

Genser, Bernd; Holzmann, Robert

Working Paper

Are Dutch Old-Age Pensions Taxed Fairly and Efficiently?

CESifo Working Paper, No. 8444

Provided in Cooperation with:

Ifo Institute – Leibniz Institute for Economic Research at the University of Munich

Suggested Citation: Genser, Bernd; Holzmann, Robert (2020) : Are Dutch Old-Age Pensions Taxed Fairly and Efficiently?, CESifo Working Paper, No. 8444, Center for Economic Studies and Ifo Institute (CESifo), Munich

This Version is available at:

<https://hdl.handle.net/10419/223516>

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.

Are Dutch Old-Age Pensions Taxed Fairly and Efficiently?

Bernd Genser, Robert Holzmann

Impressum:

CESifo Working Papers

ISSN 2364-1428 (electronic version)

Publisher and distributor: Munich Society for the Promotion of Economic Research - CESifo GmbH

The international platform of Ludwigs-Maximilians University's Center for Economic Studies and the ifo Institute

Poschingerstr. 5, 81679 Munich, Germany

Telephone +49 (0)89 2180-2740, Telefax +49 (0)89 2180-17845, email office@cesifo.de

Editor: Clemens Fuest

<https://www.cesifo.org/en/wp>

An electronic version of the paper may be downloaded

- from the SSRN website: www.SSRN.com
- from the RePEc website: www.RePEc.org
- from the CESifo website: <https://www.cesifo.org/en/wp>

Are Dutch Old-Age Pensions Taxed Fairly and Efficiently?

Abstract

The Dutch pension system is internationally top-ranked as a well-designed three-pillar system. Moreover, almost all forms of pension benefits are expenditure taxed in line with the European Commission's recommendations. Consequently, the Dutch pension policy approach could be regarded as a welcome blueprint for pension policy reform, currently on the agenda of all EU member countries. This paper focuses on the taxation of Dutch pensions and identifies two classes of problems that challenge the suitability of deferred pension taxation. First, cash flow taxation of pensions erodes the tax equity objectives of a progressive income tax. Second, deferred pension taxation generates a double fairness dilemma in a world with free cross-border migration and double taxation treaties in accordance with the OECD Model Tax Convention. The paper argues that these problems, as well as other minor problems in Dutch pension taxation, could be solved by replacing the Netherlands' current system of deferred income taxation of pensions with a frontloaded expenditure tax system.

JEL-Codes: H240, H550, H870, F220.

Keywords: pension taxation, front-loaded expenditure taxation, progressivity erosion, international migration, OECD model tax convention.

Bernd Genser
University of Konstanz (retired)
Konstanz / Germany
bernd.genser@uni-konstanz.de

Robert Holzmann
Austrian Academy of Sciences and Austrian
National Bank / Vienna / Austria
robert.holzmann@oenb.at

June 18, 2020

Revised version of a paper presented at the 2019 Cnossen Forum: Tax by Design for the Netherlands, Rotterdam.

1 Introduction

The Dutch pension system is a well-developed three-pillar system, consistent with the World Bank's proposed multipillar structure for an appropriate 21st century pension system (Holzmann and Hinz 2005; Bovenberg, van Ewijk, and Westerhout 2012), and is top-ranked by the Melbourne Mercer Global Pension Index (Mercer 2019).⁴ Despite being widely acknowledged, the Dutch regime has faced criticism (Kalloe and Kastelein 2011; Bovenberg 2011; Laros and Lundbergh 2012; Bovenberg, van Ewijk, and Westerhout 2012; Preesman 2017; Westerhout 2020). It is argued that reform steps are required because: (i) age-independent contribution and accrual rates of pensions claims, that is, uniformity pricing, generate unintended distribution effects; (ii) the costs of pension risk are not fairly shared across generations; (iii) nontransparency of pension wealth accumulation jeopardizes the sustainability of public finances and appropriate individual investments in pension saving; and (iv) institutional restrictions push the costs of pension wealth accumulation to unnecessarily high levels. More detailed reform steps call for a broader scope of collective and individual pension products, for

⁴ The Melbourne Mercer Global Pension Index is published annually by the Monash Centre of Financial Studies. In 2019 the Dutch pension system ranked first, just ahead of Denmark. These two countries are the only ones out of 37 countries worldwide classified as grade A, which based on more than 40 single indicators attests that "their pension systems deliver good benefits, financial sustainability, a high level of integrity, as well as preparedness for tomorrow's ageing world" (Mercer 2019, 6).

more flexibility in the payout phase, and for improvements in portability of pension claims for an internationally mobile labor force.

In contrast, surprisingly few critical remarks are made on the tax treatment of pensions in these studies. On one hand, this neglect of tax effects is amazing given that net replacement rates, which crucially depend on pension taxes, are important indicators in evaluating pension systems, and given that the Mirrlees report recommends designing and reforming the benefit system, the tax system, and the tax credit system jointly rather than in isolation from one another (Mirrlees et al. 2010, 146). On the other hand, Dutch pensions are generally taxed as deferred income; that is, pension benefits are subject to a progressive income tax schedule when they are paid out after retirement. This tax regime provides a level playing field for all three pension pillars and low costs of tax compliance and tax administration are low. Moreover, this system complies with the recommendations of both the European Commission (EU Commission 2019) and the Organisation for Economic Co-operation and Development (OECD 2018, 12). Sporadic critical comments on pension taxation can be found, however; for example, Kalloe and Kastelein (2011) complain that state pensions are double taxed because AOW (General Old Age Pensions Act) contributions are not deductible or that returns on occupational pensions remain untaxed.

In contrast, this paper concentrates on Dutch pension taxation and finds that four features justify scrutiny of the present tax regime:

- (i) Deferred income taxation of pension saving deviates from the general principle of comprehensive income taxation on returns from other forms of saving and generates a substantial income tax revenue loss.
- (ii) Deferred pension taxation under the progressive Dutch income tax schedule implies an income tax revenue loss for the national budget in present value terms because the marginal rates at which contributions to the pension system are deducted from taxable income are generally much higher than the average rates applied to pension benefits.
- (iii) Deferred pension taxation under the progressive Dutch income tax schedule erodes this progressivity because the lifetime income tax burden relief of a pensioner rises with the aggregate marginal tax rate gap on income before and after retirement.
- (iv) Cross-border emigration of pension benefit recipients implies a permanent income tax revenue loss to the Dutch budget, if pensioners have to tax pension benefits in the residence state according to tax treaties in line with the OECD Model Tax Convention.

