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The Sticky Case of Sticky Data: An Examination of the Rationale, Legality, and Implementation of a Right to Data Portability Under European Competition Law

Paul T. Moura,

MSc in Media and Communications (Media and Communication Governance)

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The Author can be contacted at: Paul.T.Moura@gmail.com

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Paul T. Moura

ABSTRACT

Commercial needs have pushed online services to gather as much data as possible about what people have done online. Aggregating and matching those data helps to improve the productivity of online services. Nonetheless, this also raises the risk of abuse in the form of privacy violations, locking-in of users into ‘sticky’ services, and monopolistic or unfair competition. The European Union’s proposed solution to these market risks is to enshrine a right to data portability as part of the General Data Protection Regulation. Under this proposed reform, individuals would be given the right to access their personal data in order to switch electronically those data from one online service to its rival through a commonly used electronic format. Critics of a right to data portability argue that an obligation to make data usable by rivals would be incompatible with existing competition principles, and would reduce dynamic efficiency and innovation.

The objective of this Paper is to evaluate the theoretical and legal basis for a right to data portability, as well as its practical implementation. This Paper makes contributions to existing scholarship in three ways. First, it conducts a legal analysis of Commission and European Court of Justice opinions to examine the legality of a right to data portability under European competition law. Second, it provides a theoretical comparison between data portability and number portability to better inform a policy framework. Third, it advances literature on the effective implementation of RDP by offering a research design to make an *ex ante* assessment of RDP’s potential adoption.

KEYWORDS: Data protection; data portability; competition; media policy; EU regulation

INTRODUCTION

According to Viviane Reding, European Commissioner for Justice, Fundamental Rights and Citizenship, personal data have become “the currency of today’s digital market.” (“Innovation Conference”, 2012) The capacity to use personal data to measure the social behaviors of users has made data an “asset” for organizations conducting electoral, commercial, or policy campaigns. Geradin and Kushewsky (2013) argue that the proliferation of online businesses has greatly altered market competition to the point that two conditions are necessary for success: First, there is an increasing need to attract consumers and users by offering online services free of charge. Second, in order to maintain the financial viability of a service, online service providers (“OSPs”) will need to generate revenues through advertising or similar strategies. These commercial needs have pushed OSPs to gather as much data as possible about what people have done online, including information about previous searches, website browsing, and purchase histories.¹ (Evans, 2009) Aggregating and matching data helps to improve the quality and productivity of online services. Nonetheless, markets of data expose the industry to the risk of abuse in the form of privacy violations, locking-in of users into ‘sticky’ services, and monopolistic or unfair competition among OSPs. (Almunia, 2012)

The European Union’s proposed solution to these market risks is to enshrine a right to data portability (“RDP”) as part of the General Data Protection Regulation. The RDP is provided in Article 15(2)² of the Draft Regulation:

Where the data subject has provided the personal data where the personal data are processed by electronic means, the data subject shall have the right to obtain from the controller a copy of the provided personal data in an electronic and interoperable format which is commonly used and allows for further use by the data subject without hindrance from the controller from whom the personal data are withdrawn. Where technically feasible and available, the data shall be transferred directly from controller to controller at the request of the data subject. (“Draft Regulation”, 2013)

Pursuant to this proposed reform, individuals would be given the right to access their personal data in order to switch electronically those data from one firm to its rival through a commonly used electronic format. Some argue that this contemplates a *quasi*-property right in data, extending the principle that it is “your” data and not the controllers. (See Geradin &

¹ In fact, collection of data can occur in circumstances of which users may or may not be aware. *See, e.g.*, “How Google collects data about you and the Internet” (8 January 2010). *Pingdom*. Available at: <http://royal.pingdom.com/2010/01/08/how-google-collects-data-about-you-and-the-internet/> (accessed 23 August 2013).

² Prior to the approval of compromise amendments to the Draft Regulation on 21 October 2013, the RDP was codified in Article 18(1). (“Draft Regulation,” 2012)

Kuschewsky) Critics of RDP argue that an obligation to make data usable by rivals would be incompatible with existing competition law principles. These critics also argue that exercise of the right would place an undue burden on data controllers, thereby reducing dynamic efficiency and lowering incentives to innovate. (Graef, 2013; Swire and Lagos, 2013)

STATEMENT OF RESEARCH OBJECTIVES

The objective of this Paper is to evaluate the theoretical and legal basis for a right to data portability, as well as its practical implementation. In Part II, this Paper reviews literature regarding the theoretical justifications for government intervention to correct market failures caused by high switching costs, and applies those theories in the context of consumer lock-in to online services. Part III then begins from the premise that these market failures exist, and addresses the commonly stated criticism that RDP is an inadequate solution because it allegedly violates existing European competition law principles. This Part performs a predictive legal analysis of European competition cases regarding exclusionary practices, and concludes that RDP is not incompatible with existing principles. Part IV then turns to effective policy implementation of RDP, drawing from nodal governance theory and the enforcement theory of regulation. This Part applies these theories to the European implementation of mobile number portability as a comparison case study, in order to provide a constructive analogy for implementation of RDP. Part V suggests a survey research design as an *ex ante* assessment of the potential adoption of RDP in order to better inform an approach to its effective implementation. Part VI concludes.

This Paper can contribute to existing scholarship on data portability in three ways. First, it conducts a legal analysis of European competition law using Commission and European Court of Justice decisions, rather than non-binding guidance documents. Second, it provides a theoretical comparison between data portability and number portability to better inform a policy framework. Third, it advances literature on the effective implementation of RDP by offering an empirical research design to make an *ex ante* assessment of RDP's potential adoption.

THEORETICAL BACKGROUND ON MARKET INTERVENTION

Regulation to promote competition

A general presumption in many western societies is that, through the process of supply and demand, markets will correct inefficiencies in consumer products and services. Whether governments should step in to correct seemingly inescapable market failures has been a topic of debate for decades. Shleifer (2005) surveys the criticism of government intervention, explaining that the primary argument is that private markets will assure efficient safety levels in services because those sellers who fail to deliver safe services will inevitably lose their market share to competitors. What may look like a monopoly will eventually defer to competitors and new entrants. Even when competitive forces are not strong enough, private orderings will address market failures through various mechanisms, including formation of industry associations that guarantee quality, or large scale customer protest. (Bernstein, 1992; Greif, 1989).

Even when these orderings aren't enough, Coase argues that impartial courts will correct market failures by upholding the rights of consumers through common law rules for torts and contracts. (Coase, 1960) Damage calculations are tailored to the harm suffered, and therefore sellers will face exactly the right incentives to take the most efficient level of precaution. (Posner, 1972)

Despite these arguments, empirical evidence has demonstrated that these methods of private enforcement are not always strong enough, and it cannot be assumed that courts will necessarily be unbiased and incorruptible guarantors of social welfare. Courts may be inefficient, politically motivated, or inaccessible. (Djankov, et al., 2003; Johnson, et al., 2002) In those situations where the market and private orderings fail to mitigate inefficiencies and obstacles that consumers face, some degree of government intervention may be necessary.³ (Shleifer, 2005)

³ Several specific strategies of competition regulation and their merits are discussed below.

