

# WORK (DIS)INCENTIVES FOR SOCIAL BENEFIT RECIPIENTS IN GREECE

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## ABSTRACT

This paper investigates to what extent the strengthening of Greece's social safety net since the recent sovereign debt crisis has weakened work incentives for benefit recipients. Using the tax-benefit microsimulation model EUROMOD and its Hypothetical Household Tool (HHoT), we estimate participation tax rates (PTRs) and marginal effective tax rates (METRs) in 2024 for several stylised household types, accounting for the interaction between income taxes, social insurance contributions and means-tested benefits. Our results suggest that PTRs can reach near-prohibitive levels, particularly when transition into employment is associated with the withdrawal of the unemployment benefit. METRs are similarly distorted, exhibiting sharp kinks where means-tested benefits are abruptly withdrawn rather than gradually tapered. The paper concludes with some policy recommendations to improve work incentives, while preserving the anti-poverty gains achieved over the past decade.

**Keywords:** work incentives; social benefits; tax-benefit microsimulation; participation tax rates; marginal effective tax rates

**JEL classification:** I38; J22

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# ΚΙΝΗΤΡΑ ΚΑΙ ΑΝΤΙΚΙΝΗΤΡΑ ΕΡΓΑΣΙΑΣ ΤΩΝ ΔΙΚΑΙΟΥΧΩΝ ΚΟΙΝΩΝΙΚΩΝ ΠΑΡΟΧΩΝ ΣΤΗΝ ΕΛΛΑΔΑ

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## ΠΕΡΙΛΗΨΗ

Η παρούσα μελέτη εξετάζει κατά πόσον η ενίσχυση του συστήματος κοινωνικής προστασίας στην Ελλάδα μετά την οικονομική κρίση της προηγούμενης δεκαετίας έχει επηρεάσει αρνητικά τα κίνητρα εργασίας των δικαιούχων κοινωνικών παροχών. Με τη χρήση του υποδείγματος φόρων-παροχών EUROMOD και του συμπληρωματικού του εργαλείου για την ανάλυση υποθετικών νοικοκυριών (Hypothetical Household Tool – HHoT), εκτιμώνται για το 2024 οι συντελεστές φορολόγησης της συμμετοχής στην αγορά εργασίας (Participation Tax Rates) και οι πραγματικοί οριακοί φορολογικοί συντελεστές (Marginal Effective Tax Rates) ανά επίπεδο εισοδήματος για διάφορους αντιπροσωπευτικούς τύπους νοικοκυριών, λαμβάνοντας υπόψη την αλληλεπίδραση μεταξύ φόρου εισοδήματος, ασφαλιστικών εισφορών και κοινωνικών παροχών.

Τα αποτελέσματα δείχνουν ότι οι συντελεστές φορολόγησης που προκύπτουν από τη μετάβαση δικαιούχων κοινωνικών παροχών στην εργασία μπορεί να διαμορφωθούν σε ιδιαίτερα υψηλά επίπεδα, ιδίως όταν η ένταξη στην απασχόληση συνεπάγεται απώλεια του επιδόματος ανεργίας. Παρόμοιες στρεβλώσεις εμφανίζουν και οι πραγματικοί οριακοί φορολογικοί συντελεστές, οι οποίοι αυξάνονται απότομα στα επίπεδα εισοδήματος όπου οι κοινωνικές παροχές που χορηγούνται με εισοδηματικά κριτήρια διακόπτονται απότομα, αντί να περιορίζονται σταδιακά. Η μελέτη καταλήγει σε προτάσεις πολιτικής που αποσκοπούν στη βελτίωση των κινήτρων εργασίας, διατηρώντας ταυτόχρονα τα οφέλη από την αποτελεσματικότερη πολιτική κατά της φτώχειας, όπως έχει διαμορφωθεί κατά την τελευταία δεκαετία.

### ΜΗ ΤΕΧΝΙΚΗ ΣΥΝΟΨΗ

Κατά την τελευταία δεκαπενταετία το κοινωνικό κράτος στην Ελλάδα ενισχύθηκε σημαντικά. Μια σειρά μεταρρυθμίσεων ενίσχυσε το δίκτυ κοινωνικής προστασίας μέσω της θέσπισης νέων παροχών που χορηγούνται με εισοδηματικά κριτήρια, όπως το ελάχιστο εγγυημένο εισόδημα, το επίδομα στέγασης, το αναμορφωμένο επίδομα παιδιού και η οικονομική ενίσχυση (voucher) για βρεφονηπιακή φροντίδα. Παράλληλα, κατά την περίοδο της πανδημίας και της ενεργειακής κρίσης εφαρμόστηκαν πρόσθετα μέτρα στήριξης του εισοδήματος των νοικοκυριών.

Οι παρεμβάσεις αυτές συνέβαλαν ουσιαστικά στη μείωση του κινδύνου φτώχειας και την ενίσχυση της κοινωνικής συνοχής. Ωστόσο, όσο πιο γενναιόδωρο και στοχευμένο γίνεται ένα σύστημα παροχών, τόσο αυξάνεται ο κίνδυνος να περιοριστούν τα οικονομικά κίνητρα για ένταξη στην απασχόληση ή αύξηση των ωρών εργασίας. Το ζήτημα αυτό αποκτά ιδιαίτερη σημασία σε μια περίοδο κατά την οποία η ανεργία στην Ελλάδα έχει υποχωρήσει σημαντικά, ενώ ταυτόχρονα πολλές επιχειρήσεις αναφέρουν δυσκολίες στην κάλυψη διαθέσιμων θέσεων εργασίας.

Η παρούσα μελέτη εξετάζει κατά πόσον η ενίσχυση του συστήματος κοινωνικής προστασίας στην Ελλάδα έχει δημιουργήσει αντικίνητρα εργασίας για τους δικαιούχους κοινωνικών παροχών. Η βασική ιδέα είναι απλή: όταν ένα άτομο που λαμβάνει επιδόματα αποφασίζει να εργαστεί ή να αυξήσει τις ώρες εργασίας του, μέρος ή και το σύνολο των πρόσθετων αποδοχών του αντισταθμίζεται από την απώλεια κοινωνικών παροχών, την καταβολή φόρων και την πληρωμή ασφαλιστικών εισφορών. Στην περίπτωση αυτή, το καθαρό οικονομικό όφελος από την εργασία ενδέχεται να είναι περιορισμένο.

