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THE TAX WEDGE ON THE EMPLOYER SIDE IN ITALY

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The tax wedge on the employer side in Italy

Antonella Caiumi* and Marco Rinaldi*

Abstract

The budget law for 2024 introduced a super-deduction of the labour cost for employment increases in permanent jobs from corporate income tax base (CIT). The tax-cut aimed at increasing employment is higher for eligible workers who are in a poor labour market situation. This paper addresses the question of how to comprehensively measure the tax wedge on the employer side, including employer contributions and corporate income tax. Based on a profit maximisation modelling approach, we extend the conventional measure of the tax wedge on labour, which excludes the tax component arising from the non-neutral tax treatment of labour under the corporate income tax. We examine the evolution of both the CIT and the contributory component of the employer tax wedge over the years 2006-2024, taking into account differences in the tax treatment of different types of jobs (temporary versus permanent). In addition, we take into account the main reliefs aimed at providing stronger hiring incentives to disadvantaged workers (youth, women, residents of southern areas), including those provided by the recent approved “Decreto Coesione”. Our results show that the overall tax burden on labour fell by 6.2% on permanent jobs from 2007 to 2015. The tax reduction granted by the newly introduced super deduction from the CIT of labour costs for employment increases in 2024 is 0.9% (1.3 for disadvantaged workers). We show that the magnitude of the incentive effect on the tax wedge is comparable to that associated with previous tax allowances for the same policy objective, e.g. employment increases. Overall, the tax benefit for hiring young people will be lower in 2024 than in 2023. In contrast, the total tax burden that employers will have to bear for hiring women will be lower from September 2024 than in 2023. For hiring employees in southern regions, the reduction in the total tax burden for the employer will be higher than in 2023, but only for companies with up to 10 employees.

Keywords: tax wedge on labour, corporate taxation, social security contributions, labour policy.

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1. Introduction

It has long been known that a high tax rate on labour is detrimental to growth and employment (Arnold *et al.* 2011). High values of the labour tax wedge suggest that there is scope to reduce labour taxation to improve labour market outcomes and mitigate the impact on vulnerable groups such as youth, women, the low-skilled, etc. (CPB 2015).

The tax wedge is the most important indicator of key factors influencing labour force participation and hiring decisions of individuals and businesses. It measures the difference between the employer's total labour costs and the corresponding net wage of the representative employee. As such, it comprises the sum of total personal income tax and social security contributions of employees and employers less cash benefits received, expressed as a proportion of total labour costs. This completely ignores the impact of corporate income tax (CIT) on the tax wedge, particularly on the employer side, which can be significant if the tax treatment of labour costs is not neutral.

As is well known, this applies to Italy due to the regional tax on productive activities (IRAP) introduced in 1997, which includes the cost of labour among the components of the tax base. In fact, the IRAP tax burden on labour was gradually reduced from 2007 and finally abolished in 2015, but only for permanent jobs. In addition, the CIT can be used to incentivize the hiring of employees. In implementation of the Corporate Tax Reform Delegation Act, the Finance Act 2024 grants a super allowance of 120% of the cost of hiring additional permanent employees from corporation tax. For disadvantaged employees, the rate increases to 130%.

According to the latest OECD report (2024) *Taxing wages*, the tax wedge for single employees in Italy in 2023 is 45.1%, slightly lower than in 2022 (45.9%). Despite the recent reduction in income tax for low-income earners, it is still one of the highest in OECD countries. Italy is only surpassed in this ranking by 4 out of 38 countries, which means that net wages in Italy are relatively low while labour costs remain relatively high. These figures do not differentiate the tax burden by type of job, nor do they take into account the impact of the newly introduced corporate tax changes on the tax wedge.

The focus of this paper is on the calculation of the tax wedge for the employer. The extended framework adopted here is based on a profit maximisation modelling approach and relies on the conventional assumption of coincidence of economic and legal incidence commonly used to calculate tax wedges (McKee, Visser, Saunders 1987). In this way, the tax wedge on labour can be split into two components: the share levied on the employer (contributions and CIT) and the share borne by the employee (contributions and personal income tax). By taking into account both the employer's taxes and social security contributions, our calculation provides a reliable *ex ante* indicator of the tax burden on labour by the employer.

Our measurements of the tax wedge take into account the differences in tax treatment by type of job (temporary and permanent), as well as the main reliefs aimed at creating significantly stronger incentives for hiring workers with major labour market problems, specifically young people, women, workers residing in the South.

In detail, we trace the path of the Italian CIT reforms in the years 2006-2024: from the non-deductibility of total labour costs from IRAP, including the non-deductibility of IRAP from corporate income tax, to its gradual elimination for permanent jobs in 2015 and the full deductibility of the labour component of the IRAP base from corporate income tax in 2012 for all employees, up to the newly introduced allowance from IRES for employment growth. The CIT component of the tax wedge is complemented by the development of the employer contribution component by taking into account the main provisions that came into force from 2013, including the preferential payroll tax regime that will enter into force from September 2024 (“Decreto Coesione”).

The paper is structured as follows. In the next section we present the main elements of the conventional formula of the tax wedge on labour. Section 3 contains the formulation of a comprehensive tax wedge for the employer using several illustrative examples. In Section 4 we present our results, and Section 5 provides final remarks.

2. The classical tax wedge on labour

As a guide example, we consider a stylized taxation system in which the following elements are included:

- 1) a corporate taxation with a flat rate τ_c allowing for the full deduction of the labour cost;

- 2) social security contributions (SSCs) levied on both employers and employees, respectively denoted by τ_{SSC}^c and τ_{SSC}^w , applied to a wage rate w , which in the following is called “gross wage”;
- 3) a personal income tax with a progressive rate $\tau_w(w)$;
- 4) there are no deferrals of salary payments.

Commonly, the tax wedge (denoted by TW) is understood as the distance between the total cost of labour borne by the employer and the amount that the employee actually receives. Applying the tax system depicted above, the after-tax labour cost levied on employers is $(1 + \tau_{SSC}^c)w$, while the net wage received by the employee is $(1 - \tau_{SSC}^w - \tau_w(w))w$. It follows that the total tax wedge is indeed:

$$TW^{**} = (1 + \tau_{SSC}^c)w - (1 - \tau_{SSC}^w - \tau_w(w))w = \tau_{SSC}^c w + \tau_{SSC}^w w + \tau_w(w)w$$

The total tax wedge can be split in the tax wedge levied on the employer, defined as the difference between the cost of labour and the gross wage (i.e. the salary in the payroll):

$$TW_c^{**} = w + \tau_{SSC}^c w - w = \tau_{SSC}^c w$$

and the tax wedge levied on the worker, defined as the difference between the gross wage and the net wage the worker actually receives:

$$TW_w^{**} = w + \tau_{SSC}^w w + \tau_w(w)w - w = \tau_{SSC}^w w + \tau_w(w)w$$

So, the total tax wedge can be expressed as the sum of the two components, the one borne by the employer and the other one borne by the worker: $TW^{**} = TW_c^{**} + TW_w^{**}$.

Dividing by the gross salary, we get the tax wedge as a function of the tax rates only:

$$TW_c^* = \tau_{SSC}^c, TW_w^* = \tau_{SSC}^w + \tau_w(w), TW^* = \tau_{SSC}^c + \tau_{SSC}^w + \tau_w(w).$$

This formulation, we denote as ‘*classical formulation*’, is currently used among others by OECD and Istat¹ and relies on two main assumptions:

- income taxes and social security contributions remain a burden for the subject who is struck, i.e. the economic incidence of the tax burden coincide with its legal incidence;
- the cost of labour is fully deductible from the corporate income tax (CIT), therefore the CIT is neutral with respect to hiring choices.

