Withholding self-employed and business incomes: An application to Italian firms

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Abstract

The paper proposes the application of a generalised withholding tax scheme to business-to-business transactions, in order to combat the evasion of income-related taxes levied on self-employed workers and businesses, as an alternative to the standard regime based on self-reporting. The scheme proposed here is comprehensive in scope, since it applies to all B2B transactions involving the self-employed and businesses, and can be regarded as an extension of the withholding tax regimes which are currently applied to specific sectors and/or business categories and self-employed taxpayers in some countries. We argue, even on the basis of a simple conceptual framework, that the benefit of extending such a withholding mechanism to profit taxes is twofold. On the one hand, consisting of an advance payment on the effective profit tax liability, it contributes to curbing tax evasion due to non-payment in a system characterised by a standard self-reporting mechanism. On the other hand, and more importantly, the withholding system – retaining information about each transaction subjected to it – enhances third-party information reporting if the withholding tax is applied to transactions that are otherwise excluded. This paper offers details on operational aspects of the proposed withholding tax mechanism. In particular, a critical issue in implementing the withholding regime lies in the choice of the tax rate, and more specifically in setting a level that is effective in reducing tax evasion without generating excessive tax refunds. This issue is discussed by applying the withholding mechanism to balance sheet microdata of all non-financial Italian companies.

Keywords: Withholding Tax, Tax Evasion, Third-Party Information Reporting Micro-Analysis.

JEL Classification: H26, H25.

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1. Introduction

Withholding at source arrangements are generally regarded as a key instrument for achieving high levels of compliance in income-related taxes, while reducing the burden for most taxpayers. In a withholding tax scheme the payer involved in a transaction (who is an independent third party, between the taxpayer and the tax authorities) withholds the tax from the payee and remits it to the government as an advance payment on behalf of the payee (Slemrod, 2008). This is the case when an employer withholds from the salary paid to an employee, when a financial intermediary withholds from interests paid to an investor, or when a firm withholds from another firm's sales as an advance on its business income tax. In any case, the payer, who operates as a withholding agent, pays the amount of the transaction net of the withheld tax to the payee.

The operation of the withholding tax regime includes two different and conceptually distinct components. The first is a 'third-party information reporting' component, whereby the information reported to tax authorities by payers on income paid to payees (on the amount paid, the amount of taxes withheld, the name of the beneficiary and his identification number), makes a systematic matching with tax returns of the latter possible, thus greatly increasing the probability of detection for income categories subject to a reporting obligation, compared to those self-reported by taxpayers. On the other hand, an 'advance payment' component, whereby the payer remits to the government on behalf of the payee part of the latter's tax liability prior to filing the annual tax return (and consequently the payee receives a net income from the payer). In real-world applications these two components combine in different ways and degrees, ranging from reporting-only regimes to arrangements which provide for a withholding component only as a sanction for cases of inadequate taxpayer/payee identification or his poor compliance history, and finally to regimes where the withholding component is universally applied (this is the case, as described below, of employment income).

Given these features, withholding regimes are generally deemed: 1) to significantly reduce the ability of taxpayers to understate their income for tax assessment purposes, since comparing the information provided by the payer with the income tax returns of the payee reveals any discrepancy between the two; 2) to reduce unpaid taxes that might otherwise arise if taxpayers correctly report their income but are unable to pay all of the self-assessed tax; 3) to be a more cost-efficient way for both taxpayers and tax authorities to transact the payment of taxes; 4) to facilitate the management of public finances through the regular flow of revenue to the public budget ensured by the timely remittance of withheld taxes by payers to tax authorities (OECD, 2015).

In practice, the extent to which withholding and/or reporting regimes are applied in the collection of income-related taxes varies widely across income categories. In the field of personal income taxes, the great majority of countries apply withholding requirements in taxing employment income (the so-called Pay-As-You-Earn regime): in 2017 only 5 out of 58 countries surveyed by the OECD did not apply withholding regime on wage and salaries earned by

residents (OECD, 2019).[1] Additionally, in many countries financial institutions routinely apply withholding taxes to payments of interests, dividends and royalties made to resident taxpayers (respectively 48, 47 and 36 out of 58 countries reported in the OECD 2019 survey) and non-resident taxpayers.

The case of withholding schemes applied to incomes derived from business activities, where firms collect taxes owed by other firms within their commercial network by applying a withholding tax on purchases, and remitting the amount of the transaction net of the withheld tax to the supplier, is more limited.[2] This kind of arrangement is applied in 20 out of 58 countries included in the OECD 2019 survey[3], mainly in developing countries where governments lack the capacity to measure and tax business activities, but also in Ireland, Japan, Spain and the UK. In some of these countries these regimes are limited to stand-alone third-party information requirements on business to business (B2B) transactions (not complemented by any advance payment mechanism) and their scope of application is restricted to sales in specific industries/production sectors (mainly construction, professional services and the agricultural sector). Sometimes the withholding scheme is only applied when the taxpayer does not provide an identification number to the payer (as in the case of the US). Countries that apply withholding tax to payments to certain businesses usually exclude individuals in their capacity as consumers as withholding agents (business to consumer transactions – B2C). This implies that most retail establishments remain unaffected by withholding. Moreover, in countries where withholding taxes and information reporting regimes are applied to businesses and self-employed taxpayers, compliance cost considerations emerge as a critical issue: the third parties (payers/buyers), who are required to either withhold taxes from payments and/or report payment information to tax authorities, incur a variety of costs in complying with their obligations. However, the application of information technology to businesses accounting systems and the increasing use of electronic invoicing procedures has made third-party reporting and information matching easier than ever before.

