

The Net Fiscal Position of Immigrants in the Netherlands over Migration Motives and Generations

Corné van Rhee¹ Eduard Suari-Andreu^{1,2} Philippe van Gruisen^{1,3}
Olaf van Vliet^{1,2}

November 13, 2024

[1] Department of Economics, Leiden University, The Netherlands, [2] Leiden-Erasmus-Delft Centre Governance of Migrations and Diversity, [3] Faculty of Economics and Business, KU Leuven, Belgium

Introduction

- Welfare dependency as an important driver for policy preferences regarding immigration (Dustmann and Preston, 2007; Facchini and Mayda, 2009; Gerber et al., 2017)
- The net fiscal position is conditional on migrant and host country characteristics (Hennessey and Hagen-Zanker, 2020)
- Overall pattern of negligible fiscal impact of migrants (Rowthorn, 2008; Liebig and Mo, 2013; De Matos, 2021)

Methodology

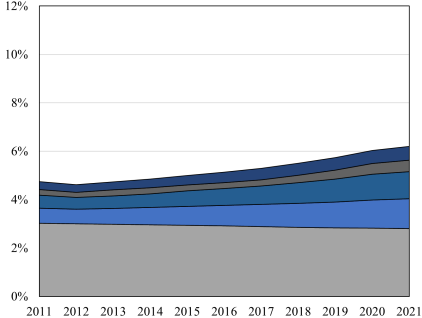
$$NFP_t^i = \sum_{r=1}^{N_R} \alpha_{rt}^i rev_{rt} - \sum_{e=1}^{N_E} \beta_{et}^i exp_{et} \quad (1)$$

- α_{rt}^i denotes individual i 's share of revenue source r in year t ,
- β_{et}^i denotes individual i 's share of expenditure source e in year t ,
- rev_{rt} denotes the revenue from revenue source r in year t ,
- exp_{et} denotes the revenue from expenditure source e in year t ,
- N_R denotes the total number of revenue sources,
- N_E denotes the total number of expenditure sources.

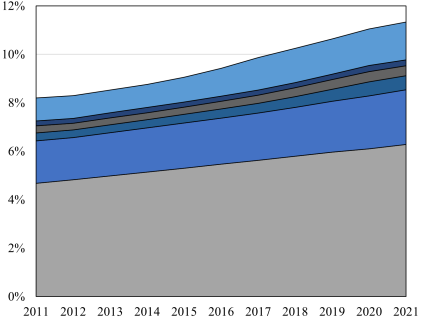
Methodology

- rev_{rt} and exp_{et} : Public national accounts ESA, COFOG
- α_{rt}^i and β_{et}^i : Calculated using micro-data α , β
- i : Characterized by migration background
 - ▶ EU/EFTA or non-EU/EFTA
 - ▶ Family, Labour, Study, Asylum, Other, Second-generation

