

Topics in Regulatory Economics and Policy

Pier Luigi Parcu
Timothy J. Brennan
Victor Glass *Editors*



New Business and Regulatory Strategies in the Postal Sector

 Springer

Topics in Regulatory Economics and Policy

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ISBN 978-3-030-02936-4

ISBN 978-3-030-02937-1 (eBook)

<https://doi.org/10.1007/978-3-030-02937-1>

Library of Congress Control Number: 2019930126

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This Springer imprint is published by the registered company Springer Nature Switzerland AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

Preface

This book is a result of the 26th Conference on Postal and Delivery Economics, which was held on May 30–June 2, 2018, in Split, Croatia. The Conference was a joint effort of the Florence School of Regulation—Communications and Media (FSR C&M) at the European University Institute and of the Center for Research in Regulated Industries (CRRI) at the Rutgers Business School.

Since the first conference was organized in July 1990, almost 4000 participants have had the opportunity to discuss evolving trends in the postal and delivery economics sector. This Conference continues to be a crucial opportunity for the relevant stakeholders to share knowledge and best practices, following the tradition established by Michael Crew and Paul Kleindorfer when they held the first conference in 1990.

The Conference on Postal and Delivery Economics is a testament to the evolution in the postal and delivery sector over the last 25 years: from high letter volumes to a progressive increase of parcel delivery, from the start of the liberalization process to the disruptive impact of digitalization and the Internet, and from sector-specific activities to new business differentiation and to new customer-friendly solutions. At the same time, the Universal Service Obligation remains a central element of the regulatory, policy, and economic debate.

The Conference was made possible by the contribution of generous sponsors. We would like to thank them not only for financial support. In addition, they provided helpful advice in their service on our organizing committee as well as, along with others, intellectual contributions, advice, and encouragement: Virginie Alloo, Kamak Arzhangi, Bruno Basalisco, Claire Borsenberger, Stephen Brogan, Claire Carslake, Mindaugas Cerpickis, Alberta Corona, Peter Dunn, Blandine Eggrickx, Colm Farrelly, Lucia Fioravanti, Jean-Paul Forceville, Jimmy Gårdebrink, Marina Gibbs, Adam Goodman, Stefano Gori, Annegret Groebel, Philip Groves, Fiona Hamilton, John Hearn, Adam Houck, George Houpis, Alison Jessop, Denis Joram, Olaf Klargaard, Marine Lefort, Leonardo Mautino, Anna Möller Boivie, Eleanor Monaghan, Henrik Ballebye Okholm, Michela Raco, Philippe Régnard, Frank

Rodriguez, Simona Sanna, Michael Scanlon, Luigi Scorca, Malcolm Shaw, Soterios Soteri, Mark van der Horst, Tim Walsh, and Tanya Westley.

This year's conference benefited greatly from the efforts of Elisabetta Spagnoli of the Conferences Unit of the Robert Schuman Centre for Advanced Studies and of the team of the FSR C&M, who were incredibly helpful during the Conference, enabling it to operate very smoothly. Our special thanks go to Paula Gori of EUI's School of Transnational Governance and Chiara Carrozza of the FSR C&M, without whom this conference and book would not exist. They and their EUI colleagues provided both advice and assistance on numerous occasions and contributed greatly to the success of the event.

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Newark, NJ, USA

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The Conference was kindly supported by

Royal Mail
United Parcel Service
Pitney Bowes
Ofcom
Poste Italiane
Le Groupe La Poste
Copenhagen Economics
IBM Global Business Services
Oxera
ComReg
Frontier Economics
Cullen International
K&L Gates LLP
New Zealand Post Limited
Agcom
An Post

Acknowledgments

We would like to thank our distinguished keynote speakers, Raphaël Goulet, Head of Unit, DG Growth, European Commission and the Executive Board Member of BIPT (the Belgian National Regulatory Authority) and Chairman of the European Regulators Group Postal Services, Jack Hamande, who was also our dinner speaker.

In addition, we thank all authors and participants of the Conference. Without their contributions, the Conference and this book would not have been possible. The usual disclaimers are applicable. In particular, the views expressed reflect the views of the authors and are not necessarily those of the editors or sponsors.

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Postal Operators as “Ground Based” Online Platforms?



Paula Gori and Pier Luigi Parcu

1 Introduction

Postal services may look old fashioned, especially to the online generations, but postal operators (POs) historically were the first “communications companies”, with the largest customer bases and as stated in Title 39 of the U.S. Code, it was the PO that “binds the nation together”.¹

In the twentieth century, voice telecommunications challenged but did not displace postal services. However, yesterday’s challenge of voice telecommunications to postal operators appears minor compared to the disruption now caused by online communications. That the Internet is having a disruptive impact on many, or maybe all, business models is obvious. What is less clear is if, and how, sectors affected by online services can react to the disruption and survive by transforming it into an opportunity.

¹Article 39 (a) “The United States Postal Service shall be operated as a basic and fundamental service provided to the people by the Government of the United States, authorized by the Constitution, created by Act of Congress, and supported by the people. The Postal Service shall have as its basic function the obligation to provide postal services to bind the Nation together through the personal, educational, literary, and business correspondence of the people. It shall provide prompt, reliable, and efficient services to patrons in all areas and shall render postal services to all communities. The costs of establishing and maintaining the Postal Service shall not be apportioned to impair the overall value of such service to the people.”