This paper discusses these features and identifies violations of fairness and efficiency, which are intrinsically tied to deferred income taxation. But it also shows that replacing deferred income taxation by a frontloaded expenditure tax system for pensions avoids individual and national consequences of progressivity erosion as well as the double fairness dilemma of cross-border pension taxation. Moreover, the paper shows that frontloaded taxation of pension income maintains the intertemporal neutrality property of expenditure taxation and exhibits some additional attractive features.

The remainder of the paper is organized as follows. Section 2 starts with a short review of the Dutch pension system and the current state of its taxation. Section 3 evaluates the economic relevance of criticisms of the Dutch pension tax regime and identifies the double fairness dilemma. The proposed reform is presented in section 4, while section 5 discusses the pros and cons of a switch to frontloaded income taxation of pensions. Section 6 summarizes and concludes.

2 Income taxation of old-age pensions in the Netherlands

The Dutch pension system is a mix of public and private pensions based on three pillars:

Pillar 1: In 2018, all Dutch residents aged 66 and over were entitled to a state pension laid down in the General Old Age Pensions Act (AOW). In that same year, the full state pension was €1,244.75 per month for a single person and €858.89 per person for couples (Ministerie van Sociale Zaken en Werkgelegenheid 2008; Stichting Pensioenfonds 2018). The respective monthly amounts are updated biannually in line with the net minimum wage. Individual pension benefits accrue in steps of 2% of the full benefit for each year in which the prospective pensioner has lived or worked in the Netherlands. AOW benefits are the most important income source for the 65+ population, accounting for 57% of their gross income in 2016 (Westerhout 2020). These pension benefits are not funded but financed pay-as-you-go by a payroll tax, levied at a rate of 17.90% on box 1 income from work and home in the first two brackets of the income tax schedule, up to a ceiling of €33,994 in 2018. The mandatory contribution to AOW pensions is integrated with the progressive income tax schedule and these contributions are not deducted from the income tax base. The statutory pension age of 66 years in 2018 is the intermediate result of a codified linear shift from 65 years in 2015 to 67 years in 2021. In June 2019 the period was extended to reach 67 years only in 2024. Thereafter, the standard retirement age will be linked to life expectancy.

Pillar 2: Supplementary to the basic state pension, occupational pensions regulated by the Dutch Pension Act are the second pillar of the Dutch pension system. Although mandatory only for large industries, more than 95% of Dutch employees are covered under an occupational pension scheme. Occupational pension benefits accounted for 39% of the 65+ population's gross income in 2016. Most occupational pensions are defined benefit schemes, but defined contribution schemes are gaining importance. In 2018, 99% of the defined benefit schemes were based on lifetime average earnings, because final pay schemes (about 70% in 1998) were massively converted to average pay schemes. Occupational pension benefits also accrue in annual steps that must not exceed 1.875% per year. In 2015, a pensionable income cap of €100,000 was introduced, indexed annually to the minimum wage.⁵ Occupational pensions must be capital funded by a legal entity, either company-specific or industrywide pension funds or insurance companies. The employer usually pays a higher contribution rate than the employee. In 2018, the mandatory contribution rate for an average employee was 7.7% and for his employer, 14.8% (OECD 2019, table 8.1). Pension rights are fully portable if workers change jobs and vesting periods for pension benefits are very short.

Pillar 3: The third pillar of private pensions consists of individual annuity contracts provided by insurance companies. This private pension market is relatively small; the gross old-age income from capital transfers including private pension annuities accounted for less than 6% in 2016.

The Dutch income tax code treats all pension benefits as box 1 income, which is taxed progressively and integrates income tax and social security contributions. In 2018, the income tax was levied at four marginal tax rates: 8.90%, 13.20%, 40.85%, and 51.85%; and social security premiums were levied at flat rates of 17.9% for old-age pensions (AOW), 0.1% for surviving dependent pensions

⁵ In connection with this pensionable salary cap, a net annuity pension was introduced for nondeductible pension contributions from income exceeding this cap. Benefit accruals from these net pensions must not exceed 1.875% per year and pension benefits after retirement are exempt from income tax.

(ANW), and 9.65% for long-term nursing and care insurance (WLZ) in the first two income tax brackets (Fiscaal Adviseurs 2017). Accordingly, marginal total tax rates rise from 36.55% in bracket 1 to 51.95% in bracket 4. A general tax credit and an employed persons' tax credit apply, which are phased out with rising income.

Contributions to statutory pensions are not deductible from the income tax base. Contributions to occupational pensions are tax-exempt; they are withheld by the employer and not considered taxable income. Contributions to qualified private pension schemes are deductible as well. After retirement, statutory, occupational, and personal pension benefits are taxed as box 1 income in the payout period. The progressive income tax schedule applies, but pensioners' social security premiums are reduced to WLZ contributions and income tax credits for pensioners are lower than those for workers. Regarding the three phases of pension cycle this income tax pattern is known as E-E-T, indicating that income spent on pension contributions is tax exempt, returns on pension wealth during the accumulation phase are exempt as well, and pension benefits paid out after retirement are subject to tax.

Nonqualified forms of retirement saving are treated as nonexempt capital investments and returns on them are taxable capital returns according to the Schanz/Haig/Simons standard which results in an income tax pattern T-T-E. Under the Dutch income tax code, T-T-E taxation of asset accumulation implies that income spent on nonqualified pension savings is taxed progressively as box 1 income, returns on these assets are taxed at a flat rate as box 3 income, and asset withdrawal is tax exempt. The tax base of box 3 income is an imputed return of 4% on the value of asset wealth. This imputed capital return is taxed at a flat rate of 30%, corresponding to a wealth tax of 1.2%.

