



Monetary Valuation of EU-wide road safety developments in 2017

June 2018

In the 5th PIN report, the monetary valuation of preventing one road death (VPF) was estimated at 2009 factor prices and in 2009 euro to be 1.70 million EUR¹. For the purpose of the 12th PIN Report, this value needs to be updated to reflect the economic conditions for 2017.

There are two components that need to be taken into account in the updating of the VPF value: the change in GDP per head and the conversion from 2009 euro to 2017 euro. The latter is done by using the values of the Eurostat Harmonised Index of Consumer Prices (HICP) for the EU28 in 2009 and 2015. The former is dealt with by considering the Eurostat estimates of the year-on-year percentage changes in the real GDP for the EU28 from 2009-10 to 2016-17 together with the changes in the EU28 population between 2009 and 2017.²

The formula used to update the VPF figure is thus the following:

$$\begin{aligned} \text{VPF}(2017) = & \text{VPF}(2009) * (\text{GDP}(2010)/\text{GDP}(2009)) * (\text{GDP}(2011)/\text{GDP}(2010)) * \\ & (\text{GDP}(2012)/\text{GDP}(2011)) * (\text{GDP}(2013)/\text{GDP}(2012)) * (\text{GDP}(2014)/\text{GDP}(2013)) * \\ & (\text{GDP}(2015)/\text{GDP}(2014)) * ((\text{GDP}(2016)/\text{GDP}(2015)) * ((\text{GDP}(2017)/\text{GDP}(2016)) * \\ & (\text{HICP}(2017)/\text{HICP}(2009)) / ((\text{POPULATION}(2017)/\text{POPULATION}(2009)))) \end{aligned}$$

and numerically

$$\text{VPF}(2017) = 1,700,000 * 1.021 * 1.017 * 0.996 * 1.003 * 1.018 * 1.023 * 1.102 * 1.024 / 1.019 = 2,115,836$$

or 2.11 million EUR

This formula differs in detail but not in substance from the one used in the corresponding calculation for the 7th PIN Report. The change is made to reduce rounding errors that could arise when adjusting the valuation over longer periods of years.

¹ For the full VPF calculation method, please read the 2011 PIN report methodological note at http://www.etsc.eu/documents/Methodological_Note_PINReport2011.pdf

² The economic and population data was retrieved from EuroStat on 24.05.2016.