In the next section, we remove this latter assumption.

3. A broader formulation of labour tax wedge on the employer: some illustrative examples

To account for the distortionary features of the CIT, we derive the tax wedge starting from a simple model of profit maximization, keeping the incidence assumption for both income taxes and social security contributions (i.e., the legal incidence matches the economic incidence).

Assuming perfect competition for the sake of simplicity, i.e. the output price does not include a mark-up on marginal production costs, the profit generated by an additional worker can be represented as follows:

$$\pi = pMP_L - w - w\tau_{SSC}^c - (pMP_L - w - w\tau_{SSC}^c)\tau_c \quad (1)$$

where π denote the marginal profit, MP_L is the marginal productivity of labour, p is the output price level, so that pMP_L represents the marginal productivity in value, and τ_c is the CIT tax rate.

As a benchmark case, we consider the case of a CIT system that allows the complete deduction of the cost of labour. Under profit-maximizing condition $\pi = 0$, we obtain:

¹ Oecd Taxing wages (2023), Istat (2022).

$$pMP_L = \frac{(1 + \tau_{SSC}^c)(1 - \tau_c)w}{(1 - \tau_c)} = (1 + \tau_{SSC}^c)w$$

As the marginal productivity of labour is invariant with respect to the CIT, the tax wedge on the employer depends only on social security contributions:

$$TW_c = \frac{pMP_L - w}{w} = \tau_{SSC}^c$$

As it is conventional, we get the contribution component of the tax wedge by setting the rate τ_c to zero in TW_c , so as to determine the fiscal wedge by difference. In such a way, we get the following decomposition:

$$TW_c = TW_c^{SSC} + TW_c^f$$

In sum, as the cost of labour is entirely deductible from the tax base of the CIT, the fiscal wedge TW_c^f is null, and the SSCs component of the tax wedge is equal to SSCs rate: $TW_c^{SSC} = \tau_{SSC}^c$. In turn, as the fiscal component of the tax wedge is null, the CIT is not distortive of the firm's employment choices.

Now suppose the tax system comprises, in addition to the CIT, a regional tax levied on the gross return of the firm, say the labour cost is non-deductible from the regional tax base. In a first step, we consider two cases regarding the coordination system between the regional tax, with rate τ_c^r , and the CIT, with rate τ_c^p .

1. The regional tax is undeductible from the CIT base.

In very simplified terms, this is equivalent to assuming that a tax system envisages a CIT and a regional tax, both levied on the same basis, economic profit (i.e. the total rate would be the sum of the two statutory taxes, $\tau_c^p + \tau_c^r$), while only the regional tax is levied on the cost of labour. The profit generated by the marginal workers can then be specified as follows:

$$\pi = pMP_L - w(1 + \tau_{SSC}^c) - (pMP_L - w(1 + \tau_{SSC}^c))(\tau_c^p + \tau_c^r) - w(1 + \tau_{SSC}^c)\tau_c^r \quad (2)$$

By proceeding as above, we derive the employer tax wedge:

$$TW_c = \tau_{SSC}^c + \frac{(1 + \tau_{SSC}^c)\tau_c^r}{(1 - \tau_c^p - \tau_c^r)}$$

and

$$TW_c^f = \frac{(1 + \tau_{SSC}^c)\tau_c^r}{(1 - \tau_c^p - \tau_c^r)} > 0$$

TW_c^f is positive, that means taxation discourages hiring choices. Note that the broader formulation differs from the classical one only by the presence of the fiscal wedge. For this reason, we can therefore consider the new formulation as a broader version of the classical one.

The fiscal wedge can be reduced assuming the regional tax allows fixed deductions, δ , from the cost of labour, expressed as percentage of the gross salary; in this way the fiscal tax wedge changes as follows

$$TW_c^f = \frac{(1 + \tau_{SSC}^c - \delta)\tau_c^r}{(1 - \tau_c^p - \tau_c^r)} \quad (3)$$

TW_c^f might even be negative if δ were high enough.

Notice that now the tax wedge is expressed as a function of *all* tax rates (included CIT's rate), in contrast to the classical formulation.

2. The regional tax is deductible from the CIT base.

In this case the profit-maximizing model modifies as follows:

$$\pi = pMP_L - w(1 + \tau_{SSC}^c) - (pMP_L - w(1 + \tau_{SSC}^c))(\tau_c^p + \tau_c^r) - w(1 + \tau_{SSC}^c)\tau_c^r + w(1 + \tau_{SSC}^c)\tau_c^p\tau_c^r \quad (4)$$

$$TW_c = \tau_{SSC}^c + \frac{(1 - \tau_c^p)(1 + \tau_{SSC}^c)\tau_c^r}{(1 - \tau_c^p - \tau_c^r)}$$

Since $TW_c^{SSC} = \tau_{SSC}^c$, we get by difference the fiscal wedge. Assuming the regional tax allows fixed deductions δ from the cost of labour as above, we get:

$$TW_c^f = \frac{(1 - \tau_c^p)(1 + \tau_{SSC}^c - \delta)\tau_c^r}{(1 - \tau_c^p - \tau_c^r)} \quad (5)$$

It is worth underlying that the fiscal wedge is null if the CIT and the regional tax both insist on the economic profits.

3. The CIT allowing a super-deduction on the cost of hiring additional employees

Now, suppose the CIT allows a super-allowance of the cost of labour as an incentive to hire (negative fiscal tax wedge). We denote with $\alpha > 1$ the rate of the super-deduction from the CIT base. To make things easier, first off we consider only the CIT. Then, the profit maximizing function is:

$$\pi = pMP_L - w(1 + \tau_{SSC}^c) - (pMP_L - \alpha w(1 + \tau_{SSC}^c))\tau_c^p \quad (6)$$

and the tax wedge on the employer is equal to

$$TW_c = \tau_{SSC}^c - \frac{(\alpha - 1)(1 + \tau_{SSC}^c)\tau_c^p}{(1 - \tau_c^p)}$$

As long as $\alpha > 1$ or $(\alpha - 1) > 0$ then the fiscal TW_c^f is negative, while $TW_c^{SSC} = \tau_{SSC}^c$.

Now, we add a regional tax levied on the economic profit but not allowing a super-deduction on labour, then the profit generated by the marginal worker becomes:

$$\pi = pMP_L - w(1 + \tau_{SSC}^c) - (pMP_L - \alpha w(1 + \tau_{SSC}^c))\tau_c^p - (pMP_L - w(1 + \tau_{SSC}^c))\tau_c^r \quad (7)$$

and

$$TW_c = \tau_{SSC}^c - \frac{(\alpha - 1)(1 + \tau_{SSC}^c)\tau_c^p}{(1 - \tau_c^p - \tau_c^r)}$$

$$TW_c^{SSC} = \tau_{SSC}^c \text{ and } TW_c^f < 0.$$

4. SSCs rate reduction

As an alternative measure to boost employment, the SSCs could be reduced (for all workers or for some identified individuals). Denote the de-contribution rate by the parameter β , so that the effective SSCs rate is $(1 - \beta)\tau_{SSC}^c$. and the SSCs wedge would be proportionally reduced: $TW_c^{SSC} = (1 - \beta)\tau_{SSC}^c$. Now assume the CIT is levied on the economic profit and grants a super-deduction of the cost of hiring additional workers, then equation 5 for the fiscal wedge becomes:

$$TW_c^f = -\frac{(\alpha - 1)(1 + (1 - \beta)\tau_{SSC}^c)\tau_c^p}{(1 - \tau_c^p - \tau_c^r)} \leq 0$$

This system is very similar to the current Italian tax rules for open-ended contracts.