3 Economically questionable properties of the Dutch pension tax regime

Based on the features of a deferred income tax regime on pensions as outlined in section 1, this section discusses the relevance of arguments raised against the Dutch system of pension taxation.

3.1 Deviation from the Schanz/Haig/Simons standard of comprehensive income taxation

Economically comprehensive income taxation implies that capital accumulation is double taxed because income tax is levied on earned income that is invested in saving and on both components of capital returns: (i) normal returns, which ensure that the real value of capital remains constant; and (ii) excess returns, which increase real capital wealth. The Fisher/Kaldor standard of expenditure taxation avoids this form of double taxation by exempting normal returns on capital from income taxation. Consequently, under comprehensive income taxation the present value of the tax burden on €100 that are saved, earn returns, and used for consumption later in life is higher than the tax burden if the same €100 are used immediately for consumption. This form of double taxation of capital income is nevertheless accepted in most countries worldwide that base their income tax system on the Schanz/Haig/Simons standard. A crucial question, therefore, is how pension saving should be treated under comprehensive income taxation. The general practice worldwide is to tax pensions under deferred income taxation along the pension cycle; that is, to exempt income spent on contributions to pension systems, to exempt returns on accumulated pension wealth, and to tax pension benefits when they are paid out after retirement. This E-E-T system of pension taxation is the usual way of implementing expenditure taxation. Different strands of justifying deferred pension

taxation arise under a comprehensive income tax system. First, pension benefits are regarded as deferred labor income and thus should be taxed in the same way as labor income, namely when cash flows in. Second, pension saving is regarded as a merit good and deferred taxation of pensions serves as an appropriate incentive to support mandatory pension saving or to invest in voluntary pension saving. Third, the preferential tax treatment of pensions opens the door for lobbying to extend the Fisher/Kaldor standard of expenditure-based income taxation to other forms of saving in steps.

The broad political support for deferred income taxation on pensions in the Netherlands suggests that the income tax revenue differential with the Schanz/Haig/Simons benchmark⁶ is very unlikely to be perceived as a tax revenue loss for the government. This should not be the case, however, if the pension tax burden undercuts the revenue benchmark of the Fisher/Kaldor standard and generates lower tax revenue for the government because of an even more generous tax relief for pensioners (see section 3.2).

3.2 Generosity of the Dutch pension tax regime

The Dutch income tax code has implemented deferred taxation of pension benefits by financing state pensions with a national insurance contributions tax and by exempting contributions to pillar 2 and 3 pension schemes. Thus expenditure taxation rather than comprehensive income taxation should be taken as the correct benchmark to identify tax breaks and corresponding income tax revenue losses.

Under a progressive income tax, changes of annual income over a period of several years imply that the average tax rate rises in high income years and declines in low income years. For taxpayers with identical aggregate income over a span of five years but fluctuating annual income, horizontal equity is violated because their tax burden differs; that is, it rises with the fluctuation of incomes. But such tax burden differentials are usually accepted by tax policy worldwide and are regarded as tolerable deviations from horizontal equity in a multiperiod perspective. One argument might be that fluctuating individual tax burdens result in aggregate revenue gains for the government.

For pension taxation, progressive tax schedules generate a similar conflict between annual and lifetime equity, because preretirement income is usually higher than postretirement income, the latter of which is taxed at a lower rate. For a typical pensioner, deferred pension taxation implies that salary income spent on pension contributions remains untaxed and becomes taxable only when pension benefits are paid out after retirement at significantly lower tax rates. Pension systems generate an intertemporal income-smoothing effect by shifting preretirement salary to postretirement pension benefits; they reduce annual income fluctuations; and consequently, both the lifetime income tax burden of pensioners and the government's income tax revenue shrink. For occupational and individual pensions, this is also true for the Netherlands. While reducing the Dutch population's income tax burden may be regarded as a beneficial byproduct of pension taxation, two questions arise: is this form of progressivity erosion an appropriate method of national tax relief?; and is deferred pension taxation a harmful way of eroding the vertical equity norms on which the Dutch income tax tariff is based? What matters is the size of the income tax relief and its incidence.

⁶ For 2003 Caminada and Goudswaard (2008) calculate a net income tax revenue shortfall of almost 1.5% of gross domestic product (GDP) for deferred pension taxation in comparison to comprehensive income taxation, that is, T-T-E. The authors attribute roughly one-half of the revenue shortfall to the nontaxation of normal returns and the other half to lower individual tax rates on pension benefits.

A similar evaluation of the lifetime revenue and incidence effects of the Dutch state pension system is not straightforward because the common tariff design of social insurance contributions and the income tax limits results of a separate incidence analysis. Moreover, no transparent relationship exists between mandatory contributions and the pay-as you-go financed pension claims of future pensioners. This might explain why no data for the Netherlands can be found in relevant expenditure tax reports of the OECD (2010, 2018) and the EU (Barrios et al. 2018). But net tax expenditure figures for Canada and the United States of roughly 1% of GDP are close to figures calculated by Caminada and Goodswaard (2008), who quantified the revenue effects of tax facilities for pension saving. Even less than about aggregate tax expenditure figures is known than about the personal incidence of pension tax expenditures.⁷

Given the lack of studies that would help to answer questions on the size and incidence of pension tax expenditures, this paper sheds some light on these effects by calculating the lifetime tax burden of single-individual households who are assumed to earn labor income for 45 years and receive pension benefits for 20 years after retirement. Individuals only differ in their annual salary, which remains constant throughout their working life; they pay social insurance contributions and income tax; and they contribute to an occupational pension scheme. After retirement they receive state and occupational pension benefits and pay social insurance contributions and income tax. To concentrate on the tax base-smoothing effect of deferred income taxation, the pension and tax scheme of 2018 is assumed constant over the whole pension cycle. These simplifying assumptions are equivalent to dynamic setting of a perfectly indexed tax and pension system over the full pension cycle, which allows disregard of inflation and growth when the existing Dutch pension tax regime is compared with two types of expenditure tax regimes: E-E-T and T-E-E.⁸