Τα ευρήματα της ανάλυσης υποδηλώνουν ότι σε ορισμένες περιπτώσεις τα αντικίνητρα για εργασία είναι ιδιαίτερα ισχυρά. Ειδικότερα, όταν η είσοδος στην απασχόληση συνεπάγεται ταυτόχρονα απώλεια του επιδόματος ανεργίας και μείωση ή ολική διακοπή άλλων κοινωνικών παροχών, το μεγαλύτερο μέρος του πρόσθετου εισοδήματος που προκύπτει από την εργασία ουσιαστικά εξανεμίζεται.

Αντίστοιχα εμπόδια εμφανίζονται και για άτομα που ήδη εργάζονται και εξετάζουν το ενδεχόμενο να αυξήσουν τις ώρες εργασίας τους ή να αποδεχθούν μια καλύτερα αμειβόμενη θέση. Σε αρκετές περιπτώσεις, μια σχετικά μικρή αύξηση του εισοδήματος μπορεί να οδηγήσει σε δυσανάλογη απώλεια κοινωνικών παροχών. Ως αποτέλεσμα, το καθαρό όφελος από την επιπλέον προσπάθεια ή την επαγγελματική ανέλιξη μειώνεται σημαντικά.

Αξίζει να σημειωθεί ότι τα σημαντικότερα αντικίνητρα δεν προκύπτουν τόσο από το ύψος των παροχών όσο από τον σχεδιασμό τους. Ορισμένες παροχές χορηγούνται στο αθέραίο έως ένα συγκεκριμένο εισοδηματικό όριο, έπειτα από το οποίο διακόπτονται εντελώς. Η απότομη απώλεια μιας παροχής μπορεί να επιφέρει σημαντική μείωση του διαθέσιμου εισοδήματος ενός νοικοκυριού, δημιουργώντας έντονα αντικίνητρα για αύξηση των ωρών εργασίας ή των αποδοχών. Αντίθετα, όταν οι παροχές μειώνονται σταδιακά καθώς αυξάνεται το εισόδημα, οι στρεβλώσεις αυτές είναι συνήθως ηπιότερες.

Τα αποτελέσματα της μελέτης δεν πρέπει να ερμηνευθούν ως επιχείρημα υπέρ της συρρίκνωσης της κοινωνικής προστασίας. Αντιθέτως, αναδεικνύουν μια θεμελιώδη πρόκληση της σύγχρονης κοινωνικής πολιτικής: η καταπολέμηση της φτώχειας, η διατήρηση ισχυρών κινήτρων για εργασία και ο περιορισμός του δημοσιονομικού κόστους αποτελούν στόχους που συχνά είναι αντικρουόμενοι.

Στην περίπτωση της Ελλάδος, η ενίσχυση του κοινωνικού κράτους μετά την κρίση βελτίωσε αισθητά την προστασία των οικονομικά ασθενέστερων νοικοκυριών. Παράλληλα, όμως, δημιούργησε συνθήκες υπό τις οποίες η μετάβαση από την ανεργία ή την αδράνεια στην απασχόληση δεν συνεπάγεται πάντοτε επαρκές οικονομικό όφελος. Το γεγονός αυτό αποκτά ιδιαίτερη σημασία σε μια οικονομία που εξακολουθεί να χαρακτηρίζεται από σχετικά χαμηλές αμοιβές σε αρκετούς κλάδους και από σημαντική παρουσία άτυπων μορφών απασχόλησης.

Η διεθνής εμπειρία υποδεικνύει ότι τα προβλήματα αυτά μπορούν να μετριαστούν μέσω κατάλληλου σχεδιασμού των παροχών. Ενδεικτικά, μια πρώτη κατεύθυνση πολιτικής είναι η σταδιακή και όχι απότομη μείωση των παροχών καθώς αυξάνεται το εισόδημα. Με τον τρόπο αυτό αποφεύγονται μεγάλες απώλειες διαθέσιμου εισοδήματος όταν ένα νοικοκυριό υπερβαίνει ελάχιστα ένα εισοδηματικό όριο. Μια δεύτερη κατεύθυνση αφορά τον καλύτερο συντονισμό των επιμέρους παροχών, ώστε τα εισοδηματικά κριτήρια να λειτουργούν με συνεκτικό τρόπο και να μην παράγουν ακούσιες αλληλεπιδράσεις. Τέλος, σε ορισμένες περιπτώσεις θα μπορούσε να εξεταστεί η διεύρυνση της πρόσβασης σε συγκεκριμένες υπηρεσίες κοινωνικού χαρακτήρα, όπως η βρεφονηπιακή φροντίδα, ανεξάρτητα από το επίπεδο εισοδήματος.

Συνολικά, η πρόκληση για τη δημόσια πολιτική είναι να διατηρηθούν τα σημαντικά κοινωνικά οφέλη που επιτεύχθηκαν κατά τα τελευταία έτη, περιορίζοντας παράλληλα τις στρεβλώσεις που αποθαρρύνουν την εργασία και την παραγωγική αξιοποίηση του ανθρώπινου δυναμικού.

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## I INTRODUCTION

Unemployment in Greece, though well above the EU average (5.8% in 2025 in the 20-64 age group), has fallen steadily and significantly in recent years: from its peak during the country's debt crisis (27.6% in 2013) to 17.9% in 2019 and to 8.8% in 2025.<sup>1</sup> Meanwhile, labour shortages have emerged in manufacturing, tourism and agriculture. As a result, the job vacancy rate rose from 0.6% in 2019 to 2.2% in 2024, close to the EU average of 2.4%.<sup>2</sup> Although this rate subsequently fell to 1.7% in 2025, as labour shortages eased somewhat throughout Europe, Greek firms continued to report difficulties in hiring.<sup>3</sup> Labour shortages coexisting with relatively high unemployment are usually attributed to skill mismatches, low pay (relative to workers' reservation wage), or – when pay is not particularly low – to a combination of poor working conditions and precarious seasonal employment, such as those prevailing in Greece's tourism industry.<sup>4</sup>

According to the academic literature, social transfer programmes can raise individuals' reservation wages, making work less attractive and potentially lowering labour supply (Mortensen 1977; Atkinson and Micklewright 1991; Blundell and MaCurdy 1999). In addition, anecdotal evidence and press reports suggest that social transfers may also play a role in discouraging benefit recipients from taking up jobs, tilting the scales from formal to informal work and from dependent employment to self-employment, genuine or bogus.<sup>5</sup>

More generally, the design of social transfers may contribute to what are known as poverty

and unemployment traps. In first-generation social assistance schemes (such as the Supplementary Benefit in the United Kingdom), work disincentives were often prohibitive. The combination of income taxes, national insurance contributions and loss of social transfers when recipients took up a low-paid job (often, the only one on offer), meant that their net income was no higher when in work than when on benefits.