The effects of high switching costs on competition

As users increasingly rely on online services in their daily lives, they disclose vast amounts of their personal data. That data are incorporated into the services that they use, and as that amount increases, users face greater obstacles in changing services, even if better, cheaper, or more privacy-enhancing services become available from competitors. European regulators are now considering whether competition regulation should intervene to mitigate these obstacles.

These obstacles for changing services are typically referred to in economics literature as “switching costs.” Switching costs are present in many product and service industries, both online and off-line. (Maicas, et al., 2009) Switching costs confer market power on firms, enabling them to charge higher prices, reduce service quality, create barriers to entry, and generally hinder competition. (cf. Graef, 2013) Firms can use high switching costs as a tool to lock in consumers and extract greater profits from existing customers. This is done by offering at first favorable terms to gain an initial market share, but later employing various methods to deter customers from ending the relationship with the firm. Under this model, firms’ incentives to exploit repeat purchasers outweigh their incentives to attract new customers. (Klemperer, 1995)

Many empirical studies have demonstrated that high switching costs hinder effective competition in the market. (Knittel, 1997; Maicas et al., 2009; Sharpe, 1997; Stango, 2002) Empirical research by Klemperer found that such costs generally increase prices and create deadweight losses of the kind in a closed oligopoly. When products are artificially differentiated using switching costs, firms have shown less incentive to differentiate their products in functional or innovative ways. One observed strategy is to intentionally make products incompatible with competitors’ products. (Klemperer, 1995) Firms have also used long term contracts that lock in customers and force new entrants to set sub-market prices in order to win those customers over. (Aghion and Bolton, 1987)

Given that empirical evidence shows that high switching costs cause welfare losses, public policy should discourage or mitigate activities that increase switching costs, and should facilitate activities that reduce them. Such facilitation may include rules for standardization, compatibility, reduction of learning costs of switching, or quality regulation. (Klemperer, 1995)

Switching costs and mobile number portability

One such public policy tool – mobile number portability (“MNP”) – gained support in Europe during the early 2000s. MNP was proposed in order to mitigate several problems caused by high switching costs between mobile communications providers. The burden of losing a mobile contact number had induced subscribers to remain with an existing provider that was not necessarily their preferred choice. This enabled incumbent firms to exploit subscribers and charge higher prices. Additionally, the high switching costs made it difficult for new entrants to gain enough of a market share to compete with incumbent providers. (Bühler, et al., 2006) Due to the strong network effects in the communications industry, where a single provider may offer several services to subscribers, new entrants typically needed to introduce discount offers in order to gain a critical mass of users to sustain a business. (Bühler, et al., 2006; See also Fudenberg and Tirole, 1984)

The European Union’s position was that “number portability is a key facilitator of consumer choice and effective competition in a competitive telecommunications environment.” (“Directive 2002/22/EC,” at (40)) Under the Universal Service Directive 2002, all Member States were directed to implement MNP procedures by mid-2003. Eventually, MNP was predicted to yield an improvement in the likelihood of switching, as it offered consumers a *quasi*-property right over their telephone numbers. (Bühler et al., 2006, p. 385) National Economics Research Associates (“NERA”)/Smith identified five potential benefits of introducing MNP. First, users would avoid the incidental costs of a number change, such as informing contacts or receiving missed calls. Second, users would be better able to move to a more preferred operator. Third, all consumers would benefit from intensified competition in mobile communications. Fourth, callers would avoid the costs of tracking down others who have changed numbers. Fifth, all consumers would invest more in mobile communications due to a re-allocation of entitlements over mobile numbers. (NERA/Smith, 1998) This last benefit is particularly important for businesses seeking to invest in “so-called vanity numbers” to sustain brand loyalty while switching services. (Bühler et al., 2006, p. 386)

Mandating number portability would, in theory, advance these benefits. The resulting strengths and weaknesses of MNP implementation are discussed further in Part IV. Nonetheless, the theoretical justification for MNP based on switching costs, and the policies behind its implementation, serve as a useful analogy to the context of data portability, given that both initiatives are said to reallocate entitlements from operators to consumers.

Switching costs and personal data portability

In proposing the RDP, the Commission explicitly analogized the projected competitive benefits to those of number portability in the telecommunications sector. ("Impact Assessment," 2012, p. 28) In delivering online services, firms gather extensive amounts of data about web searches, browsing behavior, and purchase information. (Evans, 2009) These data can constitute critical components to using an online service, and their aggregation makes dependence on a service much more likely. An increased investment of personal data into a service, based on a user's preferences, contacts, and communications, creates significant obstacles to switching. ("Impact Assessment") As discussed, such switching costs increase the risk of exploitative practices, in which online services are incentivized to increase costs for existing subscribers and disincentivized to improve service quality. This can hinder the development of a competitive market. (Klemperer, 1995)

Geradin and Kuschewsky (2013) argue that competition threats may arise in two primary situations with online services. First, OSPs may violate competition principles when they initially acquire data through anti-competitive means. Second, OSPs may violate competition principles when they engage in anti-competitive practices that prevent competitors from acquiring that data through competition on the merits, such as engaging in practices designed to increase the switching costs to users. Data portability seeks to address and mitigate the latter type of violation.

The European Commission's investigation of Google initiated in 2010 provides an illustration of such allegedly anti-competitive behavior. The Commission was concerned with two particular strategies employed by Google: (i) the acquisition of personal data through exclusivity agreements with advertising partners; and (ii) the adoption of contractual and architectural measures designed to prevent data portability. (Press Release, 2010) Google allegedly entered into *intermediation agreements* under which online publishers must exclusively enable their websites with Google's advertising and search features. This was thought to hinder competition because it made Google the exclusive search provider for some of the most popular sites, including AOL.com and Amazon.com. This provided Google with an advantage in acquiring significant amount of scale in the form of user data. (Geradin and Kuschewsky, 2013)

The Commission also investigated Google's use of *distribution agreements* under which Google had arrangements with various manufactures and software producers to ensure that Google's services were set as default options. (Evans, 2009) This necessarily increased the

likelihood that users and businesses would invest significant amounts of time and data into Google services. Moreover, the prohibition on portability of advertising campaigns essentially made switching economically infeasible for many existing customers, as they would be forced to commence anew any campaign with a competitor. As the scholarship on switching costs would suggest, this gave Google the ability to leverage its exclusive control over user data to charge up to four or five times the price of comparable competing services, thereby operating independently of competitors and market forces. (Newman, 2012)

The Google investigation illustrates the problems caused by exclusionary practices in the context of data protection. As Aghion and Bolton (1987) observed in the context of durational agreements, contractual exclusivity provisions can be effective in locking in customers and foreclosing new entrants into the market. Additionally, similar to the situation in the mobile communications sector, users' investment in and dependence on a particular service can give rise to significant switching costs that deter the user from transferring to a preferred service. These switching costs illustrate a situation in which competitive forces and private orderings alone may not address market failures. (cf. Shleifer, 2005) Recent history and enforcement actions demonstrate that the market has not corrected many of the inefficiencies that consumers face in the data protection context, and thus some degree of government intervention may be necessary. While the European Commission proposes that a right to data portability is the appropriate mechanism, critics contend that RDP exceeds existing regulatory principles under European competition law. Subsequent parts address this contention and consider the potential effectiveness of RDP in correcting these failures.

