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The Impact of the Electronic Services to the Universal Postal Services

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Abstract

Advances in technology are blurring the boundary between the delivery of communications via physical and electronics means. E-substitution has impacted the development of postal markets across the world.

Postal operators are faced with the challenge to construct medium/long term projection in a rapidly evolving market with e-substitution of postal services. Because of economies of scale in the sector, as mail volumes decline average costs increase ceteris paribus (mail volume reduction, in turns, causes a continuous uptrend in the unit costs of mail, since fixed costs of production are spread over fewer volumes). Increasing prices may not be the good answer. The requirement to provide a universal service (national geographically delivery coverage, five or six days a week service) imposes a number of rigidities on the cost structure that seriously threaten its financial viability.

This article assess the impact of universal service obligation constraints on the universal service providers cost structure as well as their combined effect, in a market environment characterized by the shrinking of volumes due to e-substitution. In the article will be uses a hedonic function to estimate the impacts from a reduction of delivery frequency, as well as quantify the impact on cost through an econometric model.

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1. Introduction

The obligation to provide a universal postal service includes a set of restrictions in the trade and operational behaviour of the provider. The restrictions stem from the defined method of providing the universal services (US) and its defined extent according to the Directives of the European parliament and Council (1997, 2002, 2008), but also according to specific conditions in individual countries. This paper is focused on the assessment of three major restrictions related to achieving the desired level of quality of the provided US by universal service obligation, which is speed, thus upholding the set transportation time $D + n$ (formula $D + n$, where D represents the date of deposit and n the number of working days which elapse between that date and that delivery to the addressee), ensuring delivery of items each business day and providing the service in the whole territory of the state.

1.1. The goals

The goal is to assess the effect of each of these restrictions on the cost structure of the provider of the universal service (USP). The reason is the growing e-substitution causing decrease of volume of distributed items falling within the US (Kolarovszki *et al.*, 2016). We want to assess the effects of each restriction by e.g. removing the obligation to provide services in time period $D + 1$, in the whole state, especially in the least attractive parts of the territory of the state.

1.2. The methodology

The proposed methodology is based on:

- Assessing profits / losses from providing US for individual years (possibility of applying a prognostic approach – simulation of future period), holding a constant extent of the defined US so it would be possible to assess the effect, which the e-substitution will have on the accounting of profits/losses during the years, with particular reference on the moment, in which the balance of profits and losses will shift to losses.
- Assessing / simulating the effect of alleviating the three main restrictions/obstacles stemming from the US on incomes and expenses from the statements of income and losses in the following years.

Similar methodology of calculating, resp. estimating the effect of e-substitution on providing US was presented on the example of Poste Italiane in study Cuomo and Scarfiglieri (2013), where the presented results shown major threat of e-substitution for Poste Italiane.

The case of Slovak Post as a USP can be interesting, because Slovakia is not one of the large economies in Europe, but despite this it is one of the most developed post-communist countries. In terms of calculating the number of items on per capita, Slovakia falls in the European average. Since electrification recorded in recent years in Slovakia major growth and at the same time decrease in volumes of letter mail (from US) is around 10% annually, it is interesting for us to examine the relationship between e-substitution and defined scope of the US.

In order to simulate profit/loss related to the US during the defined year 2012 while maintaining the defined extent of the universal service ($D + 1$, pick-up and delivery 5 days a week, 100% coverage of the territory of the state, including rural areas), the study used publicly available data on profits, costs and volumes of items of the universal service. The estimates were implemented for each part of the postal value chain in key year 2012 with the application of approaches of the modified model according to Cohen *et al.* (2006).

Simulating the effects of e-substitution on variously defined extent of the US is based especially on the results according to Pearsall and Trozzo (2011). Similar model was used also by the PWC (2006). The costs of each of the parts of the defined extent are affected by costs at each level of the postal value chain. All simulated profits/losses as well as future volumes are estimated based on previous developments and trends, including the prognosis of the GDP development. Expected annual decrease of the volume of items thanks to e-substitution is set at 3%. In this estimate we are using the experience of France, Italy, Germany, Spain, Great Britain as well as USA.

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