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The European Commission, analyzing the digital revolution, has listed a number of essential features of the so-called online platforms that are key to understanding the opportunities they present. Online platforms create and shape new markets (substituting or integrating traditional ones); they operate in a multi-sided market environment; they exploit direct and especially indirect network effects; they rely on ICT to constantly reach users; they create digital value (European Commission, 2016). Among the key ingredients for the affirmation and success of online business models, no matter the specific type, is the ability to gather and exploit large amounts of data and to acquire the trust of consumers.

Historically, because of their intermediary role, POs fare well on both of these dimensions: they have developed and used large databases and have established a long-term relation of trust with consumers. POs have additional strengths that follow from owning a series of other important assets such as a widespread presence of physical locations, a large work force, a multitude of vehicles, and so on—elements normally either missing or secondary in the business model of online platforms.

The aim of this paper is to understand whether POs could restructure their business models by transforming themselves in a new kind of ground-based online platforms or, at least, by creating strategic alliances with other major online platforms by virtue of having somewhat complementary assets. To this purpose, after a brief review of the disruption created by online platforms, we will examine behaviors and intentions of some important POs active within the European Union. We then look at the assets and strengths that may facilitate a move toward a stronger online role for POs and sketch risks and opportunities they face as they attempt to redefine themselves as a possible new *genus* of online platform.

After this introduction, Sect. 6 contains a literature review of the digital opportunities offered to POs that are analogous to those we plan to explore in this chapter. Section 3 describes the PO business dilemma presented by digitalization. This is followed in Sect. 4 by a brief presentation of the most recent digital strategies of five large European POs: Royal Mail, Deutsche Post DHL Group, Le Groupe La Poste, Poste Italiane and Correos Group.² By describing their reactions to the online challenge, we aim to understand if best practices are emerging that lead to a new major role for POs in the online world. In Sect. 5, we sketch our idea of POs as new kind of ground-based online platform. Finally, we conclude with a summary of our argument and suggested leads for further research.

²The authors would like to thank the five operators for having shared their feedback as a follow-up of the presentation of the draft version of this paper at the 26th Conference on Postal and Delivery Economics. Their input was key for finalizing this chapter.

2 A Short Survey of the Existing Literature on POs Digital Role

Most of the previous literature treating the relation between Internet and the postal sector seems to agree that notwithstanding the disruption, POs can profit from online services and go into a “Version 2.0” of their business model. Asher, Callan, and Marsh (2011), analyzing the role of the postal service in the digital age in the United States, concluded that USPS could continue to “bind the nation together” by embracing technological development and digitalization, if it is able to identify a functional area where it could design and implement a digital strategy. In this regard, Asher et al. mentioned a number of privileged spaces for action such as e-Government platforms, identity validation, privacy protection, transactions’ security, e-commerce enabling, hybrid and reverse hybrid mail (RHM).

On the other side of the Atlantic, Jaag, Stahl, and Stroelin (2011) analyzed the potential advantages of RHM with a focus on Switzerland, underlining important cost savings. A key characteristic of RHM is that the receiver can preview the envelope and, if interested in the content, can agree on a physical delivery or eventually accept the electronic version of the document, forgoing its physical delivery. The direct consequence of RHM would be to reconsider the Universal Service Obligation (USO) and, in the words of the authors, to go for a “technologically neutral formulation of the USO” (Jaag et al., 2011, p. 8).

Borsenberger, Joram, Klargaard, and Régnard (2016) stressed POs’ historical role as trusted intermediaries that protect the legal principle of confidentiality of correspondence, which they could use to present themselves as “Personal Data Stores”. The power of the postal brand, trust and the physical network as an asset that can bridge the offline and the online world (e.g. digital literacy) were the main elements on which this recommendation was based. The same study also analyzed how POs could leveraging the trust and direct contact with the community to offer themselves as managers of digital identities.

While in the physical world, identity is a unique civil status recognized by a public authority, in the digital world an individual can have several digital identities. This makes online markets more anonymous and heavily dependent on reputation and verification. The multiplication of digital profiles, usually on social networks or global online platforms, allows for gathering of a large set of data but can also have a complex impact on privacy and data protection. According to Borsenberger, Klargaard, and Régnard (2017), POs, could be the most obvious actors to collaborate with governments in creating unique state-sponsored platforms to redefine the digital identities of citizens.

In 2012, the MIT Center for Digital Business issued a study (Parker & Van Alstyne, 2011, p. 13), commissioned by the International Post Corporation, aimed at providing a roadmap to establish what they called “digital postal platforms”. The approach was to start by introducing examples and definitions of online platforms and then to outline the opportunities for the postal sector by identifying the “platform elements” of the postal actors themselves. Their suggestion was not to start from what the Internet has disrupted in the postal world and look for a response, but instead to start from the key features of online platforms and then move to the

opportunities and advantages that POs have. This philosophy of how to respond to digitalization is similar to what we are proposing here. Again, the need to re-define the Universal Service Obligation (USO) emerged as a key element of the analysis.

POs could not only embrace digitalization; they could also become pivotal facilitators of digital inclusion. A digital divide exists between urban and rural areas. A significant portion of the population still lacks elementary digital skills because of age, literacy, interest etc.³ Many businesses have remained off-line. Sheedy and Moloney (2015) examined the potential for a collaboration between Postal Operators and national and local authorities to assist communities in using digital services and providing digital literacy, both medium and content-related. The authors presented survey results showing that local communities, including local businesses, would be eager to have a Community Infopoint platform. Such a platform would act as an assistant for digital services, provide online space for businesses, serve as communication tool for the local authorities, as well as offer other services. Sheedy and Mahoney stated that National Postal Operators would be the natural managers of this type of platform.

