

ANALYSIS OF THE FISCAL AND SOCIO-ECONOMIC IMPACT OF THE SOCIAL NATIONAL IVF PROGRAM IN ROMANIA: A GENERATIONAL ACCOUNTING MODEL

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INTRODUCTION

Romania recorded its lowest fertility rate in 2002 and has continued to have relatively low fertility rates since then ¹⁻⁵, in line with a tendency manifested in many countries nowadays ⁶⁻⁷. The Romanian Gov. runs a national program with vouchers for IVF ⁸.

This **GENERATIONAL ACCOUNTING MODEL** evaluates to what extent are the costs associated with the program justified by the benefits that future children born bring to society?

- ✓ Such models are widely used. They assess the net tax value of a person conceived using assisted reproductive technology and calculates the total gross income that the state will obtain from the individual, subtracting direct transfer expenses over lifetime ⁹⁻¹¹.

OBJECTIVE

The Romanian Government runs a national social program to boost Romania's birth rate by offering financial support to couples and individuals.

It provides two vouchers: 1.000 EUR voucher for infertility treatments and a 2.000 EUR voucher for specific medical procedures ⁸.

This analysis assessed whether social and economic benefits of future children justify the investment.

METHOD

A generational accounting model considered a cohort of 10,000 in vitro fertilization (IVF) treatments, with an assumed average success rate defined at a level of 30% (20%-40% in the sensitivity analyses) . Although specialized scientific articles ¹⁸⁻¹⁹ and websites of medical service providers in the field ²⁰, and even partial public data made available to the public by the ministries involved in the implementation of the National Interest Social Program to Support Couples and Single Persons, to Increase the Birth Rate ²¹, state or suggest success rates of at least 45% and even 55%, given the uncertainties regarding the methodology used to define and estimate the success rate, based on expert opinion, a much more conservative success rate was used, namely 30%.

The model accounted for various costs, including those related to:

