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ELECTRONIC DATA EXCHANGE TO SAVE THE WELFARE STATE

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1 . Introduction

History shows that, apart from the dominant political regime, both the range and nature of government intervention in society and the economy closely mirror such variables as the literacy of the population, the sophistication of legal, administrative and communications systems, and the stage of economic and technological development. In the course of this century major "progress" has been achieved in all these areas, often to the benefit of individuals and society as a whole (for example, the growth of the welfare state), sometimes also with disastrous results (war, the decay of the natural environment).

The rapid rise of information technologies is one eye-catching innovation of recent decades, which will have consequences that can as yet not fully be gauged. Of course, of old the gathering and processing of military, police and related information has been an essential activity of the State, if only to improve its own chances of survival. But in western Europe, as from the end of the 18th century governments of a growing number of newly-constituted nation States witnessed a rapid increase of their informational needs. For example, for the Napoleonic conscription to be effective, bureaucrats needed a complete and reliable register of the population. To finance the growing central government apparatus that during the 19th century firmly established itself in many countries, a steady flow of revenue from centralized tax sources had to be secured. Thus governments felt the need to chart properly various tax bases (property and, near the end of the 19th century, personal income).

The rise of the welfare state, notably during the second half of the 20th century, only accelerated the process whereby the State bureaucracy amasses data regarding citizens and their affairs. However, until recently government officials seldom combined items contained in various data files, except in military intelligence, police work and to combat tax fraud, because a different approach was thought to be too time-consuming and seemed to be hardly cost-effective. In recent years, all this has changed very much, as a logical consequence of the gradual introduction of advanced techniques for electronic data processing. It has taken the Dutch government bureaucracy a rather long "lead time", but as from the mid 1980s policy makers seem to be increasingly aware of the potential of information technology in the service of government policy. In my view, several factors may explain the growing interest of policy makers in information technology.

1. The sheer size and complexity of public programmes that characterize the welfare state that has been build up in the Netherlands (Section 2).
2. The suspicion of growing fraud and abuse of public programmes, along with a general awareness among interested citizens that the government has lost control over major parts of the public domain (Section 3).
3. The unpleasant idea that the government might drown in its own data, which could and should be transformed into policy-relevant information (Section 4).

In discussing each of these factors in greater detail, this paper focuses on the role of information technology in the administration and auditing of *tax and transfer programmes* as organised by the public sector. Next the paper addresses the question whether combining data from various datasets, besides being a bureaucrat's dream, will also turn out to be a citizen's nightmare (Sections 5 and 6 respectively). I try to sum up the argument with a few concluding remarks (Section 7).

2. Tax and transfer programmes

During the 1960s and the 1970s in most welfare states the amounts that were channelled through the tax-transfer system increased both in absolute and in relative terms. As one informed observer recently noted "among OECD countries the Netherlands is one of those which have gone furthest in their sustained efforts to promote a tolerant, caring and supportive society through the action of government [OECD, 1991, p. 57].

The rise of the welfare state has been reflected in a particular strong growth in public spending and taxation levels after the mid 1950s. In the 1960s and early 1970s the expansion of the public sector was greatly facilitated by relatively high rates of economic growth. The decline in economic performance during the later 1970s and early 1980s triggered a financial crisis of the Dutch welfare state.

By 1983 the share of the public sector in net national income (NNI) peaked at 73 percent. At the time, net borrowing of general government amounted to 10 percent of NNI. As from 1982, the Dutch government has tried to reign in the share of public outlays and the deficit in NNI, holding the level of taxes more or less constant. After eight years of restraint, the process of public sector consolidation has clearly met with some success. Improved macroeconomic performance during the second half of the 1980s and prolonged efforts to curb public spending effectively, enabled policy makers to reduce gradually the level of public outlays to 63 percent of NNI in 1992. Relative to NNI, the net borrowing requirement about halved.

In the longer run, the expansion of the public sector is largely explained by the increase of transfer payments to private households. First, the *volume* of such transfers has tremendously grown. The number of benefit recipients (B) has continually increased, relative tot the labour force (L). Between 1960 and 1990 the B/L-ratio exploded from 0.36 to 0.86.[1] Secondly, the relative *price* of transfers has risen. In 1960 average benefits (b) amounted to 25 percent of average wage income (w), whereas by 1980 the b/w-ratio had climbed to .43. By the early 1990s successive reductions of benefit levels during the previous decade had brought the b/w-ratio down somewhat to .38 [Social Affairs, 1991, p. 118].