Empirical analyses developed by several national tax administrations (Swedish Tax Agency, 2008; United Kingdom HMRC, 2014; United States IRS, 2012) provide strong evidence of the substantial tax compliance benefits that can be produced by effective third-party information reporting and withholding regimes. In particular, findings from this research show that very high levels of compliance regarding incomes that are subject to both withholding tax and information reporting requirements can be achieved, whereas a lesser, but still high, impact on compliance can be observed, even in the absence of a withholding requirement, where income is subject to systematic reporting and matching with tax records.

While public economics literature has devoted significant attention to withholding taxes applied to personal incomes (Das-Gupta, 2004; Alm, 1999; Kamdar, 1995; Slemrod and Bakija, 1996; Barr

[1] At the beginning of 2019, after several years of discussions and postponements, a withholding tax on labour incomes (for both employees and self-employed workers) entered finally into force in France.

[2] A few countries apply a 'reverse' withholding scheme, under which the payee also withholds from the payer adding the withheld tax to the invoice.

[3] See also Table 9.6 in OECD (2015), OECD (2009) for the analysis of a selection of national cases and Soos (1990) for a discussion of legal profiles.

and Dokko, 2008; Gandhi and Kuehlwein, 2014; White et al., 1993; Highfill et al., 1998; Kleven et al., 2011), research focusing on withholding taxes on businesses income is much more limited (Brockmeyer et al., 2019; Carrillo et al., 2017; Garriga and Tortarolo, 2022). In particular, Brockmeyer et al. (2019) presents a framework for analysing behavioural responses of firms to third-party reporting and withholding. If the withheld tax is fully and costlessly reclaimed, and creditable against the taxpayer's final tax liability (when the annual tax return is filed), withholding ends up being irrelevant to tax compliance. It is merely a different method of tax collection, which shifts the collection tasks from the tax authorities to the buyer/withholding agent and changes the timing of tax payment, but it does not have any impact on the decision to evade. Only when it is assumed that the firm must incur a cost to deduct the tax withheld from the gross tax liability (for example, connected with tracking how much tax has been withheld for each transaction and then adding up those amounts when preparing the tax return), reclaiming the withheld tax can be incomplete, potentially leading to an increase in the total tax payment.

However, Brockmeyer et al. (2019) do not adequately emphasise that withholding always generates a source of third-party information (but not vice versa) (see Kleven et al., 2009, Kleven et al., 2011 and Pomeranz, 2015). Therefore, a key point is to investigate how information reporting may effectively act as an evasion deterrent, by leading taxpayers to increase their tax returns in a way that is in line with what third-parties have reported. Carrillo et al. (2017) points out the potential limitations of third-party reporting, if businesses can make offsetting adjustments on other margins of their tax returns, where information is more difficult to verify (e.g. by increasing the cost of items, such as administrative costs, that may contain miscellaneous purchases including transactions with the informal sector). Therefore, in order to boost third-party reporting as a tool for tax collection, the scope of transactions covered by third-party reporting should be expanded and the ability to monitor and enforce compliance on non-third-party reported margins should be increased.

The aim of this paper is to investigate the features and the operation of a withholding tax and information reporting regime for businesses and self-employed taxpayers that is comprehensive in scope as it applies to all B2B transactions involving the self-employed and businesses. In this perspective, the proposed mechanism can be regarded as an extension of the withholding tax and reporting regimes for business and the self-employed which are currently administered in some countries that, as discussed above, target specific sectors and/or categories of taxpayers. The generalised mechanism of withholding tax discussed here, analogous to what has recently been suggested by Visco (2017) and NENS (2017), combines a third-party information reporting component, which is expected to improve tax compliance by enhancing the scope of information matching, and an advance payment component which is aimed to specifically address evasion due to non-payment. Furthermore, the proposed mechanism, generating an automatic exchange of information directly between the buyer and the tax authority (without other parties involved, such as banks or credit card managers), would make it possible to overcome privacy problems that in some countries have until now hampered the full exploitation of third-party information by the tax authority.

The generalised withholding tax mechanism for businesses and the self-employed proposed here does not require any additional obligation from third parties in charge of the withholding tax, since the new regime can be easily framed within the functioning of VAT, which already involves the entire supply chain. As a matter of fact, the new regime can benefit from the information reporting regime already provided by VAT systems, which operates on the basis of an invoice (containing all the relevant information on each payment) between contracting parties, and covers the majority of transactions conducted by businesses.

Apart from this beneficial integration/interaction on payment data availability, the withholding regime analysed here differs from VAT systems in many respects. Under the invoice-based method of collecting VAT, which is by far the most commonly used in practice, each seller charges VAT on his output and issues the buyer with an invoice which records the amount of tax charged. Buyers who are subject to VAT on their own sales (output tax) consider the tax on the purchase invoices as input tax and can deduct it from their own VAT liability. Subsequently, the difference between output tax and input tax is paid to the tax authorities (or a refund is claimed, in the case of negative liability) when the VAT return is filed. On the contrary, under the proposed withholding tax regime, the payer/buyer extracts the tax to be withheld from the amount of the payment made to the payee/seller (net of any VAT charged on the goods and services concerned) and remits it to the tax authorities (on every single transaction or on, for instance, a monthly basis). In turn, the payee/seller deducts the withheld tax paid in advance on his behalf from the annual income tax liability, resulting in his tax return.

The remainder of the paper is organised as follows. Section 2 presents a simple and general framework that is useful for highlighting the functioning of the comprehensive withholding tax scheme applied to businesses and self-employed taxpayers, in comparison with the standard system of self-reporting. Section 3 offers details on operational aspects of the proposed withholding tax mechanism. In Section 4 the withholding mechanism is applied to balance sheet microdata of all non-financial Italian companies, to discuss the main practical problem that has to be addressed on the matter of its implementation, which concerns the choice of the tax rate. Section 5 offers some general policy considerations.