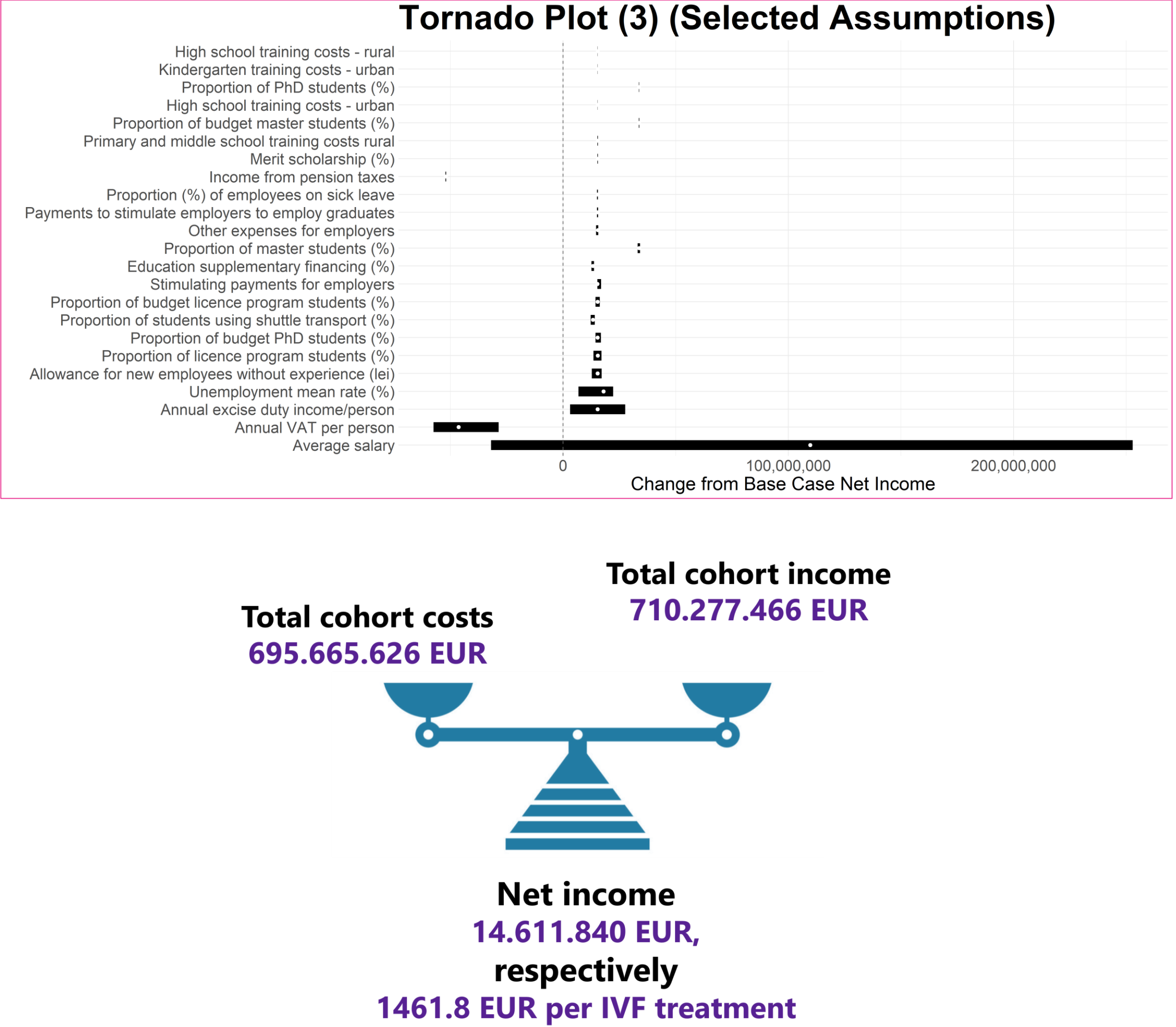
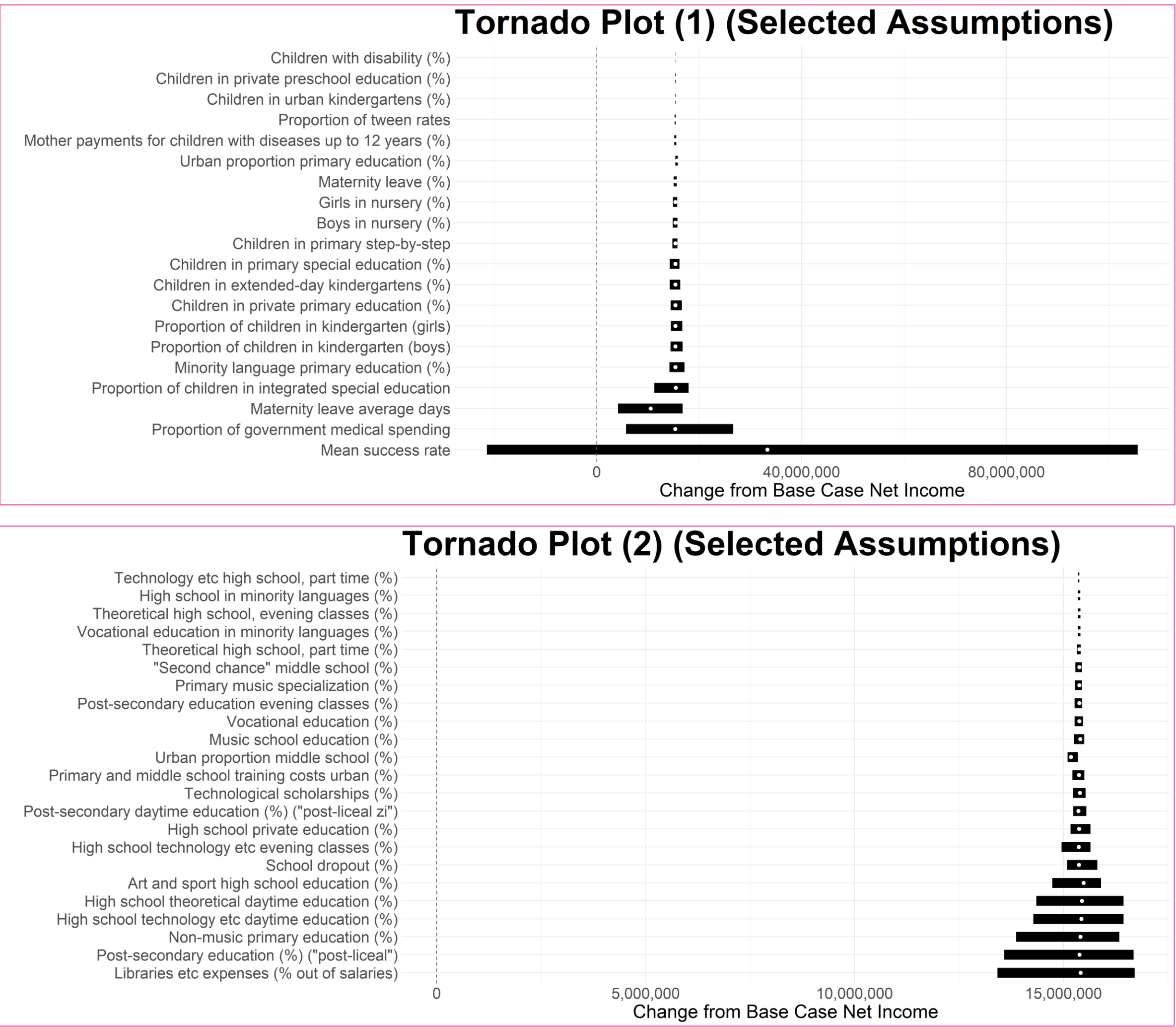
- pregnancy and childbirth monitoring,
- birth expenses,
- lifetime medical costs,
- maternity and parental leave,
- educational expenses from nursery to post-doctoral studies,
- unemployment and other social protection benefits, sick leave, and pensions.

