

# Digital inclusion and universal postal service as a business opportunity

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# Context and aim of the paper

- Notwithstanding the digitalisation that deeply affected the postal sector, **the Universal Service has barely changed.**
- Irrespective of whether **benefits** it delivers to society have been **declining** certainly its **provision** has become **increasingly costly.**
- A consolidated literature supports the idea that despite the disruption, **POs** can profit from digitalisation, becoming **facilitators of digital inclusion.**
- The paper explores the idea that the universal service, and especially the assets associated with its provision, constitute a source of potential business opportunities for POs, trying to speculate on which countries can be in a relatively better position in this respect.

# Universal service obligation

- The Universal Service Obligation in the postal sector is typically defined along three dimensions: product range, quality of service and, pricing requirements.
- To provide USO in compliance with these requirements, one might refer to its fourth dimension: the presence of a nationwide physical postal network that the designated USO provider must maintain.
- An extensive physical presence results in: high fixed cost and possibly also excess capacity, in particular in rural areas with low population density.
- In response to declining demand for sending mail, USPs in most Member States have reduced the number of postal outlets (21 out of 27 countries), while only 6 have increased it (Denmark, France, Germany, Luxembourg, Malta, and the Netherlands). In both groups there has been a significant divergence in the magnitude of this trend (UPU data).
  - The number of domestic **bank branches declined from 237,723 to 138,376 between 2008 and 2021, a decline of 42%** (European Banking Federation, 2022). In a similar period of about a decade, **the total number of post offices in the EU 27 declined from 96,124 to 93,759 or only of 2,4%. Still a decline, but 20 times slower than that of the banking sector!**



# UPU and DESI data (I)

## The first set of data:

Universal Postal Union (UPU) Postal Statistics used to produce, every year, a global ranking of the postal system in 174 countries: the Integrated Index for Postal Development (2IPD) articulated into 4 dimensions:

- ✓ **Reliability:** speed of postal delivery (inbound perspective)
- ✓ **Reach:** intensity of postal connectivity (outbound perspective)
- ✓ **Relevance:** diversification and capillarity
- ✓ **Resilience:** inclusiveness and ability to respond to external shock

# UPU and DESI data (II)

## The second set of data:

Digital Economy and Society Index (DESI), a composite index that summarises relevant indicators on EU's digital performance. DESI is articulated into the following 4 dimensions:

- ✓ Connectivity
  - ✓ Human Capital
  - ✓ Integration of Digital Technology (by business)
  - ✓ Digital Public Services
- Digitalisation is interpreted as a process that goes beyond the mere infrastructural deployment of high-speed networks