2. A simple conceptual framework

The functioning of the withholding tax mechanism proposed here can be better understood when compared to the standard self-reporting system by referring to a simple conceptual framework. Consider an economy where three firms A, B and C are involved in the supply chain of a final good (i.e. a good sold to final consumers).

Firstly, let us consider the standard self-reporting regime where the profit tax is determined and self-reported through a tax return system (here referred to as *r*) possibly based on a down payment during the fiscal year and a balance payment after the end of it. In the absence of tax evasion, total tax liability for those firms can be expressed as follows:

$$T^r = \underbrace{t^y Y_A}_{T_A^r} + \underbrace{t^y Y_B}_{T_B^r} + \underbrace{t^y Y_C}_{T_C^r} \quad (1)$$

where:

- T^r is total tax liability under the ordinary self-reporting system;
- T_i^r is the tax liability of firm *i*, with *i* = A, B and C;
- t^y is the profit tax rate;
- Y_i is the income of firm *i.*

When the proposed withholding tax mechanism (here referred to as *w*) is applied, total liability of the profit tax can be represented on an accrual basis as follows:

$$T^w = \underbrace{\overbrace{t^w S_{A\to B}}^{\substack{incurred\\ withholding\ tax}} + \overbrace{[t^y Y_A - t^w S_{A\to B}]}^{tax\ return}}_{T_A^w} + \underbrace{\overbrace{t^w S_{B\to C}}^{\substack{incurred\\ withholding\ tax}} + \overbrace{[t^y Y_B - t^w S_{B\to C}]}^{tax\ return}}_{T_B^w} + \underbrace{\overbrace{[t^y Y_C]}^{tax\ return}}_{T_C^w} \quad (2)$$

where:

- T^w is total tax liability under the proposed withholding tax mechanism;
- T_i^w is the total tax paid by firm *i*;
- t^w is the withholding tax rate;
- $S_{i\to j}$ is the amount of the sales of firm *i* (seller) to firm *j* (buyer), where *i, j* = A, B, C;
- $t^w S_{i\to j}$ is the withholding tax incurred by firm *i* and applied by *j* on behalf of firm *i* on the sales of *i* to *j*;
- the terms in square brackets denote the taxes firm *i* remits when its tax return is filed.

As explained above, when the proposed withholding tax mechanism is applied along the supply chain of the economic transactions across firms, each seller receives the price of sales net of the withholding tax $S_{i\to j}(1 - t^w)$ and the withholding tax $t^w S_{i\to j}$ is remitted by the buyer to the tax authorities at each transaction. The withholding tax is then subtracted from the profit tax paid by the seller when the tax return is filed. On the contrary, under the standard regime of self-reporting the seller receives the full price of the sales $S_{i\to j}$ from the buyer, and remits its full tax liability to the tax authorities after filing the tax return.

Obviously, when no tax evasion occurs, (1) is equivalent to (2). The tax authorities would only benefit from a more regular flow of revenue.

On a cash basis, equation (2) can be expressed equivalently as follows:

$$T^w = \underbrace{\overbrace{[t^y Y_A - t^w S_{A\to B}]}^{tax\ return}}_{T_A^w} + \underbrace{\overbrace{t^w S_{A\to B}}^{\substack{applied\\ withholding\ tax}} + \overbrace{[t^y Y_B - t^w S_{B\to C}]}^{tax\ return}}_{T_B^w} + \underbrace{\overbrace{t^w S_{B\to C}}^{\substack{applied\\ withholding\ tax}} + \overbrace{[t^y Y_C]}^{tax\ return}}_{T_C^w} \quad (3)$$

which highlights the withholding tax the buyer *j* applies on behalf of the seller *i* and remits to the tax authorities. This implies that on a cash basis, moving to the withholding tax mechanism

(compare equation (3) to (1)) would result in taxes actually paid by firm A (and, in general, by firms operating in the upper phases of the supply chain) being lower than in self-reporting regimes, because there is another firm advancing the due payment.

If, as mentioned before, the withholding is equivalent to the self-reporting regime when no tax evasion occurs, this is not the case when firms do not fully report and pay their tax liabilities at the time of filing their tax returns. In this case, the proposed withholding tax mechanism can result in a higher level of tax compliance. As a matter of fact, if $\propto_i^r$ denotes the propensity to evade of firm *i* when the self-reporting regime is applied, the total tax liability collected under that regime is:

$$T^{re} = \underbrace{(1-\propto_A^r)t^y Y_A}_{T_A^{re}} + \underbrace{(1-\propto_B^r)t^y Y_B}_{T_B^{re}} + \underbrace{(1-\propto_C^r)t^y Y_C}_{T_C^{re}} \qquad (1')$$

On the contrary, under the withholding tax regime total tax liability can be represented as:

$$T^{we} = \underbrace{\overbrace{t^w S_{A\to B}}^{\substack{incurred\\ withholding\ tax}} + \overbrace{[(1-\propto_A^w)(t^y Y_A - t^w S_{A\to B})]}^{tax\ return}}_{T_A^w} +$$

$$+ \underbrace{\overbrace{t^w S_{B\to C}}^{\substack{incurred\\ withholding\ tax}} + \overbrace{[(1-\propto_B^w)(t^y Y_B - t^w S_{B\to C})]}^{tax\ return}}_{T_B^w} +$$

$$+ \underbrace{\overbrace{[(1-\propto_C^w)\ t^y Y_C]}^{tax\ return}}_{T_C^w} \qquad (2')$$

where $\propto_i^w$ denotes the propensity to evade of firm *i* at the time of filing their tax returns when the withholding tax regime is applied. Note that:

$$0 \leq \propto_i^w < \propto_i^r$$

since third-party information reporting produced by the operation of the withholding tax regime is able to enforce compliance at the time of filing tax returns. In particular, $\propto_i^w$ is equal to zero if the information reporting is sufficiently complete, in terms of the scope of transactions covered to exclude any adjustments in other margins made by the firm in order to offset the tax withheld. Moreover, even the 'incurred withholding tax' terms in (2') are not affected by evasion since, as discussed above, the buyers are fully compliant in remitting the tax withheld to the tax authority in the same way that, under the standard self-reporting regime, they pay the sellers the full price of the transactions.

