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Article

Basic Income and Flat Tax: The Italian Scenario

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Ugo Colombino and Nizamul Islam Basic Income and Flat Tax: The Italian Scenario¹



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INTRODUCTION

The design of a nationwide policy of minimum income or basic income in Italy, comparable to the policies implemented in most European countries, is still a working enterprise. A first proposal to fill the gap was formulated by the ‘Commissione Onofri’ (Onofri 1997) appointed by a Centre-Left Government. The proposal was tested in a sample of local areas during the following two years. However, the test was stopped when a Centre-Right Government came to power, which also transferred the competence of income support policies to the regions, which had effectively been responsible for implementing basic income policies in the previous two decades. More recently, a national basic income scheme, ‘Reddito di Inclusione’ (RdI) was implemented in 2018. It addresses the population in absolute poverty. To put this into perspective, it is meant to be universal, although the funds to date are sufficient to cover about half of the target population. After the last political elections of March 4, the new government is a coalition between Lega and Movimento 5 Stelle (M5S). Lega proposes a flat tax (FT). M5S proposes a basic income guarantee, ‘Reddito di Cittadinanza’ (RdC) that should cover all the population below the relative poverty threshold. While it appears unlikely that the two proposals will be implemented, if ever, with the announced design and figures, their combination is interesting since it has its roots in public economics and in policy debates involving different, but sometimes converging, sides of the ideological spectrum. The think tank ‘Istituto Bruno Leoni’ has also recently proposed a comprehensive fiscal policy reform that includes a basic income guarantee and a flat tax.

The purpose of this paper is to evaluate and compare the fiscal and behavioural effects of (simplified or modified versions of) the M5S+Lega

¹ The preparation of the datasets used in this paper was done by running EUROMOD version [G3.0+]. EUROMOD is maintained, developed and managed by the Institute for Social and Economic Research (ISER) at the University of Essex, in collaboration with national teams from the EU member states. We are indebted to the many people who have contributed to the development of EUROMOD. The process of extending and updating EUROMOD is financially supported by the European Union Programme for Employment and Social Innovation ‘Easi’ (2014-2020). We make use of microdata from the EU Statistics on Incomes and Living Conditions (EU-SILC) made available by Eurostat (59/2013-EU-SILC-LFS). The results and their interpretation are the authors’ responsibility.

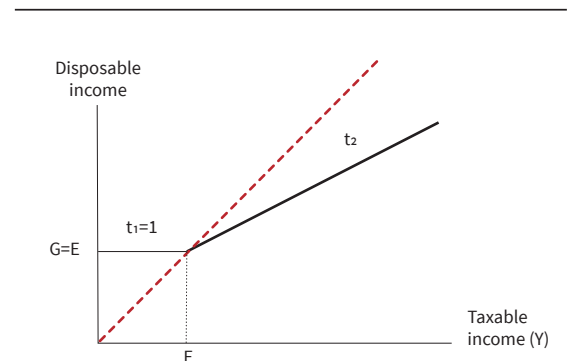
package, the RdI and the proposal by Istituto Bruno Leoni. Moreover, we will show an exercise in identifying optimal (i.e. social welfare maximizing) packages that combine basic income and flat tax. Strictly speaking, these policies do not explicitly envisage an unconditional basic income. However, they belong to the class of the ‘negative income tax’ mechanisms and as such, as we explain in the following section, they can also be interpreted as versions of unconditional basic income.

BASIC INCOME GUARANTEE VS. UNCONDITIONAL BASIC INCOME VS. NEGATIVE INCOME TAX: A CLARIFICATION

A common illustration of the difference between Basic Income Guarantee (BIG) and Unconditional Basic Income (UBI) is that the former consists of means-tested transfers, while the latter consists of a non means-tested unconditional transfer. As a matter of fact, these definitions conventionally assume a specific implementation of the two policies. Figures 1 and 2 represent standard forms of BIG and UBI. E is the exemption level. The t_1 and t_2 on the two segments of the taxable income–disposable income line represent the two marginal tax rates applied to the two corresponding ranges of values of Y.

The typical interpretation of Figure 1 goes as follows: if your own taxable income Y is below the exemption level E you receive a transfer equal to $E - Y$, so that you get a disposable income equal to $G (= E)$. If your taxable income is greater than E you pay a tax on $(Y - E)$ according to a certain rule (for simplicity’s sake, Figure 1 assumes a FT, i.e. a fixed marginal tax rate = t_2). However, the scenario can be interpreted in a different way. You get an unconditional transfer equal to G. Then every euro of your taxable income up to E is taxed according to a marginal tax rate $t_1 = 100\%$, so that your disposable income is always G, as long your own income Y is below E. Conversely, Figure 2 is typically read as saying that you receive an unconditional transfer G. Then every euro of your own taxable income (both below and above E) is taxed according to a marginal tax rate = t. However,

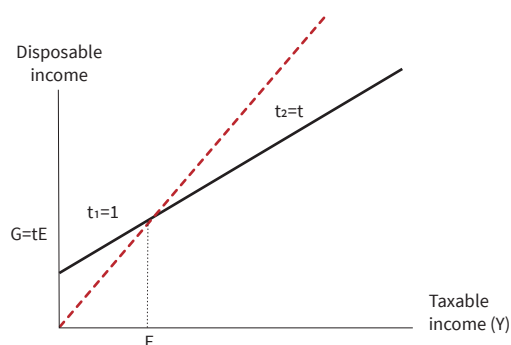
Figure 1
Basic Income Guarantee



Source: Authors’ own conception.