The problem was compounded by the fact that the Supplementary Benefit was a “passport benefit”: claiming it made recipients eligible for other benefits too (such as housing allowances, free prescriptions for pharmaceuticals or free school meals for their children). By the same token, when recipients' earnings

\* The authors would like to thank participants in the CRETE 2025 conference and the EUROMOD 2025 Annual Meeting for their insightful comments and constructive feedback. The results presented here are based on EUROMOD version J0.51. EUROMOD is maintained, developed and managed by the Joint Research Centre (JRC) of the European Commission in collaboration with Eurostat and national teams from the EU countries. We are indebted to the Institute for Social and Economic Research (ISER) and to the many people who have contributed to the development of the model. The views expressed in this article are of the authors and do not necessarily reflect those of the Bank of Greece. The authors are responsible for any errors or omissions.

1 Eurostat (2026a).

2 Eurostat (2026b).

3 ManpowerGroup (2025), *Έρευνα έλλειψης ταλέντων στην Ελλάδα 2025* (Talent Shortage in Greece Survey 2025), Kathimerini (2025), *Mismatch of jobs and skills in Greece*, To Vima (2025), *What young Greek employees want, and what employers (don't) offer*.

4 European Commission (2023), *Employment and Social Developments in Europe*, Brussels: European Commission; OECD (2024), *OECD Employment Outlook 2024*, Paris: OECD Publishing, To Vima (2024), *Greece ready to welcome tourists but businesses short of staff*.

5 Often referred to as false self-employment or dependent self-employment, this is commonly understood as involving persons/workers registered as self-employed whose conditions of employment are de facto dependent employment. National legislation and/or court decisions determine this status. This employment status is used to circumvent tax and/or social insurance liabilities, or employers' responsibilities. Source: OECD (2014), *Employment Outlook 2014*, Paris.



exceeded a certain level, the loss of the Supplementary Benefit had a cascade effect, as access to all these other benefits was also lost. In the early 1980s, at the point at which entitlement to free school meals was lost, an extra GBP 1 of earnings cost nearly GBP 3 in taxes, national contributions and lost benefits (Barr 1987). Clearly, recipients were better off on benefits than in employment. This phenomenon became widely known as the poverty trap: benefits enabled recipients to live just above the level of subsistence but prevented them from becoming self-reliant and escaping poverty altogether.

Before the sovereign debt crisis, in spite of high and rising total spending on social protection, income support for the poor and the unemployed in Greece was so limited that the poverty and unemployment traps afflicting more advanced systems of social protection could hardly have arisen. When Greece's sovereign debt crisis broke out in 2009, most poor families received little or no income support, while the country lacked a broad social assistance scheme of last resort (Matsaganis 2011; Matsaganis and Leventi 2014). But while the social protection system failed the poor and the unemployed, that very failure left intact the incentive of benefit recipients to seek work.

From the early 2010s, this pattern changed significantly, as a series of policy reforms strengthened the social safety net. New means-tested benefits were introduced: child benefit in 2013, guaranteed minimum income in 2017, housing benefit in 2019 and childcare voucher in 2022 (Laloti 2016; Matsaganis 2020; Flevotomou et al. 2026). In addition, the COVID-19 pandemic and the inflation shock associated with the war in Ukraine necessitated a significant number of income support measures designed to shield households' incomes and purchasing power. As a result, the anti-poverty performance of the country's welfare state improved considerably (Allen et al. 2025). As a corollary, concerns about work disincentives made their appearance for the first time ever.

This paper investigates whether the strengthening of the social safety net has inadvertently weakened the work incentives for benefit recipients and helped create poverty traps and unemployment traps. The paper's structure is as follows: After a brief introduction, Section 2 reviews the literature on the effects of social transfers on work (dis)incentives. Section 3 presents our data and methodology for establishing whether and to what extent social transfers affect work incentives in Greece. Section 4 discusses the results and Section 5 concludes with some reflections on the significance and policy relevance of this paper.

## 2 LITERATURE REVIEW

The relationship between social transfers and labour supply has generated a substantial body of theoretical and empirical research. The foundational concern is that if out-of-work benefits raise the reservation wage (i.e. the minimum wage at which a person is willing to accept a job), then they may reduce the incentive to seek or accept work (Mortensen 1977; Atkinson and Micklewright 1991; Blundell and MaCurdy 1999). The magnitude of this effect depends critically on the design of the benefit and tax systems, labour market conditions and the characteristics of the recipient population.

At a theoretical level, the standard model of labour supply predicts that means-tested benefits create work disincentives through two channels. The first is an income effect: higher out-of-work income raises the demand for leisure and lowers the incentive to seek employment (the extensive margin). The second is a substitution effect: as earned income rises and means-tested benefits are gradually withdrawn, the effective return to additional work falls, reducing the incentive to increase hours (the intensive margin). These disincentives are captured by the participation tax rate (PTR) and the marginal effective tax rate (METR) respectively, which jointly summarise the implicit tax on work as embedded in the

tax-benefit system (Immervoll 2004; Brewer et al. 2010; Bartels and Pestel 2016).

Empirical evidence from Europe and North America broadly confirms that high PTRs and METRs are associated with reduced labour market participation, particularly among secondary earners, lone parents and low-skilled workers (Eissa and Hoynes 2011; Bartels and Shupe 2023). The sensitivity of labour supply to financial incentives tends to be greater at the extensive margin, i.e. the decision of whether to work at all, than at the intensive margin and is consistently higher among women with young children. However, the magnitude of the difference between extensive and intensive margins varies across studies, countries and time periods (Chetty et al. 2011; Blundell et al. 2011).

A growing literature uses tax-benefit microsimulation models to calculate PTRs and METRs. Jara and Tumino (2013) provided a comparison of METRs across Europe, finding substantial cross-country variation driven by differences in tax schedules and benefit design. Jara et al. (2020) showed that unemployment insurance benefits influence substantially short-term participation tax rates. Also, the OECD regularly uses microsimulation techniques to calculate such indicators, enabling informative quantitative cross-country comparisons. According to their latest flagship report, “effective tax rates on labour income for a single worker earning the average wage rose across a majority of OECD countries for the fourth consecutive year in 2025” (OECD 2026).