Descriptive Statistics



(a) EU/EFTA



(b) Non-EU/EFTA

2nd Gen
 Family
 Labour
 Study
 Other
 Asylum

Figure 1: Share of total population

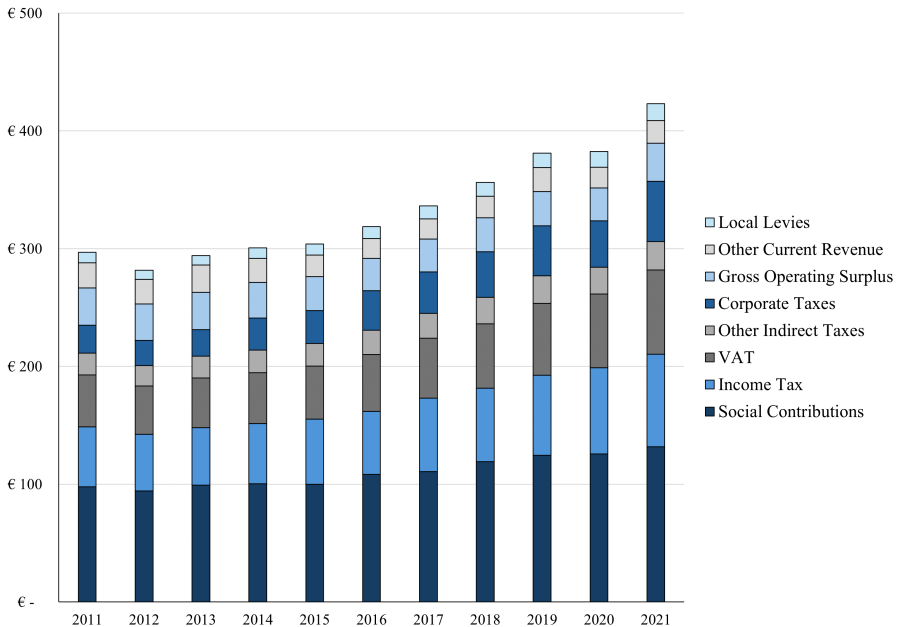


Figure 2: Dutch government revenue (billion euros, 2015 equivalent)

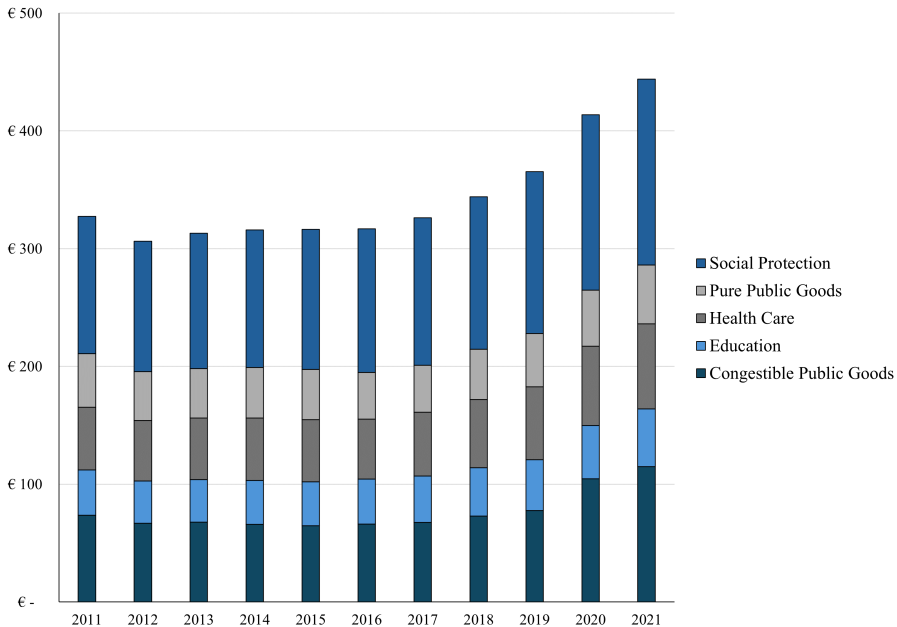


Figure 3: Dutch government expenditures (billion euros, 2015 equivalent)

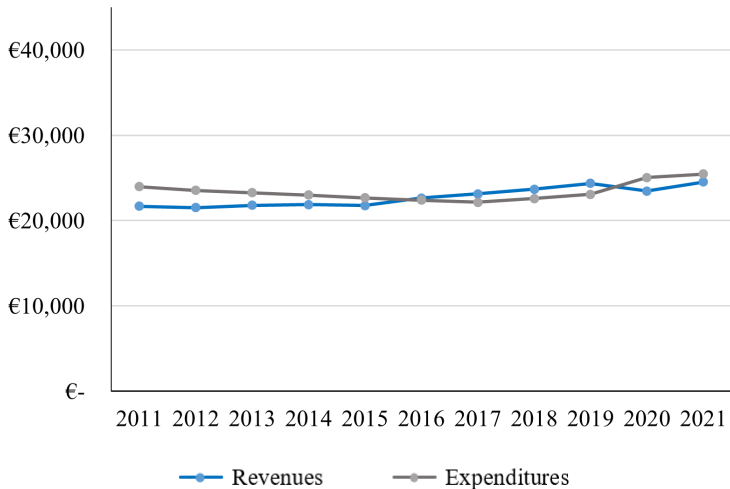
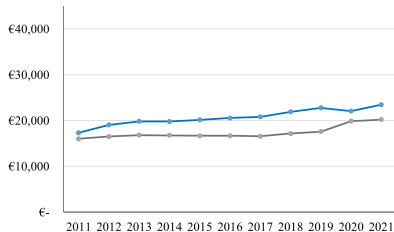
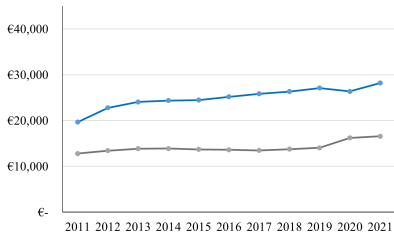