ANALYSIS OF EUROPEAN COMPETITION LAW DECISIONS REGARDING EXCLUSIONARY CONDUCT

Introduction: The requirement of “market dominance”

Perhaps the most stated criticism of the European Commission’s proposed Right of Data Portability (“RDP”) is that it exceeds traditional European competition law principles because it applies a *per se* rule that prohibits exclusive access to personal data without also requiring a showing of significant market share. In finding such abuse, the Commission typically considers three elements in an enforcement action: (i) dominant market power; (ii) an exclusionary practice; and (iii) no efficiencies to offset the harms of the exclusionary practice. (“Guidance,” 2009)

A finding of market *dominance* is often a critical aspect of an enforcement decision. Under general European competition law, an undertaking in a dominant position is said to have a “special responsibility not to allow its conduct to impair genuine undistorted competition in the common market.”⁴ Article 102 of the Treaty on the Functioning of the European Union protects against such an undertaking’s practices if they “cause consumer harm through their impact on competition.”⁵ Article 102 applies, in particular, to the conduct of a dominant undertaking that “through methods different from those governing normal competition on the basis of the performance,” such conduct has the effect “of hindering the maintenance of the degree of competition existing in the market or the growth of that competition.”⁶ The Commission’s application of these principles has been complicated in practice, and to guide its action in applying competition law to exclusionary conduct, the Commission in 2009 released a Guidance document detailing its enforcement priorities. (See “Guidance,” at [2])

Critics argue that “market dominance” must typically be proved under European competition law “by demonstrating high market share” in a “relevant market” before an organization can be found to have abused the market. The text of the RDP, however, applies the prohibition of exclusive data collection “to a start-up software company in a garage just as it does to a monopolist.” (Swire and Lagos, 2013, p. 339) Citing the Commission’s Guidance document, Swire and Lagos argue that European competition law strongly presumes that companies with less than a 40% market share cannot “dominate” a market, and are therefore exempt

⁴ Case 322/81, *Nederlandsche Badon-Industrie Michelin NV v Commission*, [1983] E.C.R. 3461.

⁵ Case C-209/10, *Post Danmark A/S v Konkurrenceradet*, [2012] E.C.R. I-0000, at [20].

⁶ *Ibid.*, at [24].

from enforcement. Since the right to data portability applies to *all* data processors, however, it is said to reduce dynamic efficiency in the marketplace and lower incentives to innovate. Critics also argue that the RDP goes beyond existing principles because it does not take efficiency justifications into account. (Graef, 2013) The criticism detailed in existing literature relies principally on the Commission's Guidance document. Nonetheless, this Guidance document "is not intended to constitute a statement of the law and is without prejudice to the interpretation of [competition law] by the Court of Justice." ("Guidance," at [3]) Thus, this Paper seeks to supplement existing scholarship by directly examining competition as interpreted in decisions of the European Court of Justice ("ECJ").

Under ECJ jurisprudence, not every exclusionary practice is *per se* anticompetitive if the practice is a result of 'competition on the merits.' In a recent case, the Court attempted to clarify this ambiguous terminology:

Competition on the merits may, by definition, lead to the departure from the market or the marginalisation of competitors that are less efficient and so less attractive to consumers from the point of view of, among other things, price, choice, quality or innovation.⁷

Applying this ambiguous notion in the context of exclusive data retention is challenging, yet this notion underpins the essential motivations behind the right to data portability. To illustrate: Imagine that Facebook raises its prices 10% over a given period. If a significant number of users subsequently switch to other social networking sites or other forms of online interaction, then those alternatives should seemingly be included in the definition of the relevant market. If users choose to stay with Facebook because of the burden of transferring their personal data, then do Facebook's actions constitute 'competition on the merits?'⁸

In this Part existing competition jurisprudence will be analysed to shed light on the ambiguity about what constitutes 'competition on the merits.' In particular, this Paper considers the role of market share calculations and measurements of economic efficiency in competition enforcement.

⁷ *Ibid.*, at [24].

⁸ This example is adapted from Waller, S. W. (2012). Social Networks and the Law: Antitrust and Social Networking. *NCL Rev.*, 90, 1771-1807, at 1785.

Methodology

This Paper surveys European competition law to examine the circumstances in which exclusionary conduct can still constitute ‘competition on the merits.’ This conclusion will be used to determine whether RDP prohibits permissible conduct, and thus whether RDP is incompatible with existing competition law principles. This examination is conducted using predictive legal analysis. Predictive legal analysis involves an analysis of judicial opinions in a common law jurisdiction. It may be considered a form of documentary analysis, as it involves an analytical reading of documents that contain information about a phenomenon that is the subject of study. (Bailey, 1994; Platt, 1981)

More specifically, predictive legal analysis observes legal ideologies and principles based on the application of laws to the facts of particular court cases. Under the doctrine of *stare decisis*, judicial bodies are limited by statements of law contained in preceding cases, and judicial decisions are also used to guide later decision making. *Stare decisis* creates an analytical limiting factor that narrows the possible legal outcome in a given case. (Burge, 2013)

The European Commission applies the doctrine of *stare decisis* in interpreting European competition law, as its enforcement decisions are limited by rulings given in existing jurisprudence. The Treaty on the Functioning of the European Union (“TFEU”) provides that the Commission’s decisions are subject to review by the European Court of Justice, which also makes legal rulings under the doctrine of *stare decisis*. The ECJ has the role of interpreting general European Union law to make sure it is applied in the same manner in all EU countries.

Using predictive legal analysis, the Paper examines the traditionally-cited competition decisions by the European Commission and the ECJ (previously the “Court of First Instance”) that interpret European law as it applies to exclusionary conduct. In particular, this Paper analyzes cases cited in the Commission’s ‘Communication on Guidance on the Commission’s Enforcement Priorities in Applying Article 82 of the EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings’ to consider when exclusionary conduct can constitute ‘competition on the merits.’ This Part then interprets and applies these precedential decisions in the context of a right to personal data portability. Based on this analysis, this Paper concludes that a right to data portability is not facially incompatible with existing competition law jurisprudence.

There are potential disadvantages to a method that relies on an analysis of a limited number of judicial cases. Similar to social science case study methods, there is the potential for bias in the selection of cases, (Abercrombie, 1984, p. 34; Salkind, 2010), as well as the potential for overgeneralization, (Ragin, 1992; Rosch, 1978). Nonetheless, generalizability of case studies can be increased by the strategic selection of cases. Here, these disadvantages are largely mitigated by the fact that the Commission considers these particular cases to be authoritative (See "Guidance," 2009), and importantly, because of the nature of judicial opinions as binding precedent, (Burge, 2013). In other words, applications of law in preceding cases serve as binding authority for applications of law in subsequent cases. (Collier, 1988) Thus, the judicial opinions discussed here would be considered authoritative in determining legal principles in current European competition case law.

