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The Compliance Costs of Taxes on Businesses and Individuals: A Review of the Evidence

par

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ABSTRACT - RESUMÉ

This paper reviews the literature on the compliance costs incurred by businesses and individuals because of one or more taxes. It presents both the main characteristics, such as sample size, interview techniques and so on, and the key findings of the nineteen studies reviewed. In general, one can conclude that simpler taxes lead to lower compliance costs.

Key-words: Compliance costs, collection costs individual taxes, business taxes.

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Ce texte recense les écrits sur les coûts encourus par les entreprises et les individus suite à leur obligation de percevoir ou de payer des impôts et taxes. On y présente les principales caractéristiques, telles que la taille de l'échantillon et les méthodes d'entrevues, et les principaux résultats des dix-neuf études recensées. En général, on peut conclure que les taxes les plus simples sont celles qui font encourir les coûts les plus bas aux entreprises et aux individus.

Mots-clés: Coûts privés de perception, taxes individuelles, taxes sur les entreprises.

In a classic paper of optimal taxation (Sandmo, 1976), three criterions that could be used to assess if a tax system was optimal were put forward: administrative efficiency, fairness and economic efficiency, with administrative efficiency being measured by taking into account cost incurred by government, businesses and individuals. Yet, administrative efficiency is rarely taken into account when optimal taxation is discussed. One explanation of this could be that most economists know little about administrative (government) and compliance (businesses, individuals) costs. This paper aims at furthering this knowledge of compliance costs by presenting and reviewing the available evidence as of December 1985. It is divided in two sections. In the first one, the compliance costs of businesses are presented while in the second the compliance costs of individuals are presented. In both cases text tables are used to facilitate comparisons.

1. THE COMPLIANCE COSTS OF BUSINESSES

In this review of the literature, we examine studies that collected compliance cost data through a survey of one kind or another. A total of fifteen such studies were identified: their main characteristics are presented in Table 1 and can be summarized as follows:

- various taxes or combination of taxes have been examined; older studies tend to be all encompassing while more recent ones focus on one or two types of taxes;
- the samples used in more recent studies have usually been drawn in a more scientific manner than in earlier studies and tend to be bigger. Both face-to-face and mail interviews are consistenly used from 1935 to 1983.

In general, the survey methods have improved through time so that greater reliance can be put on more recent studies. The three best studies from that perspective are those of Yocum; Sanford et al and Goodwin et al.