In sum, TW_c measures the increase in labour costs (i.e., the associated increased in productivity) caused by the tax system compared to a world without taxes. A negative (positive) value would mean an increase (decrease)

in the level of employment (see appendix for an illustrative example).

In our approach, the tax wedge is expressed as a percentage of the gross wage (including TFR), w . This amount can be interpreted as the equilibrium wage in the absence of taxation (see Appendix B for a graphical illustration). The total tax wedge on labour is then the distance between the costs incurred by the employer, pMP_L , including the fiscal tax wedge, and the net salary received by the worker, w_n , can be easily split between the component born by the employer, $pMP_L - w$, and the portion of tax burden borne by the employee, $w - w_n$, under the assumption that legal incidence and economic incidence coincide.

$$TW = TW_c + TW_w = \frac{(pMP_L - w) - (w - w_n)}{w} = \frac{pMP_L - w_n}{w}$$

However, for comparison purposes our computations presented in the next section are obtained as a proportion of the cost of labour comprising the gross salary and SSCs (including employment insurance), $w + \tau_{SSC}^c w$, consistently with the conventional approach.²

In order to take into account the main tax changes for both CIT and mandatory employer contributions in the years 2006-2024 (see Appendix A), we have developed a suitable toolkit based on the framework illustrated in this section.

4. The components of the tax wedge borne by the employer

The various components of the tax wedge on labour can depend on the amount of the gross wage taken as reference. This is true for several reasons. Firstly, the provisions that provide for a reduction in social security contributions generally set an upper limit for the gross wage. Secondly, the fixed deductions of labour costs from the IRAP base introduced in 2007 have a diminishing effect as the value of the gross wage increases. Last but not least, the level of the gross wage plays a role due to the progressivity of the percentage income tax, which accounts for the largest part of the tax burden for the employee.

In this section, we calculate the tax burden for the employer on the basis of a gross salary of EUR 23,600 per year. This amount corresponds to the gross salary defined in the National Labour Contract for Metalworkers Level 4, which is the most widespread in Italy and is therefore generally used as a reference for calculating the tax wedge. We apply employer contributions equal to 28.48% and insurance contributions (INAIL) to 1.5%.

The provisions for increasing employment generally apply for a limited period, depending on the type of contract (from one to three years). In our calculations of the tax wedge, we assume that the total relief is spread over the average duration of the contract, which is set at 7.6 years for permanent contracts and 2 years for fixed-term contracts (INPS database). As already mentioned, for reasons of comparability, the components of the tax wedge are expressed as a proportion of the gross wage costs to be borne by the employer according to the conventional approach (e.g., the amount for employer insurance and employer contributions added to the gross wage of the representative employee).

Figure 1 illustrates the evolution of both the tax and contribution components of employer contributions by employment type since 2005.³ Taking into account the existence of IRAP and the repeated reforms adopted since 2007, the tax component of the tax wedge has decreased from 6.2% in 2006 to zero in 2015 for permanent jobs, while for temporary jobs it has remained unchanged at 3.9% since 2012. The reduction in the tax wedge in favor of permanent jobs was higher for hiring workers in the southern regions, women and young people (the reduction in the tax wedge ranges from 0.6% to 1.1% percent, depending on the tax regulations and the target group). Incentives to increase employment in 2006-2008 and 2014 enabled a further reduction in the tax wedge of 1% and 0.8% respectively.

Regarding the impact of the newly introduced super-deduction of labour costs for employment increases from the IRES, in Italy for the first time we reckon the CIT component of the tax wedge to be negative for the employer. The amount of the tax reduction is -0.9% and reaches the value of -1.3% in favor of certain

² Istat (2022), and OECD, Taxing wages, cited.

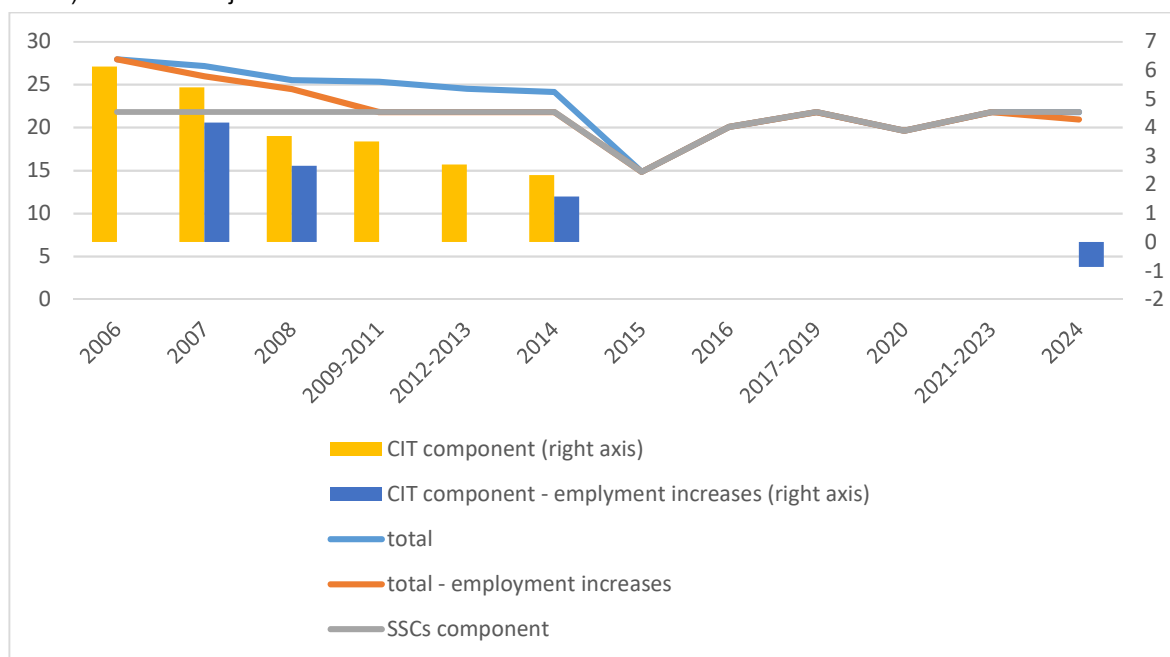
³ Appendix A briefly summarizes the main steps of the reform process in CIT as well as in employer social security contributions.

disadvantaged groups. It turns out that the tax reduction granted by the current tax reform is comparable to previous provisions that pursued the same political objective (in 2006-2008 and 2014).

