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Platform competition and market definition in the US Amex case: lessons for economics and law

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ABSTRACT

The rise of multi-sided platforms in the marketplace has spawned a vast amount of research to understand their implications for competition and welfare. This paper presents the scrutiny of one such academic work that classifies multi-sided platforms into “transaction” and “non-transaction” platforms for the purpose of relevant market definition. It has been posited that in the case of “transaction” platforms, there is one all-encompassing relevant market comprising of all sides of a platform. And such a “transaction” platform can compete only with another “transaction” platform. The U.S. Supreme Court in its Amex decision relied upon this classification and elevated the same into law. This paper identifies flaws in this concept by demonstrating that the relevant academic work defines “transaction” too narrowly. The paper takes the swift adoption of the “transaction” platform approach by the Supreme Court as an opportunity to also provide lessons for economics and law.

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1. Introduction

The research on two-sided platforms that began predominantly in the early 2000s is two decades old now.¹ During this period competition law has benefited immensely from the economic research on multi-sided

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¹B. Caillaud and B. Jullien, ‘Competing Cybermediaries’ (2001) 45 European Economic Review 797; B. Caillaud and B. Jullien, ‘Chicken & Egg: Competition among Intermediation Service Providers’ (2003) 34 RAND Journal of Economics 309; J. C. Rochet and J. Tirole, ‘Platform Competition in Two-sided Markets’ (2003) 1 Journal of the European Economic Association 990; D. S. Evans and R. Schmalensee, ‘Markets with Two-Sided Platforms’ (2008) 1 Issues in Competition Law and Policy 667; D. S. Evans and R. Schmalensee, ‘Industrial Organization of Markets with Two Sided Platforms’ (2007) 3 Competition Policy International 152.

platforms. For instance, it is known how indirect network effects influence competition,² what adjustments are needed in the SSNIP test,³ the effect of product differentiation on the market power of a platform,⁴ how multi-homing constrains the power of multi-sided platforms,⁵ and non-neutrality of prices that makes below cost pricing on one side legitimate when seen on the aggregate level.⁶ This learning process is still not over and we are yet to learn a lot more about platforms that will shape the way we apply competition law to such business models. For instance, there is still no unanimously agreed upon definition of a two-sided platform.⁷ This paper, however, is aimed at a subsequent concept once a two-sided market has already been identified. It is aimed at analysing the further categorization of a two-sided platform into the so-called “transaction” and “non-transaction” platforms, first proposed by Filistrucchi et al.⁸ and later crystallised into law by the US Supreme Court in its Amex decision.⁹

In the American Express case (hereafter Amex case) in the US, while determining the legality of the “anti-steering provision” that American Express imposed on merchants, the US Supreme Court defined credit card market as one relevant market encompassing both cardholders and merchants as its respective two sides.¹⁰ The Supreme Court defined one

²Evans and Schmalensee (2008) (n 1).

³Lapo Filistrucchi, ‘A SSNIP Test for Two-Sided Markets: The Case of Media’ NET Institute Working Paper No. 08-34.

⁴See in general, David S. Evans and Richard Schmalensee, ‘The Antitrust Analysis of Multi-Sided Platform Businesses’ (Coase-Sandor Institute for Law & Economics Working Paper No. 623, 2012).

⁵Mark Armstrong and Julian Wright, ‘Two-Sided Markets, Competitive Bottlenecks and Exclusive Contracts’ (2007) 32(2) *Economic Theory*, 353–380; see also, The Bundeskartellamt, Facebook case summary, 15 February 2019 <https://www.bundeskartellamt.de/SharedDocs/Entscheidung/EN/Fallberichte/Missbrauchsaufsicht/2019/B6-22-16.pdf?__blob=publicationFile&v=3> (accessed on 11 May 2019).

⁶Klein, Lerner, Murphy, and Plache, ‘Competition in Two-Sided Markets: The Antitrust Economics of Payment Card Interchange Fees’, 73 *Antitrust L. J.* 571.

⁷Katz notes that there is a lack of consensus regarding the definition of a multisided platform. Michael L. Katz, ‘Platform Economics and Antitrust Enforcement: A Little Knowledge is a Dangerous Thing’ (2019) 28(1) *Journal of Economics & Management Strategy*, 138–152; for instance, Hagiu and Wright find limitations with the widely accepted definition by J. C. Rochet and J. Tirole, ‘Two-Sided Markets: A Progress Report’ (2006) 37 (3) *RAND Journal of Economics*, 645–667. Hagiu and Wright propose the following as the defining features of a two-sided market. “We believe that at the most fundamental level, MSPs have two key features beyond any other requirements” (such as indirect network effects or non-neutrality of fees):

- They enable direct interactions between two or more distinct sides.
- Each side is affiliated with the platform.