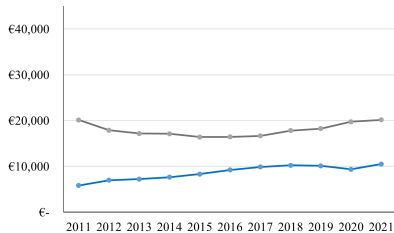
Figure 4: Average attributed revenues and expenditures to natives (Average / Pass-on)



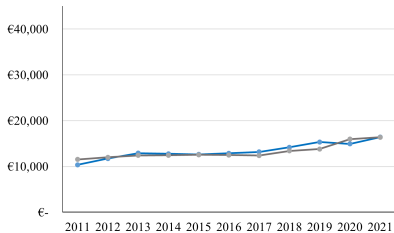
(a) EU/EFTA - Family



(b) EU/EFTA - Labour



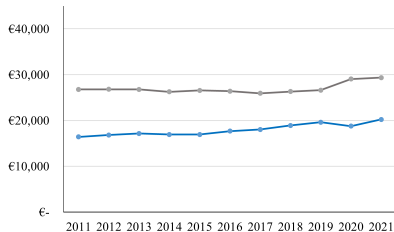
(c) EU/EFTA - Study



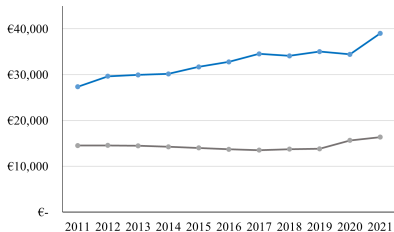
(d) EU/EFTA - Other

—●— Revenues —●— Expenditures

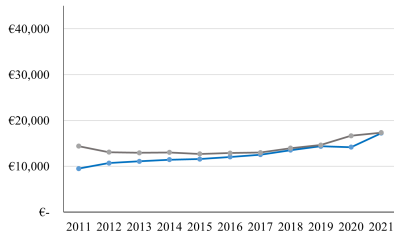
Figure 5: Average attributed revenues and expenditures (Average / Pass-on)



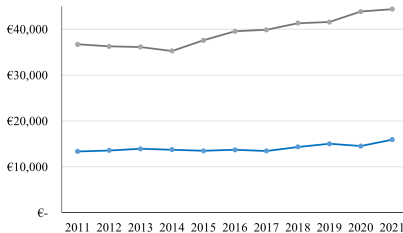
(a) Non-EU/EFTA - Family



(b) Non-EU/EFTA - Labour



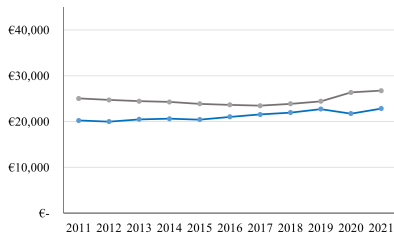
(c) Non-EU/EFTA - Study



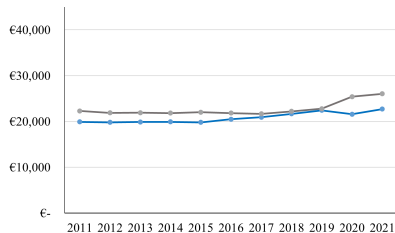
(d) Non-EU/EFTA - Asylum

—●— Revenues —●— Expenditures

Figure 6: Average attributed revenues and expenditures (Average / Pass-on)



(a) EU/EFTA - 2nd Gen



(b) Non-EU/EFTA - 2nd Gen

—●— Revenues —●— Expenditures

Figure 7: Average attributed revenues and expenditures (Average / Pass-on)