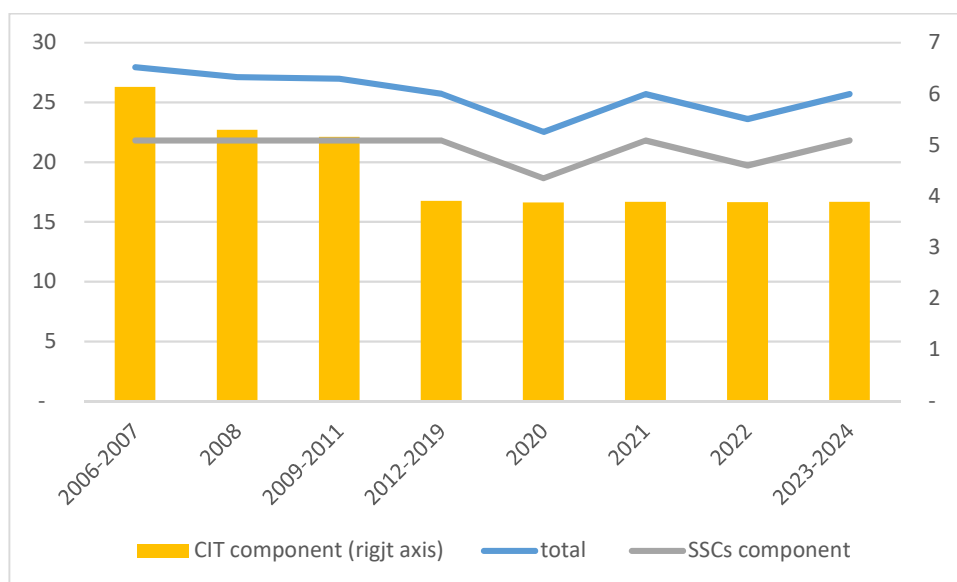
The tax wedge, calculated without taking the fiscal component into account, has remained essentially unchanged at 21.8%. A notable exception is due to the Jobs Act, which is no longer in force: the tax cut reached 6.8% in 2015 and was reduced to 1.8% in 2016. In 2020, the tax wedge was reduced by 2.8 due to temporary incentives to address the pandemic crisis, regardless of the type of job.

Figure 1 – The tax wedge on the employer by job type, years 2006-2024 (percentage points)

a) Permanent jobs



b) Fixed term jobs



Source: Authors' calculation.

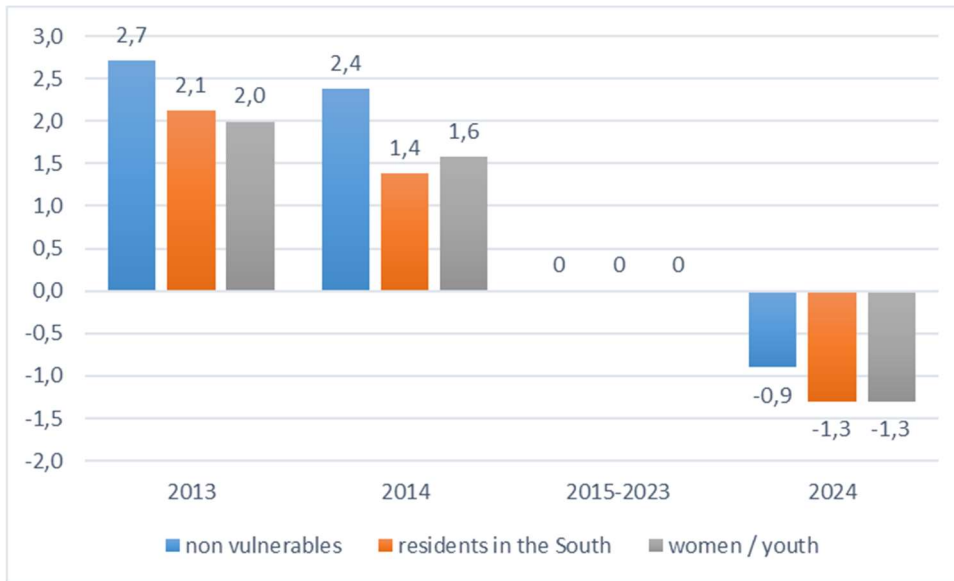
In 2013, the “Fornero reform” reduced the contribution rate for female employees by 1.7% (Fig. 2).⁴ In the years 2021-2022, the relief provided by the “Incentivo donne” law was more generous with a tax reduction of

⁴ Rubolino (2023) provides first empirical evidence that differentiating payroll taxes by gender helps to reduce the gender employment gap (but not the gender wage gap).

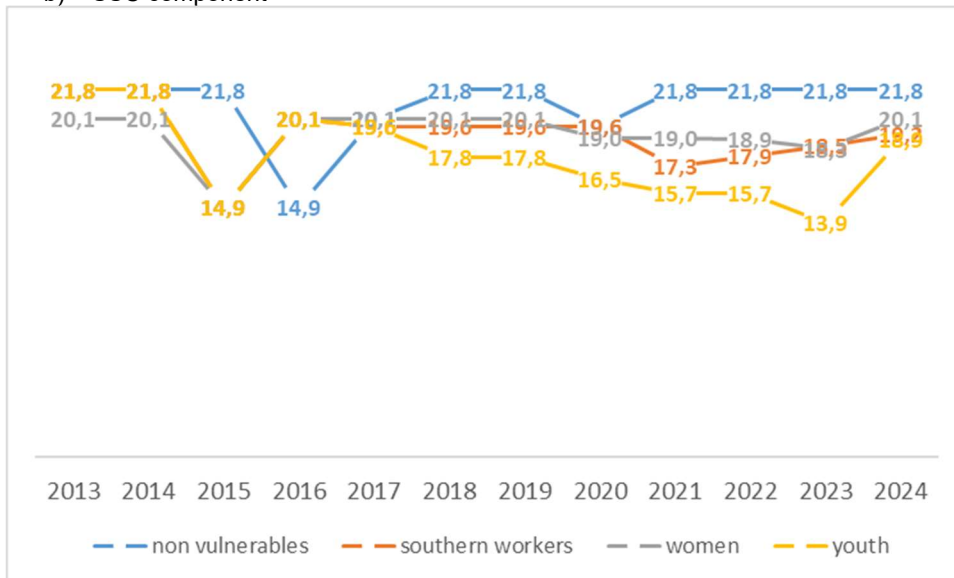
2.8%; in 2023, the tax reduction rose to 3.5%. In 2024, the tax cut for female employees will be limited to 1.7%, since the Fornero law will be applied as a replacement for the Incentivo donne. The change in the tax wedge is even more pronounced for young employees: the tax cut gradually increased from 1.7% in 2016 to 7.9% in 2023. Here, too, the payroll tax cut will be lower in 2024 (2.9%). For the inhabitants of the South, the ‘Decontribuzione Sud’ introduced in 2021 offers a decreasing relief over the years 2021-2029, the tax reduction corresponds to -2.6% in 2024, while in 2023 it amounts to -3.3%.⁵

Fig. 2 – Components of the tax wedge on labour for (non) vulnerable groups, years 2013-2024
(percentage points)

a) CIT component



b) SSC component



Source: Authors' calculation.

⁵ At the time of writing, it is not known whether the ‘Decontribuzione Sud’ will be extended after June 2024.

However, the development of tax rules continues. The recently passed ‘Decreto Coesione’ will reduce employer contributions more substantially from September 2024. The reduction in the tax wedge is 4.5% for women and for workers in southern areas (4% for young people) with respect to the basic rate (21.8%).