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Figure 2
Unconditional Basic Income



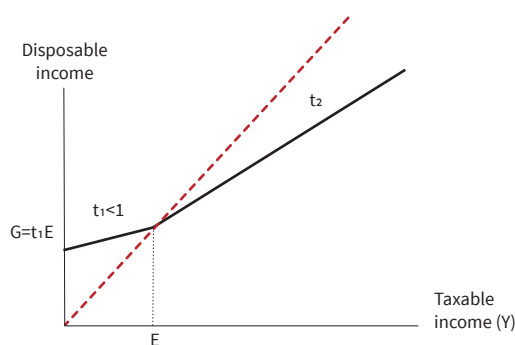
Source: Authors' own conception.

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we may alternatively interpret Figure 2 as follows. Please note that $t_1 = t_2 = t$ and $E = G/t$. If your taxable income Y is below E , you receive a transfer equal to $t(E - Y)$. If Y is greater than E instead, you pay taxes equal to $t(Y - E)$. Both mechanisms can be interpreted (and implemented) either in terms of means-tested transfers, or in terms of an unconditional transfer plus means-tested taxes. The difference is only in the slopes of the two segments below and above E . Moreover, it turns out that both BIG and UBI are special cases of the general mechanism of Figure 3. This is the usual representation of the Negative Income Tax (NIT), but at this point it should be clear that it identifies a general class of which BIG and UBI are special cases. The crucial difference of the case represented in Figures 2 and 3 with respect to the case represented in Figure 1 is the following: while with the latter the guaranteed income is always G (as long as your own taxable income Y is below the exemption level E), with the former your disposable income below E is $Y + t_1(E - Y)$, i.e. it is 'updated' depending on Y . Conversely, the key difference between Figure 2 and Figure 3 is that, with the former (UBI), $t_1 = t_2$, while with the latter $t_1 \neq t_2$.² The marginal rate t_1 is also called Benefit Reduction Rate (BRR). Although both BIG and UBI can be seen as special limit cases of NIT, we reserve the label NIT for the case of Figure 3. Please

² The standard representation has $t_1 > t_2$, but nothing prevents the opposite case.

Figure 3
Negative Income Tax



Source: Authors' own conception.

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note that t_1 is the marginal tax rate applied to Y as long as $Y < E$, but it can also be interpreted as the marginal tax rate applied to the transfer G while Y goes from 0 to E . According to this last interpretation, it is commonly called BRR.

Summing up, we can always think of (and implement) any member of the NIT class as consisting of means-tested transfers or – alternatively – as consisting of one unconditional transfer plus means-tested taxes. This perspective has important implications in view of the policy implementation: the relative appeal of the two alternatives might also depend on the relative administrative costs of means-tested transfers versus means-tested taxes.

Since the income support policies of European countries are largely implemented as means-tested transfers, and (according to what we have seen above) they can also be interpreted in terms of an unconditional transfer, does this mean that the current income support policies are already a form of UBI or NIT? Not really, for two reasons. Firstly, the current proposals of UBI or NIT, as an alternative to traditional policies, insist on the appeal of a simpler and universal system; by contrast, current income support policies are complicated; they might require the fulfilment of various additional eligibility criteria; they may require some activity or willingness to participate in some activity; they might be limited to certain occupational or demographic groups; they may be conditional to the realization of specific events – this being the most common case for insurance based policies. Secondly, the equivalence between the two interpretations/implementations explained above, strictly speaking, holds only in a static scenario. If we allow for the intertemporal dimension, there may be differences. For example, it might make a significant difference to receive an up-front unconditional transfer G at the beginning of the year or receive means-tested transfers during (or at the end of) the year instead, unless the unconditional transfer is relatively small and/or the credit market is easily accessible and/or uncertainty upon own incomes during the year is not too large.

Keeping the above caveats in mind, this paper will interpret the policies or proposals mentioned in the introduction as based on an unconditional transfer plus means-tested taxes. Moreover, we will ignore other eligibility criteria that might introduce a stricter form of conditionality or limit the universality of the policies. The motivation is that we want to focus on the economic implications of the different mechanisms illustrated in Figures 1 to 3.

POLICIES IMPLEMENTED OR IN THE PIPELINE

Italy's current government proposes RdC together with a FT. The scheme is the one illustrated in Figure 1. The RdC originally proposed by Movimento 5 Stelle, is a BIG with $E = G =$ monthly 780 euros, which was the

Italian relative poverty threshold when the policy was first proposed in 2013. Here and in what follows, the indicated amounts of G and E are meant for a single person. The amounts for a household of several persons are scaled according to the OECD equivalence rule. The proposal is not defined in great detail as yet. For example, it is not clear what its interaction would be with other current income support policies like unemployment insurance or REI.

The FT, originally proposed by Lega, envisages a fixed marginal tax rate of around 15–20 percent. Even with this proposal, many details are not defined yet. Recently, a variant with two rates, 15 percent and 20 percent, was presented. It is unclear whether the FT would be applied to all personal incomes or just earnings, although the first hypothesis is more likely.³ In our analysis, we simulate the effect of the 780-euro BIG with a 20-percent flat tax applied to all personal incomes. Since, as we will see, the package largely violates the public budget constraint and the government has not indicated how the deficit would be covered to date, we also simulate two (very) different fiscally neutral versions of the BIG+FT package.

Recently, the Istituto Bruno Leoni (Rossi 2018) proposed a comprehensive reform whose cornerstone is a BIG (Figure 1) around 500–600 euros (locally differentiated) with a 25-percent flat tax on all personal incomes. This package also implies a deficit, but the proposal includes a list of interventions in public spending and in the design of markets such as insurance and health that are meant to re-establish fiscal equilibrium.⁴ We are not able to account for these compensatory interventions in our model, so we simulate a fiscally neutral version of the proposal.

At the beginning of 2018, the previous government implemented a partial version of Rdl. Baldini *et al.* (2018) provide a detailed presentation. It is noteworthy that it adopts the NIT mechanism represented in Figure 3, with $E = 251$ (for one person), $G = 188$ and $MRR = 0.75$. We will simulate a simplified, fiscally neutral, version of REI with FT.

