

Kanniainen, Vesa

**Working Paper**

## Research Issues in Corporate Taxation

ETLA Discussion Papers, No. 302

**Provided in Cooperation with:**

The Research Institute of the Finnish Economy (ETLA), Helsinki

*Suggested Citation:* Kanniainen, Vesa (1989) : Research Issues in Corporate Taxation, ETLA Discussion Papers, No. 302, The Research Institute of the Finnish Economy (ETLA), Helsinki

This Version is available at:

<https://hdl.handle.net/10419/187018>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*

# Keskusteluaiheita Discussion papers

Vesa Kannianen\*

RESEARCH ISSUES IN CORPORATE  
TAXATION<sup>1</sup>

No 302

30.10.1989

\* Department of Economics,  
University of Helsinki and  
The Research Institute of the Finnish Economy

<sup>1</sup> Presented at the Nordic Workshop on Tax Research,  
organized by the Nordic Economic Research Council,  
Copenhagen, October 23-24, 1989.

ISSN 0781-6847

This series consists of papers with limited circulation,  
intended to stimulate discussion. The papers must  
not be referred or quoted without the authors'  
permission.



KANNIAINEN, Vesa, RESEARCH ISSUES IN CORPORATE TAXATION, Helsinki : ETLA, Elinkeinoelämän Tutkimuslaitos, The Research Institute of the Finnish Economy, 1989. 10 p. (Keskusteluaiheita, Discussion Papers, ISSN 0781-6847 ; no. 302).

ABSTRACT: The paper presents a review of some central research topics in corporate taxation in the Nordic countries. The discrepancy between the nominal and effective tax rates is documented and the implications analyzed. The insurance function of taxation in redistributing economic risks is raised as a key issue for future research.

KEY WORDS: corporate taxation, research issues

KANNIAINEN, Vesa, RESEARCH ISSUES IN CORPORATE TAXATION, Helsinki : ETLA, Elinkeinoelämän Tutkimuslaitos, The Research Institute of the Finnish Economy, 1989. 10 s. (Keskusteluaiheita, Discussion Papers, ISSN 0781-6847 ; no. 302).

TIIVISTELMÄ: Esitelmässä nostetaan esiin potentiaalisia tutkimuskohteita Pohjoismaiden yritysverotuksessa. Nimellisten ja efektiivisten veroasteiden erot dokumentoidaan ja niiden merkitystä käsitellään. Keskeiseksi tutkimusalueeksi nousee kysymys verotuksen roolista taloudellisten riskien uudelleenjakajana.

ASIASANAT: yritysverotus, tutkimuskohteet

## Contents

	Page
1. Introduction: Harmonizing Pressures	1
2. Describing the Current Nordic Systems of Taxing Corporations	2
3. Some Open Questions	3
3.1 Contracyclical Tax and Tax Pressure Investments	3
3.2 Corporation Tax is Regressive	5
3.3 Lock-in Effect and Financial Choices	6
3.4 Insurance Function of Taxation	6

## 1. Introduction: Harmonizing Pressures

The enhanced economic integration inevitably will limit autonomy in reconstruction of national tax systems. The harmonization process, as it is called, may be quite painful for high-tax Nordic economies. No doubt, the reduced freedom for country-specific approaches applies to the discussion of the future course of corporate taxation, too. A corporation tax which, in the international comparison, raises the required return on investment in one country above that in other countries will tend to tilt the international investments. The increased international interdependence was already recognized by the recent Swedish committee on business tax reform (URF), which had to reject the idea of a cash-flow corporation tax partly due to cross-border reasons. It seems possible that a world of high degree of economic integration without abolishment of free national policy making may result in a game situation between different countries. Recognition of strategic interactions may provide a useful framework for the discussion of some issues of the corporation tax.

Harmonization will be an unavoidable policy constraint. But now I leave the harmonization pressure aside. Below I concentrate on describing the current corporation tax in Nordic Economies. During my discussion, I try especially to

keep in mind issues which I find relevant for research topics.

## 2. Describing the Current Nordic Systems of Taxing Corporations

The usefulness of separating effective tax rates from nominal tax rates is perhaps nowhere as important as it is in the case of Nordic corporation taxes. A common feature is the relatively high nominal tax rate associated with much lower effective tax rates, cf. Table 1.

Table 1. Nominal and effective tax rates on corporations in Nordic countries

	Denmark	Finland	Norway	Sweden
Nominal tax rate	50 %	50 %	50.8 %	57 %
Effective tax rate	< 50 %	10-30 %	20-40 %	20-25%

Note that the above figures refer to average tax rates. No doubt, it would be crucial to have well-grounded figures on marginal tax rates, too. But they are hard to come by, unless one possesses a well-formulated theory. That such a theory is not really at hand, means that a relevant research topic has been identified. I shall return to this point later.