Andrei Hagiu and Julian Wright, ‘Multi-sided Platforms’, (2015) 43 *International Journal of Industrial Organisation* 162–174, page 163; on a lack of a unanimous definition see in general, Oscar Borgogno and Giuseppe Colangelo, ‘Antitrust Analysis of Two-Sided Platforms: The Day after AmEx’ (2019) *European Competition Journal*, 2–5.

⁸Lapo Filistrucchi, Damien Geradin, Eric van Damme and Pauline Affeldt, ‘Market Definition in Two-Sided Markets: Theory and Practice’ (2014) *Journal of Competition Law & Economics*, 10(2), 293–339.

⁹Ohio et al. v American Express Co. et al., 138 S.Ct. 2274 (2018).

¹⁰Ibid.

encompassing relevant market instead of two separate yet interrelated markets, arguing that a credit card platform is akin to a “two-sided transaction market” – using the reasoning and nomenclature proposed by some academics.¹¹ In a 2014 paper Filistrucchi et al classify two-sided platforms into “two-sided transaction market” and “two-sided non-transaction market” by proposing a test and argue that in the case of the former anti-trust authorities need to define the platform as one all-encompassing relevant market. In the case of the latter, two separate relevant markets need to be defined.¹² Admittedly, the SC while explicitly used the term “transaction platform”¹³ vis-à-vis the credit-card market and referred to the paper by Filistrucchi et al., it did not look into the test that sets out the criteria to identify a “transaction platform” generally.

There are at least two consequences of defining one market instead of two. First, as the US Supreme Court observed, a platform as a whole can only compete with another similar platform. This means that single-sided firms are not substitutes. Second, defining one market or defining multiple markets also has bearing on the plaintiff’s burden of proof. If an integrated market is defined, a plaintiff will have a tough task proving net anticompetitive effects, if there are corresponding pro-competitive effects on the other sides(s).¹⁴ The Supreme Court also acknowledged that the plaintiff has a higher burden of proving net harm to competition.¹⁵

While much ink was spilled in rejecting the integrated market approach with respect to credit cards by the dissenting part of the judgment delivered by Justice Breyer, the test proposed by Filistrucchi et al. to identify “two-sided transaction” markets remains uncontested so far, even in the academic literature. This paper points out flaws in the test proposed by Filistrucchi et al. and argues that instead of attempting to pigeonhole two-sided platforms based on certain characteristics, which cannot be generalized, into different types for the purpose of market definition,

¹¹Filistrucchi et al. (n 8); The SC also cites Klein, Lerner, Murphy and Plache, ‘Competition in Two-Sided Markets: The Antitrust Economics of Payment Card Interchange Fees’, 73 Antitrust L. J. 571, and Evans and Noel, ‘Defining Antitrust Markets when Firms Operate Two-Sided Platforms’ (2005) Colum. Bus. L. Rev. 667, while observing “credit-card networks are a special type of two-sided platform known as a ‘transaction’ platform” page 2, *Ohio v American Express* (n 9). However, Filistrucchi et al. have more prominently dealt with the concept of “transaction” platform and have attempted to develop it as a sub-category of two-sided markets.

¹²Filistrucchi et al. (n 8).

¹³This paper uses the terms “transaction platform” and “transaction market”, and “two-sided” platforms and “multi-sided” platforms interchangeably.

¹⁴Conner et al. term it as a “difficult and unwarranted burden”. See, Conner, J. M., Gaynor, M., McFadden, D., Noll, R., Perloff, J. M., Stiglitz, J. A., White, L. J. and Winter, R. A. (2017). Brief for amici curiae in support of petitioners in *Ohio et al. v. American Express Company*.

¹⁵*Ohio et al. v American Express* (n 9), page 15.

regard should be had to the competitive conditions measured by product interchangeability. Not only do such “bright-line” tests have restricted utility for they are extrapolated based on limited observation, such tests also remain prone to the pace of innovation that is known to obliterate market boundaries.

How we approach market definition in cases of multi-sided platforms essentially reflects upon our understanding of how platforms compete in the marketplace. At a time when our understanding of platform competition is still developing, it is too early to propose pre-defined criteria that run the risk of leading to an erroneous conclusion about the state of competition in the relevant market. The Amex case also provides lessons for the law and economics discipline in general. The quick adoption of a flawed economic test that has not had the occasion to be contested by other academics and courts, begs the critical question about the adoption process and standards of an economic theory before it matures into law. The paper thus also illustrates that the imprecision of economic science amplifies manifold when courts translate little contested theories into law.

