

A Proposal for Refining the Calculation of sectoral CBAM Tax Rates

The methodology we followed in calculating the effects of the CBAM on the sectors consists of two parts.

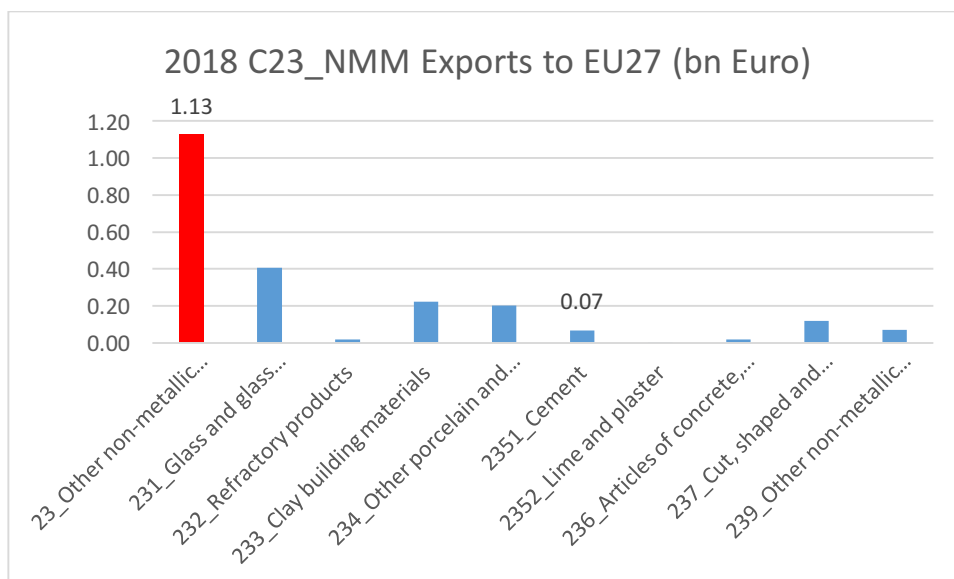
The first part calculates the embedded GHGs in the sectoral exports made to EU27 market by using Input-Output analysis. CBAM Cost would then be calculated by simply multiplying embedded GHGs by 50/70/100 Euros (per ton GHG price). Dividing CBAM Cost to export revenues earned from the EU27 market gives the sectoral CBAM Tax Rates.

In the second part, these sectoral CBAM Tax Rates (burden on the sectors) are fed into the CGE model to track their sectoral effects in the horizon of 2035/2050.

Given the availability of sectoral data and IO tables only at the 2-digit NACE level, alas, it could not be possible to analyze the effects on CBAM products determined at least at 4-digit level. For example, the effect on Cement (C23.51) exports can only be calculated at a coarser 2-digit level (C23: Non-Metallic Mineral-NMM in the model).

In other words, this boils down to a situation as if all products under C23 sector will be subject to CBAM (which is not).

The figure below shows the composition of the products under C23 exported to the EU27 market in 2018 (base year of the model).



In 2018, Turkey exported 1.13 billion euro worth of C23 products (red bar). And it is allocated to sub-products such as glass, cement, ceramics, etc. are shown by blue bars. Now, we know only 70 million euro worth of cement export (%6 of sectoral exports) will be subject to CBAM while others not.

CBAM Tax Rate calculation mentioned above implicitly assumed that all 1.13 billion worth of products will be effected by CBAM, which in turn led to an incorrect estimation of the real burden on the C23 sector (Note that the CGE model also use 2-digit level data).

Cement factories would surely be effected harshly by the CBAM but given their insignificant share in sectoral exports (%6 of total sectoral exports), same cannot be said about the C23 sector.

Now, as a refinement the following can be proposed.

By employing standard IO analysis, it is possible to find the embedded GHGs in 70 million worth of cement (C23.51) export and the corresponding CBAM Cost. CBAM Cost then will be divided by total sectoral exports (1.13 billion).

In the earlier version of the report we reported the CBAM Tax Rate (Scope 1+Scope 2 for 50 euro price) as %18.2 for the C23: NMM sector.

Again, this calculation implicitly assumed as if all products under the C23 sector would be subject to CBAM. Yet, the real burden would only be %6 of it, which is 1.1%.

Note that this refinement also assumes a composite C23 product (consists of glass, ceramics, cement, etc.). Hence, what we find from the 70 million cement export is not coming only from cement but from a composite C23 good.