The design features of benefit programmes matter greatly for the size of disincentive effects. Benefits paid in full up to a certain level of earnings, then fully withdrawn once earnings exceed that threshold, generate very high METRs at a certain income level, creating notches in the budget constraint that can act as barriers to an increase in labour supply (Kleven and Waseem 2013). Means-tested programmes relying on a small number of discrete rates (full/reduced) rather than a graduated taper also produce similar distortions.

But work disincentives may be strong even when programmes are better designed, with benefit amounts being set as a linear (negative) function of household income, such as:

$$B_i = G - \beta Y_i$$

where

$B_i$  = the benefit amount of household  $i$

$Y_i$  = the income of household  $i$

$G$  = the income guarantee under the benefit programme considered

$\beta$  = the taper rate, i.e. the rate at which the benefit amount is reduced as a recipient’s earned income increases.

If the taper rate is equal to one, recipients earning €1 more will have their benefit reduced by exactly €1 (METR = 100%), leaving total income unaffected and thereby reducing to zero the economic incentive to work. Even when the taper rate is below, but close to, one, taking into consideration the disutility of working, the opportunity cost and work-related expenses, a rational individual will choose not to work and live on social benefits. In general, the higher the taper rate, the weaker the incentive to work.

Earnings disregards, excluding part of the income earned from work when calculating the amount of benefit, were introduced precisely to address such disincentives. In several EU member states, minimum income programmes provide for an earnings disregard of typically 20% of income from labour, reducing the taper rate to 0.8 (METR = 80%), which is still a lot higher than the top marginal income tax rate (which in 2025 ranged from 10% in Bulgaria and Romania to 60.5% in Denmark).<sup>6</sup>

In-work benefit programmes, such as Earned Income Tax Credit in the US and Working

<sup>6</sup> See <https://taxfoundation.org/data/all/eu/top-personal-income-tax-rates-europe/>.

Families' Tax Credit in the UK, introduced in 1975 and in 2003 respectively, aimed to boost work incentives by subsidising earnings over a low-income range, with generally positive employment effects noted among lone parents and secondary earners (Brewer et al. 2006; Meyer and Rosenbaum 2001). In 2013, Working Families' Tax Credit was merged with Job-seeker's Allowance, Housing Benefit and other social transfers into a Universal Credit, a policy reform specifically aimed to streamline income support and improve work incentives for benefit recipients (Pareliussen 2013). In fact, Universal Credit has a taper rate of 0.55 (METR = 55%), which is lower than most benefit programmes across Europe and beyond.

Research on the work incentive implications of the newly-bolstered social safety net in Greece is generally lacking. Existing contributions have focused primarily on the system's anti-poverty performance and the pros and cons of potential reforms (Allen et al. 2025). The interaction between the new means-tested benefits and the Greek personal income tax and social contribution system – and the disincentive effects that may emerge from these interactions – has received no systematic attention.

This paper contributes to filling this gap by providing estimates of PTRs and METRs for representative household types in Greece, decomposing estimated rates into different components (i.e. those caused by taxes, social contributions and social benefits) and drawing out the implications for policy design.

### 3 DATA AND METHODOLOGY

The analysis makes use of EUROMOD,<sup>7</sup> the tax-benefit microsimulation model of the EU. The model uses survey data on gross incomes, labour market status and other characteristics of individuals and households, to which it applies the tax and benefit rules in place in order to simulate taxes, social insurance contributions and entitlements to cash benefits.

The components of the tax-benefit system that cannot be simulated (for example, those depending on prior contributions such as pensions) are read off the data.

EUROMOD has been validated both at micro and macro level and has been tested in numerous applications. Examples of such applications include several studies on the distributional impact of tax-benefit systems and on how policies have shaped income distributions over time, disentangling income changes due to policy reforms from changes due to the evolution of market incomes and changes in populations' underlying characteristics, analysing the impact of policy reforms on work incentives and measuring the impact of tax-benefit systems on dimensions other than income, such as health, quality of life, etc. For a comprehensive overview, see Sutherland and Figari (2013).

Over the years, several specialised tools and extensions have been added to broaden the model's capabilities. One of these is the EUROMOD Hypothetical Household Tool (EUROMOD-HHoT), used in this analysis. The tool allows users to generate hypothetical household datasets that can be processed by EUROMOD to simulate tax and benefit rules (Hufkens et al. 2019). These synthetic households are defined by a set of socio-economic attributes that users can tailor to the policy questions they are investigating.

By enabling the creation of custom data, EUROMOD-HHoT provides deeper insight into how policies affect households with particular characteristics, while giving users full control over the variables of interest. HHoT is fully integrated into the EUROMOD framework, ensuring that the simulated policy rules are identical to those applied in population-based microsimulations. This consistency allows for a seamless combination of representative distributional analysis with targeted hypothetical household analysis.

<sup>7</sup> Version J0.51. For more information on the EUROMOD model, see <https://euromod-web.jrc.ec.europa.eu/>.

The hypothetical household approach has several advantages in the present context. It is independent of survey data, meaning that results are not affected by sampling error, income underreporting or survey data gaps. It provides a transparent and illustrative tool for examining the logic of the tax-benefit system, showing how disposable income responds to changes in labour market status or earnings for households with specific characteristics. Finally, it allows the computation of the full household budget constraint, i.e. the mapping from gross earnings to net disposable income across the earnings distribution, which is essential for identifying notches, spikes and flat segments in the effective marginal rate schedule.

PTRs operate at the extensive margin: they show the share of the additional household income lost as a result of extra income taxes and social contributions due, as well as means-tested social benefits being reduced or fully withdrawn, when a previously non-employed household member takes up a job.

Formally, the PTR facing individual  $i$  in household  $h$  is:

$$PTR_i = 1 - \frac{Y_h^w - Y_h^b}{E_i^w}$$

where:

$E_i^w$  = gross earnings of individual  $i$  when in work

$Y_h^w$  = household disposable income when individual  $i$  is in work

$Y_h^b$  = household disposable income when individual  $i$  lives on benefits

To estimate PTRs for 2024, we used EURO-MOD-HHoT to create eight stylised households. All eight involved a couple (for simplicity: mother and father) with one child aged 2, living in rented accommodation, whose market income is exclusively labour income. We looked at changes in household disposable income when the mother moves from non-employment in period  $t_0$  to taking up a full-

time job on the minimum wage in the next period  $t_1$ .

