian entrepreneurial firms* refer to firms that introduce a new technology or innovation and have the ambition to grow. Although these firms are relatively few in number, they are believed to be disproportionately important to economic growth and job creation. There is a (partly semantic) discussion on how to define entrepreneurship that we will not focus on.[1] Henceforth, the term entrepreneurship refers to Schumpeterian entrepreneurship as defined in this paragraph.

- *Small businesses* and the self-employed are here defined as companies that are not innovative and have little ambition to grow above a certain size. Small businesses or solitary self-employment (with no employees in addition to the owner) are often the optimal size in many sectors. This class of firms is particularly important for job creation in some industries and or some categories of workers, particularly the young and the foreign-born.

There are also several types of taxes:

- *Corporate tax*: The corporate tax is levied at the firm level as opposed to the owner level.

[1] This is discussed in more detail in Henrekson and Sanandaji [2014a].

- *Owner-level taxes*: The two main owner-level taxes are *dividend taxes* and *capital gains taxes.*
- *Income taxes of business owners*: In many countries, the incomes of the self-employed and sole proprietors are taxed as a type of labor income.

Our focus is on owner-level taxes, notably capital gains taxes, dividend taxes, and income taxes. We show that the importance of these taxes varies with the type of firm. In general, capital gains taxes are more important for Schumpeterian startups, dividend taxes are more important for mature firms, and income taxes are more important for small firms and sole proprietors. Notably, we are not concerned with corporate taxes, as there is relative agreement on their effects.

This essay is organized as follows. Part I (Sections 1–4) addresses the effects of owner-level taxes on mature companies. In Section 1, we survey and evaluate the research on the effects of owner-level taxes for mature, large companies. Until recently there were three schools of thought or "views" on this matter. According to the old view, taxing corporate owners reduces incentives to save and invest, whereas the new view arrives at the same conclusion with regard to the capital gains tax. According to the new view, however, dividend taxes do not affect investment behavior. The conclusions of the more recent open economy analyses are more far-reaching: Capital gains taxes (and other taxes on capital) that reduce domestic capital supply do not affect firm finance in small open economies because capital can be imported from abroad.

In Section 2, we present the new agency view, which incorporates principal–agent problems between owners and management exacerbated by owner-level taxes. This view notes that when ownership and management are separated, a conflict of interest emerges regarding the use of firm cash flow. Managerial incentives to pay low dividends to shareholders and overinvest in existing businesses are amplified by owner-level taxes, thus exacerbating the inherent principal–agent problem.

In Section 3, we discuss the empirical validity of the strong capital mobility assumption underlying the open economy view. Empirical evidence has documented a strong propensity to invest in one's home country, indicating that international capital is far from perfectly mobile across borders. It is thus misguided to presume that foreign capital can or will fully substitute for domestic capital. Moreover, it is more difficult for small and new firms to access international capital markets for a host of reasons that we discuss at some length.

In Section 4, we summarize the different views. We conclude that tax theorists have relied historically on relatively simple black-box models of the inside of the firm. However, more complex models of firm activity have recently produced different results than previous models. Both recent theoretical and empirical studies support the view that owner-level taxes are likely to have sizable effects on business activity.

In Part II of this essay (Sections 5–7), we address the effects of owner-level taxes on startups and entrepreneurial firms. In Section 5, we discuss the effects of such taxes on entrepreneurship. Innovative startups are increasingly dependent on venture capitalists who provide both external financing and complementary skills. Entrepreneurship is a unique activity characterized by relation-specific assets, conflicts of interest, low liquidity, weak cash flow in early stages, and high levels of uncertainty. All these features make it particularly difficult to write contracts that cover all contingencies. In such cases, owner-level taxes cause distortions by reducing the returns on the cooperative efforts of entrepreneurs and external financiers that target mutual goals. Owner-level taxes also affect the occupational choice margin, making it less lucrative to leave a salaried position to attempt to create a firm.

In Section 6, we explain and analyze the importance of stock options as an instrument to overcome agency conflicts and harmonize incentives across agents — founders, financiers, and key employees. Complex contracts, which themselves can be regarded as organizational innovations, have evolved to facilitate cooperation and reduce conflicts of interest. We show that in countries in which the taxation of stock options is low or moderate, a spectrum of option contracts is frequently used in agreements among founders, financiers, and key employees of startups, whereas such contracts are rarely used in countries in which gains on stock options are taxed at high labor income rates. In the latter countries, venture capital investments are also low.