The common strand of the literature on the relation between digitalization and the postal sector is the importance for POs to exploit the postal “brand” and its unique assets, especially when confronting the major weakness of online platforms: lack of trust (Asher et al., 2011). We develop this line of reasoning below.

3 The Impact of the Internet on Postal Markets

The impact of the Internet revolution on the postal markets was quite profound. Emails, i.e. the e-substitution of direct mail, were the first online services that most citizens benefitted from. Besides emails, other phenomena such as online newspapers and online advertising contributed to the rapid e-substitution for other main traditional postal products.

Furthermore, if the primary mission of postal operators was to facilitate written personal, administrative and commercial, communication between citizens—including with the government and other private and public institutions—almost all these exchanges appeared exposed to being systematically replaced by online services. It seemed just a matter of time for digital transition to take complete effect, with the acquisition of a widespread digital literacy. Table 1, produced by (Copenhagen Economics, 2018) report for the EU Commission, shows the potential extent of the e-substitution process in relation to most essential public communications.

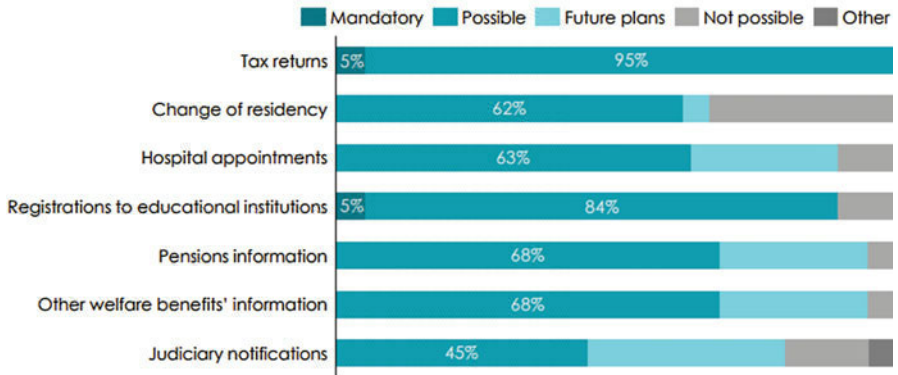
Notwithstanding the potential for the Internet to be entirely disruptive, postal operators so far have essentially survived the tempest of e-substitution, but definitely not the postal markets *tout court*. Keys to POs’ resilience were perhaps their legacy of continuous direct contact with costumers and the historical role of POs in the

³See the European Commission DESI index, <https://ec.europa.eu/digital-single-market/en/human-capital>.

Table 1 E-Government substitution from paper to digital format

Electronic communication with public institutions, 2016

Share of countries (21 countries)



Source: Questionnaire to USPS

Copenhagen Economics

Main Developments in the Postal Sector 2013-2016

community, including being an element of the state, employing large numbers of workers, widespread physical points of presence and vehicles, and, very important, a bond of trust with the community built across decades or even centuries. All these assets are to some degree missing in the online world, a lack that probably constitutes so far one of its main weaknesses. An interesting example of how digital companies may react to this lack of presence and contact is the Dutch e-commerce online platform “Bloei”, that recently added its own delivery service just to have a direct contact with its users.

In any case, the net effect of Internet disruption in the postal sector is ambiguous. On the one side, emails and other e-substitutions have largely replaced physical mail, thus triggering the rapid decline in letters volumes.⁴ But on the other side, the spread of e-commerce has strongly increased the parcels delivery business of POs, especially in the Business-to-Consumer (B2C) and Consumer-to-Consumer (C2C) segments. Moreover, even if other services also traditionally provided in part by POs, such as payment services, can easily be done online, POs and their widespread net of post offices keep an advantage through a key feature still partially lacking in the online world, again trust.⁵

POs, therefore, remain in that particular position in which they can stick to their historical role and accept the decline in letter volumes and other traditional activities, or they can attempt to evolve toward a business model in which the digital world

⁴Emails are the same product, but superior in many dimensions, offered for free through a different channel.

⁵On this point compare the interesting survey on the Community Infopoint introduced in Sheedy, C., & Moloney, M. (2015). *Digital inclusion: A role for postal operators in a smart world, postal and delivery innovation*. Berlin: Springer.

assumes an ever-increasing space. The comparison between the destiny of Polaroid (belated move to digital photography) and Netflix (immediate move from DVD delivery to online content distribution) shows that the timing of reaction can be a key to emerge as actors of the digital disruption rather than victims (Asher et al., 2011).

4 Digitalization and Diversification: The European Reaction

Many postal operators were quick to react to the Internet revolution, but they started almost immediately to diverge in their response. Essentially, POs moved along two main dimensions: a first group embracing primarily digitalization and technological development with the aim to improve their traditional business model, and a second group choosing a radical diversification of the business models toward adjacent market areas as the main driver (Parcu & Silvestri, 2017).

For the first group, facing digitalization essentially meant introducing additional services like tracking and tracing, notification of the status of the delivery, hybrid mail, reverse hybrid mail, and new e-government services. Probably at the beginning, this was perceived as a first step in the modernization of the postal markets, but for some operators it remains today the main reaction to pressure from the online world. Other POs instead went decisively for a more radical change, betting on business diversification and moving to adjacent areas, primarily finance, banking and insurance. A consequence of these two strategies in response to e-substitution is that despite different histories of postal service in different countries, there was a common global identity of the services offered by Postal Operators around the world. We are today in a situation where each PO, by exploring and mixing the two main business strategies already mentioned, has created its own original profile (Jaag, Parra Moyano, & Trinkner, 2016).