Table 1 outlines trends in outlays, transfers, tax and non-tax revenue and net borrowing requirement of the public sector in the period 1970-1993.

	1970	1980	1990	1993
Outlays	49.0	66.9	63.9	62.4
(transfers to households)	(18.3)	(29.1)	(30.0)	(30.1)
Taxes (plus contributions)	40.8	50.8	51.1	51.8
Non-tax revenues	5.1	8.5	7.0	6.8
Net borrowing requirement	3.0	7.6	5.8	3.8

Table 1: Public outlays and their financing, 1970-1993 (% of NNI),
Source: [Finance, 1992, p. 328]

The term "welfare state" is used as a shorthand for the state's activities in four broad areas: cash benefits; health care; education; and housing and other welfare services [Barr, 1992, p. 742]. Each public programme defines its target group. Tax laws identify units that are liable to the tax concerned, transfer programmes define the client population, and so on. Target groups are defined in terms of specific characteristics of individuals or some other relevant unit.

Sometimes the demarcation of the target group is unmistakably clear; in those cases it is quite obvious who is and who is not entitled to the programme. A student enrolled at

university is a case in point; in the Netherlands such an individual - if over 17 years of age - is entitled to a student grant, if certain additional requirements are met. Still the student grant and loan programme is notoriously complex, because amounts differ for students that do and do not live at home, and because part of the grant is means-tested (income of parents and the student being of relevance here). Sometimes, however, entitlements are less clear, for example whether an individual qualifies for disability benefits.

Complaints about programme complexity abound. Yet there seems to be a consensus among experts that reforms during the 1980s have only made things worse. The reform of the employment and disability social insurance programmes (from 1987) has undoubtedly led to greater complexity, whereas proposed legislation pending before parliament would even considerably more complicate those programmes. The reform of the personal income tax (from 1990) resulted on the one hand in much wanted simplification, however, at the cost of new complexities (notably the limited deduction of certain business expenses).

Programme complexity is not only the unavoidable sequel of an increasingly complex society. In the case of the Netherlands the jungle of regulations governing taxation and social security is at least in part to be explained because politicians in the Netherlands are obsessed by distributional impacts of (changes in) tax and transfer programmes. Social and cultural changes may fuel the complexity of rules. A well-known example may serve to illustrate the point: a growing number of individuals live together without being married. In many respects, such units of cohabitation are economically in the same position as married couples. Policy makers have decided that such units will be treated under tax-transfer programmes on the same footing as married couples, but not in all cases and not always according to the same criteria.

Policy makers tend to complicate programmes even further by creating new subgroups. An horrifying example was set in the first half of the 1980s. Qualifying households with an income equal to the (implicit) poverty line received yearly special benefits (an annual one-off payment) as from 1981. Originally this group consisted of some 300,000 households. By now their number has tripled. Households at the poverty line are now commonly referred to as *real minima* (Dutch: "echte minima").This category may illustrate the concept of "fragmentization" which refers to the process under which initially homogeneous groups are carved up into many relatively smaller categories, for which subgroups specific public programmes are then established. For example, as from 1984 only households belonging to the subcategory of *multi-year* real minima were entitled to the yearly special benefits.

As programmes get fragmentized and the variation of programme formulas blossoms, citizens are offered progressively more opportunities for "programme shopping": they can present their household and income situation in different ways, - depending on the programme specification - so as to maximize benefits and minimize their tax liabilities.

Recently, politicians have "discovered" this *civis calculans*. They went on to ventilate a lot of hot air about assumed programme abuse. However, politicians would be well advised to realize that citizens have always tried to maximize the result of their dealings with the state and that it is the *legislator* itself which has offered important new windows of opportunity for the profit-seeking citizenry by creating complex programmes that are inconsistent, prone to abuse and fraud, and - for the welfare state bureaucracy - hard to carry out and to monitor.

3 . Abuse and fraud

Just as old as taxation itself is the temptation of individual taxpayers to minimize their tax bills, or even completely escape taxes. Efforts within the law to minimize tax payments

are usually labelled tax *avoidance*. Such efforts outside the law are in the realm of tax *evasion.* Both types of taxpayer reactions spring from the same motivation. Both result in similar consequences: an increase of net disposable income of taxpayers concerned and a loss of revenue to the public coffers. The distinction between tax evasion and avoidance is essentially legal in nature. Hereafter, both taxpayer reactions are conveniently lumped together under the heading of tax "avoision".