In Section 7, we discuss the fact that virtually all national tax systems favor debt over equity financing. This factor increases the debt–equity ratio of firms and makes the economy more vulnerable, while penalizing early stage ventures relative to mature companies. In addition, it penalizes technological or human capital relative to physical capital and real estate.

In the eighth and final section, we present our main conclusions. Most importantly, our interpretation of the new empirical research is that owner-level taxes — on both dividends and capital gains — have economically significant effects on key aspects of firm activity, including innovative startup activity, allocation of investments, capital structure, and ownership structure. Our findings on the behavioral effects of such taxes are more consistent than in the earlier literature.

References

Z. J. Acs and D. B. Audretsch. Innovation in large and small firms. An empirical analysis. *American Economic Review*, 78(4):678–690, 1988.

J. Agell, P. Englund, and J. Södersten. *Incentives and Redistribution in the Welfare State: The Swedish Tax Reform*. New York: St. Martin's Press, 1998.

A. Alstadsæter. The Achilles heel of the dual income tax: The Norwegian case. *Finnish Economic Papers*, 20(1):5–22, 2007.

A. Alstadsæter, M. Jacob, and A. Vejsiu. *3:12 Corporations in Sweden: The Effects of the 2006 Tax Reform on Investments, Job Creation, and Business Start-ups*. Rapport 2014:2 till Expertgruppen för Studier i Offentlig ekonomi (ESO). Fritzes and the Ministry of Finance, Stockholm, 2014.

M. Apel and J. Södersten. Personal taxation and investment incentives in a small open economy. *International Tax and Public Finance*, 6(1):79–88, 1999.

A. Asoni and T. Sanandaji. Taxation and the quality of entrepreneurship. *Journal of Economics*, 113(2):101–123, 2014.

A. J. Auerbach. Share valuation and corporate equity policy. *Journal of Public Economics*, 11(3):291–305, 1979.

A. J. Auerbach. Taxation and corporate financial policy. In A. J. Auerbach and M. S. Feldstein, editors, *Handbook of Public Economics*, volume 3, pages 1251–1292, Amsterdam and Oxford: North-Holland, 2002.

A. J. Auerbach and K. A. Hassett. On the marginal source of investment funds. *Journal of Public Economics*, 87(1):205–232, 2003.

A. J. Auerbach, M. P. Devereux, and H. Simpson. Taxing corporate income. In J. Mirrlees, S. Adam, T. Besley, R. Blundell, S. Bond, R. Chote, M. Gammie, P. Johnson, G. Myles, and J. Poterba, editors, *Dimensions of Tax Design*, pages 837–893, Oxford: Oxford University Press, 2010.

Y. Bai and J. Zhang. Solving the Feldstein-Horioka puzzle with financial frictions. *Econometrica*, 78(2):603–632, 2010.

N. Balta and J. Delgado. Home bias and market integration in the EU. *CESifo Economic Studies*, 55(1):110–144, 2009.

S. Bastani and H. Selin. Bunching and non-bunching at kink points of the Swedish tax schedule. *Journal of Public Economics*, 109(C):36–49, 2014.

W. J. Baumol. *The Free-Market Innovation Machine: Analyzing the Growth Miracle of Capitalism.* Princeton, NJ and Oxford: Princeton University Press, 2002.

W. J. Baumol. *The Microtheory of Innovative Entrepreneurship.* Princeton, NJ: Princeton University Press, 2010.

B. Becker, M. Jacob, and M. Jacob. Payout taxes and the allocation of investment. *Journal of Financial Economics*, 107(1):1–24, 2013.

L. Bell and T. Jenkinson. New evidence on the impact of dividend taxation and on the identity of the marginal investor. *Journal of Finance*, 57(3): 1321–1346, 2002.

O. Bengtsson and D. Hsu. How do venture capital partners match with startup founders? Working Paper. Available at SSRN: http://ssrn.com/abstract=1568131, 2010.

A. Bhidé. *The Venturesome Economy: How Innovation Sustains Prosperity in a More Connected World.* Princeton, NJ: Princeton University Press, 2008.