To confirm this observation, we examined the 2016 yearly reports of Royal Mail (Sect. 4.1); Deutsche Post DHL Group (Sect. 4.2); Le Groupe La Poste (Sect. 4.3); Poste Italiane (Sect. 4.4) and Correos Group (Sect. 4.5), with a specific focus on their digital business model strategies and on “where the money is coming from” method of analysis. A synthesis of the origin of 2016 revenues of the five operators is presented in the following Table 2.

4.1 *Royal Mail*

The focus on traditional delivery services (letters and parcels) remains the key characteristic of Royal Mail’s strategy, which has “a clear vision to be recognized as the best delivery company in the UK and across Europe” (Royal Mail plc, 2017, p. 16) and whose main actors are UKPIL and GLS (respectively concentrating on Letters and Parcels delivery). Royal Mail’s strategic priorities are defending letters, winning in parcels and geographic expansion in both services.

Table 2 Operating revenues of five EU major postal operators, percentages

<i>Royal Mail</i>			
UKPIL (letters and parcels)	Express	GLS (parcels)	Other services
78.3	0.0 (included in UKPIL and GLS)	21.7	0.0
<i>Deutsche Post DHL Group</i>			
Post, E-commerce, parcels	Express	Global forwarding—freight	Supply chain
28.7	24	23.4	23.8
<i>Le Groupe La Poste</i>			
Services mail-parcels	GeoPost	La Banque Postale	Digital services
47.4	26.2	24.0	2.1
<i>Poste Italiane</i>			
Postal and business services	Financial services	Insurance services	Other services
11.5	16	71.8	0.7
<i>Correos Group</i>			
Postal, telegraph and parcel services	Services to third parties and of banking services	Money transfer	Other
95	1.2	1.4	0.9

In its business case, the disruption of the Internet is transformed in an opportunity mainly primarily related to e-commerce. Consequently, Royal Mail is improving its parcels delivery service by strongly improving customer experience (e.g. same day delivery) and using digitalization both to improve its internal flow and to interact with costumers (e.g. the LoveToPost app). In parallel, the group is expanding in other geographical areas of the globe, both by buying other delivery companies (e.g. the acquisition of the next-day delivery company GSO in California) and by setting up strategic partnerships with retailers and network partners to increase cross-border volumes (especially in Asia). Royal Mail is also working on e-Government initiatives. It is one of the certified companies that offers GOV.UK Verify, a government digital ID program.

To summarize, the online world is leading Royal Mail, to pursue the parcels market as a new growth opportunity, continuously improve quality of service on its traditional business, and expand geographically to ride the wave of the increase in global demand for parcels’ delivery.

4.2 Deutsche Post

Deutsche Post DHL Group strategy is similar to Royal Mail in focusing primarily on delivery and logistics. In the words of the 2016 Annual Report: “We are focusing on

our core mail and logistics” and “intend to benefit from growth in the e-commerce segment and in developing and emerging markets” (Deutsche Post DHL Group, 2017, p. 30). Deutsche Post DHL Group is organized into four divisions: Post-eCommerce-Parcel, Express, Supply Chain and Global Forwarding and Freight. The revenues coming from each of these different divisions are almost equal.

Deutsche Post interprets the online challenge as a trigger to boost parcels delivery, overall technological development, an opportunity to introduce new tailored services (within the Express division, Time Definite International and Medical Express) and to improve logistics services, particularly within the Supply Chain division. Within this digital strategy, Deutsche Post is also seeking opportunities for geographic market expansion and, according to the 2017 Annual Report, aims to have a minimum of 30% of the group revenue in emerging markets (for example Malaysia, Vietnam and Chile) by 2020. In addition, DHL Group is exploring acquisitions of industry expertise in new sectors such as life sciences, health care, automotive, electric mobility and food logistics.

The core businesses of Deutsche Post remains delivery and logistics but interpreted more broadly. The company is seeking to play a new role in so-called smart cities and, more generally, in the digital society. Tailored solutions, express services, involvement in automotive and health care, food logistics, are all areas where Deutsche Post is seeking to find a space as an enabler of change, without abandoning its primary mission in delivery. Its strategy towards innovation is also translated into setting-up an internal incubator and a privileged collaboration with Plug and Play, a platform ecosystem and venture capital fund.

4.3 *La Poste*

While having some common elements with the two above-mentioned strategies, the business model of Le Groupe La Poste appears to have undertaken a further step towards a mix between digitalization of the core business and outright diversification. Under the umbrella of the “La Poste 2020: Conquering the future” (Le Groupe La Poste, 2017, p. 14) strategy, the group is now organized as five business units: Services-Mail-Parcels, GeoPost, La Banque Postale, Digital Services and La Poste Network. The first two units count for 73.6% of the consolidated operating revenue, which means that the traditional business (letters and parcels) is still key to the present of the group.

A major diversification came in 2005 with the creation of La Banque Postale, which today accounts for 24% of the consolidated operating revenue. It is structured around three divisions: retail banking (the core business), insurance and asset management. La Poste is also active in mobile communication via La Poste Telecom, a mobile virtual network operator (MVNO). Other digital services currently account for only 2.1% of the consolidated operating revenue of the group, but they are growing the space for digital identities, secure information exchange platforms,

and hybrid products such as archiving and supporting personal and administrative services.

Finally, La Poste is also seeking a role in the new sharing economy/smart society evolution. It aspires to provide services such as collecting and recycling paper, co-mobility, delivering health products, and being present in smart homes. Particularly interesting is its presence in the so-called silver economy, assisting old people, especially in helping them to make the digital transition.

