Bundling Incentives in Markets with Product Complementarities: The Case of Triple-Play*

João Macieira†
Virginia Tech

Pedro Pereira‡
AdC and CEFAGE-UE

João Vareda§
European Commission and CEFAGE-UE

June 9, 2014

Abstract

We analyze firms' incentives to bundle and tie in the telecommunications industry. As a first step, we develop a discrete-choice demand model where firms sell products that may combine several services in bundles, and consumers choose assortments of different types of products available from various vendors. Our approach extends standard discrete-choice demand models of differentiated product to allow for both flexible substitution patterns and to map demand for each choice alternative onto the demand for each service or bundle that a firm may sell. We exploit these properties to examine bundling behavior when firms choose: **(i)** prices, and **(ii)** which products to sell. Using consumer-level data and survey data from the Portuguese telecommunications industry, we estimate our demand model and identify firm incentives to bundle and tie in this industry. We use the model to perform several policy related conterfactuals and evaluate their impact on prices and product provision.

Key Words: *Bundles, Discrete-Choice Model, Equilibrium Simulation, Differentiated Product, Consumer Level Data.*

JEL Classification: D43, K21, L44, L96.

---

*We gratefully acknowledge the financial support from the NET Institute (www.netinst.org). We thank J. Prieger and J. Williams for useful comments. The opinions expressed in this article reflect only the authors' views and in no way bind the institutions to which they are affiliated.

†Department of Economics, Virginia Tech. 3044 Pamplin Hall (0316), Blacksburg, VA 24060. E-mail: joaom07@vt.edu.

‡AdC, Avenida de Berna, n^o 19, 7^o, 1050-037 Lisboa, Portugal. E-mail: pedro.br.pereira@gmail.com.

§European Commission, DG Competition, Brussels, email: joaovareda@hotmail.com