F. Black. The dividend puzzle. *Journal of Portfolio Management*, 2(1):5–84, 1976.

D. G. Blanchflower and A. J. Oswald. What makes an entrepreneur? *Journal of Labor Economics*, 16(1):26–60, 1998.

R. Boadway and N. Bruce. Problems with integrating corporate and personal income taxes in an open economy. *Journal of Public Economics*, 48(1): 39–66, 1992.

S. Bond, M. Devereux, and A. Klemm. The effects of dividend taxes on equity prices: A re-examination of the 1997 UK tax reform. IMF Working Paper 07/204, 2007.

L. Bovenberg, K. Andersson, K. Aramaki, and S. K. Chand. Tax incentives and international capital flows: The case of the United States and Japan. In A. Razin and J. Slemrod, editors, *Taxation in the Global Economy*, Chicago and London: University of Chicago Press, 1990.

D. F. Bradford. The incidence and allocation effects of a tax on corporate distributions. *Journal of Public Economics*, 15(1):1–22, 1981.

P. Braunerhjelm, Z. J. Acs, D. B. Audretsch, and B. Carlsson. The missing link: Knowledge diffusion and entrepreneurship in endogenous growth. *Small Business Economics*, 34(2):105–125, 2010.

J. R. Brown, N. Liang, and S. Weisbenner. Executive financial incentives and payout policy: Firm responses to the 2003 dividend tax cut. *Journal of Finance*, 62(4):1935–1965, 2007.

D. Bruce and J. Deskins. Can state tax policies be used to promote entrepreneurial activity? *Small Business Economics*, 38(4):375–397, 2012.

R. J. Caballero. *Specificity and the Macroeconomics of Restructuring*. Cambridge, MA: MIT Press, 2007.

J. L. Campbell, J. A. Chyz, D. S. Dhaliwal, and W. C. Schwartz, Jr. Did the 2003 tax act increase capital investments by corporations? *Journal of the American Taxation Association*, 35(2):33–63, 2011.

B. Carlsson, Z. J. Acs, D. B. Audretsch, and P. Braunerhjelm. Knowledge creation, entrepreneurship and economic growth: A historical review. *Industrial and Corporate Change*, 18(6):1193–1229, 2009.

R. Carroll, D. Holtz-Eakin, M. Rider, and H. S. Rosen. Income taxes and entrepreneurs' use of labor. *Journal of Labor Economics*, 18(2):324–355, 2000a.

R. Carroll, D. Holtz-Eakin, M. Rider, and H. S. Rosen. Entrepreneurs, income taxes, and investment. In J. B. Slemrod, editor, *Does Atlas Shrug?*, New York: Russell Sage Foundation, 2000b.

R. Carroll, D. Holtz-Eakin, M. Rider, and H. S. Rosen. Personal income taxes and the growth of small firms. In J. M. Poterba, editor, *Tax Policy and the Economy*, volume 15, pages 121–148, Cambridge, MA: MIT Press, 2001.

G. Cavanagh. *National Income and Expenditure: Annual Results*. Dublin: Central Statistics Office, 2015.

X. S. Chen, C. Qiang Cheng, and T. Shevlin. Are family firms more tax aggressive than nonfamily firms? *Journal of Financial Economics*, 95(1): 41–61, 2010.

R. Chetty. Is the taxable income elasticity sufficient to calculate deadweight loss? The implications of evasion and avoidance. *American Economic Journal: Economic Policy*, 1(2):31–52, 2009.

R. Chetty and E. Saez. Dividend taxes and corporate behavior: Evidence from the 2003 dividend tax cut. *Quarterly Journal of Economics*, 120(3): 791–833, 2005.

R. Chetty and E. Saez. The effects of the 2003 dividend tax cut on corporate behavior: Interpreting the evidence. *American Economic Review*, 96(2): 124–129, 2006.

R. Chetty and E. Saez. Dividend and corporate taxation in an agency model of the firm. *American Economic Journal: Economic Policy*, 2(3):1–31, 2010.

R. Chetty, J. Friedman, T. Olsen, and L. Pistaferri. Adjustment costs, firm responses, and micro vs. macro labor supply elasticities: Evidence from Danish tax records. *Quarterly Journal of Economics*, 126(2):749–804, 2011.