Table 1 summarizes the model results. Column 5 benchmarks the value judgements on vertical equity embedded in the Dutch income tax tariff of 2018. Columns 3 and 4 reflect the tax burden-smoothing effect of pure expenditure tax regimes on individual lifetime income under the model's simplifying assumptions. Deferred income taxation (E-E-T) reduces the lifetime average tax burden along the whole income range, apart from the lowest income group, for whom the tax burden on pension benefits after retirement overcompensates the effect of nondeductible pension contributions before retirement, which is substantially reduced by tax credits. Tax reliefs are remarkable for middle income groups but is still about 15% for the top salary group. The lower average lifetime tax burdens under deferred income taxation (E-E-T) also reveal the erosion of progressivity by intertemporal tax base smoothing in comparison to frontloaded expenditure taxation (T-E-E). Column 2 shows that the Dutch tax regime imposes a significantly higher tax burden on pensioners in comparison to an E-E-T expenditure tax regime, which exempts AOW contributions. Higher income tax revenues and reduced progressivity erosion are triggered by nondeductible AOW contributions and support arguments that criticize the Dutch tax regime for its double tax burden on state pensions. But the comparison of the pension tax burden under the Dutch pension tax regime (column 2) with the frontloaded expenditure tax regime (column 3) still exhibits a substantial reduction in progressivity.

**Table 1: Lifetime income tax burden of single households in percent
under different expenditure tax regimes**

⁷ Johnson (2018, 4) recently criticized the inequitable distribution of pension tax relief in the United Kingdom and argued that 40% of the tax relief (47 billion pounds in 2016/17) flows to the top income decile.

⁸ According to these assumptions, frontloaded expenditure taxation (T-E-E) is equivalent to comprehensive income taxation (T-T-E) in this model because returns on pension wealth are zero by assumption.

| 1 Annual wage income | 2 Dutch regime for AOW and OP | 3 TEE regime for AOW and OP | 4 EET regime for AOW and OP | 5 Annual tax burden on box 1 income |
|---|--|--|--|--|
| (in €) | (in %) | (in %) | (in %) | (in %) |
| 20,000 | 6.89 | 6.74 | 8.86 | 9.61 |
| 30,000 | 14.17 | 14.36 | 12.21 | 21.12 |
| 40,000 | 17.21 | 21.04 | 14.50 | 27.84 |
| 50,000 | 20.55 | 24.05 | 16.88 | 32.10 |
| 60,000 | 22.74 | 25.85 | 19.70 | 34.04 |
| 70,000 | 24.01 | 27.75 | 21.70 | 37.11 |
| 80,000 | 25.76 | 29.19 | 23.20 | 39.41 |
| 90,000 | 27.03 | 30.30 | 24.75 | 41.20 |
| 100,000 | 28.03 | 31.19 | 25.99 | 42.64 |

Source: Authors' calculation based on a no-growth cohort model of single wage earners who earn state and occupational pension claims for 45 years and receive pension benefits for 20 years; contribution rates for AOW are 17.9%, for OP they are 16% for employers and 8% for employees.

Note: AOW = state pension; OP = occupational pension, wage income net of OP contributions.

Does the model's calculation help assess whether the Dutch pension tax regime is too generous? Table 1 reveals the effects of deferred pension taxation in two dimensions:

- (i) Although Dutch pension taxation does not allow the deduction of AOW contributions and taxes state pension benefits after retirement, it generates a substantial tax relief for pensioners, and vice versa cuts income tax revenue in comparison to a frontloaded expenditure regime.
- (ii) Tax-induced relief of the pension tax burden attenuates the progressivity pattern of the Dutch income tax schedule. The reduction in progressivity, which favors middle- and high-income earners, is less pronounced for frontloaded than for backloaded expenditure tax regimes.

Income tax revenue cuts and progressivity erosion of deferred pension taxation affect the national budget as well as citizens' lifetime income distribution. But these effects can only be criticized as harmful and inequitable if Dutch tax and benefit policy measures did not appropriately account for them when the tax and benefit system was politically discussed and implemented. But even if the Dutch parliament was aware of the built-in progressivity erosion effect of deferred pension taxation and its mitigation by nondeductible AOW contributions, regular efficiency and fairness checks are recommended. Pension tax reliefs might not only be discriminatory if societal groups have little or no access to favored old-age saving, but a critical distribution effect may also be triggered if budget funding requires compensation of the pension tax relief by other less efficient and less equitable taxes. In fact, by codifying and implementing a cap of €100,000 on pensionable pillar 2 income in 2015, Dutch pension tax policy explicitly admitted that deferred income taxation of pension is likely be exploited by high-income earners who invest strategically in voluntary pension saving. Contributions to occupational pension in excess of the salary cap are nevertheless feasible, but must not be taxed E-E-T. They have to be pre-taxed (namely, contributions are not deductible), but returns and benefit payments are tax-exempt. Taxing pensions T-E-E forecloses the tax preference by intertemporal tax base smoothing, but offers another one by exempting excess returns on pension wealth that are taxable under E-E-T. Therefore, Kalloe and Kastelein's (2011, 176) plea that pension taxation "will materially result in a situation in which return on the net investment is exempt from

tax” only holds for contributions above the salary cap. Deferred income taxation (E-E-T) exempts returns upon accrual but taxes excess returns, when pension benefits are paid out.

Their other plea that nondeductibility of AOW contributions contradicts E-E-T and generates double taxation (Kalloe and Kastelein 2011, 178) cannot be easily rejected by arguing that these contributions are a legally separate component of the Dutch income tax. But since pay-as-you-go financing of state pensions establishes a legal connection between state pension contributions and benefits, it is also true that nondeductibility generates an extra lifetime tax burden in present value terms for each pensioner. The double taxation view can also be backed by the ability-to-pay principle because mandatory contributions reduce an individual’s ability to pay and should therefore be deducted from taxable income.

3.3 Deferred pension taxation in a global setting

The interaction of deferred pension taxation and bilateral tax rules codified in line with the OECD Model Tax Convention (OECD 2017) are responsible for individual and national fairness problems in case of international migration.