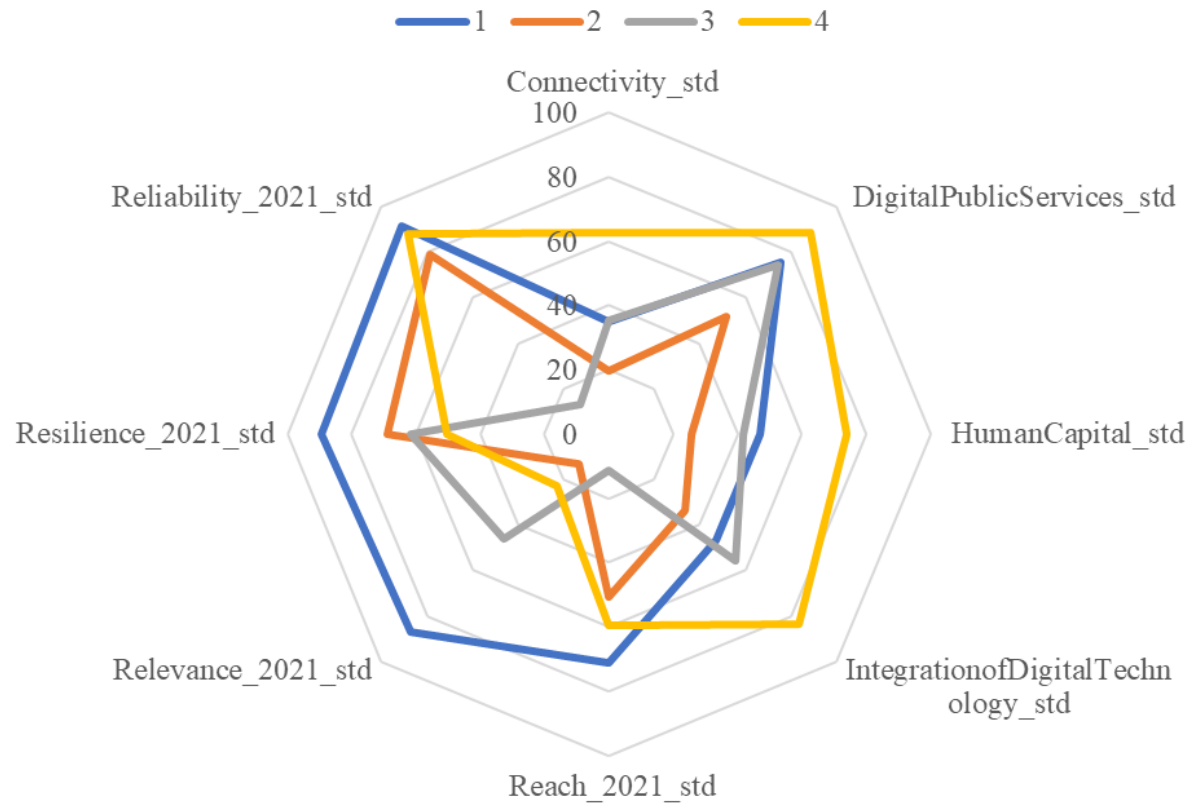
# Methodology

- Starting from the idea that digitalisation could offer promising business opportunities for the diversification of revenues needed by the postal operators, we combined the data coming from both datasets and performed a **Cluster Analysis** on the relative position of the 27 EU countries (year 2021) with respect to both digitalization and postal development.
- **Considering the lack of previous works that jointly investigate the postal sector and digitalisation, Cluster Analysis** is particularly suited for this kind of data exploration, as it allows to unveil structures of multivariate data without superimposing any predefined framework

# Methodology: steps

- 1) We standardize data of DESI and 2IPD to let them variate on the same scale.
- 2) We perform a hierarchical cluster analysis **to detect the optimal number of clusters** (comparing 4 different methods and 2 measures of **distances between groups**), conducting ad-hoc tests (Visual inspection of dendrograms and Duda-Hart index).
- 3) We increase the reliability of our results, measuring **the internal validity of each cluster combination**, searching for the highest level of **similarity within groups** with ad-hoc tests (Connectivity and Silhouette Width). The tests confirm the results of step 2.

# Results (I)



# Cluster	No. countries	List of countries
1	4	Austria, Estonia, France, Germany
2	13	Belgium, Bulgaria, Croatia, Czechia, Greece, Hungary, Italy, Latvia, Lithuania, Poland, Portugal, Romania, Slovakia, Spain
3	4	Cyprus, Luxembourg, Malta, Slovenia
4	6	Denmark, Finland, Ireland, Netherlands, Sweden