4.4 *Poste Italiane*

Poste Italiane is a clear and brave example of a postal operator in which diversification was pushed further. Today its four operating segments are Postal and Business, Finance, Insurance Services and Asset Management, and Other Services (including Poste Mobile). In particular, its customer distribution network is built around three main pillars: mail and parcel; mobile and digital payments; and financial and insurance. The Postal and Business division, which includes logistics, represents in 2016 only 11.5% of total revenue of the group. This surprisingly small number is clear evidence of the radical change in business strategy by Poste Italiane in the past few years.

What appears to be the new core for Poste Italiane today is its Insurance Services and Assets Management business (71.8% of turnover), where the group successfully operates in life insurance (i.e. long-term investments), non-life insurance and health insurance. Financial Services also contributes 16% of total revenue. Finally, Poste Italiane diversified also toward telecom services, where Poste Mobile is the first mobile virtual network operator in Italy with about 50% of the market share for MVNOs.

Within its specific digital strategy, Poste Italiane was accredited as a Digital Identity Manager by the Agency for Digital Italy. It is developing a new service “Ritiro Digitale” that provides hybrid mail. Through SPID (Sistema Pubblico di Identità Digitale) Poste Italiane offers access to government digital services (with a 90% market share); with pagoPA operates as the leading payment service provider for payments to the government. It also has an agreement with the Ministry of Education to provide a card platform for students. Poste Italiane is also a partner of a Talent Garden point in Rome, which is an incubator for digital developers.

4.5 *Correos Group*

Correos Group is probably the company most difficult to classify in this strategic assessment. In the words of its Annual Report: “The purpose of Correos Group is to become the best global provider in physical and digital communications and parcel services” (Grupo Correos, 2016, p. 5). Letter and parcel delivery are still its core

business, but its effort is to collaborate and partner with the online world appears extremely relevant. The Correos Group comprises Correos y Telégrafos and its subsidiaries, Correos Express Paquetería Urgente, Nexea Gestión Documental, and Correos Telecom.

Correos y Telégrafos is the provider of physical and digital communications and parcels solutions, which are still by far the main activity of the Group, providing more than 90% of the revenues, while Correos Express delivers parcels within 24 h. Nexea Gestión offers integrated management of corporate mass communications and customized technological solutions for document processes. Correos Telecom provides network services in the telecommunications market.

The recent relationship between Correos and the online world is extremely interesting. While delivery remains its core business, Correos established very strong partnerships with important e-commerce operators such as Alibaba, and it is acting as an enabler of different e-commerce online platforms. This development is advanced through the Comandia platform created by the group. Comandia provides both the expertise in marketing and designing and the logistics network for delivering products to small and medium enterprises (SMEs) that decide to create their e-commerce platform. Only the future will tell if this effort of creating strategic partnerships with the online world will affect significantly the sources of revenue of the Group.

In Table 3 we summarize the present strategic positioning of these five EU POs along some of the dimension we explored.

In conclusion, following primarily one of the two lines of reaction we summarily sketched, and often mixing them, these five major EU POs have become relevant digital players in their countries. However, notwithstanding the differences among countries, no PO has, at least so far, managed, or even only attempted, to completely shift toward an “online only” or “online mainly” business model.

Table 3 Strategic positioning of five major EU postal operators

	Letters parcels business	Diversification-product expansion	Digital services presence	Smart life presence	Geographic expansion
Royal Mail	High	Low	Medium	Low	High
Deutsche Post DHL Group	High	Low	Medium	High	High
Le Groupe La Poste	Medium-High	Medium	Medium-High	High	Medium
Poste Italiane	Low	High	Medium	Low	Low
Correos Group	High	Low	Medium-High	Low	Low

5 Postal Operators as Ground-Based Online Platforms

The online world is affecting the offline world and changing it, but also the opposite is true. Delivery of goods acquired online still requires a physical location. Most services, notwithstanding the possibility of an important online phase, require a personal contact. E-government, while a significant instrument for improving the relation between citizens and the state, still has a limited reach, because of a frequent lack of adequate levels of digital literacy in the population.

Recalling here the basis of most online platforms’ business models can be useful. Primarily, online platforms have built their success on a stable core component plus a set of growing complementary components. These additional components are often the basis for the value creation by the platform. The essential ingredient in platforms is the exploitation of network effects. Indirect effects are essential for the “for free” business model, but direct effects are also decisive factors for acquiring customers and market shares. Moreover, an online business model rarely is developed or fully implemented within a single firm, but is generally part of a larger ecosystem.⁶ Most successful platforms are built on agreements, standards and rules that define how the various participants interact in their relations with the customers. These agreements may be limited to interoperability but may also propose higher degrees of integration, normally make large use of common data and often require a strong commitment to openness toward third parties.

The key question we address here is if POs could find a way to continue their evolution toward a more digital business model and at the same time help foster the digital transition of our societies. With regard to complementarity, it is first worth asking whether POs’ peculiar physical presence can play any specific significant role. Similar to other traditional network industries, the postal market is characterized by a very strong physical element, but this has a peculiar prevailing human characterization. POs historically offer a delivery service of a product that is tangible, physically consigned by the client to an employee of the PO and then delivered by another employee to the recipient. Moreover, post offices are spread widely and, therefore, are a presence within local communities. Be it in cities or in rural areas, one can take it for granted that he or she can find a nearby post office. Coherently with the mission to deliver the items from one customer to the other, and because of their ubiquitous physical presence, postal operators have a very large number of employees and vehicles continuously at work. This physical presence, with a prevailing human characterization, could certainly complement other characteristics of online platforms.