S. Cnossen. Taxing capital income in the Nordic countries: A model for the European Union? In S. Cnossen, editor, *Taxing Capital in the European Union*, pages 180–213, Oxford: Oxford University Press, 2000.

A. Coad, S.-O. Daunfeldt, W. Hölzl, D. Johansson, and P. Nightingale. High-growth firms: Introduction to the special section. *Industrial and Corporate Change*, 23(1):91–112, 2014.

I. Cooper, P. Sercu, and R. Vanpée. The equity home bias puzzle: A survey. *Foundations and Trends in Finance*, 7(4):289–416, 2013.

D. Cumming. Agency costs, institutions, learning, and taxation in venture capital contracting. *Journal of Business Venturing*, 20(5):573–622, 2005a.

D. Cumming. Review essay: Global venture capital transactions. *Venture Capital*, 7(2):185–201, 2005b.

M. Da Rin, G. Nicodano, and A. Sembenelli. Public policy and the creation of active venture capital markets. *Journal of Public Economics*, 90(8): 1699–1723, 2006.

M. Dackehag and Å. Hansson. Taxation of dividend income and economic growth: The case of Europe. IFN Working Paper No. 1081. Stockholm: Research Institute of Industrial Economics, 2015.

M. Dahlquist, L. Pinkowitz, R. Stulz, and R. Williamson. Corporate governance and the home bias. *Journal of Financial and Quantitative Analysis*, 38(1):87–110, 2003.

S. J. Davis and M. Henrekson. Industrial policy, employer size and economic performance in Sweden. In Richard B. Freeman, Robert Topel, and Birgitta Swedenborg, editors, *The Welfare State in Transition: Reforming the Swedish Model*, pages 353–398, Chicago: University of Chicago Press, 1997.

S. J. Davis, J. Haltiwanger, and S. Schuh. Small business and job creation: Dissecting the myth and reassessing the facts. *Small Business Economics*, 8(4):297–315, 1996.

R. De Mooij. Tax biases to debt finance: Assessing the problem, finding solutions. International Monetary Fund, IMF Staff Discussion Note. Washington, D.C., 2011.

D. K. Denis and J. J. McConnell. International corporate governance. *Journal of Financial and Quantitative Analysis*, 38(1):1–36, 2003.

M. A. Desai and D. Dharmapala. Dividend taxes and international portfolio choice. *Review of Economics and Statistics*, 93(1):266–284, 2011.

M. A. Desai, F. Foley, and J. Hines. A multinational perspective on capital structure choice and internal capital markets. *Journal of Finance*, 59(6): 2451–2487, 2004.

M. D. Dietz. Dividend and capital gains taxation in a cross-section of firms. Manuscript, University of St. Gallen (IFF), 2003.

M. D. Dietz and C. Keuschnigg. Reforming corporate income taxation in Switzerland: An economic perspective. *Tax Notes International*, 29(8):730–735, 2003.

A. Durnev, R. K. Morck, and B. Yeung. Value enhancing capital budgeting and firm-specific stock returns variation. *Journal of Finance*, 59(1):65–106, 2004.

F. H. Easterbrook. Two agency-cost explanations of dividends. *American Economic Review*, 74(3):650–659, 1984.

P. Egger, W. Eggert, C. Keuschnigg, and H. Winner. Corporate taxation, debt financing and foreign plant ownership. *European Economic Review*, 54(1):96–107, 2010.

C. Engel and J. H. Rogers. How wide is the border? *American Economic Review*, 86(5):1112–1125, 1996.

C. Engel and J. H. Rogers. Deviations from purchasing power parity: Causes and welfare costs. *Journal of International Economics*, 55(1):29–57, 2001.

P. Engström and B. Holmlund. Tax evasion and self-employment in a high-tax country: Evidence from Sweden. *Applied Economics*, 41(19):2419–2430, 2009.

M. Faccio and J. Xu. Taxes and capital structure. *Journal of Financial and Quantitative Analysis*, 50(3):277–300, 2015.

M. S. Feldstein. Corporate taxation and dividend behavior. *Review of Economic Studies*, 37(1):57–72, 1970.

M. S. Feldstein and C. Horioka. Domestic savings and international capital flows. *Economic Journal*, 90(358):314–329, 1980.