Summary of cases

According to the Commission, market shares provide a useful first indication of the relative importance of each undertaking active on the relevant market. Nonetheless, the Commission has stated that it will "interpret market shares in the light of the relevant market conditions, and in particular of the dynamics of the market." The "trend or development of market shares over time" may also be considered if the relevant market is a "volatile or bidding" market. ("Guidance," at [13]) While the Commission considers dominance to be unlikely if an undertaking's market share is below 40%, it has stated that there may be circumstances below that threshold "where competitors are not in a position to constrain effectively the conduct of a dominant undertaking." ("Guidance," at [14])

United Brands Company

In *United Brands Company vs. Commission*,⁹ United Brands Company ("UBC"), an importer of bananas, had entered into agreements to supply green bananas to distributors. A clause in the agreement prohibited the distributors from re-selling the bananas while still green, which due to the short shelf-life of bananas, essentially prevented the distributors from selling bananas in other countries.¹⁰ In examining whether United Brands was dominant, the CFI noted that UBC had a market share of only 40-45%, but nevertheless recognized that "an undertaking does not have to have eliminated all opportunity for competition in order to be

⁹ Case 27/76, *United Brands Company and United Brands Continentaal v Commission* [1978], E.C.R. 207.

¹⁰ *Ibid.*, at [130-137].

in a dominant position.”¹¹ It found that UBC was “vertically integrated to a high degree” due to its control over large plantations,¹² and its ease of access to bananas¹³ and production supplies.¹⁴

The effect was that UBC was able to exert significant influence over the market at nearly every stage of banana production, making it insensitive to competition.¹⁵ Due to the economies of scale needed in order for newcomers to succeed in the market,¹⁶ small and medium sized firms were foreclosed from competing because of “almost insuperable practical and financial obstacles.”¹⁷ Thus, the Court concluded that UBC’s economic strength placed it in a position of dominance, and the exclusionary clauses amounted to an abuse of its dominant position.

Hoffman-La Roche

*Hoffmann-La Roche vs. Commission*¹⁸ involved a pharmaceutical company which had agreements to sell and distribute seven groups of vitamins. It required purchasers to obtain all or most of their requirements of vitamins exclusively from Roche, or induced purchasers to do so through a system of rebates.¹⁹ The Court observed “lively competition” in the relevant market, but found that La Roche operated independently of it due to its highly developed customer information and sales network.²⁰

The Court reasoned that access to the market by newcomers was “not easy” because of the amount of capital investment required to manage the vitamin factories.²¹ Roche’s capabilities were alone sufficient to meet world demand.²² Roche’s scale operations thereby gave it a dominant position on the market. The Court thus held that its exclusionary actions in tying

¹¹ *Ibid.*, at [113].

¹² *Ibid.*, at [72].

¹³ *Ibid.*, at [73].

¹⁴ *Ibid.*, at [82].

¹⁵ *Ibid.*, at [121].

¹⁶ *Ibid.*, at [122].

¹⁷ *Ibid.*, at [123].

¹⁸ Case 85/76, *Hoffmann-La Roche & Co. AG v Commission* [1979], E.C.R. 461.

¹⁹ *Ibid.*, at [80].

²⁰ *Ibid.*, at [42].

²¹ *Ibid.*, at [48].

²² *Ibid.*, at [33].

purchasers through exclusive agreements or rebates amounted to an abuse of its dominant position.²³

Hilti

In *Hilti vs. Commission*,²⁴ Hilti, a manufacturer of nail guns, cartridge strips, cartridges, and nails, had constructed its nail guns in a manner where only a certain nail design could fit into its guns. Independent producers of nails then filed an action alleging that Hilti's practices hindered their entry into and penetration of the market for Hilti-compatible nails.²⁵

The Court considered the relevant product market to be only the market for parts compatible with Hilti's nail guns, rather than the entire nail gun market, given that third-party parts were not "sufficiently interchangeable."²⁶ Due to the incompatibility of competitors' parts with Hilti's nail guns, the Court deemed Hilti to have created "a specific market governed by its own rules of supply and demand."²⁷ In doing so, Hilti was to some extent able to act independently of competitors and could selectively increase its prices against customers.²⁸

British Airways

In *British Airways Plc vs. Commission*,²⁹ Virgin Atlantic filed a complaint based on British Airways' commission schemes that provided incentives to travel agents if they sold a certain amount of British Airways tickets each year. The overall commission rate increased not only when sales targets were reached, but also on each ticket sold beyond the target.³⁰ As a result, travel agents had an incentive to increase their sales of British Airways tickets, and decrease sales of rival airlines.³¹

The Court noted that the "broad financial base" and "level of revenue" held by British Airways allowed them to effectively conduct the commission scheme with which smaller-scale

²³ *Ibid.*, at [89].

²⁴ Case T-30/89, *Hilti v Commission* [1991] E.C.R. II-1439.

²⁵ *Ibid.*, at [2]-[8].

²⁶ *Ibid.*, at [13].

²⁷ *Ibid.*, at [15].

²⁸ *Ibid.*, at [90-100].

²⁹ Case C-95/04 P, *British Airways plc v Commission* [1997], E.C.R. I-2331.

³⁰ *Ibid.*, at [17-23].

³¹ *Ibid.*, at [23].

competitors could not compete.³² The Court rejected British Airways' argument that the schemes were economically justifiable because the exponentially-increasing bonuses did not themselves generate any economic efficiencies.³³ Instead, they merely induced loyalty by travel agents to the detriment of all other airlines.³⁴

Analysis of cases

The case law supports the critics' argument that an exclusionary practice is not considered harmful to consumers if it gives rise to efficiencies, productivity, or innovation. Nonetheless, the Commission and the Court have been hostile to practices that create foreclosure effects against other market participants when those practices do not themselves create any efficiencies. When those practices do no more than to induce loyalty (i.e., "lock-in") by customers, then the exclusionary practices are more likely to violate Article 102. For example, in *British Airways*, the commission schemes were impermissible because British Airways could not show that the schemes themselves created economic efficiencies for British Airways, but instead "locked-in" travel agents to the detriment of other airlines. The CFI stated that "lock-in" strategies such as these produce an exclusionary effect that "bears no relation to advantages for the market and consumers" and "*must* be regarded as abuse."³⁵

Furthermore, the Court did not consider possession of a high market share in a particular industry to be a prerequisite to enforcement. Rather, the Court suggested that unjustified lock-in practices would essentially narrow the relevant market because they would only serve to exclude competitors. In *Hilti*, for example, the incompatibility of competitors' parts with Hilti's guns allowed Hilti to create a specific market unto itself, governed by its own rules of supply and demand. Thus, Hilti's market share in the overall firearms market lost its relevance.

Additionally, the Court is more likely to find an abuse of dominance in industries where newcomers face high barriers to entry that are difficult to overcome without possessing the large economies of scale characteristic of incumbents. In *United Brands*, UBC was vertically integrated with control over bananas, supplies, and plantations.³⁶ In *Hoffman-La Roche*, newcomers did not possess the capital necessary to construct vitamin factories capable of

³² *Ibid.*, at [24].

³³ *Ibid.*, at [26-27].

³⁴ *Ibid.*, at [28].

³⁵ *Ibid.*, at [86] (emphasis added).

³⁶ *United Brands*, *supra* note 9, at [70-82], [121-123].

competing with La Roche.³⁷ In *Hilti*, Hilti effectively created its own nail gun market in which it heavily influenced production of nail guns, cartridge strips, cartridges, and nails.³⁸ Finally, in *British Airways*, the Court emphasized rival airlines' inability to compete with British Airways' revenues and financial base.³⁹ In each of these, the Court afforded greater scrutiny in industries where possessing large amounts of capital is critical, but that capital is also difficult to obtain.