According to Article 18 of the Model Tax Convention, pension benefits disbursed across-borders “in consideration of past employment” are taxable only in the recipient’s residence country. Application of residence taxation to deferred income taxation of pensions implies that the Netherlands cannot recoup the income tax reduction granted on deductible pension premiums if workers or pensioners relocate their residency and receive pension benefits in a foreign country. However, Article 18 contains a provision clause for pension benefits paid out to a recipient in the residence country who had been employed by a public body in the source country. In this case, Article 19 states that the pension benefit is taxable in the source state unless the recipient is also a national of the resident state.

The dominance of the residence principle in Article 18 is primarily motivated by administrative arguments that help to simplify the avoidance of individual double taxation. In its commentary on this article the OECD argues that the residence state of the recipient of a foreign pension is considered to be “in a better position than the source state to take into account the recipient’s overall ability to pay, which depends on the worldwide income and the personal circumstances” (OECD 2017, C(18)-1). Furthermore, residence taxation eases tax compliance for the recipient of foreign pension benefits because tax obligations only exist with respect to the residence country. Source taxation on public pensions, according to Article 19, was originally a byproduct of income taxation of public employees “inherited from traditional rules of international courtesy,” but the 1977 OECD Model Tax Convention changed the assignment of taxes on public salaries and wages (and subsequent pensions) from a potential to an exclusive right of the source state (OECD 2017, C(19)-1). Moreover, the scope and fiscal importance of source taxation based on Article 19 was extended in several double taxation treaties that have since been revised.

From an economic perspective, it is important to recognize that the assignment of tax competences in the OECD Model Tax Convention is restricted to the third phase of the pension cycle, when pension benefits are paid out across the border. The possibility of taxing pensions while pension wealth is accumulated is addressed neither in the Model Tax Convention nor in the elaborate commentaries on the articles 18 and 19. An immediate consequence of this gap is that tax payments

in the residence country trigger double taxation of pensions if pension contributions were not fully deductible or if returns on pension wealth were not exempt in the source country during the accumulation period. If, on the other hand, pension contributions are fully deductible in the source country and pension benefits are only taxed in the residence country, then the source country is left with an income tax revenue loss because it cannot recoup the tax relief on earned income spent on deductible pension premiums.

Table 2 presents a set of simplified treaty cases that illustrate the double fairness dilemma. For a given set of parameters, the table illustrates the interaction of three different tax regimes and two types of tax treaty assignment implemented to avoid international double taxation of cross-border pensions. Both states, A and B, apply the same tax regime: expenditure taxation E-E-T, prepaid expenditure taxation with exempt returns T-E-E, or comprehensive income taxation T-T-E. Depending on the treaty, the right to tax pension benefits paid out by state A is either assigned to the source state or to the residence state. To interpret the numbers, keep in mind that income taxation subject to the source principle in the benefit-paying state A replicates the revenue situation in the no migration case.

**Table 2: Income taxation of a pensioner migrating from country A to B
under different tax regimes and tax assignments**

| Tax assignment | Residence principle | | | Source principle | | |
|------------------------------------|----------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1 Tax regime in A | 2 E-E-T | 3 T-E-E | 4 T-T-E | 5 E-E-T | 6 T-E-E | 7 T-T-E |
| 1 WA income | 120 | 120 | 120 | 120 | 120 | 120 |
| 2 WA pension saving | 24 | 24 | 24 | 24 | 24 | 24 |
| 3 WA excess returns | 12 | 12 | 12 | 12 | 12 | 12 |
| 4 WA normal returns | 18 | 18 | 18 | 18 | 18 | 18 |
| 5 WA tax base | 96 | 120 | 174 | 96 | 120 | 174 |
| 6 WA income tax | 28.8 | 36 | 52.2 | 28.8 | 36 | 52.2 |
| 7 RA pension benefit | 54 | 54 | 54 | 54 | 54 | 54 |
| 8 RA tax base | 0 | 0 | 0 | 54 | 54 | 54 |
| 9 RA income tax | 0 | 0 | 0 | 16.2 | 0 | 0 |
| | | | | | | |
| Credit method in B | | | | | | |
| 10 RB tax base | 54 | 54 | 54 | 0 | 0 | 0 |
| 11 RB income tax | 16.2 | 16.2 | 16.2 | 0 | 0 | 0 |
| 12 RB tax credit | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | |
| Net present value | | | | | | |
| 13 Total income | 132 | 132 | 132 | 132 | 132 | 132 |
| 14 Total tax burden | 39.6 | 46.8 | 63 | 39.6 | 36 | 52.2 |
| 15 Tax revenue in A | 28.8 | 36 | 52.2 | 39.6 | 36 | 52.2 |
| 16 Tax revenue in B | 10.8 | 10.8 | 10.8 | 0 | 0 | 0 |

Source: Authors' calculations.

Note: WA is working period and RA is retirement period in country A; RB is retirement period in country B.

Parameters: labor income 120; pension saving 20%; income tax rate 30%; rate of normal return 50%; rate of excess return 50%.

The results in table 2 reveal the double fairness dilemma caused by the rules of the OECD Model Tax Convention with respect to pension taxation:

- Row 14 shows that:
 - deferred income taxation avoids individual double taxation of migrants under the residence (column 2) as well as the source principle (column 5);
 - although international double taxation is excluded under the exclusive source principle, the total individual tax burden differs because excess returns remain untaxed under T-E-E (column 6) and normal returns are taxed under T-T-E (column 7) in the source state;
 - international double taxation of pensions occurs if the right to tax pension benefits is assigned to the residence state, because frontloaded pension taxes levied in the source state are not credited.
- Row 15 shows that deferred income taxation under the residence principle implies that the income tax revenue on cross-border pension benefits in the source state is zero (column 2) and the deductibility of pension contributions generates a permanent revenue loss.
- Row 16 shows that under the source principle, income tax revenue on cross-border pension benefits in the migrant's residence state is zero (column 5).

Under bilateral tax treaties in line with the OECD Model Tax Convention, the double fairness dilemma cannot be solved even if source and residence states implement deferred pension taxation. Given that migration will rise in the decades ahead and that the scope of these fairness problems will consequently increase as well, a critical review of the status quo and a comprehensive assessment of alternative approaches seems unavoidable.