G. Fenn, N. Liang, and S. Prowse. *The Economics of the Private Equity Market*. Board of Governors of the Federal Reserve System, Washington, D.C., 1995.

R. H. Forsberg. Capital structure and the 2003 tax cuts. *Journal of Business, Economics and Finance*, 1(2):5–20, 2012.

M. Z. Frank, R. Singh, and T. Y. Wang. Personal income taxes and corporate investment. *AFA 2010 Atlanta Meetings Paper.* Atlanta, GA: 5th Annual Conference on Empirical Legal Studies Paper, 2010.

K. R. French and J. M. Poterba. Investor diversification and international equity markets. *American Economic Review*, 81(2):222–226, 1991.

W. M. Gentry. Taxes, financial decisions and organizational form: Evidence from publicly traded partnerships. *Journal of Public Economics*, 53(2): 223–244, 1994.

W. M. Gentry and R. G. Hubbard. Entrepreneurship and household saving. National Bureau of Economic Research, NBER Working Paper No. 7894. Cambridge, MA, 2000.

W. M. Gentry and R. G. Hubbard. Entrepreneurship and household saving. *Advances in Economic Analysis and Policy*, 4(1):Article 8, 2004.

R. J. Gilson and D. M. Schizer. Understanding venture capital structure: A tax explanation for convertible preferred stock. *Harvard Law Review*, 116 (3):874–916, 2003.

E. L. Glaeser. A review of Enrico Moretti's The new geography of jobs. *Journal of Economic Literature*, 51(3):825–837, 2013.

P. A. Gompers and J. Lerner. What drives venture capital fundraising? *Brookings Papers on Economic Activity: Microeconomics*, July:149–192, 1998.

P. A. Gompers and J. Lerner. An analysis of compensation in the U.S. venture capital partnership. *Journal of Financial Economics*, 51(1):3–44, 1999.

P. A. Gompers and J. Lerner. *The Money of Invention: How Venture Capital Creates New Wealth*. Cambridge, MA: Harvard University Press, 2001.

R. H. Gordon and A. L. Bovenberg. Why is capital so immobile internationally? Possible explanations and implications for capital income taxation. *American Economic Review*, 86(5):1057–1075, 1996.

R. H. Gordon and Y. Lee. Do taxes affect corporate debt policy? Evidence from U.S. corporate tax return data. *Journal of Public Economics*, 82(2): 195–224, 2001.

J. R. Graham. Taxes and corporate finance: A review. *Review of Financial Studies*, 16(4):1075–1129, 2003.

J. R. Graham. Taxes and corporate finance. In B. Espen Eckbo, editor, *Handbook of Corporate Finance: Empirical Corporate Finance*, pages 59–133, Amsterdam and Oxford, North-Holland, 2008.

R. Hall and S. E. Woodward. The burden of the nondiversifiable risk of entrepreneurship. *American Economic Review*, 100(3):1163–1194, 2010.

J. Haltiwanger, R. S. Jarmin, and J. Miranda. Who creates jobs? Small versus large versus young. *Review of Economics and Statistics*, 95(2):347–361, 2013.

A. Harberger. The incidence of the corporate income tax. *Journal of Political Economy*, 70(3):215–240, 1962.

J. Harju and T. Kosonen. The impact of tax incentives on the economic activity of entrepreneurs. Government Institute for Economic Research Working Paper No. 42, Helsinki, 2013.

B. T. Heim. The responsiveness of self-employment income to tax rate changes. *Labour Economic*s, 17(6):940–950, 2010.

M. Henrekson and U. Jakobsson. Where Schumpeter was nearly right — the Swedish model and capitalism, socialism and democracy. *Journal of Evolutionary Economics*, 11(3):331–358, 2001.

M. Henrekson and D. Johansson. Competencies and institutions fostering high-growth firms. *Foundations and Trends in Entrepreneurship*, 5(1):1–80, 2009.

M. Henrekson and D. Johansson. Gazelles as job creators: A survey and interpretation of the evidence. *Small Business Economics*, 35(2):227–244, 2010.

M. Henrekson and T. Sanandaji. Small business activity does not measure entrepreneurship. *Proceedings of the National Academy of Sciences of the United States of America (PNAS)*, 111(5):1760–1765, 2014a.