Application of competition law principles to data portability

Efficiencies attributable to lock-in practices

The competition cases confirm critics' arguments that exclusionary practices that produce efficiency effects are sometimes permissible. Yet, the RDP applies to all data controllers without necessarily accounting for efficiency justifications. This gives rise to a potential conflict with existing principles. The case law suggests that European competition law would permit withholding personal data from being ported for another use – but importantly – only if that withholding would, in itself, produce economic efficiencies.

The success of businesses necessitates building loyalty among customers in order to sustain a steady cash flow. (Chow and Holden, 1997) Under this reasoning, locking-in users may provide economic efficiencies in the online market if that strategy is a significant driver of loyalty. Indeed, the creation of switching costs in order to induce loyalty is a common strategy employed by online firms. (Kim and Son, 2009; Varian and Shapiro, 1999) However, some scholars have argued that “lock-in” is not necessary in order to generate loyalty and thereby create efficiency effects. In a study examining the relationship between high switching costs and loyalty to online services, the authors found that the presence of high consumer trust in a service is a greater predictor of loyalty to that service in comparison to high switching costs caused by “lock-in” practices. (Carter, et al., 2012) This undercuts an argument that economic efficiencies are directly and solely attributable to the retention of data to the exclusion of others.

Moreover, several scholars have argued that the “lock-in” practices entrenched in digital applications can actually undermine the quality of products and services on the market. (Lookabaugh and Sicker, 2003) Bonneau and Preibusch (2010) investigate that consumer

³⁷ Hoffman-La Roche, *supra* note 18, at [48].

³⁸ Hilti, *supra* note 24, at [2-13].

“lock-in” is ubiquitous in the social network industry. They find that social network users who seek to use competing social networks face high switching costs, and the absence of smooth data portability or data extraction prevents users from moving to a new social network that offers better privacy. Indeed, in a 2009 survey, the authors found very little evidence of portability of profiles or switching between social networks. This is due in part to the significant amount of time and invested needed to create and develop their profiles that cannot later be ported elsewhere. (Boyd, 2008)

Economies of scale

Importantly, much like the industries in the cases above, many online businesses require large amounts of data “capital” to generate economies of scale in order to compete. Unlike traditional brick and mortar businesses that use inventory capital, online businesses utilize informational capital. (Milgrom and Roberts, 1990) The threat of foreclosure due to a lack of access to sufficient capital to generate large economies of scale can be observed in the Internet advertising industry. Behavioral and targeted advertising must be sufficiently precise in order to compete, but that precision is limited by the amount and quality of the data pool available to a business. (Evans, 2009) According to research from the Office of Fair Trading, behavioral advertising becomes profitable once the requisite scale of personal data is reached, and at that level of precision click-through rates become 110%-840% higher than average advertising click-throughs. (Office of Fair Trading, May 2010). Moreover, companies seeking to launch advertising campaigns will only utilize platforms with access to a large enough pool of users to make the campaign worthwhile.

Thus, a lack of access to data makes difficult the entry into many online markets, particularly if dependent on advertising revenues. (Evans, 2009) This need to harness data may suggest that locking in users can itself produce market efficiencies, and thus RDP would prohibit ‘competition on the merits.’ Yet, as several studies suggest, access to personal data need not be *exclusive* in order to create efficient products or services. (Zhu, 2004; Zhu & Kraemer, 2005) Unlike tangible goods, the non-rivalrous nature of data eliminates the need for exclusive use. Indeed, Zhu and Kraemer find that open-standard information exchange creates greater economic efficiencies, produces synchronized information flow, and increases the quality of information along the supply chain. Exclusionary retention of data may therefore foreclose competitors from being able to access the “capital” needed to sustain an online service, thereby reducing the overall efficiency of the market.

³⁹ British Airways, *supra* note 29, at [24].

Conclusion

Applying competition law principles set out in the cases above reveals that a firm's occupation of a high market share is not necessarily a prerequisite to competition enforcement against that firm. The question of market dominance appears to be more nuanced, and a high market share need not be a dispositive threshold determination prior to enforcement of competition rules. Waller further notes that enforcement agencies will in a single competition case examine the relevant market from various perspectives, such as from consumers, competitors, or suppliers, in defining the relevant market. Depending on the perspective used, the Commission and the Court may reach a different conclusion as to whether an organization meets the basic criteria for market dominance. (Waller, 2012) Given that the contours of a "relevant market" can be difficult to discern in the highly converged online environment, a single company's actual market share may be impossible to measure, and prior cases suggest that it is unlikely to be a determining factor.

Furthermore, the foreclosure effects caused by locking-in exclusive access to personal data appear unlikely to be economically justifiable. Despite the necessity of accruing a critical mass of informational data "capital" in order to compete, the nonrivalrous nature of data demonstrates that exclusionary retention is unnecessary in order to enter the market. These conclusions suggest that competition enforcement to promote data portability may be appropriate. Thus, this Paper concludes that the right to data portability is not incompatible with traditional competition law principles.⁴⁰ The next Part considers the potential for effective implementation of RDP.

⁴⁰ Whether the right to data portability is the most suitable policy is beyond the scope of this Paper. This Paper simply addresses whether RDP conflicts with existing competition principles. The Commission may wish to clarify, pursuant to its authority to determine transfer derogations ("Draft Regulation," at (129)), that exclusive data retention may be permissible in the unlikely event that it would cause economic efficiencies.

IMPLEMENTATION AND EFFECTIVE ENFORCEMENT OF A RIGHT TO DATA PORTABILITY

The previous Part explained that the RDP is not facially incompatible with traditional European competition law principles. Hence, this Part begins from a premise that the RDP may permissibly be implemented. It addresses the issue of how best to define the scope of the RDP so that it empowers users to effectively enforce it in a manner that is most likely to correct market inefficiencies. First, this Part discusses the current debate about the inflexibility of the RDP and its potential threats to market growth. Second, this Part discusses strategies of flexible co-regulatory enforcement based on competition and cyber-regulation theories. Third, this Part uses Europe's adoption of mobile number portability as a comparison case study and predictor of challenges to RDP adoption. This discussion provides the theoretical basis for the exploratory research design, which can help inform policymakers in how to implement RDP to generate the greatest benefits.

Background: Implementing a right to data portability

Current policy landscape of RDP and its implementation

Online services are pervasive in our daily lives. The European Commission takes the position that as the amount of personal data collected through these services increases, users face more obstacles in switching, even if better and more privacy-enhancing services become available. In many circumstances, this may include socially relevant data about contacts, commitments, and communications that are difficult to re-locate elsewhere. As discussed, RDP seeks to address this by reducing the obstacles to switching, thereby promoting competition and innovation among online businesses. ("Impact Assessment," 2012)

Under the proposed General Data Protection Regulation, the RDP would be enshrined in law and the European Commission may then specify the format, standards, modalities, and procedures for the transmission of personal data.⁴¹ Additionally, while most other rights in the Regulation may be exercised free of charge, the RDP entitles a data subject to exercise his or her right to port data "without hindrance."⁴² Thus, it is also likely that the Commission would specify whether and how data controllers may charge data subjects for porting data.