The packages ‘BIG + FT’ or ‘UBI + FT’ or ‘NIT + FT’ have roots in a broad spectrum of ideological or methodological positions. Milton Friedman (1962) is prominent among the libertarian supporters of NIT and FT. Tony Atkinson (1996) – close to the social-democratic side – devotes a book to the package UBI + FT. In Italy, Rizzi and Rossi (1996) proposed an analogous system. The same idea is updated and articulated in the more general reform designed by the Istituto Bruno Leoni (Rossi 2018). Islam and Colombino (2018) illustrate and evaluate

various NIT+FT packages applied to eight European countries. In principle, a BIG would aim to bring Italian social policy closer to European standards – an objective formulated at least since the report by Commissione Onofri (Onofri 1997). At the same time, the FT would aim to simplify the tax system and introduce better incentives for labour supply and tax compliance (Stevanato 2017). The promise would be an improvement in both efficiency and equity. Unfortunately, as we will see, the government package – as formulated so far – falls way short of these aims. However, there are different designs of the package that show interesting results. In what follows, we simulate and evaluate:

- The original BIG+FT government package
- Two fiscally neutral versions of the government package
- A fiscally neutral version of the reform proposed by the Istituto Bruno Leoni
- A fiscally neutral and universal version of the Reddito di Inclusione with a FT
- Three optimal NIT + FT reforms.

All of the above simulations consider simplified versions of the various reforms, although the simplification should not have an important effect as far as the comparative evaluation is concerned. Moreover, we always assume a FT applied to all personal household incomes (comprehensive and household based taxation). We observe that even the current progressive tax rule, when considering all personal incomes, *ex-post* turns out to be not very far from a flat tax.⁵ This suggests that an explicit FT imposed on all personal income might essentially represent a rationalization of the current system. The simulated reforms replace the whole current tax-benefit system. It is a simplifying extreme assumption. Realistically, it is unlikely that any implementation of a reform would cancel out all the current policies. Therefore, the results of our simulation should be taken as benchmark cases.

SIMULATIONS

We evaluate the policies described above with the model and the methodology developed and explained in Islam and Colombino (2018). The basic tool is a microeconomic model of household labour supply, developed according to the RURO approach (Aaberge and Colombino 2014 and 2018). It is a version of a discrete choice model that includes a representation of demand constraints. It runs on a dataset built with

³ Lega’s political speakers have mentioned that Alvin Rabushka suggested for Italy a 15-percent FT. This is approximately the FT that we also get as fiscally neutral when it is applied to all the personal income.

⁴ The proposal by Istituto Bruno Leoni seems close to a libertarian perspective, where the reduction of some public expenditures is expected to be compensated by a generous BIG and more efficient markets.

⁵ This primarily happens for three reasons. Firstly, tax deductions favour high incomes. Secondly, there are personal incomes (e.g. income from capital or financial wealth) that are taxed according to a separate, and on average more favourable rule: since the proportion of those incomes is larger among high income households, the effect is a moderation of progressivity. Thirdly, in high income couples, both partners are likely to work and they have more opportunities to gain from the individual progressive taxation of earnings.

EUROMOD on the basis of EU-SILC Italy 2010.⁶ It covers all couples and singles in the 18–65 age bracket. The model assumes a quadratic utility function with household income and household members' labour supply as main arguments and parameters expressed as a function of personal characteristics. Given the model estimates, one can impute a new household budget constraint induced by a reform and then simulate the new choices made by the households and all the implications for incomes, taxes, poverty etc. Our simulations are performed under the fiscal neutrality constraint, i.e. the total of tax revenue minus transfers plus social security contributions under the reform must be equal to the total under the current system. We also compute household-specific money-metric welfare indices, which can then be aggregated into a social welfare index, which offer a synthetic metric to compare policies. We adopt the Kolm social welfare index, which is computationally convenient in our case. The Kolm social welfare index is defined as follows:

$$W = \bar{\mu} - \frac{1}{k} \ln \left[\sum_i \frac{\exp\{-k(\mu_i - \bar{\mu})\}}{N} \right]$$

where μ_i is the money-metric welfare index of the i -th household, $\bar{\mu} = \frac{1}{N} \sum_i \mu_i$, N is the number of households, and k is an index of social preference for equality.⁷ The first term on the right-hand side of the expression for W can be interpreted as a measure of efficiency, while the second term is the Kolm index of inequality.

We will also present an example where we identify fiscally neutral optimal (i.e. social welfare maximizing) policies. The maximization of the social welfare index makes it necessary to embed the microsimulation of the reforms into an iterative optimization subject to the public budget constraint. In general, different values of k lead to different solutions. As far as the determination of the parameters E , G , FT and BRR is concerned, this is only relevant for the optimal taxation exercise, where we use three different values, $k = 0.05, 0.10$ and 0.125 . For the other simulations, we just have one free parameter and it turns out that there is only one value of that parameter that attains fiscal neutrality whatever the value of k (at least in the range $[0, 0.50]$). Nonetheless, even for these simulations, the welfare evaluation (i.e. the computation of W) depends on k . We report the evaluation obtained with $k = 0.10$.

In addition to the social welfare function, there are, of course, many dimensions – such as the effects on income, labour supply and poverty – along which the reforms can be compared to the current systems and among themselves. One of the dimensions that we highlight in our simulations is the percentage of winners (either in terms of income or in terms of welfare) and its distribution across the population. This is interesting

both as a measure of the benefits received by the population and as an indication of political support for the reform. The main results of our analysis are presented in Table 1 and illustrated by Figures 4 to 13.