As a source of public revenue, the corporation tax has become

less and less important in all Nordic countries. But this refers to the lowered average effective tax rates only. The consensus remains - and here we refer to the marginal tax rates - that the corporation tax continues to be important for allocation of investments, economic fluctuations, determination of financial policy of firms, risk sharing between the firms and the government, national and international location of firms, and firms' innovations policies, like r&d expenditures, to mention the central themes. What questions are still open regarding the corporation tax?

### 3. Some Open Questions

#### 3.1 Contracyclical Tax and Tax Pressure Investments

Whether the corporation tax results in a lock-in effect in lowering corporate dividends will be commented upon below. But given the dividend target of a firm, the desired level of taxable income seems to determine the effective corporate taxation. This results from the requirement of having the same bookkeeping for accounting and for tax purposes. The dramatic implication is that the corporation tax will be contracyclical. Jan Södersten and Bengt-Christer Ysander have provided striking figures about this phenomenon in the case of Sweden (cf. *Ekonomisk debatt* 8/84).

As is well-known, it is very hard to limit the incidence of

corporate tax on pure profits only. Indirectly, the tax system has made an attempt to approach this target by allowing for a variety of tax base adjustments on the basis of very generous non-predetermined tax allowances. The apparent motivation for this approach has been to guarantee a sufficient flow of internal funds for the firms in a world of imperfect financial markets and preferral of debt over equity due to interest-deductibility.

The possibility to accumulate interest-free tax debt has produced two hypotheses. First, to the extent that the firms carry unclaimed tax allowances forward without maximizing their tax debts, i.e. the cheapest source of finance, it has been claimed that the marginal corporation tax is zero. Consequently, it is perhaps not unreasonable to claim that the corporation tax satisfies the celebrated condition of neutrality. Second, firms which are exhausting their stock of deductible allowances on the intramarginal capital find that the corporation tax functions like a subsidy with respect to the marginal investment. Apparently, the first hypothesis rests on the strong assumption that firms expect never to retire their tax debts. The mechanism behind the second hypothesis requires clarification, too. To prevent additional taxes being levied on the return on intramarginal capital, new investments will indeed be made to the extent the reduced average tax plus the net return on new investment exceeds the after-tax opportunity cost. This activity is obviously



concentrated on boom periods with increasing corporate cash flows. But the return on new capital is uncertain and hence the firm's equilibrium policy can be expected to depend on expectations concerning the future cash flows, too. The details of this mechanism need to be worked out and the sketch above is a weak substitute for a rigorous analysis on an issue of high priority when current Nordic corporation taxes are concerned. But note the strong proposition this view seems to imply: the cost-of-capital cannot be claimed to be time-invariant.

### 3.2 Corporation Tax is Regressive

The evidence suggests that the corporate tax on undistributed profits is regressive in the sense that large firms have a lower effective tax rate than smaller firms. This is problematic not only from the point of view of fairness. It discriminates against internal financing of new and starting firms. It also potentially tends to bias differently the capital-labor ratios of firms of different size. A high nominal tax rate associated with extensive possibilities of adjusting the tax base seems to be problematic also in this sense.

In Finland, this problem has been aggravated by the fact that up to some level of taxable profits, the corporation tax has been heavily progressive for firms in smaller size groups.

### 3.3 Lock-in Effect and Financial Choices

The interaction of corporate taxation and firms' financial policy continues to be greatly controversial. The general opinion seems to be that the overall taxation of distributed profits exceeds that of undistributed profits. Consequently, it has been frequently claimed that this results in a kind of lock-in effect. Yet, as from the prevailing theory is learnt, this conclusion may be too hasty if taxation of distributed profits is fully capitalized in share values. As an additional example, equity-financed investments are supposed to be discriminated against when compared to debt-financed investments. And yet the so called Miller-equilibrium suggest that the pre-tax rates of interest adjust so as to compensate any tax advantages of debt-financing.

These two examples obviously suggest that the books are not yet closed as regards to the interaction of taxation and corporate financial policies. The intuition and the analytic results seem to contradict one another.

### 3.4 Insurance Function of Taxation

All investment decisions carry some risks. Some of us may be ready to claim that financial markets price and allocate risks efficiently in the economy. Once one recognizes the

importance of informational asymmetries, this view becomes highly doubtful. The signalling models seem to suggest that welfare costs are unavoidable due to private information. This is bad news. Moreover, the costs are aggravated if the signals used are productive: signalling equilibrium necessitates overinvestment in the signal. Then, if a separating equilibrium is not attainable, the striking implication arises that risks will be mispriced and the market values will be incorrect. But then there may be incentives to overinvest or underinvest. Asymmetric information seems indeed to give rise to potentially serious distortions.