As a consequence, due to both these effects, total tax liability under withholding regime is larger than the corresponding one under standard self-reporting regime. In particular, the increase in tax liability when the system moves from a self-reporting to a withholding regime is given by:

$$\Delta T^e = T^{we} - T^{re} = \overbrace{\propto_A^r t^w S_{A\to B} + \propto_B^r t^w S_{B\to C}}^{advance\ payment\ effect} +$$

$$+\overbrace{(\propto_A^r - \propto_A^w)t^y Y_A + (\propto_B^r - \propto_B^w)t^y Y_B + (\propto_C^r - \propto_C^w)t^y Y_C}^{third-party\ information\ reporting\ effect} \quad (4)$$

where the 'advance payment effect' is equivalent to the taxes that would have been effectively evaded on the sales along the supply chain, and the 'third-party information reporting effect' is the increase in tax compliance of each firm, enforced by comprehensive information reporting.

A critical point raised by the introduction of a withholding tax is how to properly set the tax rate. This issue is due to the fact that the withholding tax, which is nothing more than an advance on the income tax, has a different tax base to the latter (sales in one case and profits in the other) and, moreover, the profits-to-sales ratio can be highly heterogeneous among taxpayers. On the one hand, the self-employed are usually characterised by low deductible costs and therefore there are minor differences between the two tax bases: profits are very close to sales. On the other hand, differences of a notable magnitude emerge for businesses, and the magnitude varies among production sectors (on this see Section 4).[4] This poses serious difficulties on setting the level of the withholding tax rate. It cannot be too high, otherwise the proposed mechanism would generate sizeable tax refunds and liquidity problems for taxpayers, while it also cannot be too low, if the withholding tax is to play a significant role in curbing tax evasion.

In the first place, in the aggregate the withholding tax rate t^w should be set at a level such that the resulting total yield is equal to that produced by the profit tax in absence of tax evasion, that is:

$$\sum_{i,j=i+1} t^w S_{i\to j} = \sum_i t^y Y_i$$

and therefore:

$$t^w = t^y \frac{\sum_i Y_i}{\sum_{i,j=i+1} S_{i\to j}} \quad (5)$$

However, in the likely case where different firms feature different production functions, and therefore different profits-to-sales ratios $Y_i / S_{i\to j}$, in order to avoid some firms paying much less than the actual profit tax due in advance (with the need of large payments at the time of the tax return) and some other firms paying too much (with consequent liquidity issues and the need for large tax refunds), firm-specific withholding tax rates should be set such that:

$$t_i^w = t^y \frac{Y_i}{S_{i\to j}} \quad (6)$$

The distance between (6) and (5) measures the possible poor targeting of the withholding tax mechanism compared to the tax liabilities actually owed by each firm. However, if applying a set of firm-specific withholding tax rates is unfeasible due to administrative obstacles, a trade-off arises between the need to set the withholding tax at a level low enough to prevent most businesses from incurring advance payments exceeding the profit tax due, and the opposing

[4] On this, see NENS (2017) with reference to the context of Italy.

pressure to set the tax rate at a level high enough to significantly reduce tax evasion occurring when the tax return is filed.

3. Operational aspects

The proposed withholding tax is conceived as a mechanism to bring forward and dilute the payment of the profit tax liability of the self-employed and businesses, while living unchanged the overall tax system. Direct and indirect taxation is unaffected by it; it only implies a different way of paying taxes on profits and a different schedule. Usually, profit taxes are paid in two down payments during the year (in some countries, for example Italy, reaching 100 per cent of the tax liability) and a final payment in the first part of the subsequent year. The withholding tax would substitute the former and reduce the latter.

In our proposal, the withholding tax is applied to all kind of B2B transactions except the imports and exports of goods. We exclude B2C transactions because of the disproportionate compliance costs that their inclusion would generate on consumers; an extension to them would at least require an intervention of financial intermediaries acting on behalf of the final consumer in relation to the tax authority.

Imports (purchases) and exports (sales) of goods are excluded because, involving buyers or sellers resident in a different country, the application of the withholding tax would require the imposition of both the new tax mechanism to a non-resident taxpayer and some sort of relationship of the buyer or the seller with another country tax authority, unless in the foreign country a similar provision is applied and covered by bilateral or multilateral tax treaties. This is the case, for example, of imports and exports of services (professional services and other activities performed by self-employed), which in most countries are already subjected to withholding taxes and therefore the proposed mechanism is easily applicable. On the one hand, the exclusion of such operations from the withholding tax would partly reduce the power of the third-party information reporting feature of the proposed mechanism; on the other hand, the loss of information might be partly recovered via VAT mechanisms (electronic invoices).

All self-employed individuals and businesses engaged in B2B transactions are subjected to withholding tax proposed here independently from their size and production sector. In order to avoid an excessive administrative burden on micro or small businesses and the self-employed, it is advisable to introduce web-based procedures or foresee the intervention of financial intermediaries as representatives of the taxpayer with the tax administration (OECD, 2009).