⁴¹ These specifications would be adopted under the Article 87(2) examination procedure governing implementing acts. *Cf.* General Data Protection Regulation (2012), Article 18(3).

⁴² *Ibid.*, at 18(2).

Given the essentially incomplete nature and scope of the RDP as drafted, policymakers and stakeholders have since taken the opportunity to make demands to water down or increase flexibility with regard to the right.

Policymaker stakeholders: Advocating a risk-based approach

Proposals by political stakeholders across the European Union suggest that the eventual scope of the RDP is likely to be more flexible than originally drafted. For example, the Council of the European Union's Justice and Home Affairs released a draft compromise text for the proposed Regulation. In it, it recommended clarifying the right to data protection as a qualified right that must be proportionate to other competing rights, including the freedom to conduct a business. It advocated for a "risk-based" approach to data protection and data portability, depending on the context of the collection. Whether data portability is available to a data subject would involve weighing several factors such as (1) the link between the original purpose of collection and intended further purposes; (2) the reasonable expectations of further use anticipated by the data subject; (3) the nature of the personal data; (4) the consequences for the data subject of further intended processing; and (5) any appropriate safeguards. ("Compromise Draft," 2013, at Recital 40) The Council's concern is that an unqualified RDP would prove ineffective, and may hinder market development.

Business stakeholders: Advocating a flexible approach

Critics have expressed concern about the possible detrimental market effects on smaller firms and new entrants. Swire and Lagos argue that newcomers will be deterred from entering the market if they must write portability software from the start. This could generate unreasonable expenses for the development and maintenance of the porting technologies. Moreover, these costs would be passed on to users in some manner, thereby undermining the economic benefits of the RDP. (Swire and Lagos, 2013) Some believe that online businesses are already highly competitive, and thus portability implementation would force struggling businesses to dissolve or consolidate. (cf. Stach, 2004)

How flexible should it be? – A need for further research

Policymakers and business stakeholders fear that an unqualified RDP would produce negative economic efficiencies, and frustrate the competition that the RDP is intended to promote. Moreover, the strong demand for risk-based and flexible approaches to RDP suggest that the final version of the Regulation is likely to contain at least some qualifications.

Given the likelihood that the Commission will adopt a more flexible approach, further research is needed to determine the most effective methods and the most critical considerations that would improve implementation of a regime utilizing data portability.

Theoretical principles to guide effective implementation of RDP: Regulation of online space

Relational rights

In researching the effective implementation of a right to data portability, this analysis begins from Habermas' (1974) contention that rights are considered to be "relational" in their foundation. Rights and entitlements are derived from the communicative structures of society. Taking this contention further, Stein and Parchomovsky (2012) argue that rights are always relationally contingent, and are meaningful only when the cost of protecting them is less than the cost of attacking them. When a right is cheap to attack, but burdensome to vindicate, the right is ineffective. Even if a right is enshrined in law as fundamental, an asymmetry of enforcement costs can make the right unrealizable in practice.

In the case of RDP, a fundamental right to access to personal data and have it ported elsewhere is meaningful only if the benefits outweigh the burden of enforcement. If the costs to firms of implementing RDP are significant, they may have an incentive to dissuade users from exercising their right by imposing additional burdens and switching costs. (See Klemperer, 1995) One unfortunate consequence of this is that data holders may not be able to learn from users when in their business models RDP is most needed. Where the costs of exercising RDP dissuade users from seeking relief, regulatory intervention may be needed in order to facilitate that exercise. Thus, it is critical for regulators to determine *ex ante* which regulatory mechanisms can best promote user adoption of RDP, and which factors hinder it, in order to maintain the value and legitimacy of the right.

Symbiotic regulation and nodal governance in cyberspace

The challenge and feasibility of regulating cyberspace has been subject to extensive scholarly debate. Early cyber-regulation theorists argued that online space is inherently non-regulable by governments, but instead is governed by a free market of users coming to a collective consensus by virtue of the self-regulating communicative structures of cyberspace. (Barlow, 1996; Johnson and Post, 1996) Later cyberpaternalist scholars soon noted that this free market of users would not necessarily correct market distortions in areas such as intellectual

property rights and privacy. (Goldsmith, 1998; Reidenberg, 1997) Lessig (1999) argues that governments can effectively regulate cyberspace by harnessing the software architecture and code that defines it. Regulators can mandate changes in this code to place constraints on online activity in a manner that will mitigate the harms existing in the market.

Murray extends this analysis by considering the network effects that are caused by the communicative nature of online space. Because there are few coercive means by which regulators can ensure that Internet architecture retains the characteristics mandated by regulation, there exists a possibility of rejection by the community and circumvention of the preferred model. (Murray, 2011) Regulation of the Internet therefore necessitates “agreement and consent of the community.” (Murray, 2008)

Effective Internet governance involves a negotiation of four general “modalities” of regulation: (1) Law; (2) Social Norms; (3) Markets; and (4) Architecture. (Lessig, 1999) Regulators must harness the natural communications flows within each of these modalities to encourage actors to adopt and enforce the regulatory intervention. Murray (2008, p. 18) suggests that regulators should produce a dynamic model of these communications flows already in place. Regulators should then pinpoint the most influential gatekeeper subsystems – or “nodes” – and offer to them a positive communication that encourages them to support the regulatory intervention.

Murray’s theory of “nodal governance” can be useful in crafting effective regulation of data portability so that the right can be realized in practice. In the context of the RDP, regulators should first consider the most effective form and style of data portability regulation through which it can best offer a positive communications flow to OSPs and users. Additionally, regulators must facilitate mechanisms by which users are encouraged to communicate their adoption of the RDP. The next section discusses several regulatory options drawn from existing competition theory.

Regulatory options for correcting market failures

Earlier I discussed situations in which the market and private orderings cannot be relied upon to correct inefficiencies, and thus governments should intervene. Additionally, theories of nodal governance suggest that the communicative nature of the Internet necessitates using a careful approach to regulation that is most likely to be supported by the community involved. Under these circumstances, a more nuanced approach that incorporates both market forces and government facilitation is likely to maximize consumer welfare.

The Chicago school critique of regulation argues that direct government regulation is likely to fail in countering anticompetitive behavior either because regulators are incompetent to succeed, or because the regulatory process will inevitably be captured by the industry. (Peltzman, et al., 1989) Shleifer (2005) proposes that the enforcement theory of regulation assumes that no single strategy for regulation is perfect, but instead an optimal institutional design combining government facilitation and market forces can achieve the greatest welfare-enhancing results. Data protection regulation is therefore most likely to succeed if governments facilitate an optimal institutional design to RDP that market participants and data subjects will adopt.

Shleifer (2005) describes four general options for regulation, ranging from lesser to greater government intervention. First, under the market discipline solution, consumers may rely on reputational incentives in the market to disclose the truth about products and services. Second, society can rely on private suits by buyers who feel they have been cheated, based on general doctrines of contract or tort law. Third, governments may create regulatory agencies to oversee practices, set rules, and mandate various disclosures about products and services. Finally, governments may nationalize various product and service markets and directly control for inefficiencies.