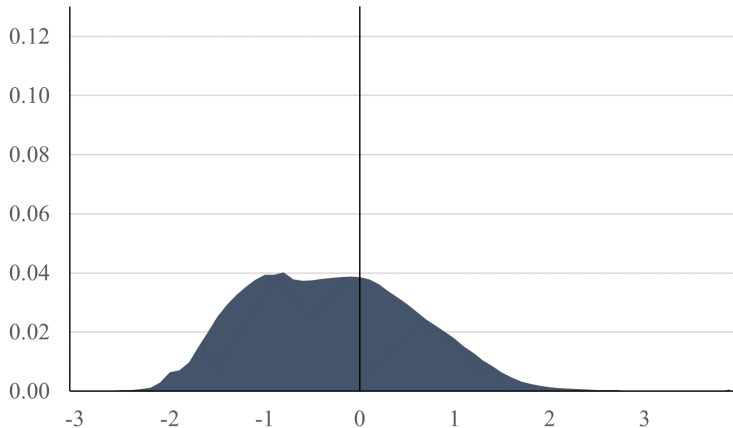
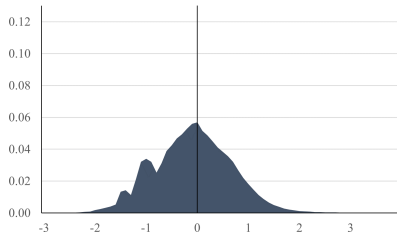
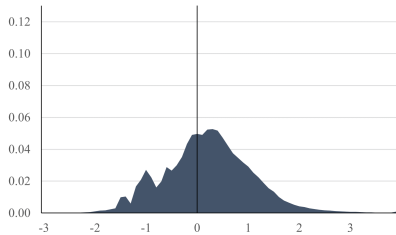


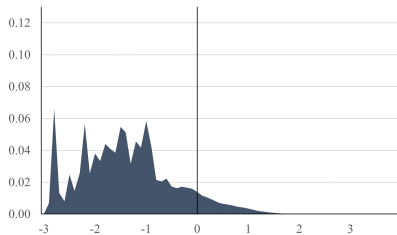
Figure 8: Density ratio total attributed revenues to expenditures for natives (Average / Pass-on)



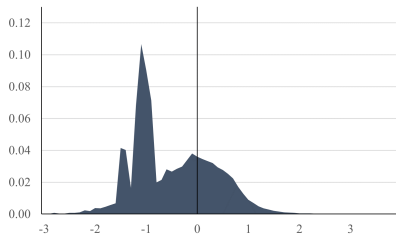
(a) EU/EFTA - Family



(b) EU/EFTA - Labour

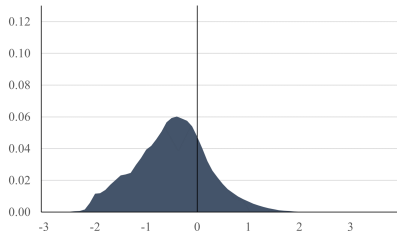


(c) EU/EFTA - Study

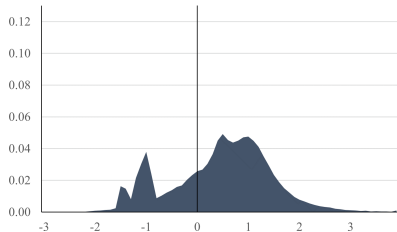


(d) EU/EFTA - Other

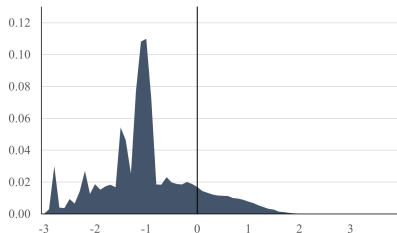
Figure 9: Density ratio total attributed revenues to expenditures (Average / Pass-on)