Merely conceived as an anticipation of the profit tax due, the proposed tax mechanism does not change the profit tax liability of businesses and therefore the withholding tax can also be applied to intra-group transactions, even in the presence of consolidated balance sheets. The overall tax burden of the group remains equal and so it is the tax burden on each enterprise in the group. It is only the balance payment of the profit tax that changes according to what is withdrawn during the year, on each transaction for each enterprise. Table 1 exhibits a very simplified example of the application of the withholding tax to intra-group transactions, where we consider four enterprises (A, B, C and D) belonging to the same group and conducting business among

each other. A, B and C only have B2B transactions; D buys from C and sells to final consumers. Under the assumption of a 30 per cent profit tax rate the overall tax liability of the four enterprises is 120 (30 each, given that taxable bases are all identical and equal to 100). This does not change applying, as an example, a 5 per cent withholding tax rate. Differences arise only for the timing of the payment: part of each enterprise tax liability is anticipated during the year when transactions are settled (30 in the simplified example) while the payment on balance is reduced consistently (90 instead of 120).

Table 1 – The application of the withholding tax to intra-group transactions (1)

Enterprise	Sale amount	Tax base	Profit tax liability (30%) (a)	Incurred withholding tax (5%) (b)	Applied withholding tax (5%)	Tax return (c = a - b)
A	100	100	30	5		25
B	200	100	30	10	5	20
C	300	100	30	15	10	15
D	400	100	30		15	30
Total	1000	400	120	30	30	90

(1) All enterprises (A, B, C and D) are in the same group; the first three only have B2B transactions, whereas C sells to final consumers (B2C).

The application of the proposed withholding tax may raise concerns about the formation of large refunds depending on the level of the withholding tax rate. As mentioned in Section 2 and shown in Section 4, if the withholding tax rate is too high the withheld tax would inevitably exceed the profit tax liability, given the differences between the two tax bases (sales and profits).

4. An application of the withholding mechanism to Italian companies

In this Section the described withholding tax system is applied to the context of Italy, in order to highlight several interesting features regarding its functioning. Its application would complement the current profit tax (of which it represents a payment in advance) and mainly consists of an extension to all B2B transactions – with the exceptions mentioned in Section 3 – of the existing withholding tax on the self-employed, as described in Appendix 1. Moreover, the proposed enhanced and enlarged withholding tax mechanism would coexist with electronic invoicing for B2B transactions and electronic submission of receipts for B2C transactions, enriching third-party information reporting. This is so because the two latter provisions in Italy do not apply to self-employed workers and businesses with remuneration or turnover below specific limits diversified according to the activity carried out. On the contrary, the withholding tax would apply to them, and the tax authority would collect unknown information on their B2B transactions.

It is worth mentioning that evasion on social security contributions and taxes is a widespread phenomenon in Italy. According to the most recent estimates[5], in 2019 the tax gap amounted to 99.3 billion (5.5 per cent of GDP), of which around 87 billion deriving from tax revenues. The propensity gap (i.e., the ratio between evaded and potential taxes and social contributions) was 18.4 per cent. The highest propensity gap regards personal income taxes owed by self-employed workers and businesses (69 per cent in 2019, up from 66.7 per cent in 2018); in absolute terms it stands at 32.2 billion (32.5 in 2018), higher than the VAT revenue evaded without collusion between buyer and seller (27.8 billion in 2019 and 31.8 in 2018). On the contrary, the least evaded tax is the personal income tax on employees and pensioners, to which a monthly withholding tax mechanism is applied. As discussed above, the proposed withholding tax mechanism would specifically address evasion due to non-payment, amounting to 3.5 billion for self-employed workers and businesses, but also the evasion without collusion between the buyer and the seller.

As mentioned in Section 3, in operational terms, given the different definition of tax base between the withholding tax and the profit tax, the critical issue is to set the withholding tax rate at a level that is effective in reducing tax evasion but, at the same time, minimises the distance between how much is withheld and the effective tax liability (that is the distance between expressions (5) and (6)).

In order to explore this issue, we use the balance sheet microdata of all Italian companies (about 940,000 companies, excluding those operating in the financial sector and those belonging to groups) for 2018[6]. The sales made by each firm are then distinguished between B2B and B2C operations as the withholding tax mechanism described above only applies to the former. The shares of the B2B sales are estimated by applying the average ratios specific for each production sector (around 1.6 thousand cells) drawn from VAT returns.

Table 2 reports the average, the median, the 25th and the 75th percentiles of the profits-to-sales ratio in 2018 for Italian non-financial companies.[7] The values are calculated separately for companies with positive profits, companies with zero profits and companies with zero sales. As an example, for all companies, the average profits-to-sales ratio is 6.0 per cent, which rises to 7.2 per cent when only companies with positive profits are taken into account.

The corresponding withholding tax rate which gives a total yield equal to that produced by the profit tax (19.2 billion euros) is then calculated according to (5), by applying the profit tax rate t^y, equal to 24 per cent in the case of the Italian corporate tax, to the profits-to-sales ratio.

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[5] The *Commissione per la redazione della Relazione sull'economia non osservata e sull'evasione fiscale e contributiva* (2021a and 2021b) report offers estimates of tax evasion with reference to social contributions and more than 90 percent of all taxes. Taxes not covered are those which are harder to evade, such as those on capital income and on real estate transfers.

[6] Data are from Bureau Van Dyck, AIDA database.

[7] The profits-to-sales ratio is calculated using as numerator taxable profits (estimated corporate tax bases) and as denominator operating revenue. Firms belonging to fiscal groups are excluded from the analysis.