Specifically:

- In households 1-4 (HH1-HH4), the mother received unemployment benefit in  $t_0$ .
- In households 5-8 (HH5-HH8), the mother did not receive unemployment benefit in  $t_0$ .
- In households 1 (HH1) and 5 (HH5), the father is not in work.
- In households 2 (HH2) and 6 (HH6), the father works part-time earning 50% of the (monthly) minimum wage.
- In households 3 (HH3) and 7 (HH7), the father works full-time earning 100% of the (monthly) minimum wage.
- In households 4 (HH4) and 8 (HH8), the father works full-time earning 150% of the (monthly) minimum wage.

This is shown in Table 1.

**Table 1 Stylised household configurations in estimating PTRs**

| HH | Mother on unemployment benefit in $t_0$ | Father earns         |
|----|-----------------------------------------|----------------------|
| 1  | Yes                                     | 0 (not in work)      |
| 2  | Yes                                     | 50% of minimum wage  |
| 3  | Yes                                     | 100% of minimum wage |
| 4  | Yes                                     | 150% of minimum wage |
| 5  | No                                      | 0 (not in work)      |
| 6  | No                                      | 50% of minimum wage  |
| 7  | No                                      | 100% of minimum wage |
| 8  | No                                      | 150% of minimum wage |

Notes: Households are couples (mother, father) with one child aged 2, living in rented accommodation, with no other market income except for labour income. The minimum wage in Greece in 2024 was €830 per month.

On the other hand, METRs operate at the intensive margin. They show the share of the additional labour earnings lost as a result of extra income taxes and social contributions due, as well as means-tested social benefits being reduced or fully withdrawn, when a household member works more or earns more.

Formally, the METR facing individual  $i$  in household  $h$  is:

$$METR_i = 1 - \frac{Y_h^1 - Y_h^0}{E_i^1 - E_i^0}$$

where:

- $E_i^1$  = gross earnings of individual  $i$  in  $t_1$  (when working more)
- $E_i^0$  = gross earnings of individual  $i$  in  $t_0$  (when working less)
- $Y_h^1$  = household disposable income in  $t_1$  (when individual  $i$  works more)
- $Y_h^0$  = household disposable income in  $t_0$  (when individual  $i$  works less)

To estimate METRs for 2024, we used the EUROMOD-HHoT to create four additional stylised households (households 9-12). We looked at how household disposable income changes as the mother's earnings increase (by increments of €100 per month). As above, all four scenarios involved a couple (for simplic-

**Table 2 Stylised household configurations in estimating METRs**

| HH | Mother's earnings gradually increase | Father earns         |
|----|--------------------------------------|----------------------|
| 9  | from €0 to €4,200 per month          | 0 (not in work)      |
| 10 | from €0 to €4,200 per month          | 50% of minimum wage  |
| 11 | from €0 to €4,200 per month          | 100% of minimum wage |
| 12 | from €0 to €4,200 per month          | 150% of minimum wage |

Notes: Households are couples (mother, father) with one child aged 2, living in rented accommodation, with no other market income except for labour income. The minimum wage in Greece in 2024 was €830 per month.

ity: mother and father) with one child aged 2, living in rented accommodation, whose only market income is labour income.

Specifically:

- In household 9 (HH9), the father is not in work.
- In household 10 (HH10), the father works part-time earning 50% of the (monthly) minimum wage.

**Table 3 Main social benefits in Greece (2024)**

| Type of benefit                        | Monthly benefit rate                                                       |                     | Annual income threshold        |
|----------------------------------------|----------------------------------------------------------------------------|---------------------|--------------------------------|
|                                        | 1st and 2nd child                                                          | 3rd+ child          |                                |
|                                        | Full rate: €70                                                             | Full rate: €140     | Full rate: €6,000              |
| Child benefit <sup>1</sup>             | Reduced rate A: €42                                                        | Reduced rate A: €84 | Reduced rate A: €10,000        |
|                                        | Reduced rate B: €28                                                        | Reduced rate B: €56 | Reduced rate B: €15,000        |
|                                        | (per child)                                                                | (per child)         |                                |
| Guaranteed minimum income <sup>2</sup> | Income threshold minus assessed income (income disregard: 20% of earnings) |                     | First adult: €2,592            |
|                                        | Max for a person living alone: €216                                        |                     | Each additional adult: €1,296  |
|                                        | Overall max per household: €972                                            |                     | Each child: €648               |
| Housing benefit                        | First adult: €70                                                           |                     | First adult: €7,000            |
|                                        | Each additional household member: €35                                      |                     | Each additional member: €3,500 |
|                                        | Overall max: €210                                                          |                     | Overall: €21,000               |
| Childcare voucher <sup>3</sup>         | Infants aged <2.5 years: €294                                              |                     | Up to 2 children: €27,000      |
|                                        | Toddlers aged 2.5-4 years: €237                                            |                     | Each additional child: €3,000  |
|                                        | (includes meals)                                                           |                     | Overall: €36,000               |

Source: Organisation of Welfare Benefits and Social Solidarity (OPEKA).  
1 Note that in 2024 an extra one and a half instalment was paid to eligible recipients in December.  
2 Note that in 2024 an extra half instalment was paid to eligible recipients in December.  
3 Note that the yearly voucher amount is €3,239; it is paid in 11 monthly installments.

- In household 11 (HH11), the father works full-time earning 100% of the (monthly) minimum wage.
- In household 12 (HH12), the father works full-time earning 150% of the (monthly) minimum wage.

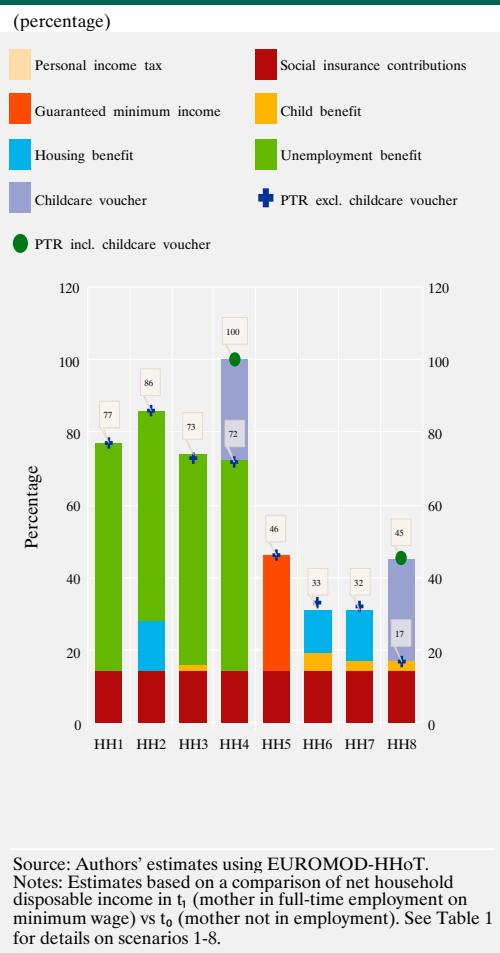
This is shown in Table 2.