A further clarification is in order, before presenting the results. The methodology that we adopt actually compares not the point positions of households, but rather the opportunity sets or the optimal expected choices before and after the reform. This explains, for example, why even currently affluent households are affected by some reforms that only appear to be aimed at the poorest households. The point is that each household faces a whole opportunity set and takes into account the possibility of ending up occupying any position in the opportunity set (with different probabilities, of course).

The Government Package and Two Variants

We simulate a simplified version⁸ of the package with $E = 780$, $G = 780$, $FT = 20$ percent and $BRR = 100$ percent. The implementation of this project would generate a 90-billion-euro public budget deficit. This result is in line with other estimates.⁹ It is somewhat higher since – unlike other analyses to date – we take into account the households' labour supply responses. Although the FT has some positive effect on labour supply,¹⁰ it is more than offset by the negative effect of G and by the 100-percent BRR . We do not show detailed results in Table 1, since the evaluation could only make sense by making some hypothesis on how the deficit would be covered. So far the government has not given any specific indications, apart from the expectation that the positive labour supply effects should guarantee the self-financing of the package. However, this expectation is definitely not supported by the simulations, including our own. We will then analyse two alternatives whereby the government package is modified in order to attain fiscal neutrality. The first one asks what FT guarantees the fiscal neutrality – given $E = G = 780$? Conversely, with the second exercise we ask, given a $FT = 20$ percent, what value of G is compatible with fiscal neutrality?

A fiscally sustainable FT with a BIG = 780. With $E = G = 780$ and $BRR = 100$ percent, the FT that supports fiscal neutrality is 54 percent. The high value of both G and FT discourages labour supply: overall the change is around –7.3 percent, with a negative peak of –13.8 percent for single women. Single women on average have lower potential earnings and the very high BIG represents a strong incentive to leave, or not enter, the labour market. The overall

⁸ The government package includes some additional eligibility conditions, which are unlikely to be relevant as far as the comparative evaluation is concerned.

⁹ See, for example, Baldini and Daveri (2018), <http://www.lavoce.info/archives/50516/reddito-cittadinanza-m5s-perche-costa-29-mil-iardi-non-149/>; and Baldini and Rizzo (2018), <http://www.lavoce.info/archives/50668/con-la-flat-tax-conti-pubblici-a-rischio/>.

¹⁰ A pure fiscally neutral FT leads to a 3.24-percent increase in labour supply.

⁶ The fiscal system and the main economic variables that might be relevant for our comparative analysis did not witness significant changes since 2010.

⁷ For an interpretation of the different values of k – see Islam and Colombino (2018).

Table 1
Behavioural, Fiscal and Welfare Effects of Different Policies

	A fiscally sustainable BIG=780	A fiscally sustainable FT=20%	A fiscally sustainable FT=25% (Bruno Leoni)	A fiscally sustainable Reddito di Inclusion	An optimal NIT+FT k=0.05	An optimal NIT+FT k=0.10	An optimal NIT+FT k=0.10
E	780	330	453	251	767	870	769
G	780	330	453	188	186	287	469
% BRR	100	100	100	75	24	33	61
% FT	54	20	25	17	29	35	39
$\Delta\%$ income	- 11.7	0.1	- 2.0	0.1	- 0.6	- 2.9	- 5.1
$\Delta\%$ welfare	- 4.3	0.8	0.8	0.5	1.0	0.9	1.1
$\Delta\%$ winners							
Income	27	52	59	57	73	61	55
Welfare	38	63	59	64	74	72	71
$\Delta\%$ Headcount poverty index							
All	23.8	24.0	26.7	20.7	- 4.5	1.6	- 2.6
Couples	- 92.0	18.3	3.6	18.3	6.3	- 24.5	15.9
Single women	32.0	23.0	26.6	18.8	- 23.0	8.2	- 31.1
Single men	7.3	19.5	20.1	18.1	1.8	- 3.5	4.2
$\Delta\%$ poverty gap index							
All	- 94.5	- 4.2	- 20.5	- 4.2	- 10.3	- 25.9	- 45.3
Couples	- 92.0	18.3	3.6	18.3	- 6.7	- 24.5	- 39.8
Single women	- 95.1	- 9.2	- 26.0	- 9.2	- 8.9	- 22.8	- 43.4
Single men	- 95.9	- 16.6	- 33.6	- 16.6	- 14.8	- 30.4	- 51.9
$\Delta\%$ labour supply							
All	- 7.3	- 0.7	- 2.0	- 0.7	- 0.7	- 1.9	- 3.4
Married women	- 12.2	0.7	- 1.4	2.2	- 1.2	- 3.3	- 5.3
Married men	- 4.38	- 0.8	- 1.5	- 0.2	- 0.5	- 1.1	- 2.0
Single women	- 13.8	- 5.0	- 7.3	- 2.4	- 2.0	- 3.9	- 7.5
Single men	- 2.0	- 0.7	- 1.0	- 0.4	- 0.3	- 0.5	- 1.0

Notes: Headcount poverty index (HPI) = proportion of households below the relative poverty threshold; poverty gap index (PGI) = HPI \times income gap, where income gap = average relative distance from the poverty threshold among the poor households; labour supply = monthly expected hours of work (including 0 hours).