Some forms of taxation, like the income tax, have an insurance dimension. It seems, however, problematic to expect that the government could share the returns and the risks equally. In practice, loss offset provisions are only partial. Government taxes systematically "too early" i.e. before the total return of a project has been realized. The limit to optimal risk-sharing is determined by the trade-off between making the government a fair partner in risk-sharing and moral hazard; subsidizing unprofitable firms may badly hurt the incentive structures.

Once this problem has been recognized, one can take a new look at the generous body of tax allowances existing today. First, aren't they an indirect though perhaps an unoptimal way of sharing risks with the government? Profits made in

early years can be left untaxed by generating tax debt. The government is preventing from taxing too early. Losses made can be carried forward. But second, if investments are accordingly subsidized, are the incentives reduced?

In any case, it should be quite clear that the existing theories of corporate taxation are flawed in their analysis of depreciation. The economic depreciation is equivalent to a change in the values of assets. These values are forward-looking variables and highly stochastic not least of all due to the embodied technical innovations which irratically change the economic values of existing assets. Acceleration of annual depreciation deductions can be viewed as reflecting the associated risk premium to prevent overtaxation. It is by no means clear that a return to some mechanical tax depreciation is the right step, though the problem may be less severe if in the future we are living in a world with substantially lower nominal tax rates on corporations.

In light of what I just have stated, the recent Swedish committee (URF) proposal is interesting. The suggestion is to grant a firm the right to allocate funds to a special tax equalization reserve, to be based on the corporations' equity capital, up to a maximum of 30 percent. From the point of view of optimal taxation of corporations, it is appropriate to start thinking whether this approach indeed represents a more desirable way of utilizing the insurance property of

corporate taxation than the current base adjustment possibilities. This is an obvious candidate as a research topic. Below I call the Swedish proposal a "profit allowance". For small enterprises, this base adjustment would be tied to the payroll. This would result in a labor subsidy. Perhaps is it not unjustified given the existing tax distortions in labor markets.

Due to asymmetric information, for example, inside and outside financing may be complements rather than substitutes. This may justify the current trend of reducing the tax rate on undistributed profits. A good research topic would be to look at whether new developments in the financial system tear apart the historically strong link between retained profits and corporate investments. I doubt it. My prediction is that investments continue to be tied closely to profits. The problem in thinking about this link is that we do not have a good theory of investments and their structure. As Haavelmo pointed out long ago, a theory of capital is of limited help here. Profits continue to vary highly and so does the investment demand. Use of the corporation tax, for example through the investment fund system, to stabilize investment demand has been, however, frustrating. The reason may be that the tax otherwise is quite contracyclical. The profit allowance, tied to the equity capital, may be a good alternative if debt and equity are complements. In the Miller equilibrium, this base adjustment would not be needed. But

under complementarity, a profit allowance may be optimal if tax neutrality is desirable. Tangible capital, intangible capital, and inventories would have the same tax treatment. But this allowance is not optimal if it appears that neutrality is not desirable after all.

The profit allowance is not attractive only from the point of view of risk sharing and equal treatment of debt and equity. It may actually enhance the managerial incentives to maximize the market values if the management's compensation is tied to the latter. But it is not without its problems either. First, it may strengthen the lock-in effect in encouraging growth of retentions. Second, if it results in a countercyclical effective tax rate, it shares the destabilizing effects of current corporate taxation.

To bring my presentation to end, I propose that when one makes a more careful analysis of the interplay between the firms' policy and the financial markets, I would not be surprised if some new forms of base adjustment seemed desirable. But by implication, that view suggests that the corporation tax base should not be broadened too much.

ELINKEINOELÄMÄN TUTKIMUSLAITOS (ETLA)  
The Research Institute of the Finnish Economy  
Lönrotinkatu 4 B, SF-00120 HELSINKI Puh./Tel. (90) 601 322  
Telefax (90) 601 753