Tax(es) Studied	Author/Year Published	Method and Year of Data	Area Studied	Universe Size	Sample Size	Usable Answers	Response Rate	Universe Coverage	Comments
All	R.M. Haig - 1935	Mail Survey - 1934	U.S.A.	533 600 ¹	1 600 (approx.)	163	10,2%	0,03%	Incorporated businesses - 186 questionnaires were returned; 163 were usable; larger firms and manufacturers are over- represented
A11	J.W. Martin - 1944	Face-to-face Interviews - 1941	U.S.A.	Unknown	17 (?)	5/3	<u>-</u>	-	The sample size is five full interviews, but about a dozen partial interviews
A11	J.B. May & G.C. Thompson - 1950	Mail (?) Survey - 1950	U-S-A-	115 900 ²	Unstated	125		0,112	Manufacturing firms only
Axle Mile Tax	C.V. Oster & A.D. Lynn - 1955	Face-to-face Interviews - 1953	Ohio, U.S.A.	Unknown	18	11	61%	0,30%	Ohio trucking companies
Retail Sales Tax	M.Matthews - 1957	Time Study & Face-to-face Interviews - 1956	Utah, U-S-A-	5 634 ³ (1954)	7	7	-	0,12%	31 departments and check-out counters were covered in the time study of these 7 stores; 2 049 transactions were measured in the time study
A11	S.M. Mathes & G.C. Thompson — 1959	Mail (?) Survey - 1959	U.S.A.	156 300 ⁴	Unstated	222	-	0,142	Manufacturing firms only
A11	M.H. Bryden – 1961	Mail Survey - 1960	Canada	107 387 ⁵	500	125	25%	0,12%	The sample is made up of cor- porate supporters of the Cana- dian Tax Foundation
Retail Sales Tax	J.C. Yocum 1961	Time Study & Face-to-face Interviews - 1960	Chio, U.S.A.	216 4636 / 9 233 ⁷	Unknown: Replacement ment Sample Used	526		0,24/ 5,70%	Sample of stores includes men's clothing, drug, furniture, worlety, hardware, grocery and department stores and restaurants with sales of 50 000 5 once in the second half of 1956 768 transactions were measured in the time study
Payroll & Sales Taxes	F.J. Muller - 1963	Mail Survey & Time Study - 1963	Washing- ton State U.S.A.	Unknown	250/100	198/75 ⁸	79,2%	-	Small businesses, with no clear definition given. Approximately 1 000 transactions measured
Corporate Income Tax	K.S. Johnston - 1963 / Federal	Face-to-face Interviews - 1960	Ohio	Unknown	6	6	100%	-	Incorporated manufacturing firms
Personal Income Tax	B. Strumpel - 1966	Unknown - 1963	West Germany	Unknown	1 009	988	98,0%	-	293 professionals (M.D., lawyers,) and 695 business- men
A11	J.H. Wicks/ M.N.Killworth - 1967	Mail and Phone - 1965	Montana, U.S.A.	Unknown	Variable: Property Tax = 500	Property Tax = 71	14,23		
					Corporate Income Tax = 200	Corporate Income Tax = 25	12,5%	-	
					Excise = 70 (Beer)	Excise = 27 (Beer)	38,6%		
Value Added Tax	M. Goodwin - 1976	Pace-to-face 1973-1974	Rath England	Unknown	68	29	42,6%	-	The Sample comprises independent retailers with sales of 5 000 pounds or more a year. Three iterviews were to be conducted in each case at four-month intervals: 85 out of 87 were completed
Value Added Taox	C.T. Sanford et al - 1981	Mail = 1978 Face-to-face and Phone follow up = 1979	United Kingdom	1 274 000	9 094 500	2 799 263	30,87 52,67	0,22%	The universe is the list of registered traders as of 31-03-1978, per Customs and Excise
P.A.Y.E.	M.Goodwin et al - 1983	Mail - 1982	United Kingdom	1 000 0009	3 000 ⁹	68710	22,9%	0,07%	The universe is the list compiled by Inland Revenue of taxpayers
Business Income Tax (per- sonal cor- porate)	Canadian Federation of Independent Business (CFIB)	Face-to-face - 1983	Canada	Unknown	22 438	19 20811	85,6%	-	The universe is members of the Federation. They tend to be small Canadian owned businesses Only fitms using outside expertise were retained.

Taken from Historical Statistics of the United States, Part 2, Owpter V, Series V41, Page 914.

See Note 1, Series V45. If non-corporate firms are included, this number is 318 000. See Ibid, Series V15, Page 911.

As taken from Table 4 of the study. In table 3 a figure of 6 246 is used.

See Note 2. With non-corporate firms included, the rises to 323 000.

Treation Statistics 1962, Revenue Canada, Section III, Table 1, Page 110; all corporations except inactive ones.

There are 215 463 vendors, but because of the kind of business and minimum size constraints, this number was reduced to 9 233.

The kind of business restrictions led to the exclusion of 183 189 stores while the remainder of exclusions are due to size (24 041).

Out of the 198 respondents of the initial mailing, 100 agreed to face-to-face interviews; 75 such interviews yielded useful information. Approximately

Approximately

10 The figure of 687 is from Figure 3.

11 Of 22 438 business owners Interviewed, 2 311 (10,3%) prepared their business tex returns themselves and were thus excluded from the survey. The remainder were excluded because of missing information.

The definition of costs used in the studies and their main findings are presented in Table 2.

The definition of costs varies from one study to another. Most studies, with the exception of Bryden and Yocum, do not include overhead costs in this definition of costs. Time costs are the costs most often covered followed by outside fees.

The main findings are:

- first, that compliance costs represent a small but non-negligible percentage of taxes collected;
- second, that taxes levied on transactions (sales taxes, V.A.T.) have higher compliance costs than the types of taxes;
- third, that compliance costs increase when the complexity of the tax situation of the taxpayer, as measured, for example, by the number of jurisdiction collecting taxes or the number of tax rates, increases;
- fourth and most importantly, that compliance costs, measured as a percentage of taxes, decrease when taxpayer size, however measured, increases. This last finding is corroborated by the evidence reported in Table 3. In it, evidence taken from the five studies where appropriate numerical results are available, is presented.