The other fundamental complementarity between physical and online presences, is the difficult search for an adequate level of trust for online transactions. The online environment has a structural element of anonymity and a lack of personalization that

⁶Probably, Apple is the most important example of an originally closed platform/company, but the development of the Apple store shows that global success anyway requires an increasing degree of openness and interaction with other players.

somehow limits the ability of citizens to have full confidence in the good and services provided. Clearly online services have radically changed our habits and simplified our daily life, however, many users still do not fully trust online platforms. There is an overall suspicion of insufficient protection of personal data; on this issue, it will be interesting to see whether the new GDPR regulation in Europe will have a true impact. The easy and often “for free” business model, typical of the online world, hides behaviors contrary to consumers’ interests and protection. A specific twist of this argument is that all the current Internet giants emerged in non-EU countries, but they are now facing significant and increasing troubles in becoming truly compliant with EU rules. The issue is important if one thinks to major themes such as workers’ rights, taxation, privacy, and data protection.

Carefully considering all these elements, important for the success but also the limitations of online platforms, suggests that none of them appears alien or opposite to POs’ characteristics. Where the physical element plays a role, POs have the advantage of their strong reputation built on their direct personal contact with customers, often ending up in playing a social role within communities.

Do some of their peculiarities impede to POs to evolve and become themselves typical online platforms? Probably yes. Compared to examples like Google or Uber, a PO is very different. The physical element and differences in turnover per employee and working conditions signal a permanent and structural diversity between postal operators and any normal online platforms. But these same differences could also constitute the specific advantage and opportunity for postal operators. Can online platforms productively use of these type of assets? Which of them would represent a true added value?

There is little doubt that physical presence and consumers’ trust could be key added values for many online activities. Postal operators could become “ground-based” platforms, an anchor for online platforms for a host of activities. These include government services, digital identities, insurance-finance-banking, telecommunication products, and ticket selling for events. Less familiar examples include pollution measurement and assistance to old people.

Online postal platforms could become a sort of “Google Home” but for the outside. They could become a “personal life assistant” for citizens impacted by the digital transformation. Especially, considering their local presence, POs can be of extreme help in the digital transition phase. Some initiatives of EU POs, which we mentioned in previous sections, are clear examples that this evolution is not only possible but has already started.

In a nutshell, a strategy for POs would be to identify the key elements that can lead to the creation of a successful online/offline postal platform. This opportunity could be pursued in partnerships with native digital companies, a route probably easier than having POs reinventing themselves as global competitors in the digital ecosystem. This strategy would require exploiting all the possible advantages of opening a postal digital platform, seeking to become part of an ecosystem, and developing it in collaboration with many partners. This would also require a search for third parties that carry innovation and ideas that POs have not considered, and especially to be open to all kinds of potentially successful projects then can increase

the size and value of their businesses. This would entail risk sharing with private companies and, especially, local start-ups dedicated to immediate citizens’ needs.

This potential new business model will have to be consistent with the current EU regulatory framework, both specific postal sector regulation and regulation in other relevant sectors, for example, data protection. The relation between this enhanced role of POs and the traditional Universal Service Obligations still would need to be explored, but it is most likely that the USO role and the new role of POs would not conflict but could easily integrate.

6 Conclusion

In the past 10–15 years, the Internet has severely impacted the postal and delivery market. The volume of letters (advertising and bills included) dropped, demand for parcel delivery increased, and costumers’ needs changed. As highlighted in the latest editions of the Conference on Postal and Delivery Economics, POs have updated and readdressed their offers and their quality of service as delivery companies and have started diversifying their businesses toward adjacent markets.

When connectivity, technological development and digitalization started to impact consumers’ habits, the postal sector proved able to react and showed a surprising resilience when facing the digital transformation. This rapid response might be related to the fact that, as mentioned above, e-substitution of mails was one of the first services users profited from on a large scale. However, the cause of the resilience rests in the quite wise business approach of the postal sector, which understood the disruption and non-reversibility of digitalization and opted for an immediate and general effort to adapt. The response of the postal sector has been to employ different, but not necessarily conflicting, strategies: improvement of existing products, introduction of new postal services, acquisition of strategic companies and assets and business diversification.

Probably today, it is possible to open a new phase. In this chapter, we ask if the time is ripe for a further step ahead for POs. The specific characteristic of widespread physical presence and consumers’ trust of the POs, i.e. once again building on their legacy assets, can lead to a new strategy that fully integrates them in the digital world. POs could become new, sophisticated but ground-based digital players. In front of the advancing digital revolution, POs could redefine themselves as a new type of online-offline platforms that can accompany the change. This may facilitate the digital transition for consumers and citizens, contributing to the realization of a more human digital ecosystem.