In correcting market inefficiencies in the data protection context, effective regulation can draw from each of these options. The high switching costs that exist for data-intensive online services illustrate that market discipline alone is insufficient. Moreover, while private litigation can mitigate these weaknesses, it is likely to be imperfect due to the potential inefficiency and inaccessibility of court systems.⁴³ Demands for flexibility by market participants, along with the need to capitalize on the communicative flows of online space, suggest that an intermediate strategy is optimal in order to ensure that an effective RDP will be realizable.

Shleifer (2005) argues that private enforcement using public rules can provide a flexible intermediate, co-regulatory approach. Burdens on consumers and enforcement bodies can be lessened considerably if statutes describe precisely what elements are essential. Subversion by industry of enforcement mechanisms is also less likely if pre-determined rules and principles reduce the amount of discretion that may be exercised. Indeed, several empirical studies have demonstrated that private enforcement of public rules is a highly efficient way to

⁴³ See discussion *supra*, at II.A.

correct market failures. Hay, et al. (1996) and La Porta, et al. (2006) show empirically the success of this strategy in security issuance. Similarly, Barth, et al. (2004) has demonstrated the importance of private enforcement of public rules in banking regulation. Additionally, supervision of public rules through regulatory agencies can be an effective complement to private enforcement, as these agencies can establish expertise in the field, can offer guidance to businesses, and can be provided with incentives to enforce social policy. (Glaeser, et al., 2001; Pistor and Xu, 2002; Shleifer, 2005)

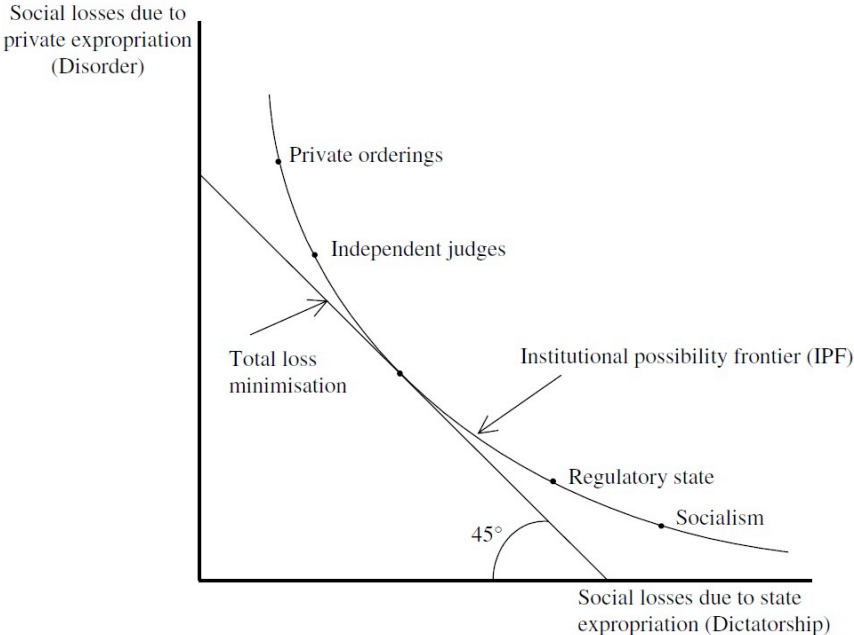


Fig. 1. Institutional possibilities.
 Source: Djankov et al., 2003.

This intermediate, co-regulatory approach may offer the flexibility necessary to effectively regulate online businesses in the area of data portability. Data protection agencies can set rules and principles regarding portability and oversee its implementation. Moreover, users who feel that their right to data portability has been violated can seek relief through agency enforcement. Such a method is likely to be more accessible and cheaper than traditional litigation. It can also utilize the techniques of nodal governance advocated by Murray. If data collectors are penalized for failures after they occur, they will learn about the probability and magnitude of those harms as a result of the process of regulation itself. (See Hanson and Logue, 1998, p. 1274) Given that social norms and technologies surrounding data portability are likely to evolve over time, a co-regulatory approach would facilitate continuous challenges by users, and those challenges will generate ongoing communication and information that would educate online businesses about how to best develop RDP procedures.

Case Study: Drawing from the experience of mobile number portability

In crafting enforcement approaches to data portability, the implementation of mobile number portability provides a useful comparison. Following some of the trials and tribulations of adoption of MNP in the European Union, scholars examining its effectiveness have advised jurisdictions conducting *ex ante* assessments of portability to consider the predicted trade-off between achieving positive market outcomes and the anticipated costs of implementation. (Lyons, 2006)

The United Kingdom, for example, has adjusted its approach to MNP over time with generally effective results. Currently, the UK sets public rules for implementation of MNP, which are then carried out by private companies. Ofcom, the UK's communications regulator, oversees compliance with these rules and is able to take enforcement action for any breaches or complaints. (Ofcom, 2010) The UK's MNP implementation thus parallels the intermediate co-regulatory strategy outlined by Shleifer (2005). Nonetheless, European implementation of MNP has not achieved perfection, and its strength and weaknesses are discussed in the remainder of this section.

Benefits of MNP

As discussed earlier, the motivation behind MNP is to reduce switching costs among mobile communications subscribers. Such switching costs confer market power on firms, enabling them to charge higher prices, reduce service quality, create barriers to entry, and generally hinder competition. (cf. Graef, 2013) MNP was predicted to yield an improvement in the likelihood of switching. This would, in theory, create benefits for subscribers who switch to a better service, would strengthen market competition; and would benefit those who attempt to locate subscribers who have switched services. (Lyons, 2006)

Costs of MNP

Following the implementation of MNP in several countries, many studies have examined whether, and the extent to which, MNP has actually reduced switching costs and increased competition. (Bühler et al., 2006; Gans, et al., 2001; Lyons, 2006) Lyons (2006) notes that operators may respond to MNP by diverting implementation costs to users in other ways, but argues that MNP should nevertheless have at least a weakly positive effect at improving switching costs. However, Bühler, et al. (2006) argue that the valuation of MNP in some circumstances can be lower than the incremental cost of developing and administering

porting technologies. Based on this deadweight loss, the authors conclude that making porting free of charge, as it is in many jurisdictions, is economically inefficient. Furthermore, if operators are forced to cover the cost of the technology themselves, then they may have an incentive to choose technologies that will lead to productive inefficiencies. This, in turn, may hinder subscriber adoption of portability, reducing the overall market benefit.

Subscriber adoption of MNP

Several empirical studies examined the low adoption rate of MNP following its implementation. These studies found that the time delay in porting a mobile number may have discouraged many subscribers from switching providers, thereby circumventing the regulatory goal. (Stach, 2004) NERA research also revealed problems caused by the time delay in porting. During the first years after implementation, porting a number took an average of 25 days. When the delivery time was eventually reduced to an average of five days, adoption increased to 18% for residential subscribers, and 80% for commercial subscribers. (NERA, 2003) Shin and Kim (2008) also observed less frequent adoption of MNP in situations where bundling of services made porting of numbers difficult. They also found less adoption when subscribers faced high search or learning costs in using MNP.