Table 1 - Changes in the tax wedge on the employer, permanent jobs, year 2024

<i>Changes due to CIT reliefs (only employment increases)</i>		<i>Changes due to SSCs reliefs (new hires)</i>			
		<i>Before DI Coesione</i>		<i>DI Coesione</i>	
<i>Age</i>					
<i>Age<30</i>	<i>Age>30</i>	<i>Age<35</i>	<i>Age>35</i>	<i>Age<35</i>	<i>Age>35</i>
-1,3	-0,9	-3,0	0	-4,0	0
<i>Gender & Parenting</i>		<i>Gender⁽¹⁾</i>			
<i><2 children</i>	<i>≥ 2 children</i>				
-0,9	-1,3	-1,7		-4,5	
<i>Geographical requirement</i>					
<i>Centre-North</i>	<i>South</i>	<i>Centre-North</i>	<i>South</i>	<i>Centre-North</i>	<i>South</i>
-0,9	-1,3	0	-2,6	0	-4,5

Source: Authors’ elaboration. Notes: CIT reliefs: Super deduction of the labour cost from IRES for additional workers. Employer contribution reliefs, Ante-DI Coesione (before 1-09-2024): Esonero giovani 2018, Fornero law, and Decontribuzione Sud. DI Coesione applies from 1-09-2024. The contribution relief granted by the latter provision for the recruitment of employees in southern regions is limited to companies with up to 10 employees. The basic rate for the tax wedge is 21.8%. The combination of CIT and contribution reliefs is allowed depending on the eligibility requirements.

In summary, employer contributions will be lower from September 2024 compared to 2023 for the recruitment of women and for the recruitment of workers in southern regions, although in the latter case only for companies with up to 10 employees. When hiring young employees, the reduction in the overall tax burden for the employer will be lower in 2024 than in 2023 even if employment increases (e.g. if the CIT super-deduction on employment increases also applies). If the Decontribuzione Sud is not extended further, companies with more than 10 employees in the southern regions will have to pay the full employer tax wedge from September 2024, even for new hires.

Table 2 – Changes in the tax wedge on the employer, permanent jobs, comparison between years 2023 and 2024

	2023		2024	
	Before DI			
		Coesione	DI Coesione	
<i>youth</i>				
under 30	-7,9	-4,3	-5,3	
30-35 years	-7,4	-3	-4	
<i>women</i>				
<2 children	-3,5	-2,6	-5,4	
≥2 children or at least 6 months in non employment status in depressed areas	-3,5	-3	-5,8	
<i>geographical requirement</i>				
Centre-North	0	-0,9	-0,9	
South - all employees ⁽¹⁾	-3,3	-3,9	-3,9 ^(*)	
South - new hires, firms up to 10 employees				-5,8

Source: Authors' elaboration. Note. D.L Coesione will come into force from September 2024. (1) Decontribuzione Sud. (*) The extension from July 2024 is subject to the approval of the European Commission.

5. Final remarks

The 2024 budget law has once again brought the issue of reducing labour costs to the fore, with the aim of improving the competitiveness of Italian companies and thus also growth and employment. The standard measures on the tax burden on labour do not take into account the impact of taxes on employers. Using a broader formulation of the employer tax wedge, we examine the impact of recent tax changes on the tax wedge, distinguishing between the fiscal and contributory components.

The paper provides an overview of the evolution of both components of the tax wedge in the period 2006-2024. We show that changes to the tax rules regarding the deductibility of labour from the IRAP base reduced the tax wedge by 6.2% for permanent jobs from 2007 to 2015. In 2012, the deductibility of the labour component of IRAP from IRES reduced the tax wedge for temporary jobs by 2.3%.

The newly introduced super deduction for new hires from the CIT base also leads to a 0.9% reduction in the tax component of the tax wedge (1.3 for disadvantaged workers), which becomes negative for the first time and thus reduces the overall tax wedge. We show that the magnitude of the incentive effect on the tax wedge is comparable to that associated with previous tax allowances for the same policy objective, e.g. employment increases.

The official estimates (OECD 2024, ISTAT 2022) do not take into account the above-mentioned tax changes on the tax wedge or the possible offsetting between tax and contribution reliefs. Our results show that the new tax incentive for stable employment in 2024 only partially offsets the loss of relief on employers' SSCs, which expire in December 2023. Overall, the tax benefit for hiring young people will be lower in 2024 than in 2023. In contrast, the total tax burden that employers will have to bear for hiring women will be lower from

September 2024 than in 2023. For hiring employees in southern regions, the total tax burden for the employer will be lower than in 2023, but only for companies with up to 10 employees.

The empirical literature points to asymmetric effects of tax increases and tax cuts. Among others, Attinasi et al. (2016) show that the effects of a change in the tax wedge can be asymmetric, with an increase in the tax wedge having a stronger and more immediate effect on the labour market than the positive effect of a reduction in the tax wedge of the same magnitude. One topic for further research is therefore the empirical estimation of the elasticities of labour demand to tax changes in Italy. The results shown in this paper could be a useful starting point for empirically analysing the effects of labour taxation on hiring decisions by exploiting the documented variability of the overall tax wedge on labour.

Appendix A – The taxes on labour in Italy: a general overview

The Corporate Income Tax

The Italian tax code envisages for a CIT called ‘Imposta sul reddito delle società’ (IRES) and a regional tax called ‘Imposta sui redditi delle attività produttive’ (IRAP), which is mainly intended to finance the Italian regional healthcare system. The main rate of corporation tax (IRES) is 24% and the rate of business tax (IRAP) is 3.9%.⁶

IRAP was introduced in 1997 as part of a comprehensive tax reform aimed at reducing the tax burden on profits and correcting the historical imbalance in the Italian tax system towards indebtedness. The IRAP replaced a number of taxes, including the regional income tax (ILOR), a tax on dividend distributions from corporations, the wealth tax and the wage contributions levied to finance a national healthcare system. This enabled a considerable simplification of tax law. In addition, the introduction of IRAP made it possible to significantly reduce the tax rate on profits by broadening the tax base. The tax rate, originally set at 4.25%, was reduced to 3.9% through a comprehensive reform in 2008.

IRAP is essentially a net income type of value added tax on an origin basis (Ceriani and Giannini 2009). The peculiarity of the IRAP tax is that it is not levied on income when taxpayers receive it, but before it is distributed, on the value of the production generated in each tax period by the economic agents carrying out an entrepreneurial activities. The IRAP tax base is calculated by a direct subtraction method as the difference between gross receipts (sales revenue) and the cost of intermediate consumption (purchases from other companies plus depreciation). Under the original tax design, neither labour costs nor interest payments were deductible from the IRAP tax base. In addition, the IRAP liability was not deductible from IRES.

In the course of time, various provisions were introduced as exceptions to this general principle:

- a) a lump sum deduction of 2,000 euro up to five employees for small firms (with positive components of the production value up to 400,000 euros);
- b) a lump sum deduction of 10% of the IRAP liability from the IRES for companies that have incurred either financial or labour costs since 2009;
- c) the deductibility of the IRAP liability resulting from the labour component (less allowable deductions) from the IRES since 2012;
- d) the so-called tax wedge deduction for permanent jobs since 2006, in particular the deductibility from the IRAP base of SSCs, plus a fixed amount of 4,600 euros for each permanent employee (increased to 7,500 since 2014) and to 9,200 euros (15,000 since 2014) for employees in the southern regions; since 2012, this amount has been increased to 10,600 euros (13,500 since 2014) for women and employees under the age of 35 and to 15,200 euros (21,000 since 2014) for women and employees under the age of 35 in the southern regions.⁷ Finally, since 2015, labour costs for permanent employees have been fully deductible from the IRAP base;
- e) allowances for employment growth, in particular the deduction of 20,000 euros for each employee for four years when hired in 2006-2008 and a new deduction of 15,000 euros for each employee for three years in 2014.