2. THE COMPLIANCE COST OF INDIVIDUALS

There are four studies that use a survey to collect data on compliance cost incurred by individuals because of personal income taxes. Their main characteristics are presented in Table 4 and can be summarized as follows:

Study	Taxes Examined	Costs Included	Average Com- pliance Costs	Size of Business	Size of Transaction	Number of Jurisdictions	Other Findings
Heig	All (federal, state, local) Sales		2,3% of all taxes 3,7% of sales taxes 1,04% of proper- ty taxes	-	-	One state firms = 1,5% Two or more states: 2,5% more than forty states: 5,5%	-
Mertin	Seles	Not defined or discussed	2,3% of taxes	-	-	•	-
May and Thompson	All	Internal and Ex- ternal costs	1,5% of taxes ¹ 0,1% of sales ¹	-	-	Costs increase wi	
Oster and Lynn	Axle Mile	In most cases, only time costs	18,6% of net tax	"High compliance costs result where tax liability is small" (p. 214)	-	-	Firms with less regular types of operations (foreign trailers, varied routes,) incur higher costs
Yetthern	Sales	Time costs of sales and administrative employees only	5,4% of taxes	"Large stores had smaller cost than did small estab- lishments" (p. 15)	"The lower the average dollar sale the higher the collec- tion costs" p. 14	•	Credit granting stores incur higher costs
Hathes and Thompson	All	Internal and Exter- nal costs	2,2% of taxes ¹ 0,17% of sales ¹	-	-	Costs increase with the number of returns	-
Bryden	All	Wages and salaries, direct costs, share of overhead and our- side fees included	0,68% of all taxes 0,28% for the cor- porate terms tax 0,68% for the per- sonal income tax		-	Cost of col- lecting the per- sonal income tax is higher in Que- bec (1,06%) than for all Canada (0,68%) ³	-
Yocum	Sales	Time costs of sales and administrative employees, some direct and overhead costs	7,64% of taxes	"Sales tax collection costs are higher for smaller stores, lower for larger stores" (p. 110)	Inverse re- lation be- tween size of transac- tion and costs	-	-
Kuller	Sales	Time costs only	-	"Costs are higher for the smaller firm" (p. 3)	-		-
Johnston	Corporate Income (Paderal)	Time costs, some facilities costs and outside fees	0,28 of taxable income 0,36 of taxes	"As corporate income size increases, cost of compliance as a percentage of taxable income decreases" (p. 81)	-	-	Avoidable (voluntary incurred) compliance costs equal 16,5% of total compliance costs
Strumpel	Income and business	Time cost and out- side fees	29% of tax 6,5% of income	Costs as a % of income decline with increases in income	-	-	
Wicks and Killworth	VII	Not defined or discussed	10,2% of corporate income tax 1,3% of beer excise tax	-	-	-	· va
Goodwin	V.A.T.	Commencement and recurrent costs were separated. Materials, time costs and outside fees are included	21-30% of tax	Costs (time) as a % of tax with increases in size		•	Zero rating increases costs with respect to tax burden
Senford et al	V.A.T.	Time costs and outside fees	0,92% of taxable turnover 9,26% of taxes	Costs as a % of turn- over (taxes) decline with increases in size	-	-	Compliance costs in- crease with both num- ber of sales and pur- chase invoices and also with the number of rates used
Goodrin et al	P.A.Y.E.	Time costs and outside fees are included	1,01% of taxes	Costs as a % of taxes decline with increases in size	-	-	
CYIB	Business Income Tax	Outside fees only	-	Cost per suployee declines with increases in the number of employees (size)			Owners of incorporated businesses incur high- er costs than proprie- tors or partners

The data are presented in interval forms. These averages are calculated as an unweighted mean of the add-points of intervals with 0,4 and 4,0 assigned to the last (open ended) intervals of sales and of taxes.

Commissions or fees received for collecting taxes were subtracted.

Quebec has its own Department of Revenue that collects its personal income tax. Thus in Quebec, firms must comply with two sets of laws and regulations, prepare two sets of individual income statements and so on. In the remainder of Canada, the federal government collects provincial income taxes using federal taxable income as a basis for calculations.

Based office costs are excluded.