M. Henrekson and T. Sanandaji. Beskattning av personaloptioner och innovativt entreprenörskap: Expert report to the government commission on corporate taxation. In SOU *2014:40, Neutral bolagsskatt — för ökad effektivitet och stabilitet. Slutbetänkande av Företagsskattekommittén*, pages 735–766, Stockholm: Ministry of Finance, 2014b.

M. Henrekson and T. Sanandaji. Stock option taxation and venture capital activity: A cross-country study. IFN Working Paper, No. 1104. Stockholm: Research Institute of Industrial Economics, 2016.

H. Huizinga. The behavior of international firms and UK tax policy. In J. Mirrlees, S. Adam, T. Besley, R. Blundell, S. Bond, R. Chote, M. Gammie, P. Johnson, G. Myles, and J. Poterba, editors, *Dimensions of Tax Design*, pages 900–904, Oxford: Oxford University Press, 2010.

H. Huizinga and G. Nicodeme. Foreign ownership and corporate income taxation: An empirical evaluation. *European Economic Review*, 50(5):1223–1244, 2006.

H. Huizinga and J. Voget. International taxation and the direction and volume of cross-border M&As. *Journal of Finance*, 64(3):1217–1249, 2009.

H. Huizinga, L. Laeven, and G. Nicodeme. Capital structure and international debt shifting. *Journal of Financial Economics*, 88(1):80–118, 2008.

E. Hurst and B. W. Pugsley. Non pecuniary benefits of small business ownership. Working Paper, Booth School of Business, University of Chicago, 2010.

E. Hurst and B. W. Pugsley. What do small businesses do? *Brookings Papers on Economic Activity*, Fall:73–118, 2011.

E. Hurst, G. Li, and B. W. Pugsley. Are household surveys like tax forms? Evidence from income underreporting of the self-employed. *Review of Economics and Statistics*, 96(1):19–33, 2014.

J. K. Jackson. The United States as a net debtor nation: Overview of the international investment position. In *Congressional Research Service Report No. 7-5700*, Washington, D.C.: Congressional Research Service, 2013.

M. Jacob and M Jacob. Taxation, dividends and share repurchases: Taking evidence global. *Journal of Financial and Quantitative Analysis*, 48(4): 1241–1269, 2013.

M. C. Jensen. Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review*, 76(2):323–329, 1986.

M. C. Jensen and W. H. Meckling. Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3 (4):305–360, 1976.

D. W. Jorgenson. Capital theory and investment behavior. *American Economic Review*, 53:247–257, 1963.

D. W. Jorgenson. The theory of investment behavior. In Robert Ferber, editor, *Determinants of Investment Behavior*, pages 129–175, New York: NBER, 1967.

V. Kanniainen. Failures in corporate governance: Can the corporation tax improve efficiency? *FinanzArchiv*, 56(3/4):310–334, 1999.

V. Kanniainen and P. Panteghini. Tax neutrality: Illusion or reality? The case of entrepreneurship. *FinanzArchiv: Public Finance Analysis*, 69(2): 167–193, 2013.

S. N. Kaplan and P. Strömberg. Financial contracting theory meets the real world: Evidence from venture capital contracts. *Review of Economic Studies*, 70(2):281–315, 2003.

M. Keen and K. A. Konrad. The theory of international tax competition and coordination. In Alan J. Auerbach, Raj Chetty, Martin S. Feldstein, and Emmanuel Saez, editors, *Handbook of Public Economics.* Volume 5, pages 257–328, Amsterdam and Oxford: North-Holland, 2013.

C. Keuschnigg and S. B. Nielsen. Taxation and venture capital backed entrepreneurship. *International Tax and Public Finance*, 11(4):369–390, 2004a.

C. Keuschnigg and S. B. Nielsen. Start-ups, venture capitalists, and the capital gains tax. *Journal of Public Economics*, 88(5):1011–1042, 2004b.

M. A. King. Taxation and the cost of capital. *Review of Economic Studies*, 41(1):21–35, 1974.

M. A. King. *Public Policy and the Corporation.* London: Chapman-Hall, 1977.

H. J. Kleven and E. Schultz. Estimating taxable income responses using Danish tax reforms. EPRU Working Paper No. 2011-02, Department of Economics, University of Copenhagen, 2011.

