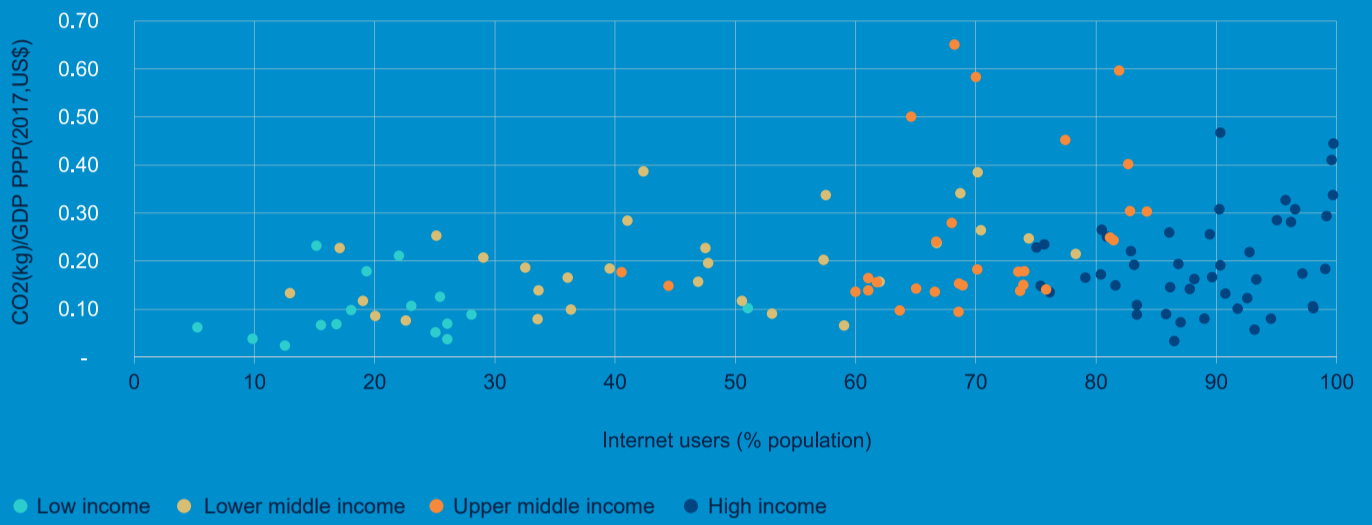


How do digitalization and decarbonization efforts interact?



INTERNET USERS AND CO2 EMISSIONS PER UNIT OF GDP

2019



Source: BBVA Research.

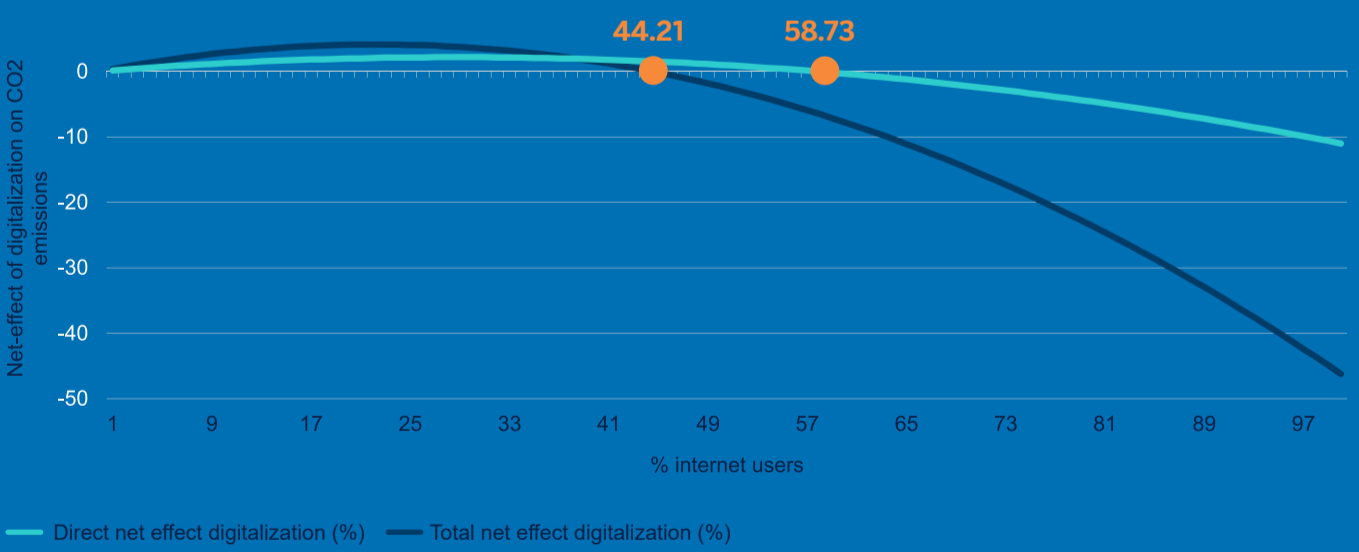
Digitalization is expected to help decarbonization in the medium and long term in low digitized countries, while it is already fostering CO₂ emission reductions in highly digitized economies.



The empirical results suggest an **inverted U-shaped relationship between digitalization and CO₂ emissions;** in early stages of digitalization emissions increase and with further development emissions decrease. That is, **specific thresholds of digitalization need to be reached in order to start reducing emissions.**

TOTAL NET EFFECT OF DIGITALIZATION ON CO2 EMISSIONS

(%)



Source: BBVA Research.

Once the thresholds are reached, the **direct or pure effect** of digitalization has the potential to reduce emissions as much as **10%** (if catching up to the frontier), while the **total effect,** which includes energy efficiency gains and easier access to renewables, could be close to a **maximum of 45%.**



By 2020, almost **60%** of the sample countries were above the **direct-effect** threshold, while the percentage increases to **70%** when considering the threshold for the **total effect.**



See the complete analysis on our website

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