Projected challenges to implementation of RDP

Based on the case of MNP, it is possible that RDP may face similar challenges of implementation costs, user-learning costs, and tumultuous or deficient transfer experiences. Indeed, during the European Commission's competition investigation of Microsoft, enforcement of smooth software interoperability was a significant challenge. Technical experts accused Microsoft of providing insufficient information that would enable smooth interoperability, and the Commission eventually levied €1.18 billion in compliance fines before Microsoft's disclosures were deemed adequate. (Scherer, 2011)

Additionally, Bonneau and Preibusch (2010) have examined affirmative measures by social networks to hinder portability of profile data when users have sought to switch to a competitor. Smaller social networking sites have made attempts to retrieve a user's profile data from other networking sites, but this often violates a website's terms and conditions, and incumbent sites have been known to manipulate the architecture of online platforms in order to block such porting. The practice has led to several lawsuits. In one case, Facebook sued Power.com for allowing users to enter their Facebook login information to fetch their profile data. This followed a suit by Facebook to block Google's FriendConnect service from

retrieving a user's Facebook data. (Arrington, 2009) These measures demonstrate that sites are aware of the high switching barriers for online services, and have actively sought to increase them.

Based on these communications flows already in place – namely, contractual or technological barriers imposed by online businesses to prevent or hinder portability – there is likely to be some market resistance to RDP implementation. It can be predicted that online businesses may create switching barriers to hinder enforcement. Thus, further research is needed to explore the precise vulnerabilities of users and project where these switching barriers will arise. This research can help inform the Commission in establishing the “standard forms and procedures” for RDP as directed under the Draft Regulation, and determine whether qualifications to RDP are necessary.

PROPOSED RESEARCH: AN EXPLORATORY STUDY OF PORTABILITY ADOPTION

Introduction: *Ex ante assessments of portability adoption*

Scholars in the mobile communications context have demonstrated the importance of conducting *ex ante* assessments of portability, and in particular the relationship between adoption by users and the anticipated barriers to implementation. (cf. Lyons, 2006) In this Part, this Paper proposes a research design that seeks to accomplish this goal, and explores the structural relationships among customer satisfaction, breadth of use of an online service, and switching intentions. The research would focus on three common online services for which porting technologies are currently widely available: (i) web browsers; (ii) email services; and (iii) blog hosting services. The research draws heavily from successful exploratory research in the mobile communications and online brokerage sectors, and in particular from Shin and Kim (2008), Maicas et al. (2009), and Chen and Hitt (2002).

The objectives are to (1) identify variables that contribute to users' switching in three types of online services; and (2) to conduct an empirical analysis of the relative effects of data portability on users' decision to switch in order to predict the extent to which switching intentions are influenced by the perceived switching costs, and whether those perceived costs moderate satisfaction-retention linkages.

Selected sample of online services

In order to examine the stated objectives and evaluate intentions to port personal data, it is critical that this research focuses on services for which data portability is currently widely available. These services are (i) web browsing software (e.g., Internet Explorer, Firefox, Google Chrome); (ii) email service providers (e.g., Gmail, Outlook, AOL, Yahoo); and blog hosting services (e.g., Blogger, Wordpress, Drupal). These particular services were selected because of the predicted differences in depth of the relationship with each service (i.e., use of many different components or attributes within a single service, see Maicas et al., 2009).

Survey design and variables

Most variables may be assessed using multi-item scales. Customer satisfaction is measured with a 3-item scale designed to capture overall satisfaction. This variable uses an approach to measurement of customer satisfaction adopted from Shin and Kim (2008) and Fornell, et al. (1996). The questions regarding switching intention are adopted from Kim, et al. (2004). Questions measuring switching barriers and user lock-in are adopted from Chen and Hitt (2002). Questions measuring switching costs are adopted from Jones, et al. (2002). Finally, the questions measuring breadth of service seek to capture the cross-platform behavior of users, namely, whether they use any additional services provided by the core service. This follows the approach employed by Maicas et al. (2009). See Figure 2.

Figure 2. Items used to measure

Type of service surveyed (select one)		— Internet Browsing Software						
		— Email Service Provider						
		— Blog Hosting Provider						
Variable	Scale items							
Customer satisfaction	I am satisfied with the current service	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A	
	The current service meets all the requirements that I see reasonable	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A	
	The service satisfies my need	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A	
Switching intentions	I intend to switch providers	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A	
	In the future I shall need services of a different service provider	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A	
	I do not wish to continue to have service from my current service provider	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A	
Switching barriers	It is difficult for me to use another service provider	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A	
	It would be complicated for me to switch to another service provider	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A	
	It takes a lot of time to get information about other service providers	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A	
Customer lock-in	I feel locked in to this service provider	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A	
	There are hassle procedures to switching to another service	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A	
	In order to switch services, I have to breach terms and conditions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A	
Switching cost	In general, it would be a hassle to change service providers	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A	
	It would take a lot of effort to change service providers	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A	
	It would take a lot of time changing service providers	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A	
Breadth of service	I use one or more other services from this provider	Yes	No				N/A	

Predicted value of results

This study can provide insight as to the extent to which user satisfaction and switching barriers influence users' attitudes toward and behaviors in switching service providers. The results may indicate whether decisions to switch are influenced by lock-in, switching costs, and switching barriers, such as contractual commitments or reliance on a service. The findings may also indicate whether these barriers differ significantly across the three different types of services, and whether users' subscription to multiple platforms from a provider has a significant effect. Ultimately, the results can potentially inform regulators about the likelihood of dissatisfied users' adoption of RDP in the face of various switching barriers.⁴⁴

Thus, these findings can raise implications on the effectiveness and implementation of RDP. The European Commission has assumed that RDP will enhance competition in the online market. The findings of this proposed study can inform regulators about whether such competition advantages are likely to materialize, and the possibility of any discrepancy between the regulatory assumption and the market outcome. The results can contribute to scholarly and policy literature by providing guidance to regulators about how to specify the rules, format, standards, modalities, and procedures for the transmission of personal data pursuant to the Draft Regulation.

⁴⁴ Cf. Shin and Kim (2008), for similar results in a study about mobile number portability.

CONCLUSION

This Paper makes contributions to existing scholarship in three ways. First, it conducts a legal analysis of actual Commission and European Court of Justice opinions to examine the legality of a right to data portability. Second, it provides a thorough theoretical comparison between data portability and number portability to better inform a policy framework. Third, it advances literature on the effective implementation of RDP by offering a research design to make an *ex ante* assessment of RDP's potential adoption.

This Paper gives an overview of the rationale, the legality, and the regulatory implementation of a right to data portability under European competition law. After a review of literature regarding government intervention to promote competition, this Paper considers theoretical justifications for intervention in the context of high switching costs and consumer lock-in problems that characterize many online services. This Paper then finds legal support for RDP as a solution to these switching costs based on European Community and European Union case law. Finally, this Paper examines some of the struggles from implementation of mobile number portability, in order to propose further research to help guide smooth implementation of data portability in the future.

While formal adoption of the European General Data Protection Regulation may be taking longer than originally anticipated, and the criticism more extensive than predicted, it is expected that the Regulation is likely to be adopted in due course. The foregoing analysis examines the theoretical and legal justifications for the proposed Regulation's provision of a right to data portability in particular, and can lend guidance during the final debates and discussions about its implementation.

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