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How to respond to declining volumes in postal price caps?

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In many countries, postal regulators have implemented price cap regimes to allow more pricing flexibility and to provide incentives for postal operators for improving efficiency. In the price cap formula (RPI-X), the X-factor reflects expected productivity gains that usually reduce the scope of potential price increases such that average prices may only increase less than inflation (change in RPI). Today, most regulated national postal operators face declining letter volumes due to digitisation and e-substitution so that productivity gains resulting from innovations are compensated by reduced economies of scale and scope. Regulators in several countries have responded to the changing market conditions by revising and modifying price cap regulations: either by reducing the scope of price regulated services or by setting negative X-factors.¹ Crew and Brennan (2016) developed a theoretical approach to link price caps to volume declines by introducing an adjustment factor (Z-factor).² Recently, regulators, have considered implementing the Crew-Brennan approach, for example PTS in Sweden³.

The paper consists of two parts. The first part compares price cap regimes, and X factors determined by regulators in selected European countries (Belgium, France, Germany, Italy, the Netherlands, Portugal, Sweden and the UK). This analysis updates our findings from previous publications⁴ and specifically discusses how regulators apply the price cap formulas to address incentives for efficiency improvements on the one hand and losses in economies of scale and scope on the other.

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1 Dieke, Alex, Christian M. Bender and Sonja Thiele (2017), International Price Regulation, WIK-Consult, Bad Honnef, appendix to: U.S. Postal Service Office of Inspector General (2017), Lessons in Price Regulation from International Posts, Report no. RARC-WP-17-003.

2 Brennan Timothy J. and Michael A. Crew (2016), Price Cap Regulation and Declining Demand. In: Crew Michael A., Brennan Timothy J. (eds), The Future of the Postal Sector in a Digital World, Springer International Publishing, 2016, 1-17.

3 SOU (2016), Som ett brev på Posten – postbefordran och pristak i ett digitaliserat samhälle, Government Official Inquiry, SOU, Stockholm; PTS (2016), PTS remissvar på delbetänkandet Som ett brev på posten – postbefordran och pristak i ett digitaliserat samhälle. Answer to official referral, Swedish Post and Telecom Authority, Stockholm.

4 Niederprüm, Antonia, Christian M. Bender and Alex Dieke (2016), Scale economies and postal price caps in Europe: Declining volumes, lower productivity, higher postage? In: Crew Michael A., Brennan Timothy J., The Future of the Postal Sector in a Digital World, Springer, Cham, pp 18-28.

The second part of the paper is dedicated to the Z-factor proposed by Crew and Brennan that consists of two key components: the elasticity of average cost and the price elasticity of demand. The paper discusses potential pitfalls of the Crew-Brennan approach and provides recommendations for its implementation and parametrization in regulatory proceedings. For this purpose, the paper presents an economic model that addresses i.a. percentage changes in average costs in letter operations depending on the per capita-volume.⁵ The percentage change in costs could be used to determine the Z-factor to reflect expected changes in average cost due to volume decline. The paper summarizes recent studies on price elasticities for letter demand and their implications on the Z-factor, and on the incentives for the regulated firm.

The paper concludes with an assessment that combines our findings from recent decisions on price cap mechanisms and our analysis of the Crew-Brennan approach. It gives recommendations for future price control decisions.

5 An earlier version of this model was published in Dieke, Alex et al. (2013), Main Developments in the Postal Sector (2010-2013), WIK report for the European Commission.