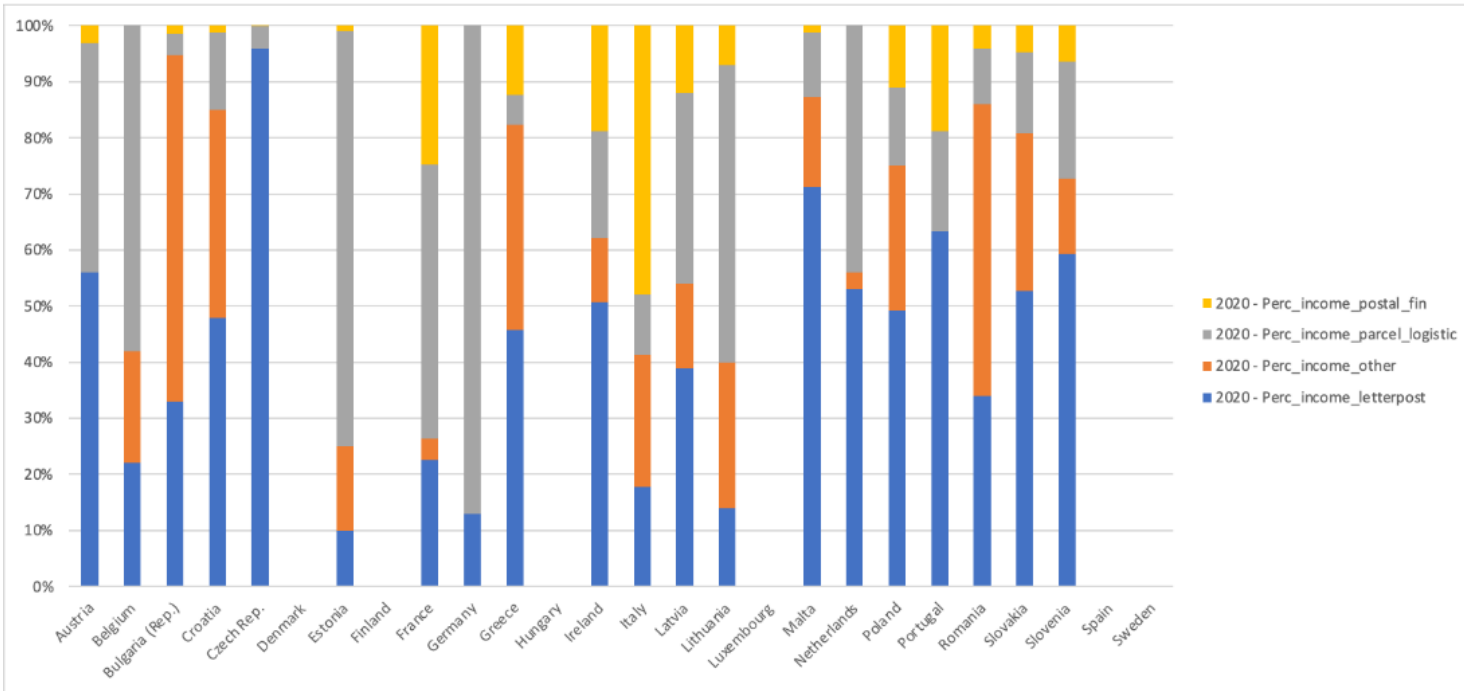


# Results (II)

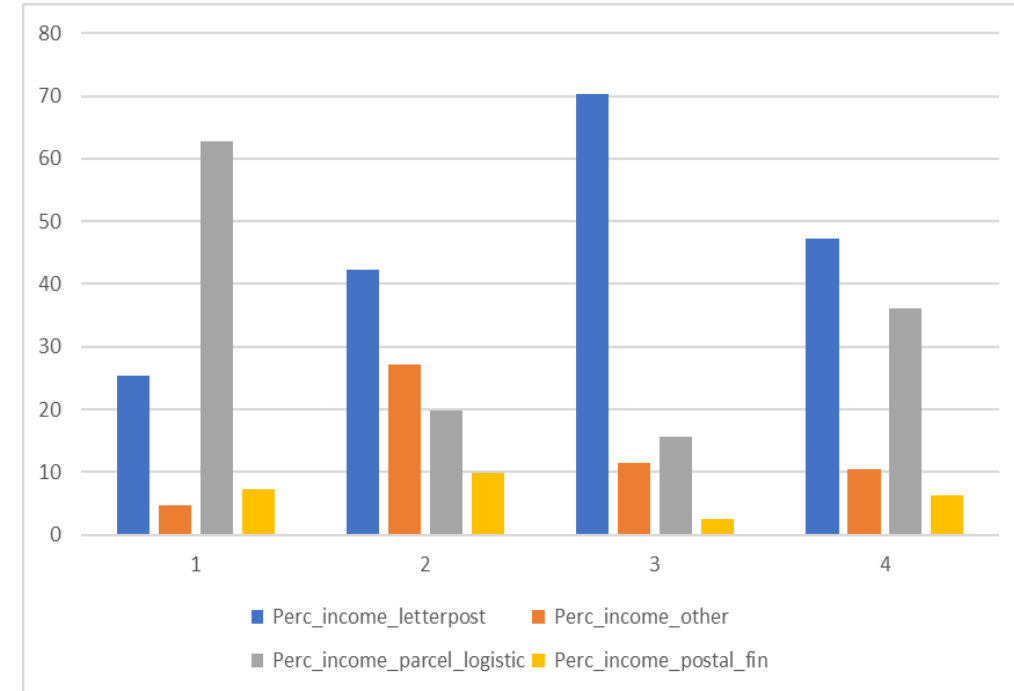
- **There is no cluster that is “superior” on both kind of measures compared to other clusters:** cluster #1 (**consolidated postal systems**) and #4 (**top “digital” performers**) shows “inverted” performances with respect to the two sets of indicators.
- In the middle two groups:
  - #2 includes many countries combining solid and developed postal systems with less than average performances with respect to digitalization;
  - #3 few small countries combining slightly lower levels of resilience but better relevance of their postal systems with relatively high performances on digitalization (better than group #2, in this respect).

# Results (III)

## Income decomposed by finance, logistic, letter and “other” (2020)



## Average values for clusters groups (2020)



# Case studies

Existing USO assets can be used innovatively to contribute to the provision of socially relevant services (like SGEI). Examples:

## 1. La Poste and Poste Italiane: innovative projects on social cohesion

The needs of the growing silver economy and also of an increasingly digital society represent a potential business opportunity for postal operators that by providing new social services, independently or in collaboration with government or other stakeholders, might generate new revenues.

## 2. Reverse logistics in the Netherlands

With its capillary network and national coverage, providers of the universal service, might be in a unique position to offer reverse logistic service both to consumers as well as third-parties, facilitating and reinforcing socially-desirable behaviours.

## 3. Opportunities for the Postal Service to Support 5G deployment

The growing need for network densification, which implies inevitable growth of the infrastructure deployment cost, might allow national postal operators to leverage their strong physical presence and national coverage to contribute to 5G deployment.



