



UPU Think Tank Brief

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Citizen access to postal services – a precursor for socio-economic growth

I. SDGs – measuring global progress

Approved in January 2016, the Sustainable Development Goals (SDGs) are the embodiment of the 2030 Agenda for Sustainable Development, adopted by world leaders in September 2015 at a UN summit. The 17 SDGs are successors to the eight Millennium Development Goals (MDGs), established in 2000.

While the MDGs applied only to developing countries, the SDGs apply universally to all member states and are considerably more comprehensive, inclusive and ambitious.

The 17 UN SDGs are further broken down into 169 targets and 244 indicators. These indicators are supposed to measure progress towards achieving the SDGs.

The choice of these indicators is the area where the political is confronted with the practical aspects of monitoring and reporting on them.

II. SDG indicators and their proxies

The SDG indicators are constructs that are supposed to reflect a certain aspect of reality. And as such they are never perfect. Their selection is an optimization exercise, with the goal being to maximize their informative value.

However, sometimes the desired indicator is too costly to be collected. In that case, another could be selected “by proxy” if sufficient correlation is proven.

Past research by the UPU and other peers has already shown that **postal indicators can constitute very reliable proxies for national well-being** (“The International Postal Network and Other Global Flows as Proxies for National Wellbeing”, Plos One, 2016).

An analysis was also conducted of the extent to which postal development may facilitate progress in some of the SDGs (Postal development report 2018, UPU, 2018).

To that end, the sub-scores of the UPU’s Integrated Index for Postal Development (2IPD) were regressed on a group of SDG indicators. In the 2018 report, the UPU found significant relationships for four indicators associated with the following goals:

- Decent work and economic growth (Goal 8)
- Industry, innovation and infrastructure (Goal 9)
- Sustainable cities and communities (Goal 11)
- Partnerships for the goals (Goal 17)

III. Access to postal services and SDG scores

To take a broader view, in this policy brief, we examine the relationship between the density of postal infrastructure, as a proxy indicator for access to postal services, and the achievement of national SDG goals.

We calculate the density of postal offices, as a proxy for access to postal services, through the officially reported number of postal offices per 10,000 inhabitants in 2022¹.

The number of permanent post offices per capita is derived directly from UPU postal statistics. It is one of the most important postal indicators and has the following advantages:

- It determines to a large extent the relevance of the postal sector in a given country.
- It is directly correlated with postal volumes per capita and the range of postal services offered.

¹ In our analysis we have used the last available datasets. For postal infrastructure we use 2022 data, and for the SDGs we use 2023 data. Given that the level of postal infrastructure is

relatively stable, the 2022 data can be extrapolated and used against the 2023 SDG data for this analysis.

- It is simple to understand and communicate.
- The associated data are of relatively high quality and missing points are estimable.

The drawbacks of this indicator are the following:

- wide definition of postal office and global differences;
- no direct information about the actual proximity of postal offices to population centres;
- no associated information on the status of digitization, accessibility, or range of services offered by a post office.

Of particular interest is the last limitation, which points to continuing digitization, the development of e-commerce, and the diminishing importance of letter post. The traditional role of post offices has changed, and it may be argued that their density is not as important as in the past.

The level of achievement of the SDGs by a country is a composite ranking index based on all the sub-indicators for given goals, which can be interpreted as the percentage of achievement of the SDGs for that country (Sustainable Development Report 2024).

IV. Density of postal offices vs achievement of SDGs – analysis

In Figure 1, the horizontal axis represents the density of postal offices in 2022, while the vertical axis

represents the percentage of achievement of SDGs in 2023 (both converted into logarithms for the sake of scaling).

The comparison **reveals a positive linear relationship** (correlation = 0.762, $R^2 = 0.581$, $y = 0.081 \cdot x + 1.856$) between the two variables.

Although correlation does not imply causality, we can venture a hypothesis that **the density of postal infrastructure can have a positive effect on the level of achievement of SDGs by a country.**

In Figure 1, the dots above the trend line represent countries that are performing above the average, given their level of density of postal offices.

Conversely, dots below the trend line represent countries for which there is potential for higher performance.

Interestingly, as we can see in Zone A, the dispersion and the number of outliers is higher for countries with a low density of postal offices, below one office per 100,000 people.

The relationship is not as clear, or in other words, the random effects prevail (correlation coefficient = 0.208).