4 Frontloaded pension taxation

The starting point for this new framework for pension taxation is the existence of two unsolved problems in the prevailing architecture of pension tax systems.

First, tax equity is simultaneously oriented along two mutually exclusive equity standards: comprehensive income taxation and expenditure taxation.⁹ These standards imply different time patterns of capital income taxation over the cycle of accumulation and use of capital. The Schanz/Haig/Simons principle requires taxation while capital wealth accrues by investing and earning returns (T-T-E), whereas the Fisher/Kaldor principle defers taxation until capital wealth is withdrawn and can be used for consumption (E-E-T). The Fisher/Kaldor approach forgoes double taxation of savings and establishes intertemporal neutrality on consumer spending decisions. Like the Netherlands, almost no other EU or OECD member state applies comprehensive income taxation for pension income, but a huge variety of Fisher/Kaldor-type taxes on different forms of retirement income exist (see Genser and Holzmann 2016, 2018). While different forms of pension taxation are only a problem of national equity as long as workers and pensioners reside in one state over the whole pension cycle, individual and national fairness problems emerge if workers or pensioners relocate across borders.

Second, tax assignment rules in tax treaties that try to avoid double taxation of pension income codified in Articles 18 and 19 of the OECD Model Tax Convention only apply to pension benefit flows

⁹ The inconsistencies in cross-border taxation of pensions are grounded in the theoretical ambiguities of taxation of pensions and their implementation in the national context. For the state of the theory of pension taxation and implementation of pension taxation in key industrialized countries, consult Holzmann and Piggott (2018) or Genser and Holzmann (2020). Mirrlees et al. (2010) offer broader perspectives on the taxation of labor and capital and call for an integrated approach for the design of pensions and their taxation.

in the last phase of the pension cycle. The rules do not address cases of advanced pension taxation during the phases of pension wealth accumulation.

To overcome these two deficiencies, this paper postulates that fair and efficient pension taxation must ensure that:

- pensions should be taxed according to the Fisher/Kaldor principle, and
- fair pension taxation has to account for the pension tax burden over the whole pension cycle.

To satisfy the first requirement, the proposal makes use of a fundamental equivalence property of the Fisher/Kaldor approach. The nonneutrality of comprehensive income taxation can be avoided not only by backloaded expenditure taxation (E-E-T), but also by a corresponding frontloaded income tax regime (T-t-E), which fulfills the intertemporal neutrality property as well and is economically equivalent to E-E-T under a set of simplifying assumptions.¹⁰ Under a T-t-E regime, income spent on pension savings is taxed when contributions are made and exempted when accumulated pension wealth is withdrawn. With respect to returns on pension wealth, the normal return component is tax-exempt and the excess return component is taxable upon accrual. This partial income tax exemption of returns is indicated by $t_t < T$ also reveals that the tax liability under a Fisher/Kaldor expenditure tax (T-t-E) is smaller than under a comprehensive income tax (T-T-E) (recall Table 2).

The second requirement ensures individually fair pension taxation along the full pension cycle. T-t-E taxation implies that pensions are pre-taxed in the source country while pension benefits are exempt. To avoid individual double taxation of cross-border benefits, pension benefits must be exempt in the residence country as well. Compared to deferred income taxation, national fairness prevails under T-t-E because the source country does not suffer from income tax revenue losses on exempt contributions when individuals migrate. Whenever they relocate as retirees or when they emigrate before retirement, their pension wealth accumulation has already been appropriately taxed upon accrual.

Pre-taxing pensions following the Fisher/Kaldor principle should be attractive to treaty partners¹¹ as it generates a fair distribution of income tax revenues and avoids international double taxation of pensioners even under the existing assignment rules of the OECD Model Tax Convention:

- Pre-taxation of pension implies that the source state's pressure to recoup income tax revenues upon migration no longer exists.
- No income tax is due for pension benefits paid out to migrants and nonmigrants in source as well as in residence states.
- Pre-taxation of pension income accounts for all personal circumstances of the income earner and his ability to pay under unlimited tax liability as a resident of the source country.

¹⁰ Standard assumptions are that the tax schedule remains unchanged over the pension cycle, the tax schedule is perfectly adjusted to inflation, and the tax regime treats positive and negative incomes symmetrically. Another crucial issue is the implicit assumption of progressive tax systems of what is considered tolerable and not regarded as violating tax equity under fluctuating period incomes over the lifecycle, which affects the lifetime tax burden of individuals with exactly the same present value of lifetime income. Perfect lifetime tax equity would require applying the progressive tax schedule to a notional average gross period income over the lifecycle. The same implicit assumption is necessary for lifetime pensions, although the tax burden differences are salient: In contrast to T-t-E taxation, deferred income taxation E-E-T implies that low pension benefits after retirement may go untaxed if they fall below the general income tax allowance. Perfect equivalence is attained under the implicit assumption that taxable lifetime earnings including taxable pension benefits are taxed by calculating the notional gross period income over the pension cycle.

¹¹ For a recent study on Germany, see Genser and Holzmann (2019).

- Since pension premiums are not deductible, no administrative check is necessary to approve the equivalence of a foreign pension system to a domestic one.
- The pensioner does not have to file an income tax return in the residence country after migration because cross-border pension benefits were already pre-taxed under unlimited tax liability in the emigration country.
- If all pensions are pre-taxed and pension benefits are exempt in both treaty countries, then assignments according to Articles 18 and 19 of the Model Tax Convention become irrelevant.

Solving the double taxation problem of cross-border pensions is simple among countries after their switch from deferred to frontloaded pension taxation. If, however, one state decides to keep deferred pension taxation, then avoidance of international double taxation requires that the residence state fully account for pre-taxation of pensions in the source state. Consequently, the OECD Model Tax Convention should then be revised by extending foreign tax credits to frontloaded pension taxes in the source country. The simplest solution, however, would be to codify a pension article that assigns the right to tax pension benefits exclusively to the source state.