As is common in CIT systems, the IRES allows the full deduction of labour costs from the tax base. The Budget Law 2024 introduced a 20% increase in the deduction of labour costs from the IRES for employment increases limited to permanent contracts only for the year 2024. For certain categories of protected workers, the super deduction rate is increased to up to 30%. These include women who have at least two children or have been unemployed for at least 6 months in disadvantaged areas, young people under the age of 30 who are eligible for the Youth Unemployment Incentive (L.48/2023), people living in disadvantaged areas and former recipients of the Citizen's Allowance who are excluded from the integration grant (which replaced the Citizen's Allowance). The tax allowance can be combined with the contribution reliefs currently in force, such as the exemption from social security contributions for young people under 35 years of age for first employment

⁶ IRES statutory rate was 31.5% until 2007, 27.5% from 2008 until 2016, and further cut at 24% since 2017. IRAP statutory rate was 4.25% until 2007 and reduced to 3.9% since 2008.

⁷ The so called *tax wedge* deduction is alternative to the lump sum deduction for small firms (point a).

introduced by the 2018 Finance Act (but not with the most generous relief for young people, which will be introduced in 2023) or the so-called “Decontribuzione SUD”.

The tax provisions taken into account in our calculation of the fiscal wedge are listed in chronological order in Table A.1.

Table A1 – CIT provisions included in the fiscal wedge by type of contract. Years 2006-2024

Year	Contract types	Non-deductibility of the cost of labour from IRAP	Deductibility of SSCs added to a fixed amount from IRAP base	Lump sum deduction of IRAP liabilities (10%) from the IRES base	Full deductibility of IRAP liabilities - arising from the labour component - from the IRES base	Full exemption of the labour cost for permanent employees from the IRAP base	Deductions for employment increases
2006	permanent fixed-term	X X					X
2007	permanent fixed-term		X				X
2008	permanent fixed-term		X				X
2009	permanent fixed-term		X	X X			
2010	permanent fixed-term		X	X X			
2011	permanent fixed-term		X	X X			
2012	permanent fixed-term		X	X X	X X		
2013	permanent fixed-term		X	X X	X X		
2014	permanent fixed-term		X	X X	X X		X
2015	permanent fixed-term			X	X	X	
2016	permanent fixed-term			X	X	X	
2017	permanent fixed-term			X	X	X	
2018	permanent fixed-term			X	X	X	
2019	permanent fixed-term			X	X	X	
2020	permanent fixed-term			X	X	X	
2021	permanent fixed-term			X	X	X	
2022	permanent fixed-term			X	X	X	
2023	permanent fixed-term			X	X	X	
2024	permanent fixed-term			X	X	X	X

Note: the

lump sum deduction of 1.850 euro (point *a*) is applied for both contract types in 2006 and only for fixed-term contracts onwards.

Compulsory Social security

Social security contributions levied in Italy include the statutory contributions for the provision of social security and welfare benefits (sickness, invalidity, occupational diseases, accidents at work, old age, maternity leave) and the levy for the severance pay reserve (TFR). Employer contributions vary depending on the type of contract, company size, sector of activity, location, etc. The SSC rate applies to the gross salary and is levied approximately 1/3 by the employee and 2/3 by the employer. The gross salary is also the basis for calculating employment insurance (INAIL) and the TFR. The Italian system generally favors open-ended employment contracts over fixed-term contracts.

In 2015, the so called ‘Jobs Act’ granted new hires with permanent jobs, even if part-time, an exemption from social security contributions from January 1 to December 31, 2015. The exemption applied for a maximum period of 36 months from the date of hiring and for a maximum amount of € 8,060 per year. The scheme was extended, although detuned only for the following year (2016).

Additional measures have been established to support vulnerable groups of the population, such as women, young people and residents in disadvantaged areas of the country. Since January 2013, the law known as the

“Fornero Reform” has reduced the social security contributions payable by employers for female workers by 50 percent for a period of 12 months for fixed-term contracts and 18 months for permanent contracts. The preferential scheme applies to women who have been unemployed for at least six months. The eligibility criteria vary according to place of residence, age and duration of non-employment. In addition, the eligibility criteria are designed to favor female hires in occupations with the greater gender employment imbalance.

The 2018 Budget Law introduced a structural relief called ‘Esonero Giovani 2018’, which grants workers under 35 years of age who do not have a permanent employment contract an exemption of 50% of SSC payments up to €3,000 and up to 36 months.

In order to limit the impact of the COVID-19 epidemic on employment and ensure the protection of employment levels, the tax exemption for SSCs hiring young people and women is increased to 100% and applies up to an amount of €6,000 (€8,000 in 2023). The duration of the exemption remains 36 months for young people and 18 months for women.

The 2021 Finance Act introduced the so-called “Decontribuzione SUD” in favour of all employees living in southern regions. It provides for a partial exemption from SSC payments, with rates decreasing from 30% (until 2025) to 20% (years 2026-2027) and further to 10% (years 2028-2029). The provision is subject to regular approval by the European Commission in accordance with the State Aid Directive. The current approval expires in June 2024.⁸

The Budget Act 2024 does not extend the incentives for young people and women that expired in 2023, leaving only structural incentives available, namely Esonero Giovani 2018 and Fornero Act.

Decree-Law No. 60 of 7 May 2024, known as D.L. Coesione, introduced a new payroll tax preferential scheme for the recruitment of female and young workers and residents of the southern regions from September 2024 to the end of 2025. The allowance is up to 6,000 euros for young people and 8,000 euros for women and employees living in the southern regions for 24 months. In the latter case, the relief is limited to companies with up to 10 employees. The benefit can be combined with the super-deduction of labour costs from the IRES for employment growth for 2024.⁹

Overall, the reductions in employer contributions are limited to new hires. Notable exceptions are, on one side, the “Decontribuzione SUD”, which benefits all existing and future employment relationships in the southern regions, on the other side, the reductions in employer contributions for newly hired women, which only apply in the event of an increase in employment. Table A.2 provides a more detailed overview of the normative development of the employer contribution rebate in recent years (2013-2024), including the rate, the upper limit and the duration of the exemption.¹⁰ Table A.3 supplements the previous table with the eligibility requirements for the individual provisions.

⁸ Our calculations assume that if the provision is not renewed, the loss of benefit for existing contracts will be around 2 percentage points in terms of the gross salary, regardless of the date of employment.

⁹ D.L.7 maggio 2024 n. 60, see article 22 for young workers, article 23 for women, and article 24 for southern workers.

¹⁰ Provisions targeted towards over 50 and apprenticeship contracts are not considered here.