The model considered revenues from wages and salaries, VAT, pension taxes, and excise duties. All of these costs were sourced from government health and education reports, national statistics, labour market studies, and official budget documents ¹²⁻¹⁷.

RESULTS

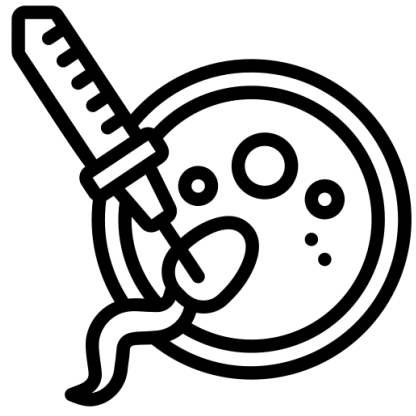
Total costs per cohort were estimated at 695,786,227EUR, whereas total income at 770,080,000EUR, **resulting in a net income estimated at 74,294,658EUR, or 7,429.5EUR for each IVF treatment supported by the program.**

The comprehensive sensitivity analysis, comprising 10,000 simulation runs with simultaneous random variation of 108 assumptions, revealed **a wide distribution of potential net income for the cohort outcomes**, ranging from -5,885,867 EUR (minimum) to 705,084,156 EUR (maximum), and notably, even the first quartile showed a positive value of 172,546,273 EUR, **strongly suggesting that positive net income results persist across the vast majority of potential assumption combinations.**



CONCLUSIONS

The IVF social national program represents a useful investment in Romania's future from a socio-economic standpoint.



While the model has not included quantification of significant psychological benefits for recipients and intangible advantages for the state, these factors remain highly relevant considerations.

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