Table 2 – Profits-to-sales ratios (Italian non-financial companies, 2018)

	Companies (%)	Share of total profits	Share of total sales (%)	Profits-to-sales ratio				
				Average	Median	P25	P75	Average (t-1)
Positive profits	64.1%	99.0%	82.6%	7.2%	9.6%	3.2%	26.7%	6.9%
Zero profits	21.9%	0.0%	17.4%	0.0%	0.0%	0.0%	0.0%	1.3%
Zero sales	14.0%	1.0%	0.0%					23.2%
Total	100.0%	100.0%	100.0%	6.0%	4.8%	0.0%	18.4%	5.9%

Source: our calculation based on the balance sheets of Italian corporations; the profits-to-sales ratio is calculated using as numerator taxable profits (estimated corporate tax bases) and as denominator operating revenue.

As shown in Table 3 (Scenario 1), the withholding tax rate derived in this manner when all companies are considered together is around 1.4 per cent. However, this implies a very poor targeting of the new regime: 41.4 per cent of the companies end up paying less than 90 per cent of the profit tax due ('favoured companies') and 44.9 per cent paying more than 110 per cent ('penalised companies'). The costs in terms of both low recovered tax evasion (corresponding to 'favoured companies') and high tax refunds (corresponding to 'penalised companies') are significant: 9.8 billion euros (50.5 per cent of the total profit tax revenue) are paid in excess through the withholding tax by penalised companies (and, of course, the same amount is paid less by favoured companies).

Table 3 – Application of the withholding tax mechanism in different scenarios (Italian non-financial companies, 2018)

	Profit tax revenue (bn euros)	Withholding tax								
		Scenario 1: Single tax rate			Scenario 2: Multiple tax rates by production sector			Scenario 3: Rebated (50%) tax rates by production sector		
		Tax refunds (bn euros)	Penalized companies[1] (%)	Favoured companies[2] (%)	Tax refunds (bn euros)	Penalized companies[1] (%)	Favoured companies[2] (%)	Tax refunds (bn euros)	Penalized companies[1] (%)	Favoured companies[2] (%)
Positive profits	19,034	6,462	35.8%	59.3%	5,741	42.0%	52.2%	1,781	25.4%	70.3%
Zero profit	0	3,302	100.0%	0.0%	3,258	100.0%	0.0%	1,629	100.0%	0.0%
Zero sales	193	0	0.0%	24.0%	0	0.0%	24.0%	0	0.0%	24.0%
Total	19,227	9,763	44.9%	41.4%	8,999	48.8%	36.9%	3,410	38.2%	48.4%

Source: our estimates based on the balance sheets of Italian corporations.

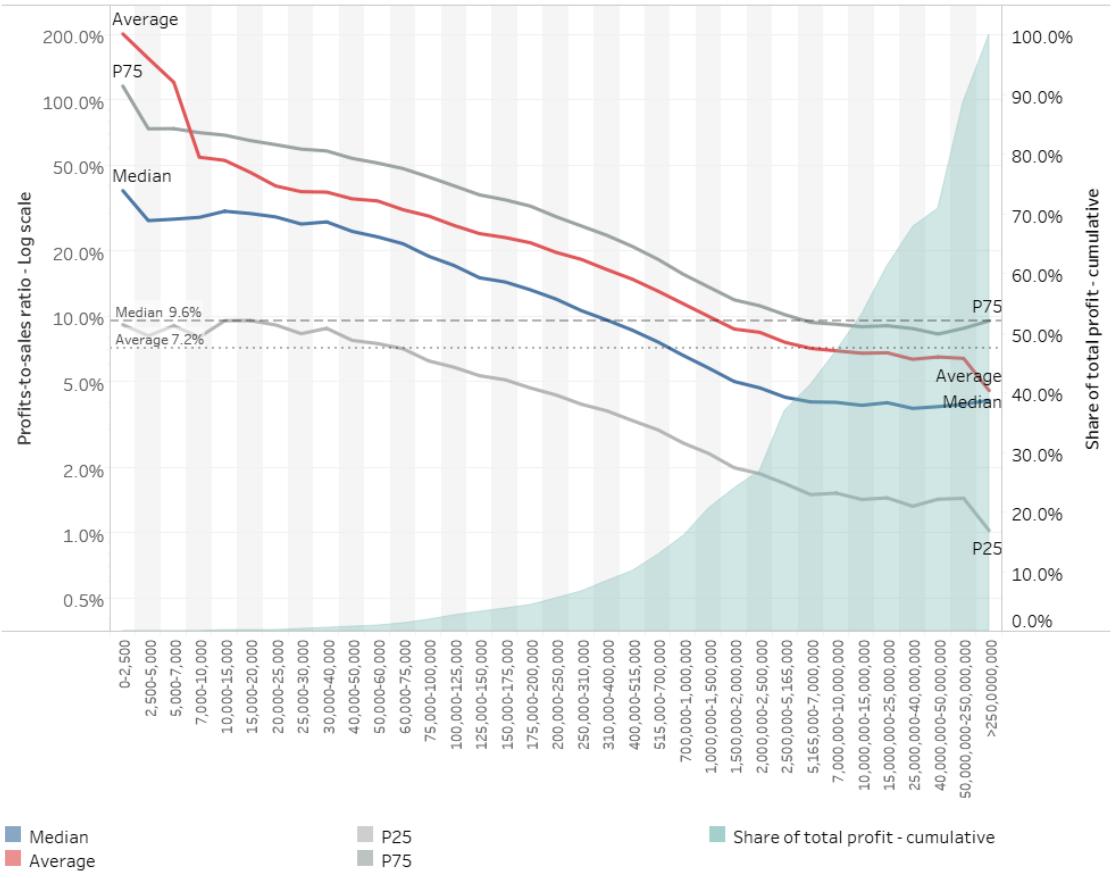
(1) Cases where the overall withholding tax is more than 10 per cent higher than the profit tax. – (2) Cases where the overall withholding tax is more than 10 per cent lower than the profit tax.