Similarly, households may actively be engaged in transfer seeking behaviour, in that they artificially and purposefully arrange their affairs in a way that maximizes entitlements under present programmes. Abuse borders here on fraud, for example when households do not declare income so as to maximize means-tested benefits. The early 1980s saw publication of several estimates of the size of the hidden economy. These publications did not fail to shock the general public and politicians alike. An informed guesstimate by Begeer and Van Tuinen, both at the Central Bureau of Statistics, put the value of transactions hidden from the fisc at 5-10 percent of NNI (1992: 25-50 billion guilders) [Begeer & Tuinen, 1986].

Looking back, it seems that - at least in the Netherlands - the tax authorities have reacted rather late to counter the effects of deteriorating taxpayer morality. Only from the mid 1970s on, concerted action was undertaken against some forms of tax planning, by closing a number of the most glaring loopholes in the personal income tax. Moreover, the Internal Revenue Service (IRS) has more actively sought an opinion of the tax courts regarding the acceptability of a number of tax planning devices.

Also, as from the end of the 1970s, problems posed by tax fraud and the hidden economy have at least been recognized by policy makers. Subsequently fraud has come under serious attack by the tax authorities. To mention just one example, as from 1987 banks in the Netherlands have to provide the IRS with data on all interest paid out to private account holders. This effectively put an end to the earlier practice that about half of aggregate interest income was not declared to the taxman.

The topic of fraud by benefit recipients has long been a taboo for many participants in Dutch political discourse. After the mid 1980s this taboo has gradually evaporated and policy makers have sought to intensify the battle against social fraud.

The importance of successful policy actions aimed against apparently massive tax and social security fraud can hardly be exaggerated. One direct result of tax fraud is the annual loss of billions of guilders of potential revenue. Hence, given the level of public spending and the size of the public deficit, tax avoision imposes higher tax rates on honest tax payers than in the case where all taxpayers stick to the rules, and model their behaviour according to presumed intentions of the legislature. Moreover, as a consequence of tax avoision conditions of fair competition are distorted. Private firms which manage to escape (part of) their tax obligations find themselves in an advantageous position viz-à-viz firms which fulfil those obligations and thus have lower after-tax returns.

Tax avoision is a public evil. Fraudulent taxpayers will not hesitate to use all available legal instruments and sophisticated communications technology to escape taxes. It is only logical then, and moreover in the interest of all law-abiding citizens, that the government uses the same weapons to combat fraud and abuse. Likewise, successfully countering fraud with benefits may substantially lessen present strains on the public budget.

While in the battle against fraud by now undoubtedly a number of successes has been scored, there is scope to intensify policies which are aimed to reduce both tax avoision and fraud with benefits as well [Finance,1992, pp. 361-379]. Electronic data exchange on an increasingly large scale could and should be an important instrument of tax and transfer law enforcement.

4. A government drowning in data

Data collected by government organisations serve at least three specific purposes:

1. It functions as an instrument for the implementation, administration and control of the specific government programme for which it has been collected;
2. It facilitates the control of other government programmes (through data exchange);
3. It provides researchers with the necessary data base to assess and evaluate certain government programmes.

Scientific research is often blocked, because data are not made available to researchers at the micro level, the reason given to them being that the "privacy of programme participants has to be protected". Such reasoning is weak (researchers are not in the least interested in the private circumstances of programme participants) and it has far-reaching consequences for public policy. This point deserves some elaboration.

As public spending on welfare programmes exploded, there was concern in certain quarters as to the degree to which given allocative and distributive goals of government policy were actually attained. Interest in the effectiveness of programmes grew even more when - in the late 1970s and the 1980s - the budget crisis of the welfare state made cuts in outlays for existing transfer programmes inevitable. To be able to assess the relative merits of various strategies to cut programme costs, it is essential to have at least approximate information about the impact and incidence of taxes and transfers. To provide policy makers with this type of information, researchers need first of all data. Moreover, it will often prove necessary or useful to process available data with a microeconomic model.[2]

With adequate data lacking, politicians may make unnecessarily uninformed decisions on the retrenchment of transfer programmes, hurting groups most in need of public support. In the event, priority for the protection of privacy may hurt many clients who are hit by programme changes inspired by and voted upon by uninformed politicians.

Another illustration is in order. Some programmes are specifically targeted at minority groups. However, due to a lack of adequate data it often proves difficult to locate those target groups among the population at large. Again, because of a lack of data it is often impossible to assess the effectiveness and efficiency of such compensatory programmes, which leaves them open to attack.