H. J. Kleven, C. Landais, and E. Saez. Taxation and international migration of superstars: Evidence from the European football market. *American Economic Review*, 103(5):1892–1924, 2013.

H. J. Kleven, C. Landais, E. Saez, and E. Schultz. Migration and wage effects of taxing top earners: Evidence from the foreigners' tax scheme in Denmark. *Quarterly Journal of Economics*, 129(1):333–378, 2014.

M. Koethenbuerger and M. Stimmelmayr. Corporate deductibility provisions and managerial incentives. *Journal of Public Economics*, 111(C):120–130, 2014.

S. Kortum and J. Lerner. Assessing the contribution of venture capital to innovation. *RAND Journal of Economics*, 31(4):674–692, 2000.

A. Kristofferson. Neutral beskattning av bolagsinkomster i en öppen ekonomi — cash-flowskatter och andra skatter. In *Expertrapporter till Skattebasutredningen Vol. C*, SOU 2002:47. Stockholm: Fritzes, 2002.

J. Lerner and J. Tåg. Institutions and venture capital. *Industrial and Corporate Change*, 22(1):153–182, 2013.

K. K. Lewis. Trying to explain home bias in equities and consumption. *Journal of Economic Literature*, 37(2):571–608, 1999.

L. Lin and M. J. Flannery. Do personal taxes affect capital structure: Evidence from the 2003 tax cut. *Journal of Financial Economics*, 109(2):549–565, 2012.

A. Lindbeck. The Swedish experiment. *Journal of Economic Literature*, 35 (2):1273–1319, 1997.

M. K. McGee. Capital gains taxation and new firm investment. *National Tax Journal*, 51(4):653–673, 1998.

R. Mehra. The equity premium puzzle: A review. *Foundations and Trends in Finance*, 2(1):1–81, 2006.

N. Misher. Tax consequences of exercising an incentive stock option with stock of the granting corporation. *The Tax Executive,* July: 357–363, 1984.

F. Modigliani and M. H. Miller. The cost of capital, corporation finance and the theory of investment. *American Economic Review*, 48(3):261–297, 1958.

R. K. Morck and B. Yeung. Dividend taxation and corporate governance. *Journal of Economic Perspectives*, 19(3):163–180, 2005.

J. Nam, J. Wang, and G. Zang. The impact of the dividend tax cut and managerial stock holdings on corporate dividend policy. *Global Finance Journal*, 21(3):275–292, 2010.

B. Nooteboom. Firm size effects on transaction costs. *Small Business Economics*, 5(3):283–295, 1993.

P.-J. Norbäck and L. Persson. The organization of the innovation industry: Entrepreneurs, venture capitalists, and oligopolists. *Journal of the European Economic Association*, 7(6):1261–1290, 2009.

P.-J. Norbäck, L. Persson, and J. Vlachos. Cross-border acquisitions and taxes: Efficiency and tax revenues. *Canadian Journal of Economics*, 42(4): 1473–1500, 2009.

E. Norrman. Portfolio choice, taxation and the allocation of capital between large and small firms — a general equilibrium model with financial behavior. Working Paper No. 3. Reports from the Personal Finance and Family Business Research Program. Department of Economics, Lund University, 1997.

M. Obstfeld and K. S. Rogoff. The six major puzzles in international macroeconomics: Is there a common cause? In Ben Bernanke and Kenneth S. Rogoff, editors, *NBER Macroeconomics Annual 2000*, pages 339–390, Cambridge, MA: MIT Press, 2000.

M. Obstfeld and A. M. Taylor. Global capital markets. In Michael Bordo, Alan M. Taylor, and Jeffrey A. Williamson, editors, *Globalization in Historical Perspective*, pages 121–190, Chicago: University of Chicago Press, 2003.

OECD. *Fundamental Reform of Corporate Income Tax.* OECD Tax Policy Studies No. 16. Paris: OECD, 2007.

P. Pelikan. Ownership of firms and efficiency: The competence argument. *Constitutional Political Economy*, 4(3):349–392, 1993.

R. Portes and H. Rey. The determinants of cross-border equity flows. CEP Discussion Paper No. 0446, Centre for Economic Performance, London School of Economics, 2000.