Table A.2 – Employer contribution reliefs by contract type and vulnerable group. Years 2013-2024

year	contract types	all employees	duration (months)	relief	incentives to southern regions	duration (months)	relief
2013	permanent						
	fixed-term						
2014	permanent						
	fixed-term						
2015	permanent	Jobs Act 2015	36	100% up to € 8.060			
	fixed-term						
2016	permanent	Jobs Act 2016	24	40% up to € 3.250			
	fixed-term						
2017	permanent				Incentivo occupazione ⁽¹⁾	12	€ 8.060
	fixed-term						
2018	permanent				Incentivo occupazione sviluppo ⁽¹⁾	12	€ 8.060
	fixed-term						
2019	permanent				Incentivo occupazione sviluppo ⁽¹⁾	12	€ 8.060
	fixed-term						
2020	permanent	IO Lavoro ⁽¹⁾ ; Decontribuzione D.L. Agosto	12; 6	100% up to € 8.060	Decontribuzione Sud 2020	3	30%
	fixed-term	Decontribuzione D.L. Agosto	6	100% up to € 8.060	Decontribuzione Sud 2020	3	30%
2021	permanent				Decontribuzione Sud ⁽²⁾		30% until 2025 20% until 2027 10% until 2029
	fixed-term				Decontribuzione Sud ⁽²⁾		30% until 2025 20% until 2027 10% until 2029
2022	permanent				Decontribuzione Sud ⁽²⁾		30% until 2025 20% until 2027 10% until 2029
	fixed-term	Decontribuzione D. Agosto	3	100% up to € 8.060	Decontribuzione Sud ⁽²⁾		30% until 2025 20% until 2027 10% until 2029
2023	permanent				Decontribuzione Sud ⁽²⁾		30% until 2025 20% until 2027 10% until 2029
	fixed-term				Decontribuzione Sud ⁽²⁾		30% until 2025 20% until 2027 10% until 2029
01/01/2024 31/08/2024	permanent				Decontribuzione Sud ⁽²⁾		30% until 2025 20% until 2027 10% until 2029
	fixed-term				Decontribuzione Sud ⁽²⁾		30% until 2025 20% until 2027 10% until 2029
01/09/2024 31/12/2026	permanent				DL Coesione	24	100% up to € 7.800
	fixed-term						

Note. (1) The provision applies to employment increases if the ‘de minimis’ limit is exceeded (UE 2023/2831 and 2923/2832). (2) The provision is subject the authorization of the European Commission as State Aid. At the time of writing this paper, the current authorization expires on June 30 2024. However, our computations consider the application to the whole application period until 2029. (3) The provision applies only to employment increases.

Table A.2 continued - Employer contribution reliefs by contract type and vulnerable group. Years 2013-2024

year	contract types	incentives to youth	duration (months)	relief	incentives to women	duration (months)	relief
2013	permanent				Fornero	18	50%
	fixed-term				Fornero	12	50%
2014	permanent	Bonus Giovannini ⁽¹⁾	18	33% up to € 8.000	Fornero	18	50%
	fixed-term				Fornero	12	50%
2015	permanent	Bonus Giovannini ⁽¹⁾	18	33% up to € 8000	Fornero	18	50%
	fixed-term				Fornero	12	50%
2016	permanent				Fornero	18	50%
	fixed-term				Fornero	12	50%
2017	permanent	Incentivo Occupazione Giovani ⁽²⁾	12	100% up to € 8.060	Fornero	18	50%
	fixed-term	Incentivo Occupazione Giovani ⁽²⁾	12	50% up to € 4.030	Fornero	12	50%
2018	permanent	NEET ⁽³⁾ ; Esonero giovani 2018	12; 36	€ 8.060 (€ 3000 if added with Esonero giovani 2018);	Fornero	18	50%
	fixed-term				Fornero	12	50%
2019	permanent	NEET ⁽³⁾ ; Esonero giovani 2018	12; 36	€ 8.060 (€ 3000 if added with Esonero giovani 2018);	Fornero	18	50%
	fixed-term				Fornero	12	50%
2020	permanent	Esonero giovani 2018	36	50% up to € 3.000	Fornero	18	50%
	fixed-term				Fornero	12	50%
2021	permanent	Esonero giovani 2021	36	100% up to € 6.000	Incentivo donna	18	100% up to € 6.000
	fixed-term				Incentivo donna	12	100% up to € 6.000
2022	permanent	Esonero giovani 2021	36	100% up to € 6.000	Incentivo donna	18	100% up to € 6.000
	fixed-term				Incentivo donna	12	100% up to € 6.000
2023	permanent	Esonero giovani 2023; NEET 2023 ⁽³⁾	36	100% up to € 8.000; 60% (20% if combined with	Incentivo donna	18	100% up to € 8.000
	fixed-term				Incentivo donna	12	100% up to € 8.000
01/01/2024 - 31/08/2024	permanent	Esonero giovani 2018	36	50% up to € 3.000	Fornero	18	50%
	fixed-term				Fornero	12	50%
01/09/2024 - 31/12/2026	permanent	DL Coesione	24	100% up to € 6.000	DL Coesione	24	100% up to € 7.800
	fixed-term				Fornero	12	50%

Note. (1) The provision applies to employment increases if the ‘de minimis’ limit is exceeded (UE 2023/2831 and 2923/2832). (2) The provision is subject the authorization of the European Commission as State Aid. At the time of writing, the current authorization expires on June 30 2024. However, our computations consider the application to the whole application period until 2029. (3) The provision applies only to employment increases.

Table A.3 - Eligibility criteria for the payroll tax cut

<i>SSCs reliefs</i>		
Jobs Act 2015	L. 190/2014 (Legge di Stabilità 2015)	workers without employment for at least 6 months with another employer
Jobs Act 2016	L. 208/2015 (Legge di Stabilità 2016)	workers without employment for at least 6 months with another employer
IO Lavoro	L. 205/2018 (Legge di Bilancio 2019) – Decreto ANPAL 52/2020	unemployed between 16 and 25 years old, without a job for 6 months if over 25
Decontribuzione D.L. Agosto	DL 104/2020	new job hires no limitations
<i>Employment incentives towards Southern regions</i>		
Incentivo occupazione SUD	L. 205/2017 (Legge di Bilancio 2018) Decreto ANPAL 2/2018	unemployed workers with a workplace in one of the regions of Southern Italy (including Abruzzo), if over 34 years of age they must have been out of work for 6 months