5 Pros and cons of frontloaded pension taxation

Section 4 focused on the features of a well-established frontloaded pension tax system and left aside the transition process from deferred to frontloaded pension taxation.

The switch to frontloaded pension taxation looks straightforward for pension contributions paid after the tax reform. They are no longer deductible and the individual income tax bases include pension contributions of employers and employees. As pension wealth accumulated in pension funds must cover only net pension benefits after the reform, contributions can be split into a net pension wealth component and an income tax component transferred directly to the tax authority.

Pension wealth accumulated under deferred income taxation before the tax reform can analogously be split into a net pension wealth and an income tax component that can be used to cover the reform-induced implicit tax liability rather than imposing an additional income tax liability on the future recipient of pension benefits.

Shifting the responsibility for appropriate pension taxation to the pension fund will require administrative provisions, in particular the obligation to keep and to manage a transparent individual account for each pension saver. Such individual pension accounts are already the rule for classified pension funds that run financial or notional defined contribution schemes. But this obligation should be extended to defined benefit schemes. Mandatory individual pension accounts are not only an essential prerequisite of frontloaded pension taxation they also enable pension funds to inform clients swiftly and precisely about the annual status of their pension claims¹².

An additional requirement is the appropriate taxation of excess returns on pension wealth. The calculation of pension wealth returns is straightforward for defined contribution systems as pension funds keep appropriate individual accounts. Individual accounts for defined benefit systems may not be the rule at the moment, but pension funds must be required to keep them based on the legal or contractual obligations of the pension fund. Excess returns can then be calculated by comparing

¹² Moreover, individual pension accounts correspond to retirement accounts, an essential component of mandatory welfare accounts which were proposed by Bovenberg and Sorensen (2004, 510f) as an efficiency-enhancing reform of social insurance.

values on notional or financial pension wealth, which reflect the change in individual pension claims. Based on these individual accounts the calculation and the payment of income tax should be an obligation of the pension fund. No income tax is due as long as individual returns on pension wealth are below the “normal rate threshold.” The tax code must define if individual excess returns are taxable as box 3 capital income or as box 1 income. Flat rate taxation under box 3 is certainly simpler, but progressive taxation as box 1 income should also be feasible because pension funds have all the relevant data in their books and can use contributions taken in to pay due income taxes of insured pensioners.

An additional problem is the higher individual tax burden under frontloaded income taxation, because intertemporal tax base smoothing of lifetime income is no longer feasible (recall Table 1). Paying frontloaded income taxes fully by cutting accumulated individual pension wealth will lead to reduced net pension benefits, which then might become too low to meet the pension policy targets of poverty avoidance and consumption smoothing. Political debates on income tax rates as well as on pension contribution rates and tax-free pension benefits under different pension systems are necessary to analyze pension tax equity, when the progressive income tax schedule will no longer be eroded by tax base smoothing under deferred pension taxation.

For the income tax authority, pre-taxation of pensions implies that the income earner’s personal circumstances and his ability to pay under unlimited tax liability determine the annual income tax burden. Withholding income tax including the frontloaded pension tax can be operated analogously to the current wage tax, because employers and pension funds are aware of all tax-relevant information. After retirement pensioners are no longer liable for income taxation if pension benefits are their only source of old-age income.

Apart from circumventing the double fairness dilemma without tedious renegotiations of tax treaties, frontloaded pension taxation offers other attractive features that should be considered in political disputes on the future of pension taxation:

- Administration and compliance costs of pre-taxing pension should be lower than under deferred pension taxation because monitoring of deductible pension saving becomes redundant.
- The special treatment of pension saving from salary exceeding the salary cap becomes redundant.
- Pensioners will no longer have to file tax returns for the rest of their lives if their old-age income consists of pension benefits from different domestic or foreign pension systems. Pensioners will only have to file tax returns if they earn market income in addition to pension benefits.
- Pre-taxation of pensions avoids cross-border monitoring and compliance problems between source and residence states, activities necessary under E-E-T taxation to ensure that aggregate individual pension benefits are appropriately taxed.
- Pre-taxation also backs free mobility in the EU or worldwide since no income tax becomes due in the source state if the pension saver emigrates as a worker or a pensioner.
- Finally, pre-taxation of pensions should trigger a boost in labor markets by offering retirees a welcome tax-exempt income supplement to their pension benefits, because minor labor or freelancing income will remain tax-free due to personal income tax credits.

These additional advantages must be balanced against problems created by the pension tax reform. Already mentioned was the higher income tax burden when pension contributions are added to taxable box 1 income under the present progressive income tax schedule. The fiscal effect would be a large short-term increase in income tax revenue that can be used to adjust the income tax schedule appropriately, in line with tax equity and tax yield objectives. This adjustment should also take into account that a substantial part of the frontloaded individual income tax bill should be paid out of pension contributions collected by the pension fund. Reducing individual pension wealth accumulation by a tax factor $(1-T)$ allows paying out net pension benefits that are equivalent to after-tax pension benefits under E-E-T. But further adjustments of effective income tax rates are necessary to avoid preretirement net income losses. Possible tax measures could be the rates and bracket bounds of the progressive income tax schedule or adjustments of the income tax credit.

A loss in individual purchasing power caused by immediate frontloaded pension tax payment can also be prevented if the tax authority is ready to accept deferred payment of the assessed frontloaded pension tax liability in the same fiscal way as backloaded expenditure taxation defers taxation of pension saving (see Genser and Holzmann 2018). Deferred payment of tax debt is neutral with respect to the intertemporal government budget constraint as long as the present value of deferred tax payments is equal to the present value of the assessed tax liability. Genser and Holzmann (2018) proposed two options for decoupling pension tax assessment and pension tax payment. Under both options frontloaded pension tax liabilities are accumulated during the working life. Under the deferred pension tax payment option, payment of the pension tax liability is annuitized upon retirement and starts when pension benefits are paid out. Under the distributed pension tax payment option, pro rata payments are linked to cash flows over the whole pension cycle, that is, to contribution payments, returns on pension wealth, and pension benefit withdrawals. The latter option requires a recalculation of the relevant rate to ensure full repayment of the tax liability over the retirement period. Tax payments are withheld by the pension fund and transferred directly to the tax authority when net pensions are paid out.