The government runs and/or has access to unnumbered (extensive) data sets, which presently are seldom combined or merged, so as to trace fraud and abuse of tax-transfer programmes by individuals and private firms.[3] If policy makers do not choose to optimize the use of available data bases, the organisation and maintenance of data exchange mechanisms such as do exists is of rather limited value. I therefore take the position that the government, within the limits of cost-effectiveness and protection of legitimate interest of its citizens, should use the potential of electronic data processing to its fullest extent, if only to keep its own administrative house in order.

5. Technocrat's dream?

Large scale exchange of data which government bureaucracies already register in their administrations seems to be the technocrat's dream. Indeed, the playing field of *civis calculans* might well be restricted in important ways, once the government efficiently and successfully combines data from various sources. Some observers do not like the idea at all; they feel the chill of Big Brother watching us (see Section 6). I prefer to take a different position, stressing that electronic data exchange first of all serves to rescue the

welfare state from the negative consequences of massive fraud (as documented in Section 3).

Those fearing the arrival of Big Brother may find solace in my next consideration. In practice, massive data exchange might turn out to stretch government organisations to their limits, given the scale of the operation envisaged here. It may be noted that several large automatization projects of the government have more or less flopped in recent years (courts, police, Ministry of Defence). It appears that the IRS has been rather successful in this respect. But I do not doubt that Van Lunteren could disclose some of the practical difficulties that the IRS has encountered over the years, though I am not sure that those complications will be mentioned in his paper.

6. Citizen's nightmare?

Defenders of the so-called "privacy" of citizens are strongly opposed to a pragmatic data exchange as has been advocated in the preceding section. Opponents seem to overlook that in most cases no additional data are collected. What is fed into government computers is already available in one of the government organisations. I concede that the combination of data may generate new information. But that is, after all, the aim of the whole operation. There is no need to detail all objections which are regularly fielded against the routine of electronic data exchange. Given benefits to be achieved through this technique, the burden of proof seems to rest with opponents of automatic data exchange.

One of the opponent's arguments, to be singled out, refers to "noise" in datasets, which may lead to harassment of citizens because the government has its data wrong. This argument may be reversed. It seems to be of general interest that government records are as reliable and "clean" as possible. Data exchange will allow the government to trace noise before real harm is done because of unreliable data.

Basically, the privacy argument goes back to an irrational, uncanny feeling that Big Brother watches us. As long as our democratic institutions guarantee and protect the full rights of minorities, I see no cause for alarm here. Without coordinated data exchange growing fraud, which is the more harmful phenomenon, results.

Without doubting the good intentions of privacy crusaders, it may be submitted that their arguments have in fact the effect of protecting specific, private interests of actors who are often not behaving according to the rules. For example, individuals who after dropping out of the university (thus losing the right to occupy a student apartment) object to the matching of data from university administrations and the student housing corporation. They forget that they occupy a much sought-after apartment. It is not clear to me what privacy is harmed if measures are taken to ensure that such apartments are occupied only by those entitled to do so. This example is one out of many. The same line of reasoning holds of course for tax fraud, and the matching of tax and social security files. Data exchange is in the interest of all law-abiding citizens and will restore the grip of government on parts of the public domain (allocation of subsidized housing, tax fraud) over which it has lost the ability to guarantee prudent supervision.

7. Conclusions

The strained public finances and a scheduled reduction of the number of civil servants employed by central government might in the next few years jeopardize efforts to further improve the quality and relevance of policy information and might also seriously hamper the battle against fraud in the areas of tax and transfer programmes. The introduction of more and better computers and the electronic handling of large datastreams within government bureaucracies offer new opportunities to win the battle against fraud and to improve our present knowledge of impacts of tax-transfer programmes. It is my firm

conviction that without massive electronic exchange of data, in the medium term the real loser will prove to be the welfare state and its deserving clients, which may not survive continuing fraud and abuse in the order of 25-50 billion guilders a year.

8. Notes

1 Both the number of benefit recipients and the size of the labour force have been corrected so as to be expressed in full-year equivalents. Detailed data may be found in: [Social Affairs, 1991, p. 14].

2 De Kam [1990] offers a now slightly dated overview of data sets and microeconomic simulation models that were available at the end of the 1980s to trace income effects of changes in existing tax-transfer programmes.

3 Third parties are in many instances under the obligation to provide the IRS with detailed information regarding clients and business transactions.

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