Table 3

Cost Definition and Main Pindings of Studies of Compliance Costs of Businesses

Study	Tex	Cost Indicator	Compliance Size Indicator	Cost of Businesses and their Size Cost-Size Relationship				
Bryden	Personal Income tax	Costs/Remit- tances	Number of employ— ees	Size : 0-400 400-1 000 1 001-5 000 5 001+ Ratio (%): 1,66 1,53 1,15 0,41				
Yocum	Sales tax	Cost/Sales tax liability	Gross sales (\$), second half of 1959	Size : 50-99 999 100 000-199 999 200 000+ Ratio (%): 16,95 9,09 7,84				
Strumpel	Income and Business tax	Costs/Gross Business Income	Net business in- come (D.M.)	Size : 0-20 000 20 000+ Ratio (%): 8,6 7,2				
Sanford	VAT	Cost/Taxable turnover	Taxable turnover (£)		00 000+ 0,04			
Goodwin	P.A.Y.E.	Cost/Yield	Number of employees	Size : 1-5, 6-10, 11-20, 21-50, 51-100, 101-500 Ratio (%): 14,2 6,0 4,6 3,8 1,7 1,3	, 501+ 0,8			

Author/ Year Published	Area/ Year/Tox Stidled	Survey Method/ Population Size	Sample Size/ Umable Responses/ Response Rute	Sample Binaes and Ailtustmenta	Coet Concepts Used
Wicks, J.H./ 1965	Monitana/1965 / State income tex	Student handout for parents/ un- known	3181/106/332	50 num-respondents were phoned and had lower coats than re- spondents: results were adjusted accordingly	Time costs were calculated using sur- vey data on hums spent on keeping records and preparing income tax re- turn and humrly earned income esti- mated from survey data on tax paid
					Money costs are assumes paid for record keeping and return prepara- tion work
Wicks, J.R./ 1966	Montana/1964 / Federal income tax	Student hundout for parents/ Mill return / unknown	380/118/31%	75 non-respondents were phoned and had lower costs than re- spondents: results were adjusted accordingly	Time costs were calculated using survey data on locars spent on keeping records and prejuting income tax return and hearly earned income estimated from survey data on tox paid
					Momey costs are adminits poid for record keeping and return preparation work
Senford, C.T./ 1973	Great Britain/ - 1970 / Income Task	Nation wide face- to-face inter- views	3 555/2 773/78%	In some calculations only respondents from England and Wales (2 472) are used	Time costs were calculated using survey data on time sment attending to "personal tax atfairs" and time walman closes to be less than suges set high enough to represent the disattlity associated with tax work. Work of uspaid advisers is also included
	- 1970-1971/ Income Tax	Mail survey of high cost tex- payer	335/116/34,6%	30 non-puspordents were interviewed: they may be more often self-employed with tax advisors	Money costs are obtained from survey data on fees to tox adviser, corrected for sample blasses and under hilling and miscellamenus expenses incurred by high cost taxpayers
Slearod, J. and N. Sorum/ 1984	Minnesota / 1982	Mail murvey	2 000/600/30%	The sample "undersamples low income households". Results were thus reweighted	Time costs were calculated using survey data on time spent learning about tax rules, keeping record, looking up tax tables, preparing returns and providing information to tax advisor and survey data or imputed data (when missing) on the after tax wage rate
					Money costs are for fees to tax advisors and miscellaneous costs

¹ Estimated since Wicks states that "the 106 represented approximately one third of those to whom questionnaires were subsitted.

- all studies are reasonably recent but, except for the Sanford study, use small (Wicks) or medium (Slemrod/Sorum) sized, regionally limited, samples;
- the definition of money costs used by Wicks is more restrictive than the one used by Sanford and by Slemrod and Sorum since it only includes fees and excludes miscellaneous costs. The more inclusive definition is clearly preferable;
- the uses of time surveyed by Wicks are less inclusive than those surveyed by Sanford and by Slemrod and Sorum. In particular, Slemrod and Sorum are careful to include time spent with tax advisors.

The main findings of these studies are presented in Table 5. They can be summarized as follows:

- the cost reported will vary with the value of time used to estimate that cost. The authors used gross wages (Wicks), net of income taxes wages (Slemrod and Sorum) and hypothetical time costs (Sanford);
- self employed individuals incur higher costs than employees.