In estimating PTRs and METRs, we look at the interactions between income taxes, social contributions and four social benefits: child benefit, guaranteed minimum income, housing benefit and childcare voucher. These were the most important means-tested benefits in operation in 2024. Their key characteristics are shown in Table 3.

## 4 RESULTS

Our estimates of participation tax rates for the eight stylised household configurations described in Table 1 are presented in Chart 1, which further breaks down PTRs into their main components. The results reveal that PTRs in Greece, as estimated based on the tax and benefit system in place in 2024, can be severely prohibitive. This is particularly the case in scenarios 1-4, under which the non-employed mother has to forego the unemployment benefit received in  $t_0$ . In the first three scenarios, out of every €100 of gross earnings generated by the mother taking up a full-time job on the minimum wage, between €72 and €86 are effectively clawed back through extra social insurance contributions due and means-tested benefits being reduced or withdrawn. The most extreme case arises in scenario 4, where the father earns more than in the other scenarios. As a result of this, when the mother transitions to formal full-time employment on the minimum wage, the household loses not only the unemployment benefit, but also the childcare voucher, which results in a PTR of 99.6%. Clearly, at a participation tax rate as high as that, there is no financial incentive to take up formal work.

Chart 1 Estimated participation tax rates



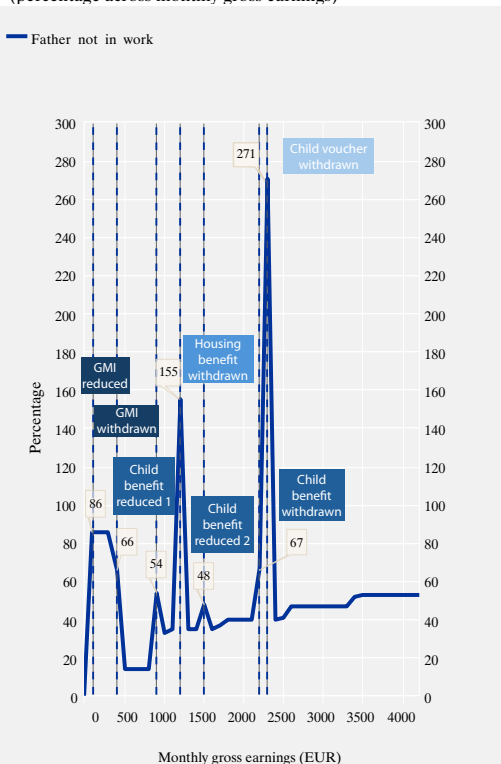
PTRs are considerably lower in scenarios 5-8, where the mother was not in receipt of unemployment benefit in  $t_0$ .<sup>8</sup> Still, PTRs remain significant, ranging from 32% to 46% across all four configurations.<sup>9</sup> The level of the father's earnings plays a moderating role: the household's entitlement to guaranteed minimum income, housing benefit and child benefit is reduced as earnings increase across scenarios (in  $t_0$ ), as a result of which PTRs are respectively less stark when the mother takes up a job (in  $t_1$ ). This pattern is only reversed in scenario 8, where the father earns more and the addition of

<sup>8</sup> In February 2026, the number of unemployed workers ([Unemployment by sex and age - monthly data, Eurostat](#)) exceeded the number of recipients of contributory unemployment benefit by about 77% ([Public Employment Service \(DYPA\) data](#)).

<sup>9</sup> Note that the top marginal tax rate in 2024 for incomes in excess of €40,000 per year was 44%.

**Chart 2 Estimated marginal effective tax rates under scenario 9**

(percentage across monthly gross earnings)



Source: Authors' estimates using EUROMOD-HHoT.  
Notes: Estimates based on changes in net household disposable income as mother's monthly gross earnings rise linearly from zero to €4,200 (i.e. approximately 5.1 times the minimum wage in 2024). See Table 2 for details on scenario 9.

the mother's earnings raises household income above the threshold of eligibility for childcare voucher, which is subsequently withdrawn.

Summing up, high PTRs result from several overlapping factors. First, the unemployment benefit (set at 55% of the daily minimum wage paid for 25 days), foregone when the mother takes up a formal job, is a significant consideration, particularly when the father is not in work or is on low pay. Second, entitlement to means-tested benefits is substantially reduced or fully terminated as earned income rises above the relevant thresholds. The interaction of benefit losses with social insurance contributions due produces PTRs that drastically reduce the financial reward from formal employment on the min-

imum wage (which is typically the entry wage for many workers). This points to a policy design which justifiably ensures a (low) income floor for households at the bottom of the distribution but erects obstacles to the aspiration to rise above that floor through their own effort.

Our estimate of marginal effective tax rates (METR) for scenario 9, the stylised household configuration where the father does not work, is described in Chart 2. This suggests how the household's net disposable income increases as the mother's monthly gross earnings rise linearly from zero to €4,200, approximately equal to 5.1 times the minimum wage in 2024.

Clearly, the METR schedule is markedly non-linear, exhibiting both extended flat segments and sharp kinks at specific points. At very low levels of earnings, METRs are mostly driven by the gradual withdrawal of guaranteed minimum income (GMI). Specifically, programme rules provide for a 20% earnings disregard (in other words, €0.20 out of each additional €1 earned are not taken into account, so that the guaranteed minimum income benefit is only reduced by €0.80). Combined with social insurance contributions, paid from the first €1 of earnings, and the extra half GMI instalment at the end of the year, which behaves like a "passport benefit", this results in a METR of 86%.<sup>10</sup>

The earliest spike occurs at the income range where the amount of the guaranteed minimum income benefit the household is eligible for begins to decrease; the second one arises when the GMI amount falls below €10 per month (the lowest amount payable), at which point the benefit is fully withdrawn. The next one occurs where the child benefit becomes payable at reduced rate A. Meanwhile, above a household taxable income of €10,000 per year, personal income tax is also due, which raises the METR to 33% and then to 35%. Further up, as soon as the household's taxable income crosses the €14,000 line, the entire housing benefit

<sup>10</sup> Note that incorporating the extra half GMI instalment to the basic GMI amount would lead to a reduction in METR by 3 percentage points, from 86% to 83%.