This unsatisfactory result is due to the dramatic heterogeneity of companies in terms of their profits-to-sales ratios. Some evidence of this can be drawn from Figure 1, where the profits-to-sales ratios (the average, the median, the 25th and the 75th percentile values) are plotted over company size, as measured by turnover brackets. Given the wide variability of values and their decreasing profile, it seems inappropriate to apply a single withholding tax rate to all companies, unless incurring heavy targeting costs in the meaning as discussed above. Similar evidence is offered by Figure 2, which displays average profits-to-sales ratios by production sectors. The

marked variability of the ratio is evident, ranging from 31.6 per cent for Real estate brokerage to 2.5 per cent for Agriculture.

A possible strategy for identifying a tax rate that is able to better combine the aim of combatting evasion of the proposed tax mechanism with the constraint of limiting tax refunds is to segment the companies according to structural variables (such as the production sector where they operate) and to set a specific withholding tax rate for each group of companies thus identified. Further information about financial variables (profit or loss in the previous year balance sheet or turnover size) are not known *ex-ante* and so they cannot be used to set the withholding tax rate to be applied within a certain fiscal year.

Figure 1 – Profits-to-sales ratios by turnover brackets (Italian non-financial companies with positive profits, 2018)



Source: our estimates based on the balance sheets of Italian corporations.

Figure 2 – Profits-to-sales ratios by production sectors (Italian non-financial companies with positive profits, 2018)

	Average	25th percentile	Median	75th percentile	Share of total profit
REAL ESTATE ACTIVITIES	31.6%	13.3%	35.5%	63.5%	6.87%
ACTIVITIES OF HOUSEHOLDS AS EMPLOYERS; UNDIFFERENTIATED GOODS- AND SERVICES	29.8%	25.4%	25.4%	25.4%	0.00%
ACCOMMODATION AND FOOD SERVICE ACTIVITIES	22.8%	7.2%	21.3%	49.5%	2.40%
OTHER SERVICE ACTIVITIES	12.5%	4.4%	13.3%	36.1%	0.60%
HUMAN HEALTH AND SOCIAL WORK ACTIVITIES	11.9%	1.5%	6.7%	18.2%	1.54%
PROFESSIONAL, SCIENTIFIC AND TECHNICAL ACTIVITIES	11.5%	4.1%	11.3%	28.1%	5.49%
ARTS, ENTERTAINMENT AND RECREATION	11.2%	2.0%	8.0%	25.6%	0.72%
EDUCATION	11.0%	2.2%	7.7%	21.2%	0.30%
CONSTRUCTION	10.6%	5.6%	13.9%	32.7%	7.55%
WATER SUPPLY; SEWERAGE, WASTE MANAGEMENT AND REMEDIATION ACTIVITIES	9.9%	2.2%	6.0%	14.4%	2.09%
MINING AND QUARRYING	9.7%	1.8%	5.2%	13.6%	0.20%
INFORMATION AND COMMUNICATION	9.5%	3.3%	8.6%	20.3%	3.94%
MANUFACTURING	7.0%	2.1%	5.2%	11.5%	37.41%
ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	6.4%	2.4%	7.3%	19.9%	3.11%
TRANSPORTATION AND STORAGE	5.8%	1.2%	3.9%	10.9%	3.61%
WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES AND MOTORCYCLES	5.1%	2.6%	6.9%	17.7%	22.09%
ELECTRICITY, GAS, STEAM AND AIR CONDITIONING SUPPLY	3.1%	7.6%	27.6%	77.1%	1.56%
AGRICULTURE, FORESTRY AND FISHING	2.5%	0.6%	3.5%	14.4%	0.51%

Source: our estimates based on the balance sheets of Italian corporations.

In Table 3, Scenario 2 reports the results of this approach. The multiple rates of the withholding tax, derived to give the same yield of the profit tax separately for each sector, range from a maximum of 6.95 per cent for the Water collection, treatment and supply sector to a minimum of almost zero for the Social security and Fishing sectors. The results show that company segmentation by production sectors gives only a small gain in terms of tax targeting, since the total level of the tax refund decreases from 9.8 billion euros (as said, 50.5 per cent of total profit tax revenue) in the single tax rate scenario to 9 billion euros (46.8 per cent). Conversely, the number of companies which we referred to as penalised (and the corresponding total amounts involved) increases while the number of favoured companies decreases.

Another way to reach a more acceptable compromise between the different requirements involved in the choice of the withholding tax rate is simply to limit the yield to be collected in advance. In this way, we accept the weakened effectiveness of the proposed new mechanism in combatting tax evasion by allowing a greater portion of the profit tax to be paid by tax returns. This means that t^w in (5) and t_i^w in (6) are derived in such a way that they produce a share α of the profit tax returns for all companies or some groups of companies, respectively. As an example, in Table 3, Scenario 3 reports the case where the sector-specific tax rates derived in Scenario 2 are halved. The refund level decreases significantly to 3.4 billion euros (17.7 per cent of the profit tax revenue) and the corresponding share of penalised companies lowers to 38 per cent. As expected, given the reduction in the withholding tax incidence, the share of the favoured companies goes up by more than 11 percentage points compared to Scenario 2.

A more complex framework could be envisaged by introducing a differentiation of the withholding tax rate based on past profits and sales performance, but this approach would be severely affected by the accuracy of required estimates and suffers from a lack of transparency.

5. Concluding remarks

Reducing tax evasion is a key priority for many governments and, in this respect, withholding taxes and third-party information reporting are widely recognised as useful tools across the world. In developed countries employers normally withhold income tax on behalf of their employees and then remit it directly to the tax authority. Similarly, capital income (i.e., interests, dividends and royalties) is generally taxed at source and paid net of taxes. That makes these incomes the most difficult to evade.