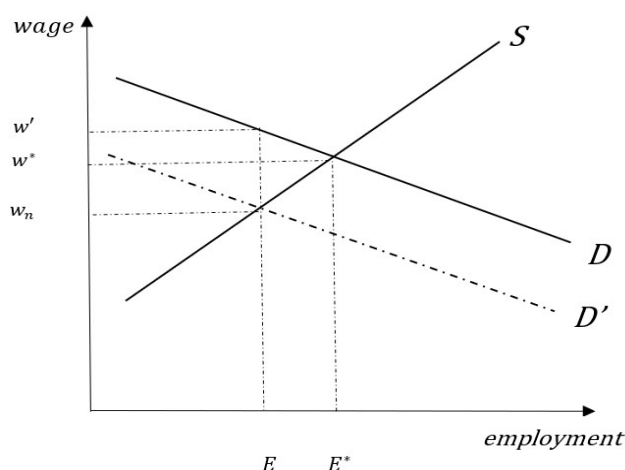
Incentivo occupaz. sviluppo SUD	L. 145/2018 (Legge di Bilancio 2019) Decreto ANPAL 178/2019	unemployed workers with a workplace in one of the regions of Southern Italy (including Abruzzo), years, without a job for 6 months if over 34
Decontribuzione Sud 2020	D.L. 104/2020	all workers with a workplace in one of the regions of Southern Italy (including Abruzzo)
Decontribuzione Sud 2020	L. 178/2020 (Legge di Bilancio 2021)	all workers with a workplace in one of the regions of Southern Italy (including Abruzzo)
DL Coesione	DL 60/2024	new hires in the southern regions (including Abruzzo), unemployed for 24 months, 35 years or older, limited to companies with up to 10 employees
<i>Incentives for Female hires</i>		
Fornero	L. 92/2012	women of any age unemployed for at least 6 months or 24 depending on their place of residence, age and occupation.
Incentivo donne	L. 178/2020 (Legge di Bilancio 2021)	women of any age without employment for at least 24 months, 6 months if resident in the south or in sectors with high gender inequality.
Incentivo donne	L. 197/2022 (Legge di Bilancio 2023)	women of any age without employment for at least 24 months, 6 months if resident in the south or in sectors with high gender inequality.
D.L. Coesione	DL 60/2024	women of any age without employment for at least 6 months if resident in the southern regions, 24 months otherwise
<i>Incentives for youth hires</i>		
Bonus Giovannini	L. 99/2013	under 30 without employment for at least 6 months or without a professional or secondary school diploma
Incentivo Occupazione Giovani	Decreto MLPS 394/2916	between 16 and 30 years old and enrolled in the "Youth Guarantee" program
NEET	Decreti ANPAL 3/2018, 83/2018 581/2018	young people between 16 and 29 years old, without work for at least 6 months if between 25 and 29 years old
Esonero giovani 2018	L. 205/2017 (Legge di Bilancio 2018)	under 35 years old (30 in 2019-2020) never employed with a permanent contract
Esonero giovani 2021	L. 178/2020 (Legge di Bilancio 2021)	under 35 years old and never employed with a permanent contract.
Esonero giovani 2023	L. 197/2022 (Legge di Bilancio 2023)	under 35 years old and never employed with a permanent contract
NEET 2023	D.L. 48/2023	under 30 years old enrolled in the "Youth Guarantee" program
DL Coesione	DL 60/2024	Under 35 years old and never employed with a permanent contract

Appendix B – The tax wedge on labour and labour market outcome

In a simple representation of a classical perfectly competitive labour market, the equilibrium market clearance conditions provide the resulting level of employment, at which labour demand and labour supply are equal, and the resulting wage rate. Labour demand is fuelled by firms and driven by the marginal productivity of labour, while the labour supply is given by workers' labour choices corresponding to each wage rate. Assuming for simplicity that labour supply increases as the wage rate increases, Figure 1 shows that in the initial case of no taxes levied both on workers and on employers, in equilibrium the employment is E^* at the wage rate w^* .

Now, let's introduce a tax legally levied on workers. For a given gross wage paid by employers, workers receive a lower net wage than in the absence of the tax. It follows that, the effective labour demand curve D' moves below the original demand curve to the amount of the tax levied on workers (Fig. A2). As the workers reduces the amount they are willing to work because of the lower net wage they receive when the tax is in place, employers have to bid up wages to keep them working up to the point the higher gross wage is equal to the marginal productivity of labour. Thus the tax cause a reduction of the employment from E^* to E and the gross wage rate paid by employers increases from w^* to w' . Thus, the burden of taxation can be split between employers who pay somewhat higher gross wages than in the absence of the tax, and workers who receive a lower net wage than in the absence of the tax. $w' - w^*$ represents the portion of tax burden borne by employer and $w^* - w_n$ is the portion of tax burden borne by employee.

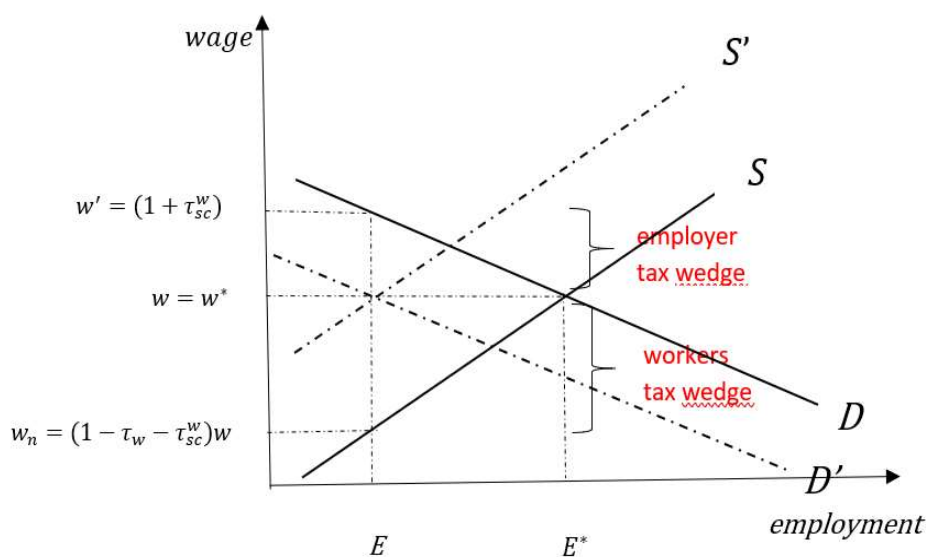
Figure B1



Notice that the extent to which the burden of the tax split between workers and employers is intimately linked to the relative degree of responsiveness of each to the disincentives created by the tax. Holding the elasticity of labour constant, the more elastic is labour demand, the larger the share of the tax burden born by workers. For example, in the extreme case of completely elastic labour demand, the workers would bear the full burden of the tax, $w_n = w - \tau w$, and the reduction in the employment would be higher than in the case of an incompletely elastic labour demand depicted in fig. A2. Vice versa, holding the elasticity of labour demand fixed, the more elastic labour supply is, the lower the share of the burden of the tax borne by workers.

Figure A3 illustrate a more realistic case where SSCs are legally levied on both workers and on employers with rate τ_{SSC}^w . In addition, the tax system includes a withholding income tax on workers with rate τ_w , and a non-distortionary income tax on employers. This implies that the cost of employing a worker exceeds the gross wage the worker receive: hence the effective supply S' curve move upward the original supply curve in the absence of the tax for the amount of SSCs levied on employers. The new equilibrium solution is established when the effective supply S' and demand D' curves meet: the employment E is much lower that E^* , the corresponding total labour cost born by employers is $w' = (1 + \tau_{SSC}^c)w$ and the net wage rate received by workers is $w_n = (1 - \tau_w - \tau_{SSC}^w)w$, that is in this special case the legal incidence coincides with economic incidence

Figure C2



What about if the tax treatment of the cost of labour in corporate taxation is not neutral as in Italian tax code (as shown in the text)? Then, the cost of labour including the tax wedge borne by employers, w' , could be lower or higher than $(1 + \tau_{ssc}^c)w$, depending on whether the corporate income tax, respectively, encourages or disincentives additional recruitments.

It is worth noting that it is often implicitly assumed that a tax cut on the employee side (i.e. in the personal income tax rate or in employees' social security contributions) can lead to a higher labour supply. It is also often assumed that a reduction in taxes on labour will increase the demand for labour. However, the economics literature argues that in an imperfect labour market, the impact of a tax change on labour market outcomes depends on the interaction between the demand and supply sides of the market. This interaction is determined by the behavioural responses of economic agents, which are measured by elasticities.¹¹ Higher elasticities (on the demand or supply side) lead to greater reactions to tax changes, with the relatively less elastic side having to bear a higher tax burden.

¹¹ Micro-level studies allowing for the interaction of labour supply and demand suggest that that labour demand elasticities vary across skill levels: the demand elasticity is highest for low-skilled workers at -1.05, and lowest for medium skill workers at -0.37 (Peichl and Siegloch 2012).

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