# Conclusions on cluster analysis

- From 2019 to 2020, countries in #1 have shown a remarkable growth of parcel logistics (+16,2%) showing a noteworthy capacity of the countries in this group to react to an external shock (pandemic) and exploit the strength of their physical presence.
- We speculate that the POs in the countries in cluster #2 have the greatest scope for developing services and activities that can contribute to digitalisation of public administration, businesses and citizens using existing postal networks.
- Also countries in cluster #3 might have high opportunities for diversification of revenues given that letters still account, on average, for over 70% of income of POs whereas parcels account for barely 15%.
- Countries in cluster #4 have already developed prominent digital skills. As they primarily include EU MS famous for their welfare system the questions is whether they could experiment with the use of postal presence to deliver advanced and highly digital socially relevant services.



# Conclusions

- In general, diversification into parcel market is the most obvious choice for POs. However, societal changes linked to digital transition constitute another equally important business opportunity. More data on income coming from the provision of socially relevant services would help researchers and companies to understand its true extent.
- The success of this type of diversification depends also on country-specific factors:
  - i.e. diversification into the banking sector and the success of Poste Italiane;
  - whether the POs are still SOEs and whether the management culture is risk-averse;
  - hurdles that may limit POs' ability to exploit their opportunities (high labour cost, regulations limiting entry into other sectors).
- While some new services may simply be offered by POs themselves, others will unavoidably require partnerships with firms from other sectors, and/or closer collaboration with public administrations, and **a very open mind from their regulators.**



# Thank you!

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