In the paper, building on a proposal made by Visco (2017) and NENS (2017) and taking on board the results of several pieces of literature, we propose extending the withholding mechanism to the self-employed and business profit taxes, the most commonly evaded taxes worldwide. The withholding tax, which would coexist with the standard self-reporting mechanism, is applied by the buyer directly to the gross amount owed to the seller in each B2B transaction and then remitted to the tax authority. The amount withheld is then subtracted by the seller from the tax liability emerging from the filed tax return.

We first show with a very simplified conceptual framework the effectiveness of the withholding mechanism in terms of recovered tax yields. Then, after a brief discussion of the operational aspects of the proposed mechanism, we apply it to the Italian case to illustrate that the main challenge its introduction faces lies in the choice of the tax rate, given the difference between the withholding tax base (sales) and that of profit taxes (profits). There is a trade-off between setting the rate at a level low enough to prevent most businesses from incurring large refunds and setting it a level high enough to significantly reduce tax evasion occurring when the tax return is filed.

We argue that the benefit of extending such a withholding mechanism to profit taxes is twofold. On the one hand, consisting in an advance payment on the effective profit tax liability, it contributes to curbing tax evasion due to non-payment in a system characterised by a standard self-reporting mechanism, and ensures a more regular flow of revenue to the central government. On the other hand, and more importantly, the withholding system – retaining information about each transaction subjected to it – enhances third-party information reporting if the withholding tax is applied on transactions that are otherwise excluded. Furthermore, it generates an automatic exchange of information directly between the buyer and the tax authority (without other parties involved, such as banks or credit card managers) which makes it possible to overcome certain privacy problems that have been encountered in some countries in the full exploitation of third-party information by the tax authority.

Regarding the final point, the application of the withholding tax to all B2B transactions between the self-employed and businesses reduces the possibility of sales under-reporting and cost overestimation for these taxpayers, and therefore tax evasion without collusion between buyer

and seller. However, there may be limits to the effectiveness of third-party information if taxpayers can make offsetting adjustments on less verifiable margins. It still remains possible to evade by resorting to other margins of the tax declarations where information is harder to verify, (i.e., general costs) or by increasing informal activities and transactions settled with payments in cash.

This reasoning leads to some policy considerations. Firstly, in order to be effective enforcement policies need to be based on comprehensive third-party information, in order to limit the margins that can be used to reduce the tax liability. This would, on the one hand, allow a more complete cross-reference of reported costs and incomes with available information and, on the other, allow tax authorities to focus their auditing resources only on those margins which are more difficult to monitor through third-party information.

Secondly, withholding taxes and third-party information reporting, which broaden the availability of information and increase its timeliness, could nevertheless encourage forms of evasion with collusion among counterparts by expanding rather than reducing evasion. In the presence of an emergence of costs favoured by third-party information reporting, evasion phenomena with collusion could also lead to a loss of revenue. This should be countered by accompanying the withholding mechanism and third-party information reporting with the provision of adequate controls, for example, on the stability and credibility of profit margins.

Thirdly, only the introduction of substantial incentives for the use of traceable means of payment and of stringent limits on the use of cash can discourage the evasion with collusion in the final stage of the trade chain (B2C transactions).

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Appendix 1: The withholding tax on self-employed income in Italy

In Italy a withholding tax system is currently applied to self-employed income; it is conceived as an advance payment of personal income tax liability. The regime applies to all transactions carried out between the self-employed and businesses. The tax is withheld by the buyer and then deducted as a tax credit from the personal income tax liability of the self-employed. The withholding tax is not applied if the counterpart is a final consumer, nor to incomes of sole proprietorships in which the business involves not only labour, but also capital. The tax rate is 20 per cent, and 30 per cent if the seller is non-resident.

A sizeable share of the self-employed are subjected to a simplified tax scheme ("Regime forfetario") in which incomes are subjected to a flat tax and the withholding tax regime is not applied. In 2017 about 1 million self-employed persons were subjected to the flat rate tax, and in 2020 the number increased to 1.7 million. Moreover, these taxpayers are not subjected to the main third-party information reporting obligations: the electronic invoicing for B2B transactions.

In Italy there are overall approximately 4 million self-employed persons (including sole proprietorships, professionals and partnerships). Table A1 shows that in 2017 (the last year for which are available administrative microdata) around 42.2 per cent of the self-employed paid a withholding tax, representing 45.3 percent of taxable income and 48.5 per cent of total turnover.[8]

The total yield of the withholding tax amounted to 10.6 billion, which is 59.8 per cent of the corresponding personal income tax (17.7 billion). For 0.7 million self-employed persons the withholding tax exceeds the personal income tax on average by 63.6 per cent, generating sizeable tax refunds.

Table A1 – Current withholding tax regime for self-employed in Italy – Fiscal year 2017

	Withholding tax > 0	Total self-employed
Number of taxpayers (thousand)	1,720	4,076
Share of taxpayers (%)	42.2	100.0
Share of taxable income (%)	45.3	100.0
Share of turnover subjected to withholding tax (%) (1)	48.5	23.7
Total personal income tax (million)	17,691	28,018
Total withholding tax (million)	10,576	
Taxpayers with withholding tax larger than PIT (thousand)	714	
Excess of withholding tax (%)	63.6	

Source: our calculations based on a representative sample of tax returns filed by self-employed.
(1) Estimates based on professionals and sole proprietorship with simplified accounting.

[8] Revenue of the self-employed does not necessarily coincide with income subjected to the withholding tax. It may include incomes from other sources, such as rents, and the reimbursement of expenditures faced by the professional in order to attain his/her tasks.