References

- Asher, D., Callan, J., & Marsh, B. (2011). The postal service role in the digital age-expanding the postal platform. In *19th Conference on Postal and Delivery Economics*.
- Borsenberger, C., Joram, D., Klargaard, O., & Régnard, P. (2016). Personal data and privacy issues and postal operators stand. In *The future of the postal sector in a digital world*. Berlin, Germany: Springer.
- Borsenberger, C., Klargaard, O., & Régnard, P. (2017). *Digital identities: A good move for postal operators*. Berlin, Germany: Springer.
- Copenhagen Economics. (2018). Main developments in the postal sector 2013–2016: Preliminary finding, study for the European Commission Directorate General for Internal Market, Industry, Entrepreneurship and SMEs.
- Deutsche Post DHL Group. (2017). 2016 Annual Report.
- Deutsche Post DHL Group. (2018). 2017 Annual Report.
- European Commission. (2016). Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Online Platforms and the Digital Single Market Opportunities and Challenges for Europe, SWD (2016) 172 final.
- Finger, M. (2014). Postal operators as information intermediaries. *The Postal Industry—Innovation and Markets*, 2(2).
- Grupo Correos. (2016). Integrated Annual Report.
- Jaag, C., Parra Moyano, J., & Trinkner, U. (2016). Postal strategies in a digital age. In *The future of the postal sector in a digital world*. Berlin, Germany: Springer.
- Jaag, C., Stahl, F., & Stroelin, B. (2011). *Commercial and regulatory aspects of reverse Hybrid Mail* (Swiss Economics Working Paper).
- Le Groupe La Poste. (2017). Registration Document 2016.
- Parcu, P. L., & Silvestri, V. (2017). Lessons from the postal sector to telecommunications and vice versa. In M. Crew, P. L. Parcu, & T. Brennan (Eds.), *The changing postal and delivery sector*. Berlin, Germany: Springer.
- Parker, G., & Van Alstyne, M. (2011). *A digital postal platform: Definitions and a roadmap*. Cambridge, MA: The MIT Center for Digital Business.
- Poste Italiane. (2017). Annual Report 2016.
- Poste Italiane. (2018a). Capital Markets Day Deliver 2022 (presentation).
- Poste Italiane. (2018b). Financial Database 2017.
- Royal Mail plc. (2017). Annual report and financial statements 2016–17.
- Sheedy, C., & Moloney, M. (2015). Digital inclusion: A role for postal operators in a smart world. In *Postal and delivery innovation in the digital economy, Topics in regulatory economics and policy*. Berlin, Germany: Springer.
- Universal Postal Union. (2010). *post – The next generation postal network*.

Inducing Optimal Quality Under Price Caps: Why, How, and Whether



Timothy J. Brennan

1 Introduction and Overview

A well-known result is that while a monopoly sets price above the socially optimal level, it might also set quality above its optimal level (Spence, 1975). In the postal context, quality refers to non-price aspects of service such as frequency of delivery (3-day, 5-day, 6-day) and speed (next day delivery, delivery in 2 days, etc.). Because increasing quality increases the price at which a monopoly can sell its product, it could obtain more in profit from increasing quality than consumers gain in surplus. It follows that the level of quality chosen by a monopolist under price cap regulation (PCR) could also be greater than the overall social optimum, when price is set at marginal cost (at that level of quality) as well.

A disclaimer: I submitted a declaration for the Public Representative of the U.S. Postal Regulatory Commission (PRC) on adjusting postal rates when demand falls, for a PRC proceeding reviewing the statutory price cap framework for regulating rates for market dominant services. The views expressed here are mine alone and do not reflect the views of the Public Representative and any of its other consultants on whether or how to adjust regulated rates to induce quality improvements. I thank participants in the Advanced Workshop in Regulation and Competition participants at the Center for Research in Regulated Industries (CRRI) in January 2018. I am also grateful for comments and observations from Bruno Basalisco, A. Thomas Bozzo, Victor Glass, Cynthia Sanchez Hernandez, Marten Ovaere, Pier Luigi Parcu, Edward Pearsall, and other participants in the 26th Postal Conference and the CRRI 37th Annual Eastern Conference. I especially appreciate David Sappington's help in finding earlier mentions of some of my findings on suboptimal quality under price-cap regulation here, as I was sure they must have been found before. Responsibility for errors remains mine alone.

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However, the quality level chosen by a PCR monopolist is too low at a regulatory price cap, which will typically be set above marginal cost. A firm under PCR will set quality to maximize profits from increased demand for its product, but will not take into account the increase in surplus to inframarginal buyers (Sappington, 2005 at 131, n. 18). This result also applies to an unregulated monopolist, in that it will set quality too low relative to what would be optimal at the monopoly price, even if that quality level may still exceed what is optimal when price equals marginal cost.

Intuitively, increasing a price cap should increase quality, because with higher margins the PCR firm can capture more of the benefits from increasing quality (Weisman, 2005). This suggests a possible trade-off between price and quality, where the gains from higher quality could outweigh the welfare losses from the higher price. If a regulator cannot observe quality directly, it may be able to increase consumer welfare by raising the price cap. Unfortunately, a positive association between the price cap and service quality does not hold in general. Moreover, there appears to be no effective means for a regulator to give the firm the appropriate incentives to optimize quality without requiring enough cost information that it could just set the optimal price without relying on PCR to induce efficient production (Brennan, 1989).

This chapter sets out these theoretical principles and investigates whether it is possible to increase welfare by increasing the price cap and, if so, what conditions are necessary for that to occur and what information the regulator would need to see if they are satisfied. Section 2 of this chapter presents postal policy motivations for searching for regulatory solutions to the problem of suboptimal quality. Section 3 reviews the theory relating to the incentives of price-capped firms to set quality and the reasoning behind the claim that a monopoly might provide a higher level of quality than would be optimal. Both of these serve as background for the findings in Sect. 4 that a price-capped firm, and a monopoly, will provide too little quality relative to the quality that would be optimal at the prices they charge.

Section 5 briefly examines why increasing a price cap need not lead to higher quality. The intuition is that if those with low willingness to pay are particularly sensitive to quality, it may be worth it to attract them by increasing quality under a low price cap, but not if the firm can charge higher prices. Section 6 finds that if the regulator knows the value of quality, it can provide incentives to the firm to produce optimal quality—but only if the firm captures the entire consumer surplus from quality improvements. Other legal and political considerations suggest that having the price-cap regulated firm and its regulator negotiate quality standards and penalties for non-compliance may lead to a reasonable agreement and be the best we can expect to do. Section 7 summarizes and concludes.