Source: Authors' own calculation.

implication is that both disposable income (- 11.7 percent) and social welfare (- 4.3) fall. There is also a clear evidence of 'welfare trap' since the Headcount poverty index (HPI), i.e. the proportion of poor household, increases. However, the poverty gap index (PGI) decreases by almost 100 percent. Since the PGI is equal to the HPI times the income gap, this means that there is a very important decrease in the income gap.¹¹ In Figure 4 we show the proportion of income winners by decile of initial disposable income and by type of household. A household is defined as a winner if, according to the new budget induced by the reformed tax-benefit rule, the household's new available income increases, given the same pre-reform hours of work.¹² Therefore, this illustration shows the pure budget effect of the reform, without accounting for the household's behavioural response. There is a large majority of winners among the first three deciles of the couples and among the first four

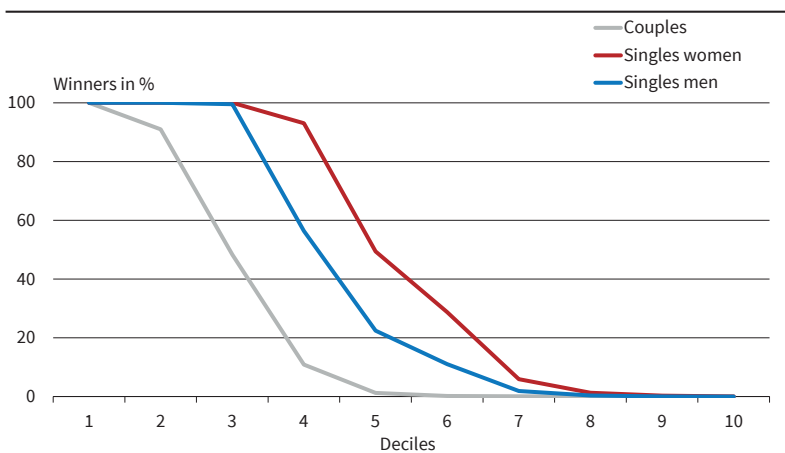
deciles of both single women and single men. In all the other deciles losers prevail. The package leads to a massive redistribution of income, the most evident price of it being the reduction of average disposable income. Figure 5, instead, shows the proportion of welfare winners by initial welfare decile and type of household. In this case we account for the new choices made by the households. This is appropriate, since the model assumes that households maximise their own welfare (or utility), not their income.

A fiscally sustainable BIG with a 20-percent FT. A 20-percent FT turns out to be able to support a BIG = 330. Overall, the scenario looks better than the previous one. Disposable income is stable and social welfare increases. Labour supply only suffers a significant negative change for single women (- 5.0 percent). The pattern of effects on poverty is similar to what we have seen with the previous case, although it is more moderate. The striking differences with respect to the '780 + 54 percent package' concern the distribution of winners (Figures 6 and 7). This time the losers are to be found mostly in the middle-low deciles. The distribution of winners is very imbalanced

¹¹ See the note to Table 1 for definitions of Headcount poverty index, poverty gap index and income gap.

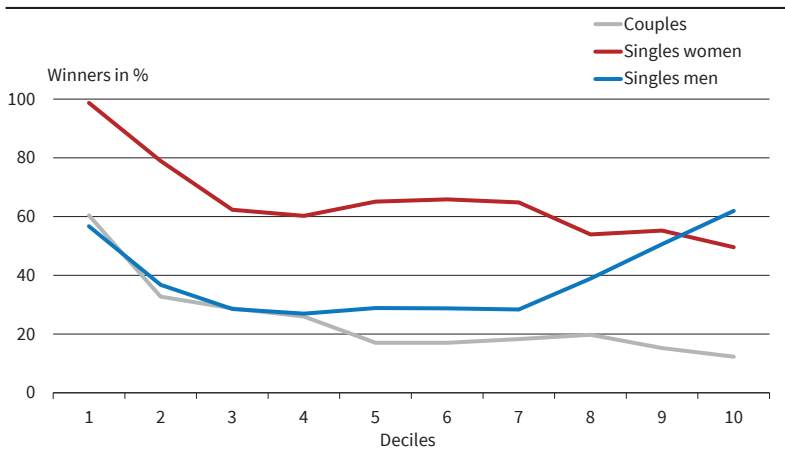
¹² The percentage of households who maintain the same level of income is typically less than 1 percent.

Figure 4
Income Winners with the '780+54% Basic Income Guarantee + Flat Tax' Package



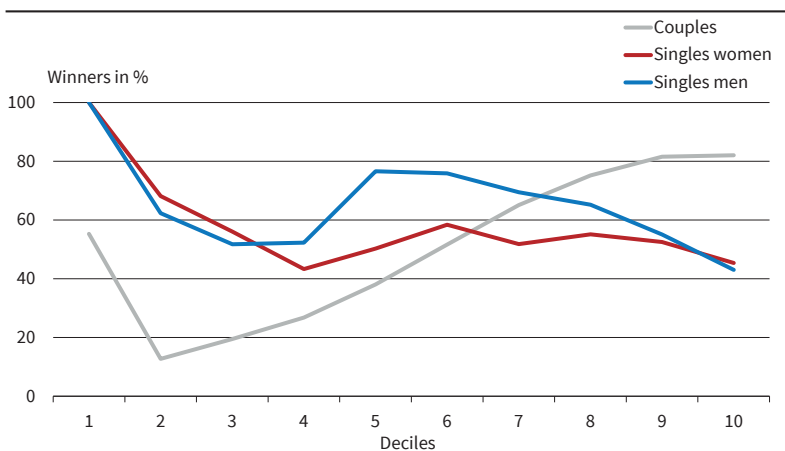
Source: EUROMOD; authors' own calculation. © ifo Institute

Figure 5
Welfare Winners with the '780+54% Basic Income Guarantee + Flat Tax' Package



Source: EUROMOD; authors' own calculation. © ifo Institute

Figure 6
Income Winners with the '330+20% Basic Income Guarantee + Flat Tax' Package



Source: EUROMOD; authors' own calculation. © ifo Institute

between deciles, household types and genders. As is common in this type of analysis, the distribution of

the eligibility economic conditions. Given the set policy parameters $G = 188$, $E = 251$ and $BRR = 75$

welfare winners (Figure 7) is smoother than the distribution of income winners.