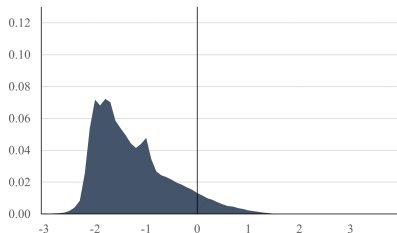
(a) Non-EU/EFTA - Family



(b) Non-EU/EFTA - Labour

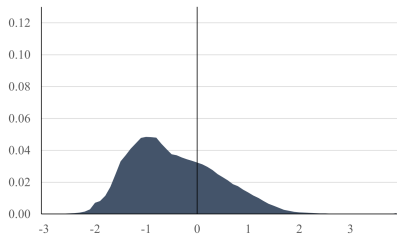


(c) Non-EU/EFTA - Study

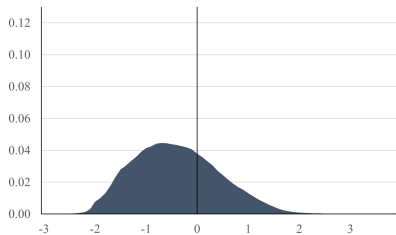


(d) Non-EU/EFTA - Asylum

Figure 10: Density ratio total attributed revenues to expenditures (Average / Pass-on)



(a) EU/EFTA - 2nd Gen

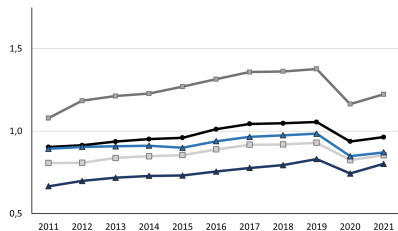


(b) Non-EU/EFTA - 2nd Gen

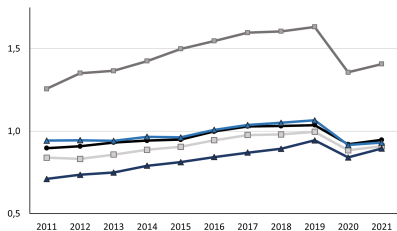
Figure 11: Density aggregated net fiscal position total attributed revenues to expenditures (Average / Pass-on)

Methodological choices

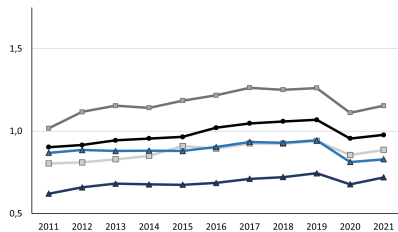
- Apportioning the expenditures on public goods (Williams, 2013; Rowthorn, 2014)
- Attributing the tax revenue from companies (Auerbach, 2006; Harberger, 2008; Gravelle, 2013)
- How to include the children of migrants (Gans, 1992; Zhou, 1997; Safi, 2010)



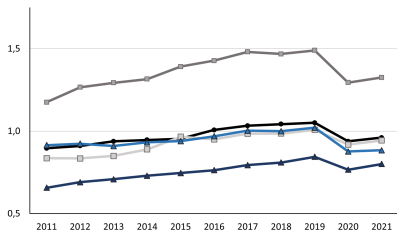
(a) Average / Pass-on



(b) Marginal / Pass-on



(c) Average / Special Interest



(d) Marginal / Special Interest

— Native — EU/EFTA - 1st Gen — EU/EFTA - 2nd Gen — Non-EU/EFTA - 1st Gen — Non-EU/EFTA - 2nd Gen

Figure 12: Average ratio revenues to expenditures

Conclusion

- Findings in line with the argument of Rowthorn (2008)
- Intuitive results; Confirmation of previous suggestive evidence (Liebig and Mo, 2013; Hinte and Zimmermann, 2014)
- Second generation NFP seems to converge to that of natives
- No subpopulation consists of solely net fiscal recipients