(worth €1,680 per year) is suddenly withdrawn, resulting in a really sharp kink. More spikes can be found higher up, where the child benefit becomes payable at reduced rate B, before it is fully withdrawn. But the sharpest kink of all is located where the household's taxable earnings exceed €27,000, at which point households lose eligibility for the childcare voucher (worth €3,239 per year). Thereafter, as eligibility for all means-tested benefits is exhausted, METRs are driven by taxes and social contributions alone, gradually rising from 40% to 53% (corresponding to annual taxable income in excess of €40,000).

A very similar pattern can be seen in scenarios 10-12 (working father), as shown in the Appendix. In these scenarios, the father's earnings merely shift the METR schedule to the left, as the mother's contribution causes the household to lose eligibility for this or that benefit at an earlier point. In scenario 12 (father earns 150% of the minimum wage), the household is not entitled to either guaranteed minimum income or housing benefit, even when the mother has zero earnings, so spikes in METRs are caused by the interaction of social contributions and income tax with child benefit and, especially, childcare voucher.

Clearly, the worst kinks are associated with social transfers that are either paid at the full rate or not at all – in the case of Greece in 2024: housing benefit and childcare voucher. The design of these benefits not only erects financial barriers at the extensive margin (affecting the decision of whether to work or not), shown up as high PTRs, but also creates strong disincentives at the intensive margin (affecting the decision of whether or not to work more hours and/or for a higher hourly wage), shown up as high METRs, for mothers already in employment.<sup>11</sup>

## 5 CONCLUSIONS AND POLICY IMPLICATIONS

In a certain sense, all anti-poverty policies face a trilemma between lifting the greatest number

of families out of poverty, preserving work incentives for benefit recipients and limiting fiscal costs (which can also be seen as preserving work incentives for taxpayers). Policy makers may meet at most two of these policy objectives, but not all three at the same time.

For instance, very low or non-existent social benefits cost taxpayers little and score high on work incentives for benefit recipients, but of course fail dramatically in terms of poverty relief. At the other extreme, generous social transfers available for all eliminate poverty and avoid inactivity traps but require a high level of fiscal spending. The middle way, chosen by many governments in Europe and beyond, to opt for relatively adequate benefits that are, however, tightly targeted, performs well in terms of poverty relief and keeps fiscal costs reasonably low but introduces strong work disincentives for recipients. In Greece, the strengthening of the social safety net since the crisis, a period when important means-tested benefits were introduced, significantly improved the anti-poverty performance of the welfare state and at the same time worsened work disincentives or introduced some where previously none existed.

As pointed out, work disincentives are part and parcel of anti-poverty policy: policy makers can make work disincentives disappear by eliminating all income support to the non-working poor. If, on the other hand, governments decide to offer the non-working poor some income guarantee that enables them to live on benefits, recipients may well choose to continue to do just that.

It is important to understand that the reluctance of benefit recipients to take up jobs is not the result of some moral failing on their part:

<sup>11</sup> PTRs and METRs are structural indicators that summarise the financial incentives embedded in the tax-benefit system; they do not, in themselves, constitute evidence of actual behavioural responses. However, as seen in Section 2, empirical evidence from Europe and North America broadly confirms that high PTRs and METRs are associated with reduced labour market participation for specific population groups.

the combined effect of income taxes, social contributions and reductions or withdrawals of social benefit is that work may often not pay (at least not in the relevant range of low-paid work usually on offer). In view of that, the decision of benefit recipients not to work is perfectly rational: it results from utility maximisation under constraints (Blundell and MaCurdy 1999; Brewer et al. 2010).

The resulting poverty or inactivity trap is not a Greek exception: as mentioned earlier, work disincentives used to be very high even in the countries which pioneered comprehensive social assistance (e.g. the UK). The combination of income taxes, national insurance contributions and loss of social benefits while on low earnings meant that recipients' net income was often no higher when in work than when living off benefits. Even now, for a non-negligible minority of workers in a number of countries, METRs can be close to 100% or higher (Jara et al. 2020).

But are poverty and inactivity traps the real risk in Greece? Arguably, punitively high PTRs and METRs are more likely to result in some workers taking up jobs in the informal sector, while continuing to claim benefits rather than not working at all (Dellas et al. 2024). Viewed from this perspective, the disincentive to take up a formal job, resulting from the recently introduced social benefits (and their interaction with taxes and social contributions), may not so much cause poverty traps and inactivity traps but contribute to the perpetuation of the country's low-wage/low-value added growth model (Pissarides et al. 2023).

To some extent, work disincentives are due to poor policy design: PTRs and METRs are unnecessarily high when (i) a country's social protection system relies excessively on means testing, and (ii) benefit rules carelessly and haphazardly interact with the rest of the tax-benefit system. In the case of Greece, where universal non-contributory benefits are absent and benefit rules are set idiosyncratically and not in an integrated fashion, both of these con-

ditions seem to be currently met to a considerable extent.

It follows that better policy design can reduce PTRs and METRs, and improve work incentives. As pointed out above, this would not be costless: it would require some increase in fiscal spending.

What can realistically be done? To ease work disincentives, while keeping budget costs reasonably low, policy makers should carefully redesign benefit entitlement rules and their interaction with taxes and social contributions.

Various policy recommendations stem directly from the results of this work. The first is to smooth out kinks in the effective tax schedule by eliminating cases where a benefit is either available in full or not available at all (as in housing benefit and childcare voucher).

To a lesser extent, kinks also result from the practice of relying on a small number of benefit rates (e.g. full rate/reduced rate A/reduced rate B, as in child benefit). In view of this, the second policy recommendation would be to reduce the amount of benefit as recipients' income rises by applying elementary algebra instead (along the lines of  $B_i = G - \beta Y_i$ , as in the guaranteed minimum income).

The third recommendation would be to set the taper rate  $\beta$ , at which social benefits are gradually reduced as household income rises, at a level well below 100%, also taking into account income taxes and social contributions. Smoothing kinks and replacing discrete thresholds with continuous tapers are primarily distributional and structural changes that need not necessarily entail higher aggregate spending. By contrast, reducing taper rates, while preserving income guarantees or extending benefit eligibility to new groups via smoothing withdrawal rates while keeping benefit rates constant, would require additional fiscal resources.