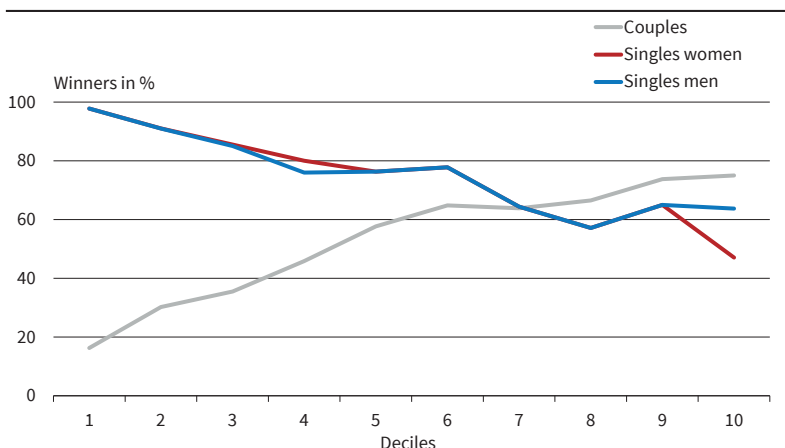
A Fiscally Neutral Version of the 'Bruno Leoni' Package

The proposal of Istituto Bruno Leoni (Rossi 2018) envisages a BIG around 500-600 euros, a 25-percent FT and a BRR = 100 percent. There is a deficit in public budget and the proposal includes a detailed plan of public expenditure cuts or restructuring in order to restore fiscal neutrality. The basic idea of the proponents seems to be that the BIG is sufficiently high to compensate (possibly more efficiently) for the cut in public expenditure. We are not able to account for the effects of the cuts in public expenditure. Here we follow the same line as with the government package. Since the prominent element of the proposal seems to be the 25-percent FT, we look for the value of a revenue neutral BIG given $FT = 25$ percent and $BRR = 100$ percent. The result is $G = E = 453$. Overall, the performance is close enough to the '330 + 20 percent package'. The same applies to the distribution of winners (Figures 8 and 9).

A Fiscally Neutral and Universal 'Reddito di Inclusionone' + FT

While all of the previous proposals adopt the BIG design of Figure 1, RdI adopts the NIT scheme of Figure 3. While RdC addresses relative poverty, RdI addresses absolute poverty. We assume that the policy is really universal - while at the moment of writing the funds are potentially sufficient to cover approximately half of the population in absolute poverty. Moreover, we simplify

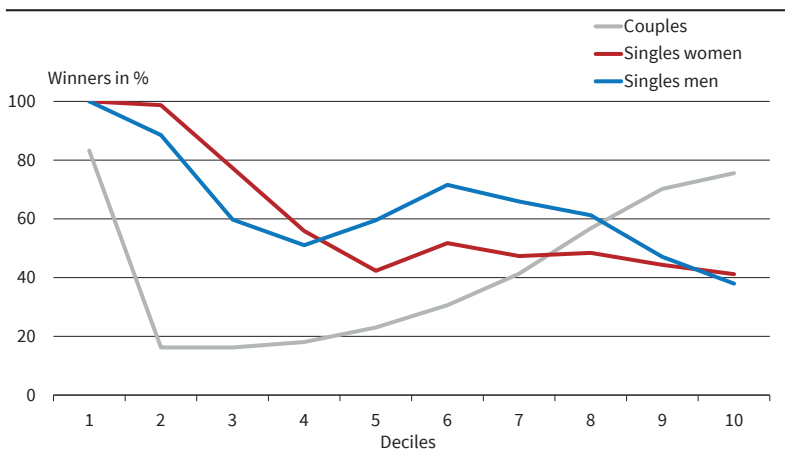
Figure 7
Welfare Winners with the '330+20% Basic Income Guarantee + Flat Tax' Package



Source: EUROMOD; authors' own calculation.

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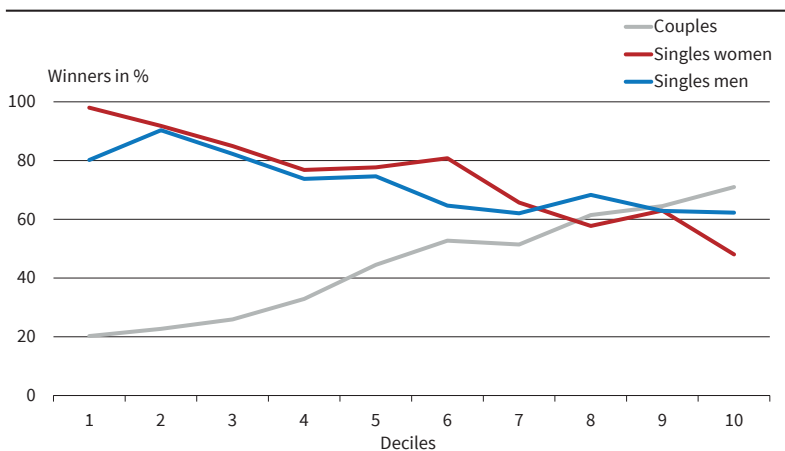
Figure 8
Income Winners with the '452+25% Basic Income Guarantee + Flat Tax' Package



Source: EUROMOD; authors' own calculation.

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Figure 9
Welfare Winners with the '425+25% Basic Income Guarantee + Flat Tax' Package



Source: EUROMOD; authors' own calculation.

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percent we look for the value of FT that attain fiscal neutrality. The result is FT = 17 percent. The overall

of the marginal tax rates and of the public budget constraints. Colombino and Narazani (2013) and Colombino (2015) illustrate previous exercises on Italy.