CONCLUSION

As shown in Table 6, tax compliance costs can usually represent a non-negligible 0,2 to 0,3% of the tax base, ranging from 0,17% to 0,85%. Thus it appears appropriate to consider them when engaging in tax design or tax reform. In general, the findings of the literature show that a simple tax, as measured by the number of rates, of exemptions, of taxing jurisdiction, is associated, the lower of the compliance costs associated with it. This is a reassuring finding in an era where proposed changes to the tax system should lead to a reduction in the number of deductions, exemptions and special provisions in both the United States (personal and corporate income tax) and Canada (business transfer tax).

Author / Year Published	Compliance Cost as % of Tex	Type of Taxpayers	Income Levels	Deductions Claimed	Other Findings
Wicks, J.H./ 1965	7X ¹	"Costs tend to be be especially high for those who are self-employed", p.41	-	No relationship was found	"For the typical taxpayer, the state cost is only about 11% of the federal", p. 41
Wicks, J.H./ 1966	321	"The self-employed bore the highest costs", p. 20	"Probably no significant correlation between cost and income p.21	Itemizers "had higher averable costs all the self-employed itemized", p. 21	
Senford, C.T./ 1973	1,87 to 3,39 to 7,32% Estimates from table 3.8 (p. 44) vary depending on value of fees, own time and miscella- neous expenses	"Compliance costs tend to fall with disproportional weight (on) the self-employed and to a lesser extent on the executive and pro- fessional classes	Low income individuals have higher compliance costs		A cost in the 3 to 5 % range would appear reasonable
Slewrod, J. and N. Sorum 1984	7% (Federal and state income tax)	Everything else equal "The self- employed have 400\$ more in total re- source cost than employees", p. 27	"The lowest in- come class is associated with relatively high compliance cost, as is being in the highest in- come class", p.27	_	On average record keeping takes 13,8 hours and return preparation 4,4 out of 21,7 hours

These are the median values of the cost distribution. They are used rather than mean values of 32% and 11,5% since Wicks favors using median values.

Table 6							
Resource	Cost	of	Collecting	Taxes			

Study	•	Country/Year	Tax(es) Studied	Tax Cost as Share of Output	Output Measure
Haig	(1)	U.S.A 1934	A11	0,31%	GNP
Martin	(2)	U.S.A 1941	A11	0,17%	GNP
May and Thompson	(3)	U.S.A 1950	A11	0,24%	National Revenue ^l Manufacturing
Mathes an Thompson	d (4)	U.S.A 1959	A11	0,27%	National Revenue ^l Manufacturing
Bryden	(5)	Canada - 1960	A11	0,32%	GNP
Sanford	(6)	U.K 1970	Personal In- come Tax	0,33%	Personal Income ²
Sanford et al	(7)	U.K 1978-79	V.A.T.	0,22%	GDP
Goodwin et al	(8)	U.K 1982	P.A.Y.E.	0,33%	Wages and Salaries
Slemrod/ Sorum	(9)	U.S.A 1982	Federal/State Personal Income Tax	0,85%	Personal Income

SOURCES:

- (1) Cost of taxes paid: 2,3% x all taxes (Y-507, Volume 2, Page 1119); GNP: F-1 Volume 1, Page 224, Historical Statistics of The United States, (HSUS).
- (2) Cost of taxes paid: See text; GNP: Same source as above.
- (3) &
 (4) Cost of taxes paid: 0,1% (1950) or 0,17% (1959) x sales of the manufacturing sector (P 682, Volume 2, Page 682); National Revenue, Manufacturing: F 230, Volume 1, Page 239 (HSUS).
- (5) Cost of taxes paid: Text and Reference Table 59; GNP: Reference Table 5, Economic Review 1980.
- (6) Cost of taxes paid: 1,12% x total compliance costs (1,12 is a factor for the exclusion of Scotland from some calculations, see p. 30); Personal Income: Economic Trends Annual Suppliment 1986, London: C 50, Table 18.
- Cost of taxes paid: See text; GDP: 1978-79; average of both years (Yearbook of National Accounts Statistics 1980, Volume 1, Part 2, Table 1.1, Page 1487. (7) Cost of taxes paid:

- (8) Cost of taxes paid: See text; Wages and Salaries: Economic Trends Annual Supplement, 1986, London: C 90, Table 18.
- (9) Cost of taxes paid: See text: Personal Income: Statistical Abstract of the United States, 1984, Washington Bureau of the Census, 1983, Table 749.

NOTES:

- $^{
 m l}$ Used since compliance costs examined are those of the manufacturing sector.
- ² Low estimate of cost used.
- 3 Mid-point of costs estimate used.

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