Thank you for your attention

Corné van Rhee

Department of Economics, Leiden University, The Netherlands

j.c.a.van.rhee@law.leidenuniv.nl

Table of Contents

1 Appendix

ESA Classification

Corporate income tax	Emission permits	Wastewater treatment charge
Personal income tax	Employer payroll tax	Water system charge
Value added tax (VAT)	Advertising tax	Wealth tax
Wage tax	Groundwater and landfill tax	Other taxes
Excise duties on beer	Groundwater tax + Tap water tax	D611 Employers' social contributions
Coal tax	Inheritance and gift tax	D613 Households' social contributions
Excise duties on intermediate alc.drinks	Insurance premium tax	D612 Employers' social contributions
Excise duties on other alcoholic drinks	Levies on stocks of petroleum products	P11 Market output
Excise duties on tobacco products	Motor vehicle tax	P12A Own-account capital formation
Excise duties on wine	Packaging tax	P131 Payments for non-market output
Benefit tax	Rental housing tax	D39 Other subsidies on production
Air travel tax	Public Corporate Organisations levies	D41 Interest
Animal wellbeing tax	Real estate tax	D4N Other property income
Bank levies	Real estate transfer tax	D42 Distributed income of corporations
Energy tax + Sustainable energy sur-charge	Passenger car and motorcycle registry tax	D43 Reinvested earnings on foreign investments
Betting and lottery tax	Resolution levy on social housing corp.	D44 Other investment income
Business investment zone tax	Resolution tax	D45 Rent
Chamber of Commerce contribution	Sewage charges	D71 Net non-life insurance premiums
Civil aviation noise pollution tax	Surplus manure tax	D72 Non-life insurance claims
Excise duties on gasoline and other mineral oils	Tax revenue from Caribbean Nether-lands	D73 Current transfers within Govern-ment
Commuter tax	Tax on raising of equity capital	D74 Current international co-operation
Deposit Guarantee Scheme tax	Tax on non-alcoholic drinks	D75 Miscellaneous current transfers
Dividend tax	Tourist tax	D92 Investment grants
Dog-license tax	Waste Tax	D99 Other capital transfers

[Back](#)

UN COFOG Classification

1.1 Executive and legislative organs, ..	4.5 Transport	8.1 Recreational and sporting services
1.2 Foreign economic aid	4.6 Communication	8.2 Cultural services
1.3 General services	4.7 Other industries	8.3 Broadcasting and publishing
1.4 Basic research	4.8 R&D Economic affairs	8.4 Religious and community services
1.5 R&D general public services	4.9 Economic affairs n.e.c.	8.5 R&D Recreation, culture, religion
1.6 General public services n.e.c.	5.1 Waste management	8.6 Recreation, culture and religion n..
1.7 Public debt transactions	5.2 Waste water management	9.1 Primary education
1.8 Transfers of a general character b..	5.3 Pollution abatement	9.2 Secondary education
2.1 Military defence	5.4 Protection of biodiversity and lan..	9.3 Post-secondary non-tertiary edu.
2.2 Civil defence	5.5 R&D Environmental protection	9.4 Tertiary education
2.3 Foreign military aid	5.6 Environmental protection n.e.c.	9.5 Education not definable by level
2.4 R&D Defence	6.1 Housing development	9.6 Subsidiary services to education
2.5 Defence n.e.c.	6.2 Community development	9.7 R&D Education
3.1 Police services	6.3 Water supply	9.8 Education n.e.c.
3.2 Fire-protection services	6.4 Street lighting	10.1 Sickness and disability
3.3 Law courts	6.5 R&D Housing amenities	10.2 Old age
3.4 Prisons	6.6 Housing and amenities n.e.c.	10.3 Survivors
3.5 R&D Public order and safety	7.1 Medical products and appliances	10.4 Family and children
3.6 Public order and safety n.e.c	7.2 Outpatient services	10.5 Unemployment
4.1 General economic affairs	7.3 Hospital services	10.6 Housing
4.2 Agriculture, forestry, fishery, an..	7.4 Public health services	10.7 Social exclusion n.e.c.
4.3 Fuel and energy	7.5 R&D Health	10.8 R&D Social protection
4.4 Mining, industry, construction	7.6 Health n.e.c.	10.9 Social protection n.e.c.

[Back](#)

Revenue apportioning criteria

<i>Revenue Category</i>	<i>Sources</i>	<i>Apportioning Criteria</i>
Income taxes	Personal income tax, Wage tax	Share of income taxes owed
Company and Capital Taxes	Company income taxes, excise duties, sewage charges, passenger and motorcycle registration tax, motor vehicle tax, wastewater treatment charge, energy tax, tap water tax, water system charge, fly tax, tourist tax, advertising tax, packaging tax, bank levies, emission permits	Share of dividends from special interest received / Imputed total expenditures
Dividends	Dividend tax	Share of dividends received
VAT	Value added tax, tax on non-alcoholic drinks	Imputed total expenditures
Excise duties	Excise duties on beer, intermediate alcoholic drinks, other alcoholic drinks, tobacco products, and wine	Imputed expenditures on alcohol
Car	Passenger and motorcycle registration tax, motor vehicle tax, Excise duties on gasoline and other mineral oils	Imputed car related expenditures
Insurance	Insurance tax	imputed insurance expenditures
Energy	Energy tax, Sustainable energy surcharge	Imputed expenditures on energy
Local levies	Sewage charges, wastewater treatment charge, tap water tax, water system charge, dog-license tax, commuter tax	Imputed expenditures on local levies
Inheritance	Inheritance and gift tax	Share of population aged 70+

