

Trends in individualized affordability of factory-made cigarettes: findings of the 2008-2020 International Tobacco Control (ITC) Netherlands Surveys

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Abstract

Introduction: Cigarette affordability, the price of tobacco relative to consumer income, is a key determinant of tobacco consumption.

Aims and Methods: This study examined trends over 12 years in individualized factory-made cigarette affordability in the Netherlands, and whether these trends differed by sex, age, and education. Data from 10 waves (2008–2020) of the International Tobacco Control Netherlands Surveys were used to estimate individualized affordability, measured as the percentage of income required to buy 100 cigarette packs (Relative Income Price [RIP]), using self-reported prices and income. The higher the RIP, the less affordable cigarettes are. Generalized estimating equation regression models assessed trends in individualized affordability over time and by sex, age, and education.

Results: Affordability decreased significantly between 2008 and 2020, with RIP increasing from 1.89% (2008) to 2.64% (2020) ($p \leq .001$), except for 2008–2010, no significant year-on-year changes in affordability were found. Lower affordability was found among subgroups who have a lower income level: Females (vs. males), 18–24 and 25–39-year-olds (vs. 55 years and over) and low or moderate-educated individuals (vs. highly educated). Interactions between wave and education ($p = .007$) were found, but not with sex ($p = .653$) or age ($p = .295$). A decreasing linear trend in affordability was found for moderately ($p = .041$) and high-educated ($p = .025$), but not for low-educated individuals ($p = .149$).

Conclusions: Cigarettes in the Netherlands have become less affordable between 2008 and 2020, yet this was mostly because of the decrease in affordability between 2008 and 2010. There is a need for more significant increases in tax to further decrease affordability.

Implications: Our findings suggest that cigarettes have become less affordable in the Netherlands between 2008 and 2020. But, this appears to be the result of a steep decrease in affordability between 2008 and 2010. Affordability was lower among groups who have on average lower incomes (females, young adults, and low- and moderate-educated individuals), and differences in trends across education levels could be explained by per capita income changes. Our individualized measure indicated lower affordability than published aggregate affordability estimations. Future tax increases should be large enough to result in a lower affordability.

Recommended Citation

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