Some additional, broader policy implications emerge from the relevant literature, e.g.

streamlining benefits by following good practices in benefit design; defining assessed income as broadly as possible, taking into account other social benefits, ordering sequentially (guaranteed minimum income last) and avoiding exceptions. For instance, the case for excluding non-contributory disability benefits from assessed income when the amount of guaranteed minimum income benefit due is calculated seems unclear.

Another policy implication pertains to setting equivalence scales consistently, unless there are compelling reasons to the contrary. For example, there is evidence that economies of scale in consumption are not as great at low levels of income as they tend to be higher up the income distribution (Garbuszus et al. 2021). As a result of this, a more generous equivalence scale is called for when designing means-tested benefits. In contrast, the equivalence scale used in both child benefit and guaranteed minimum income in Greece (assigning a weight of 0.25 to each child) assumes *greater* economies of scale in consumption than the modified OECD equivalence scale (assigning a weight of 0.3 to each child) commonly applied by academic researchers and statistical agencies in Europe.

A final policy implication entails considering making some social benefits available to all,

irrespective of income. Universal social benefits are certainly costly and hence a hard sell in a country as indebted as Greece. Nevertheless, there is a strong case for universal access to affordable high-quality childcare from a social investment perspective. There is strong evidence of significant short- and long-term benefits of childcare, in terms of higher mothers' employment and better child outcomes, respectively. In view of these, it has been established that high-quality childcare leads to higher lifetime earnings of both mothers and children, which in turn translate into greater tax revenues, which more than outweigh the immediate costs. Heckman and Karapakula (2019), in their review of the long-term impact of the Perry Preschool Project in the US in the 1960s on the children and siblings of the original participants, have estimated the rate of return on investment to be as high as 13%. More recently, a study of a policy reform in Spain lowering the age of eligibility for publicly provided universal preschool from 4 to 3 years of age estimated that the benefits, in the baseline scenario, were four times as high as the costs (van Huizen et al. 2019). Making the childcare voucher in Greece available to all families with children of the relevant age would be a step towards reaping all these benefits and in the process eliminating the work disincentives stemming from its current means-tested design.

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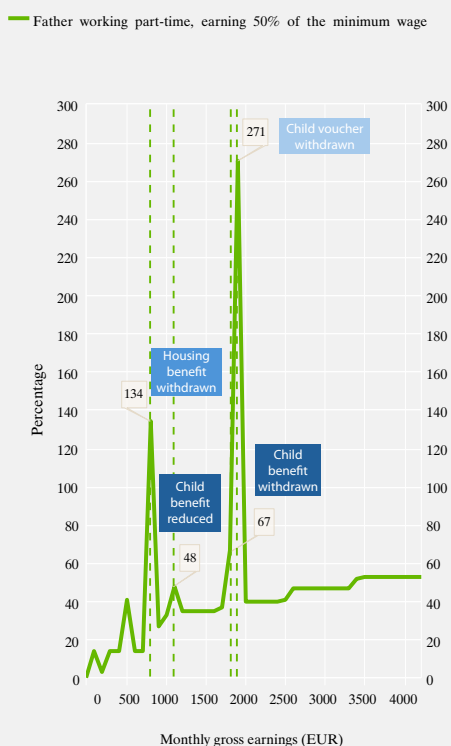
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## APPENDIX

**Chart A1 Estimated marginal effective tax rates under scenario 10**

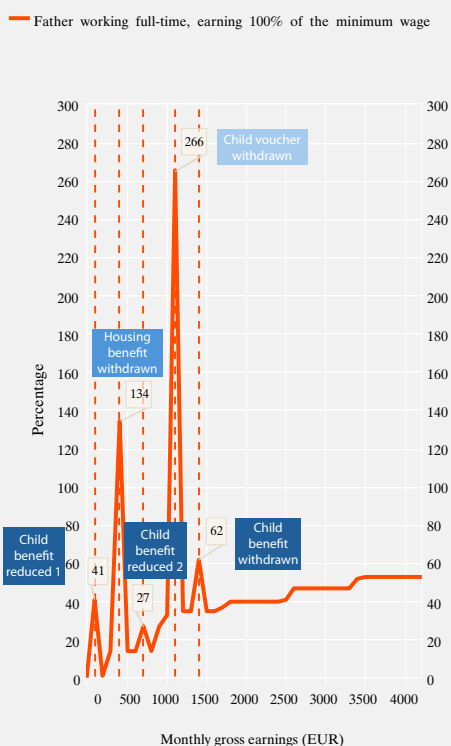
(percentage across monthly gross earnings)



Source: Authors' estimates using EUROMOD-HHoT.  
Notes: Estimates based on changes in net household disposable income as mother's monthly gross earnings rise linearly from zero to €4,200 (i.e. approximately 5.1 times the minimum wage in 2024). See Table 2 for details on scenario 10.

**Chart A2 Estimated marginal effective tax rates under scenario 11**

(percentage across monthly gross earnings)

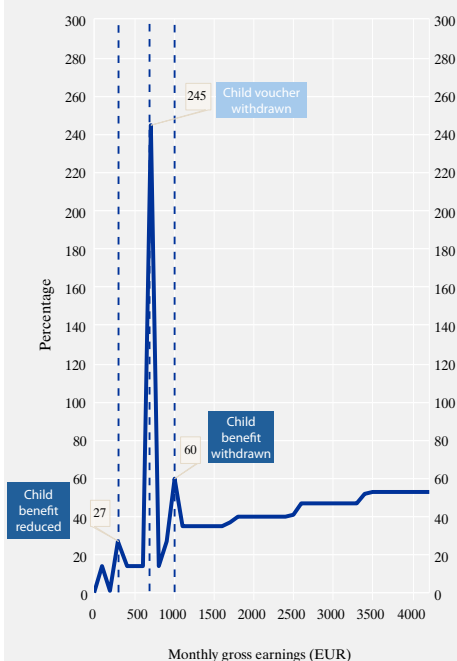


Source: Authors' estimates using EUROMOD-HHoT.  
Notes: Estimates based on changes in net household disposable income as mother's monthly gross earnings rise linearly from zero to €4,200 (i.e. approximately 5.1 times the minimum wage in 2024). See Table 2 for details on scenario 11.

**Chart A3 Estimated marginal effective tax rates under scenario 12**

(percentage across monthly gross earnings)

— Father working full-time, earning 150% of the minimum wage



Source: Authors' estimates using EUROMOD-HHoT.

Notes: Estimates based on changes in net household disposable income as mother's monthly gross earnings rise linearly from zero to €4,200 (i.e. approximately 5.1 times the minimum wage in 2024). See Table 2 for details on scenario 12.