Apportioning criteria

<i>Revenue Category</i>	<i>Sources</i>	<i>Apportioning Criteria</i>
Social contributions	D611 Employers' social contributions, D613 Households' social contributions, D612 Employers' social contributions	Share of social contributions paid
Gross operating Surplus	P11 Market output, P12A Own-account capital formation, P131 Payments for non-market output	Share of the adult population
Rents	D41 Interest, D4N Other property income, D42 Distributed income of corporations, D43 Reinvested earnings on foreign investments, D44 Other investment income, D45 Rent, D71 Net non-life insurance premiums, D72 Non-life insurance claims, D73 Current transfers within Government, D74 Current international co-operation, D75 Miscellaneous current transfers, D92 Investment grants, D99 Other capital transfers	Share of the adult population / All to natives

[Back](#)

Apportioning criteria

<i>Expenditure Category</i>	<i>UN COFOG #</i>	<i>Apportioning Criteria</i>
Pure Public Goods	1, 2	Share of adult population (Williams, 2013) / All to natives (Rowthorn, 2014)
Congestible Public Goods	3, 4, 5, 6, 8	Share of adult population
Pharmacy and Apparatus	7.1, 7.5, 7.6	Share of Pharmacy and Apparatus costs
GP + Paramedics	7.2, 7.5, 7.6	Share of GP and Paramedic costs
Hospital	7.3, 7.5, 7.6	Share of Hospital Costs
Primary School	9.1, 9.7, 9.8	Share of days enrolled in primary education
Secondary School	9.2, 9.7, 9.8	Share of days enrolled in secondary education
Vocational / Adult Education	9.2, 9.7, 9.8	Share of days enrolled in vocational or adult education
Higher Vocational Education	9.4, 9.7, 9.8	Share of days enrolled in higher vocational education
Higher Education - University	9.4, 9.7, 9.8	Share of days enrolled in university education
Sickness and Disability	10.1, 10.8, 10.9	Share of ZW, WAZ, WAO, IAOW IOAZ, WAJONG, BBZ or IOW Benefits Received
Old Age	10.2, 10.8, 10.9	Share of AOW Benefits Received
Bereaved	10.3, 10.8, 10.9	Share of ANW Benefits Received
Family	10.4, 10.8, 10.9	Share of AKW, 'Kindertoeslag' and 'Kindergebonden Budget' benefits received
Unemployment	10.5, 10.8, 10.9	Share of WW / nWW Benefits Received
Housing	10.6, 10.8, 10.9	Share of 'Huurtoeslag', '-Subsidie' and 'Rijksbijdrage Eigen Huis' Benefits Received
Income Support	10.7, 10.8, 10.9	Share of WWB Benefits Received

[Back](#)

Imputation

Out-of-sample predictions, separately for natives, Western migrants, and non-Western migrants

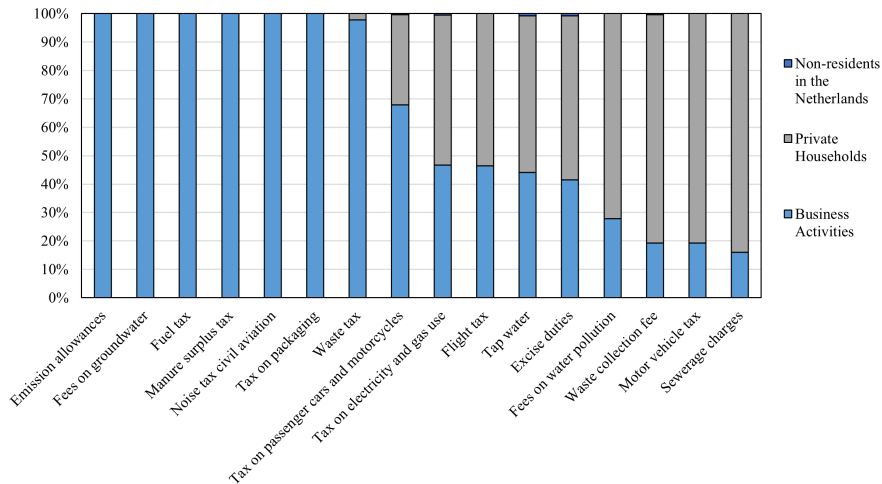
- Migrants may have a different marginal propensity to consume compared to natives (Dustmann, 1997; Carroll et al., 1999; Piracha and Zhu, 2012; Dustmann et al., 2017)