The advantage of expanding payment of frontloaded expenditure tax liabilities over the whole pension cycle is the low rate on pension cash flows, which therefore might mitigate political opposition against the pension tax reform. Moreover, deferred payment of pension taxes reduces the political pressure to expand budget expenditures, which will certainly emerge if income tax revenue boosts after the pension tax reform.

6 Concluding remarks

Deferred pension taxation is widely recommended and implemented across OECD countries. The Dutch system is a very clear and general pension tax regime, certainly superior to the pillar-specific pension tax systems used in other countries. While the attractiveness of a properly designed deferred pension tax can hardly be challenged in a closed economy setting, this paper argues that this tax system does not achieve fairness and efficiency in a global setting.

One characteristic feature of globalization is the increasing international mobility of individuals during their working life and after retirement. The current practice of taxing cross-border pensions in line with the network of bilateral double taxation treaties does not exclude unfair taxation of cross-border pension benefits for the individual pensioner and the pension benefit-paying countries. The

key reasons are the heterogeneity of national pension tax systems and the economically incomplete guidance of the OECD Model Tax Convention, which does not take into account national pension taxation along the full individual pension cycle, as well as the concern of source countries to recoup income tax revenue losses from tax concessions granted during individual pension wealth accumulation.

This paper proposes that the Netherlands consider moving toward frontloaded expenditure taxation of pensions and discuss the pros and cons of its implementation. Moreover, discussing frontloaded pension taxation in a country with a well-designed national pension system might inspire the EU Commission to reconsider its recommendations for member states to strengthen the basic liberties of the European single market and to cope with the economic challenges of globalization.

References

Barrios, S., Coda Moscarola, F., Figari, F., and Gandullia, L. (2018). Size and Distributional Pattern of Pension-Related Tax Expenditures in European Countries. EUROMOD Working Papers EM15/18.

Bovenberg, L. and Sorensen, P.B. (2004). Improving the Equity–Efficiency Trade-off: Mandatory Savings Accounts for Social Insurance. *International Tax and Public Finance* 11, 507–529.

Bovenberg, L. (2011). European Pension Reform: A Way Forward. *Pensions: An International Journal* 16(2), 75-79.

Bovenberg, A. L., van Ewijk, C., and Westerhout, E. (2012). *The Future of Multi-Pillar Pensions*. Cambridge University Press.

Caminada, K., and Goudswaard, K. (2008). Revenue Effects of Tax Facilities for Pension Savings. *Atlantic Economic Journal* 36, 233-246.

European Commission (2001). *The Elimination of Tax Obstacles to the Cross-border Provisions of Occupational Pensions*. COM (2001) 214 final.

European Commission (2014). *Tax Expenditures in Direct Taxation in EU Member States*. Occasional Paper 207, Brussels.

European Commission (2019). Pension Taxation. https://ec.europa.eu/taxation-customs/individuals/personal-taxation/pension-taxation_en; downloaded 20 March 2019.

Fiscaal Adviseurs (2017). *Income Tax and Social Security in the Netherlands - Employers and Employees - 2017*. MFFA Tax Advice, Amsterdam.

Genser, B., and Holzmann, R. (2016). The Taxation of Internationally Portable Pensions: An Introduction to Fiscal Issues and Policy Options. *CESifo DICE Report* 14(1), 24-29.

Genser, B., and Holzmann, R. (2018). The Taxation of Internationally Portable Pensions: Fiscal Issues and Policy Options, in Holzmann, R., and Piggott, J.(eds.) *The Taxation of Pensions*, MIT Press, Cambridge MA, 443-479.

Genser, B., and Holzmann, R. (2019). Taxing German Old-age Pensions Fairly and Efficiently. CESifo DICE Report 17(4), 36-40.

Genser, B., and Holzmann, R. (2020). Frontloaded Income Taxation of Old-Age Pensions: For Efficiency and Fairness in a World of International Labor Mobility. CESifo Economic Papers, Advance Article ifz017, <https://doi.org/10.1093/cesifo/ifz017>.

Holzmann, R., and Hinz, R. (2005). Old-age Income Support in the 21st Century: An International Perspective on Pension Systems and Reform. The World Bank, Washington, D.C.

Holzmann, R., and Piggott, J. (2018, eds.). The Taxation of Pensions. MIT Press, Cambridge MA.

Johnson, M. 2018. "Five Proposals to Simplify Saving." Pointmaker, Centre for Policy Studies, London, August.

Kalloe, V., and Kastelein, M. (2011). The European Commission Green Paper on Pensions: Lessons from the Dutch Experience. Pensions: An International Journal 16(3), 175-190.

Laros, R., and Lundbergh, S. (2012). Principles for Better Pensions: Lessons from the Netherlands. Pensions: An International Journal, 17(2) 88-93.

Mercer (2019). Melbourne Mercer Global Pension Index. Monash Centre for Financial Studies, Melbourne.

Ministerie van Sociale Zaken en Werkgelegenheid (2008). The Old Age Pension System in the Netherlands. Rijksoverheid, Den Haag.

Mirrlees, J. et al. (2010). Tax by Design: The Mirrlees Review. Oxford UP.

OECD (2010). Tax Expenditures in OECD Countries. OECD Publishing, Paris.

OECD (2017). Model Tax Convention on Income and on Capital: Condensed Version 2017. OECD Publishing, Paris.

OECD (2018). Financial Incentives and Retirement Savings, OECD Publishing, Paris.

OECD (2019). Pensions at a Glance 2019. OECD Publishing, Paris.

Preesman, L. (2017). Pensions in the Netherlands: A Gordian Knot of Reform. IPE Magazine, March 2017.

Stichting Pensioenfonds Wolters Kluwer Nederland (2018). Participants Information Brochure Pension Plan 2018. https://www.pensioen-wk.nl/spwk/attachments/File/Engels/Pensioenregeling_2018ENG.pdf

Westerhout, E. (2020). Pension Reform in the Netherlands. CentER Discussion Paper Series; Vol. 2020-012, Tilburg University.