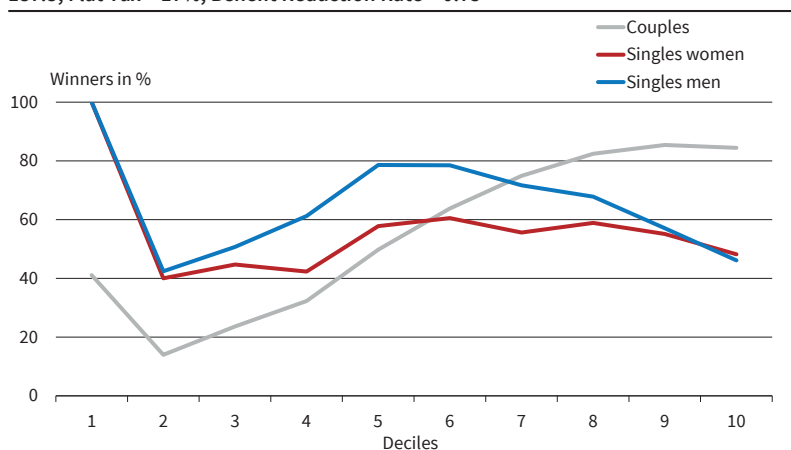
performance (including the distributions of winners of Figures 10 and 11) is again close to that of the previous two policies. In this case, however, we have a positive change in both disposable income (+ 0.1 percent) and social welfare (+0.5 percent). As we have already observed, NIT is a general design that includes BIG and UBI as special cases and, therefore, it generally dominates them. In the next section we illustrate the identification of optimal rules within the NIT class.

Optimal NIT+FT Packages

This section documents the results of an exercise in empirical optimal taxation. Namely, we identify the optimal parameters E, G, BRR and FT within the class of NIT mechanisms, subject to the public budget constraint, i.e. the policies are constrained to be fiscally neutral. The optimality criterion is the maximization of the Kolm social welfare index for $k = 0.05, 0.10$ and 0.125 .¹³ The NIT mechanism – although a member of the same class – induces radically different incentives when compared to BIG. In the BIG scheme, as long as your own income is in the range $(0, E)$, your disposable income is equal to G: your own effort to increase your income has no effect on disposable income. With NIT, by contrast, the effect of your effort is visible. The results of the optimal taxation exercise are reported in the last three columns of Table 1. A higher preference for equality (i.e. a higher value of k) entails a higher G and a higher BRR

¹³ Islam and Colombino (2018) perform a similar exercise for eight European countries. The exercises reported here address different policies. There are also some differences in the definitions of the public budget constraints. Colombino and Narazani (2013) and Colombino (2015) illustrate previous exercises on Italy.

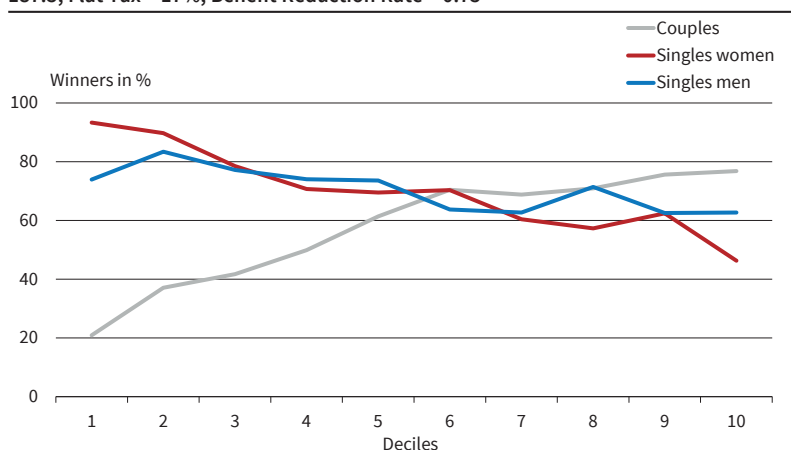
Figure 10
Income Winners with Tax Exemption Level of Income = 251, Unconditional Transfer = 187.5, Flat Tax = 17%, Benefit Reduction Rate = 0.75



Source: EUROMOD; authors' own calculation.

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Figure 11
Welfare Winners with Tax Exemption Level of Income = 251, Unconditional Transfer = 187.5, Flat Tax = 17%, Benefit Reduction Rate = 0.75



Source: EUROMOD; authors' own calculation.

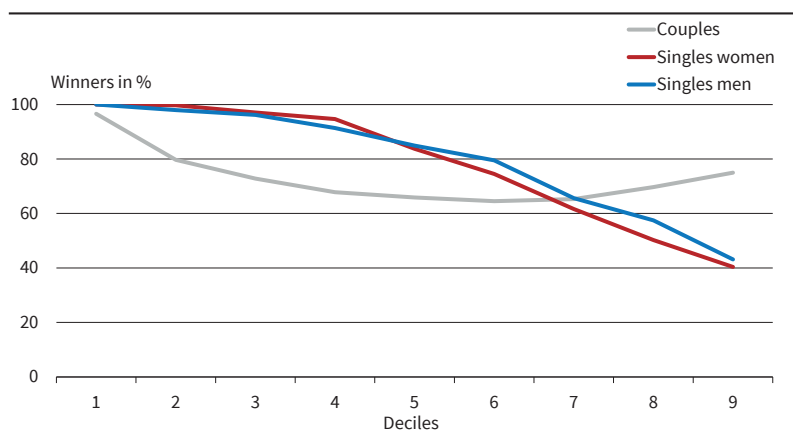
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relative to FT. With a more expensive G, it becomes more convenient to impose higher taxes (higher BRR) on dense segments of the population (i.e. low-average incomes households, those more likely affected by BRR). The three optimal policies show some specific features when compared to the policies of the first three columns of Table 1. Firstly, they perform better in terms of social welfare and poverty gap index. Secondly, they induce a far more equilibrated profile of winners (income-wise and welfare-wise) both across deciles and across types of households. Overall, the (optimal) NIT mechanisms make it possible to obtain a much more balanced distribution of costs and benefits. It is interesting to compare our version of REI with the optimal NIT associated with $k = 0.05$. The two policies have essentially the same value of G. The key difference concerns BRR and FT. While REI's BRR is 75 percent, the optimal policy has a much lower value of BRR (24 percent), which implies a much higher value of E ($= G/BRR = 767$) and permits a smoother transition from the subsidised range of incomes (between 0 and