KESKUSTELUAIHEITA - DISCUSSION PAPERS ISSN 0781-6847

- No 272 MIKAEL INGBERG, A Note on Cost of Capital Formulas. 07.10.1988. 29 pp.
- No 273 JUSSI KARKO, Tuottavuuskehitys Suomen rautavalimoteollisuudessa 1978-1985. 10.10.1988. 38 s.
- No 274 HILKKA TAIMIO, Taloudellinen kasvu ja kotitaloustuotanto - Katsaus kirjallisuuteen. 01.11.1988. 54 s.
- No 275 MIKAEL INGBERG, Kapitalinkomstbeskattnings neutralitet i Finland. 11.11.1988. 32 s.
- No 276 MIKAEL INGBERG, Näkökohtia metsäverotuksesta. 11.11.1988. 34 s.
- No 277 MARKKU KOTILAINEN - TAPIO PEURA, Finland's Exchange Rate Regime and European Integration. 15.12.1988. 37 pp.
- No 278 GEORGE F. RAY, The Finnish Economy in the Long Cycles. 20.12.1988. 104 pp.
- No 279 PENTTI VARTIA - HENRI J. VARTIAINEN, Finnish Experiences in a Dual Trade Regime. 20.12.1988. 18 pp.
- No 280 CHRISTIAN EDGREN, Tulorakenteen hyväksikäytöstä veronalaisen tulon kasvua arvioitaessa. 22.12.1988. 32 s.
- No 281 PEKKA ILMAKUNNAS - HANNU TÖRMÄ, Structural Change of Factor Substitution in Finnish Manufacturing. 09.01.1989. 22 pp.
- No 282 MARKKU RAHIALA - TIMO TERÄSVIRTA, Labour Hoarding Over the Business Cycle: Testing the Quadratic Adjustment Cost Hypothesis. 18.01.1989. 22 pp.
- No 283 ILKKA SUSILUOTO, Helsingin seudun aluetalous panos-tuotostutkimuksen valossa. 08.02.1989. 27 s.
- No 284 JAMEL BOUCELHAM - TIMO TERÄSVIRTA, How to Use Preliminary Values in Forecasting the Monthly Index of Industrial Production? 08.03.1989. 14 pp.
- No 285 OLLE KRANTZ, Svensk ekonomisk förändring i ett långtidsperspektiv. 28.02.1989. 29 p.
- No 286 TOR ERIKSSON - ANTTI SUVANTO - PENTTI VARTIA, Wage Setting in Finland. 20.03.1989. 77 p.
- No 287 PEKKA ILMAKUNNAS, Tests of the Efficiency of Some Finnish Macroeconomic Forecasts: An Analysis of Forecast Revisions. 30.03.1989. 19 p.

- No 288 PAAVO OKKO, Tuotantomuodon muutos ja sen merkitys yritys- ja alue-  
rakenteelle. 08.05.1989. 14 s.
- No 289 ESKO TORSTI, The Forecasting System in ETLA. 10.05.1989. 36 p.
- No 290 ESKO TORSTI, MAT-ohjelmointitulkin käyttö ja rakenne. 11.05.1989.  
67 s.
- No 291 GUJA BACCHILEGA - ROBERTO GOLINELLI, Medium Term Prospects for the  
European Economies. 17.05.1989. 27 p.
- No 292 KARI ALHO, Deregulation of Financial Markets: A General  
Equilibrium Analysis of Finland. 31.05.1989. 43 p.
- No 293 PAAVO OKKO - EERO KASANEN, A Model of Banking Competition.  
15.06.1989. 20 p.
- No 294 HILKKA TAIMIO, Naisten kotityö ja taloudellinen kasvu Suomessa  
vuosina 1860-1985. 28.06.1989. 38 s.
- No 295 PETTERI HIRVONEN, Kysyntä - tarjonta -kehikon mukainen siirtofunk-  
tiomalli bruttokansantuotteelle. 23.08.1989. 38 s.
- No 296 PAAVO OKKO, Suomen aluekehityksen ja aluepolitiikan nykyvaihe.  
01.09.1989. 20 s.
- No 297 ANTTI RIPATTI - PENTTI VARTIA - PEKKA YLÄ-ANTTILA, Suomen talou-  
den ja yritys rakenteen muutokset 1938-1988. 11.09.1989. 95 s.
- No 298 ROBERT HAGFORS, On Economic Welfare Equality as a Policy Goal and  
Social Transfers as Instruments. 11.09.1989. 20 p.
- No 299 SYNNÖVE VUORI - PEKKA YLÄ-ANTTILA, Joustava tuotantostrategia  
puu- ja huonekaluteollisuudessa. 27.09.1989. 60 s.
- No 300 SEVERI KEINÄLÄ, Finnish High-Tech Industries and European  
Integration; Sectoral Study 1: The Telecommunications Equipment  
Industry. 12.10.1989. 85 p.
- No 301 VESA KANNIAINEN, The Arch Model and the Capm: A Note. 30.10.1989.  
10 p.
- No 302 VESA KANNIAINEN, Research Issues in Corporate Taxation.  
30.10.1989. 10 p.

Elinkeinoelämän Tutkimuslaitoksen julkaisemat "Keskusteluaiheet" ovat  
raportteja alustavista tutkimustuloksista ja väliraportteja tekeillä  
olevista tutkimuksista. Tässä sarjassa julkaistuja monisteita on rajoi-  
tetusti saatavissa ETLAn kirjastosta tai ao. tutkijalta.

Papers in this series are reports on preliminary research results and  
on studies in progress; they can be obtained, on request, by the  
author's permission.

0033A/30.10.1989