Part 1 of this paper briefly summarizes the adoption of the “transaction platform” test by the US Supreme Court in the Amex case. Part 2 then by way of practical examples illustrates the shortcomings in the test. This part also shows that even alternative methods to categorize platforms for the purpose of market definition are incoherent and thus legally unpalatable. Based on this part, Part 3 presents lessons for economics. Part 4 by referring to the quick adoption and subsequent disenchantment with the “Areeda-Turner” test argues that a new economic insight must go through a “natural aging process” before it starts informing the law. This part also analyses the extent to which the EU competition law framework allows a new economic theory to be contested before it is translated into law. Part 5 concludes.

2. The decision in the Amex case and “transaction platforms”

The US Amex case was primarily centred on the antitrust legality of the “anti-steering provisions” employed by American Express with respect to its merchant partners. Amex adopted a business model that charged merchants higher fees as compared to its rivals. Thus, to prevent the merchants from steering the Amex card users to other cheaper options, Amex used contractual restrictions on its merchants. The United States and seventeen States collectively sued Amex arguing that the “anti-steering” was

anticompetitive inasmuch as it violated § 1 of the Sherman Act. The proper examination of this allegation under the rule of reason using the burden-shifting framework required the courts to define a relevant market.

At the District Court, American Express argued that the relevant market should be decided based on “transactions” encompassing the entire multi-sided platform.¹⁶ The District Court, however, rejected to define an all-encompassing relevant market citing past precedents.¹⁷ The Court also observed that American Express provided no “compelling reason” to depart from the past precedence.¹⁸ Accordingly, the District Court held that the credit-card market should be treated as two separate, yet deeply interrelated markets with merchants on one side and cardholders on the other side.¹⁹ On appeal, the Second Circuit without referring to the “transaction market” approach defined a single relevant market by observing “[s]eparating the two markets here—analysing the effect of Amex’s vertical restraints on the market for network services while ignoring their effect on the market for general purpose cards—ignores the two markets’ interdependence”.²⁰

The SC in the majority opinion delivered by Justice Thomas held that the credit-card market is a type of “transaction” market and thus this network is “best understood as supplying only one product – the transaction – that is jointly consumed by a cardholder and a merchant. Accordingly, the two-sided market for credit-card transactions should be analysed as a whole”.²¹ The SC explained that “transaction platforms” facilitate a single simultaneous transaction between two sides. Thus, when a credit card network sells its services to a merchant, it simultaneously needs to cater to a cardholder. The transaction in this operation, therefore, is indivisible and concurrent.²²

The SC treats “transaction” markets as a special case, in that the products/services are not only complementary (which is the case with all

¹⁶U.S. v. American Exp. Co. 88 F.Supp.3d 143 (E.D.N.Y. 2015).

¹⁷Visa II, 344 F.3d [United States v. Visa, 344 F.3d 229 (2d Cir. 2003)]; In re Payment Card Interchange Fee & Merch. Disc. Antitrust Litig. 562 F. Supp. 2d 392, 396–397 (E.D.N.Y. 2008); In re Visa Check/MasterMoney Antitrust Litig., No. 96-CV-5238 (JG), 2003 WL 1712568, at *2 (E.D.N.Y. 2003).

¹⁸U.S. v. American Exp. CO. (E.D.N.Y. 2015) (n 16), p 44.

¹⁹Ibid, page 5.

²⁰United States v. American Express Company, United States Court of Appeals for the Second Circuit, Docket No. 15-1672, page 35. This reasoning is flawed in that it negates the very reason to define relevant market: identify substitutes in order to measure competitive constraints. Any effects on competition can be determined at a later stage. Arguably, even if two separate markets are defined, it is possible to identify the net effects, keeping in mind effects manifesting on the interdependent other side of the market.

²¹Ohio et al. v American Express (n 9), p. 2.

²²Ibid 13.

two-sided platforms), they are mandatory for the existence of a transaction. It is true that while referring to the “transaction” market, the SC refers to other academics as well²³; however, Filistrucchi et al. have more prominently dealt with the concept of “transaction” platform and have attempted to develop it as a sub-category of two-sided markets. Aside from the nomenclature, the majority judgment frequently refers to Filistrucchi et al. while explaining the features of a “transaction” platform.