$$C_h = \alpha + \beta D_h + \gamma X'_h + \epsilon_h \quad (2)$$

- C_h denotes *ln* expenditures on various product groups by household h in year t
- D_h denotes *ln* household disposable income
- X'_h denotes various socio-economic, geographic and household composition control variables

Back

Taxes by taxpayer



[Back](#)

Net Fiscal Position

- Auerbach, A. J. (2006). Who bears the corporate tax? a review of what we know. *Tax policy and the economy*, 20:1–40.
- Carroll, C. D., Rhee, B.-K., and Rhee, C. (1999). Does cultural origin affect saving behavior? evidence from immigrants. *Economic Development and Cultural Change*, 48(1):33–50.
- De Matos, A. D. (2021). The fiscal impact of immigration in oecd countries since the mid-2000s. *International Migration Outlook 2021*.
- Dustmann, C. (1997). Return migration, uncertainty and precautionary savings. *Journal of development economics*, 52(2):295–316.
- Dustmann, C., Fasani, F., and Speciale, B. (2017). Illegal migration and consumption behavior of immigrant households. *Journal of the European Economic Association*, 15(3):654–691.
- Dustmann, C. and Preston, I. P. (2007). Racial and economic factors in attitudes to immigration. *The BE Journal of Economic Analysis & Policy*, 7(1).
- Facchini, G. and Mayda, A. M. (2009). Does the welfare state affect individual attitudes toward immigrants? evidence across countries. *The review of economics and statistics*, 91(2):295–314.
- Gans, H. J. (1992). Second-generation decline: Scenarios for the economic and ethnic futures of the post-1965 american immigrants. *Ethnic and racial studies*, 15(2):173–192.
- Gerber, A. S., Huber, G. A., Biggers, D. R., and Hendry, D. J. (2017). Self-interest, beliefs, and policy opinions: Understanding how economic beliefs affect immigration policy preferences. *Political Research Quarterly*, 70(1):155–171.
- Gravelle, J. (2013). Corporate tax incidence: Review of general equilibrium estimates and analysis. *National tax journal*, 66(1):185–214.
- Harberger, A. C. (2008). Corporation tax incidence: Reflections on what is known, unknown, and unknowable. In *Fundamental Tax Reform*. The MIT Press, United States.
- Hennessey, G. and Hagen-Zanker, J. (2020). The fiscal impact of immigration: A review of the evidence. In *Swiss Agency for Cooperation and Development*. Overseas Development Institute.
- Hinte, H. and Zimmermann, K. F. (2014). Does the calculation hold? the fiscal balance of migration to denmark and germany. Technical report, IZA Policy Paper.
- Liebig, T. and Mo, J. (2013). The fiscal impact of immigration in oecd countries. In *International Migration Outlook 2013*, pages 125–190. OECD.
- Piracha, M. and Zhu, Y. (2012). Precautionary savings by natives and immigrants in germany. *Applied Economics*, 44(21):2767–2776.

- Rowthorn, R. (2008). The fiscal impact of immigration on the advanced economies. *Oxford Review of Economic Policy*, 24(3):560–580.
- Rowthorn, R. (2014). A note on dustmann and frattini's "estimates of the fiscal impact of uk immigration". *On-line: <http://www.civitas.org.uk/pdf/rowthorndustmannfrattini.pdf> [20.03. 2015, 12.34]*.
- Safi, M. (2010). Immigrants' life satisfaction in europe: Between assimilation and discrimination. *European sociological review*, 26(2):159–176.
- Williams, N. (2013). Responding to 'the fiscal effects of immigration to the uk'. *Civitas, London*.
- Zhou, M. (1997). Segmented assimilation: Issues, controversies, and recent research on the new second generation. *International migration review*, 31(4):975–1008.