This leads to a second hypothesis that **only a certain level of postal infrastructure triggers spillover effects that contribute to the achievement of national SDG targets.**

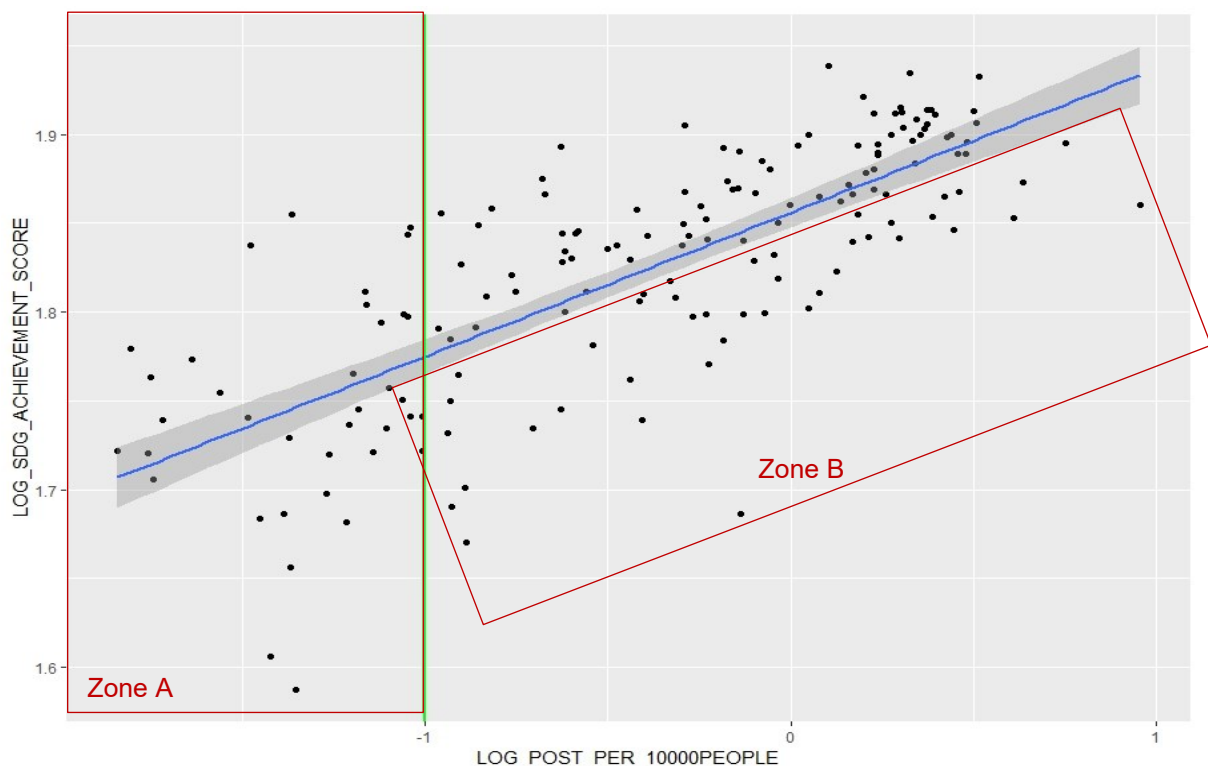


Figure 1: National SDG scores to the density of postal offices

Essentially, below a certain threshold, estimated at one post office per 100,000 inhabitants, **the postal sector has little impact on how a given country performs in achieving its SDG targets.**

We can also assume that a further refined analysis, perhaps with detailed supporting information from a selection of countries, could yield a more precise statistical relationship between the density of postal infrastructure and the SDGs.

V. Policy recommendations

In a recently published report, the UPU presents a clear case of the postal sector's contribution towards economic growth (State of the Postal Sector 2023).

In the hypothetical case of the complete absence of postal infrastructure, there would be **a median reduction of 6.96% in a country's annual GDP.** This significantly underscores the vital role played by Posts in their respective economies.

The analysis presented in this policy brief goes beyond the economic factor to show that the postal sector also makes a significant contribution towards the achievement of national SDGs.

From our analysis, we make two recommendations:

- For countries that belong to the left part of the picture (Zone A), where the relationship is quasi random, it is imperative to invest (or re-invest) in infrastructure so as to achieve a positive contribution by the postal sector to national human and socio-economic growth as outlined by the SDGs.

As a broad guideline, countries with less than one post office per 100,000 inhabitants need to boost their postal outreach in order for the sector to have a tangible impact on their socio-economic growth.

- For countries in Zone B, those below the trend line could examine whether the use of their postal infrastructure is optimal to foster the achievement of the SDGs.

To this end, one could compare with peers above the trend line the range, relevance and cost of services that could have an effect on SDGs. For example, benchmarking the cost of money transfers is directly related to goal 10, while the use of postal export for e-commerce could have an effect on goal 17.

As a final note, we can clearly state to regulatory and other policy-making bodies that the **downsizing or closing of postal offices should not be a simple business decision** – there are far-

reaching consequences to the overall growth and sustainable development of a country to consider.

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