2 Postal Policy Motivations

In 2006, the United States enacted the Postal Accountability and Enhancement Act (PAEA).¹ Among other things, PAEA bifurcated U.S. Postal Service (USPS) offerings into “market dominant” and “competitive” categories, and mandated that the Postal Regulatory Commission (PRC), USPS’s regulator, use a “modern system for regulating rates” to set prices for the former.² This “modern system,” essentially PCR, fixed rates for market dominant services in 2006, adjusted upward by the percentage increase in the U.S. “Consumer Price Index for All Urban Customers,” abbreviated as CPI-U.

This is essentially a form of price-cap regulation (PCR), which typically includes a generally upward adjustment following some price index and a downward adjustment allowing for expected increases in productivity (Littlechild, 1983; Brennan, 1989). This expected productivity follows from the motivation for price caps—if a regulated firm believes that it will retain cost reductions the regulator will not force it to adjust prices to match those reductions, it will have an incentive to produce efficiently rather than wastefully. PCR leads the regulated firm to act as a price taker, giving it the same incentive to minimize costs as do competitive firms, and the X factor reflects an aspiration to share expected cost savings with buyers of the regulated service.³ For this reason, PCR is often referred to as CPI-X; for USPS, PAEA did not include an X factor, effectively setting it equal to zero.

In late 2016, the PRC instituted a review, mandated by PAEA, of how well this “modern system”, that is, PCR for market-dominant services, is working.⁴ One of the criteria for such review was “to maintain high quality service standards established under section 3691.”⁵ In its solicitation of comments, the PRC proposed a preliminary criterion for service quality as when a “system [of “modern regulation”, that is, PCR] . . . is designed for the Postal Service to consistently achieve, for each class of mail, stated days to delivery at a desired target rate.”⁶ In the order it

¹Pub. L. 109-435 (2006).

²39 U.S. Code §3622(d)(1)(A).

³If demand increases, the regulated firm’s profits will typically increase, as price for regulated firms generally exceeds marginal cost. If increases in demand are expected, the X adjustment could be a way to share those profits with buyers. Brennan and Crew (2016) explored how a regulator could increase a price cap to prevent declining demand from reducing profits; the same adjustment would reduce prices when demand increases, sharing accompanying higher profits with customers.

⁴39 U.S. Code §3622(d)(3).

⁵39 U.S. Code §3622(b)(3). The §3691 reference is to a part of the statute requiring USPS, with PRC consultation, to institute service standards that “enhance value,” “preserve access,” and “reasonably assure Postal Service customers delivery reliability, speed and frequency.” 39 U.S. Code §3691(b)(1)(A)-(C).

⁶Postal Regulatory Commission, *Advance Notice of Proposed Rulemaking on the Statutory Review of the System for Regulating Rates and Classes for Market Dominant Products*, Order No. 3673, Docket No. RM2017-3 (Dec. 20, 2016) at 5. This is the proceeding in which I filed declarations for the PRC Public Representative on adjusting prices when demand declines, mentioned in the above

issued following its review of public comments on its PAEA review, the PRC stated that “that the current system does not effectively encourage the maintenance of high quality service standards.”⁷ It also added as a component of quality “how often the Postal Service meets its stated service standards.”⁸ In response to its concerns, the PRC proposed a 0.25% increase in price if USPS “adhered to” its service quality standards.⁹

The PRC’s assessment and recommendation raises a number of theoretical questions. The first is in what sense does PCR imply too little quality if, after all, monopoly may set quality above the optimal level. If quality is a problem, what should be done? Pearsall (2018) suggested the possibility of an adjustment to price based on quality, but his suggestion was not based on the value of quality but what a price cap would be had it been based on the initial cost of providing lower quality service rather than what had been provided when PAEA mandated PCR. This reinforces the potential value in examining whether adjustments to PCR could provide appropriate incentives to set service quality levels.

3 Quality, Monopoly, and Price Caps

An intuition frequently brought to bear on the issue of price caps and product quality is that the former precludes the latter. Under price caps, the firm retains profits from cutting costs. Since better quality costs more, PCR implies that the firm will minimize quality. This claim is not correct. Cutting quality reduces demand, and thus the quantity that the firm will sell under PCR. If, as one would expect because it is regulated, the price cap exceeds marginal cost, a reduction in demand will reduce the firm’s profits. The firm will reduce quality only to the extent that the savings in reduced quality make up for the lost profits from reduced demand.

To see this, let p be price, q be quality and $x(p, q)$ be the quantity of the regulated service demanded at p and q .¹⁰ For simplicity, let the variable cost of producing x units at quality level q be given by $h(q)x$, that is, with constant marginal cost $h(q)$

disclaimer. Prof. John Kwoka of Northeastern University filed declarations for the PRC Public Representative that discussed service quality.

⁷Postal Regulatory Commission, *Order on the Findings and Determination of the 39 U.S.C. § 3622 Review*, Order No. 4257, Docket No. RM2017-3 (Dec. 1, 2017) at 250.

⁸*Id.*

⁹Postal Regulatory Commission, *Notice of Proposed Rulemaking for the System for Regulating Rates and Classes for Market Dominant Services*, Order No. 4258, Docket No. RM2017-3 (Dec. 1, 2017) at 53-56. The PRC did not say how it would ascertain “adherence”.

¹⁰This model presumes that each PCR service has only one quality level. There may be a menu of PCR services each with a different quality level, e.g., first-class mail and second-class or standard mail.