E) to the non-subsidised ones (above E). This also implies a higher FT for the optimal NIT (29 percent instead of 17 percent). It is also worth noting that the optimal BRR and FT are not so far away from each other, so that the system turns out to be rather close to a UBI. It is also instructive to compare the optimal NIT ($k = 0.05$) to our fiscally neutral version of the proposal by Istituto Bruno Leoni. While the latter attains fiscal neutrality with BRR = 100 percent and FT = 25 percent, the former adopts a smoother profile with BRR = 24 percent and FT = 29 percent. The optimal guaranteed income, instead of being kept at 453, is 'updated' from 186 up to 767 depending on the household's own effort. It is interesting to observe that this optimal policy might be considered as an improving modest correction of REI. With this design, the optimal policy shows a better performance in terms of income, welfare, winners and poverty. It is rather striking to compare the graphs related to optimal policy with those showing other policies (government package, Bruno Leoni, REI). The latter tend to generate

large winners' differences between deciles, between genders and between different household types (couples and singles). The former induces a far more balanced distribution of winners (in terms of both income and welfare). This dimension is important in view of the political support that can be expected for such reforms. If we adopt a more egalitarian criterion such as $k = 0.10$, the optimal values turn out to be $E = 860$, $G = 287$, $FT = 35.7$ percent and $BRR = 33$ percent. Again, we are not far from the UBI design of Figure 2. If my monthly taxable income is less than 860 euros, I receive a benefit equal to 33 percent of the difference between 860 euros and my income. This disposable income increases with my taxable income (up to 860 euros). As with the $k = 0.05$, this mechanism guarantees a good compromise between income support and labour supply incentives. There is a gain in social welfare (+ 1.19 percent). The fall in the poverty gap index is very large. Labour supply grows among couples. The distributions of winners are balanced: Graphs are not reported, but overall they confirm what

Figure 12
Income Winners with the 'Optimal Negative Income Tax + Flat Tax ($k = 0.05$)' Package

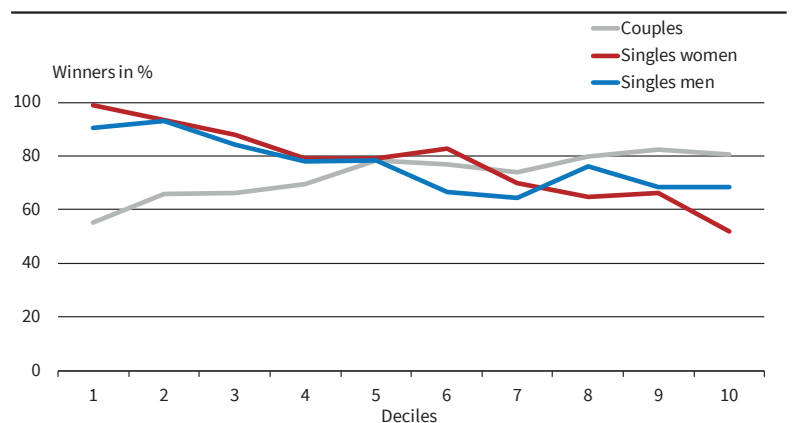


k: Kolm social welfare index.

Source: EUROMOD; authors' own calculation.

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Figure 13
Welfare Winners with the 'Optimal Negative Income Tax + Flat Tax ($k = 0.05$)' Package



k: Kolm social welfare index.

Source: EUROMOD; authors' own calculation.

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we see with the $k = 0.05$ optimal policy (Figures 12–13). In Table 1 we also document the effect of an optimal NIT+FT given $k = 125$. Clearly, this policy implies a more generous minimum income support ($G = 469$) and higher taxation ($FT = 39$ percent). As with the previously commented optimal policies, there are some notable benefits, e.g. a big reduction in the poverty gap index and gains in social welfare. However, there is also a worrying decrease in the labour supply and in income as a result.

CONCLUSIONS

Our results show that it is possible to find fiscally neutral packages that combine basic income and flat tax and convey some social and economic benefits. However, the design of the feasible packages is definitely far removed from the current government's proposals. The 'preferred' (most appealing and realistic) proposals seems to be 'the 330+20 percent package', 'the Istituto Bruno Leoni package' and 'the optimal ($k = 0.05$) NIT+FT

package'. Even a universal version of REI might represent a starting scenario that could be updated to converge upon one of the three 'preferred' policies. The main points in favour of these policies seem to be: the positive effect on both income and welfare of the 330+20 percent package; the generous BIG of (our version of) the proposal by Istituto Bruno Leoni; the large percentage of winners, and their balanced distribution across deciles and household type, of the optimal ($k = 0.15$) NIT+FT. Islam and Colombino (2018) show that there is a significant link between the productivity of the economy and the (optimal) fiscally neutral level of basic income (and of the associated FT). The Italian productivity per hour of work is approximately equal to the average of European countries and the average guaranteed minimum income in Europe is 395 euros. The basic income envisaged by the three most realistic policies ranges between 300–500 euros, depending on the specific policy design: 330 with the 330+20 percent package, 453 with our version of the Istituto Bruno Leoni proposal, 495 (for a single with own

income = 383) with the optimal ($k = 0.05$) NIT + FT policy. The range of basic income values of the three 'preferred' reforms is therefore comparatively consistent with the policies currently implemented in European countries when productivity differentials are taken into account.

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