J. M. Poterba. Venture capital and capital gains taxation. *Tax Policy and the Economy,* volume 3, pages 47–67, Cambridge, MA and London: MIT Press for the National Bureau of Economic Research, 1989a.

J. M. Poterba. Capital gains tax policy toward entrepreneurship. *National Tax Journal*, 42(3):375–389, 1989b.

J. M. Poterba. Taxation, risk-taking, and household portfolio behavior. In Alan J. Auerbach and Martin S. Feldstein, editors, *Handbook of Public Economics*, volume 3, pages 1109–1171, Amsterdam and Oxford: North-Holland, 2002.

J. M. Poterba. Taxation and corporate payout policy. *American Economic Review*, 94(2):171–175, 2004.

J. M. Poterba and L. H. Summers. Dividend taxes, corporate investment, and 'Q'. *Journal of Public Economics*, 22(2):135–167, 1983.

J. M. Poterba and L. H. Summers. The economic effects of dividend taxation. In E. I. Altman and M. G. Subrahmanyam, editors, *Recent Advances in Corporate Finance*, Homewood, IL: Richard D. Irwin, 1985.

V. Quadrini. The importance of entrepreneurship for wealth concentration and mobility. *Review of Income and Wealth*, 45(1):1–19, 1999.

R. Rajan and L. Zingales. What do we know about capital structure? Some evidence from international data. *Journal of Finance*, 50(4):1421–1460, 1995.

H. S. Rosen. Entrepreneurship and taxation: Empirical evidence. Unpublished manuscript. Department of Economics, Princeton University, 2003.

K. Rydqvist, J. Spizman, and I. Strebulaev. Government policy and ownership of equity securities. *Journal of Financial Economics*, 111(1):70–85, 2014.

E. Saez. Do taxpayers bunch at kink points? *American Economic Journal: Economic Policy*, 2(3):180–212, 2010.

T. Sanandaji. Self-employment does not measure entrepreneurship. Working Paper. Irving B. Harris School of Public Policy. Chicago, IL: University of Chicago, 2010.

T. Sanandaji. The international mobility of billionaires. *Small Business Economics*, 42(2):329–338, 2014.

H. J. Schuetze and D. Bruce. Tax policy and entrepreneurship. *Swedish Economic Policy Review*, 11(2):233–265, 2004.

J. A. Schumpeter. *The Theory of Economic Development.* Transaction Publishers, London, 2004 [1934].

A. Shleifer and R. W. Vishny. Legal determinants of external finance. *Journal of Finance*, 52(3):1131–1150, 1997.

H.-W. Sinn. *Capital Income Taxation and Resource Allocation.* Amsterdam and Oxford: North Holland, 1987.

H.-W. Sinn. Taxation and the cost of capital: The 'old' view, the 'new' view and another view. In David F. Bradford, editor, *Tax Policy and the Economy*, volume 5, pages 25–54, Cambridge, MA: National Bureau of Economic Research, 1991a.

H.-W. Sinn. The vanishing Harberger triangle. *Journal of Public Economics*, 45(3):271–300, 1991b.

J. Slemrod and J. Bakija. *Taxing Ourselves.* Cambridge, MA: MIT Press, 2008.

P. B. Sørensen. From the global income tax to the dual income tax — recent tax reformers in the Nordic countries. *International Tax and Public Finance*, 1(1):57–79, 1994.

P. B. Sørensen. Changing views of the corporate income tax. *National Tax Journal*, 48(2):279–294, 1995.

J. E. Stiglitz. Taxation, corporate financial policy, and the cost of capital. *Journal of Public Economics*, 2(1):l–34, 1973.

L. Tesar and I. Werner. Home bias and high turnover. *Journal of International Money and Finance*, 14(4):467–492, 1995.

J. Tirole. Corporate finance. *Econometrica*, 69(1):1–35, 2001.

D. Yagan. Capital tax reform and the real economy: The effects of the 2003 dividend tax cut. *American Economic Review*, 105(12):3531–3563, 2015.

G. Zucman. The missing wealth of nations: Are Europe and the US net debtors or net creditors? *Quarterly Journal of Economics*, 128(3):1321–1364, 2013.