In the paper relied upon by the SC, Filistrucchi et al. define the two-sided transaction platform based on three criteria.²⁴ First, presence of a transaction between the two groups of platform users; second, observability of a transaction between the two groups of platform users; and third, because of observability, a per-transaction (or per-interaction) fee or a two-part tariff is possible. Judged against this criteria, Filistrucchi et al. consider payment cards services, auction houses, video game consoles, operating systems and property rental agency as two-sided transaction market, noting that the product that is offered is “the possibility to transact through the platform”.²⁵

Some scholars are of the view that in the case of multisided platforms, every side should be defined as a different relevant market, instead of defining a single multisided relevant market.²⁶ Also, there are others who believe that it is better to define one integrated market always.²⁷ Admittedly, there can be cases when it is prudent to define a single market.²⁸ Defining one market in the case of a particular two-sided platform is a matter of practical wisdom, in that the condition of

²³The SC also cites Klein et al. (n 11) and Evans & Noel (n 11).

²⁴Filistrucchi et al. (n 8), page 298.

²⁵Ibid, page 303.

²⁶Michael L. Katz and Jonathan Sallet, ‘Multisided Platforms and Antitrust Enforcement’ (2018) 127 Yale L.J. 2142.

²⁷Joshua D. Wright and John M. Yun, ‘Burdens and Balancing in Multisided Markets: The First Principles Approach of *Ohio v. American Express*’ (2019) 54 Review of Industrial Organization, 717–740. Wright and Yun look at the literature from both sides and argue that

In sum, while there is some divergence in views regarding the need to define one or two relevant product markets, this second school is generally consistent in the view that an assessment of whether there is anticompetitive harm must be incorporated at the prima facie burden stage of a rule-of-reason analysis. Notably, the Supreme Court in *American Express* (and the Second Circuit) endorsed this approach. page 726.

²⁸... [b]oth approaches seem to be in line with the concept of demand-side substitutability; in particular, defining one single market does not conflict with this concept as a platform can be understood as a provider of an intermediation service, serving linked user groups with essentially the same service. All in all, and given the role of market definition as a tool that supports competitive analysis, neither of the two approaches seems right or wrong in absolute terms as long as the analysis appropriately accounts for interdependencies—such as indirect network effects—and for all competitive forces on each ‘side’ of the market.”, Sebastian Wismer and Arno Rasek, ‘Market Definition in Multi-Sided Markets’, OECD (2018) Rethinking Antitrust Tools for Multi-Sided Platforms, 57.

competition can be gauged at the level of the platform, as any competitive constraints may come from a similar structure. However, as this paper shows, this is a factual enquiry and pre-defined criteria about the platform type can lead to an erroneous conclusion about the relevant market.

It is noteworthy that even before the US Supreme Court adopted this nomenclature, the German competition authority (the Bundeskartellamt) had already resorted to the concept of “transaction” platforms.²⁹ However, the criteria chosen to characterize a platform as “transaction” platform was the presence of “pronounced bilateral positive indirect network effects between the two user groups”.³⁰ In these merger cases, however, the Bundeskartellamt left the precise market definition open. In P7S1/Verivox it was not conclusively decided if a “transaction platform”, online comparison platform that also acted as an intermediary for contracts for various services, competed with alternative channels such as offline sales or supplier’s own website – both single-sided markets.³¹

3. Limitations of the concept of “transaction” platforms

This part scrutinizes the test proposed by Filistrucchi et al. and illustrates the glaring loopholes with their sweeping generalization of “transaction” markets.

3.1. Narrow view of “transaction”

Filistrucchi et al. distinguish between transaction platforms, such as credit card networks, for which there is an observable transaction and non-transaction platforms, such as ad-supported media markets, for which there is no observable transaction. Speaking of interaction between the two sides of the market, the authors note that in media markets this interaction may be present, albeit only a delayed transaction is present, “and this transaction is usually not identifiable (as it is impossible to say

²⁹BKartA – Immonet/Immowelt, B6-39/15, case summary of 20.04.2015, page 2; also in, BKartA – P7S1/Verivox, B8-67/15, case summary of 05.08.2015; In a subsequent paper, however, the Bundeskartellamt instead of using the term “transaction platform” uses the term “match making platform”. Bundeskartellamt, Working Paper – The Market Power of Platforms and Networks, Ref. B6-113/15, June 2016.

³⁰“In this constellation of a so-called transaction platform there is a typical two-sided market with pronounced bilateral positive indirect network effects between the two user groups. In the case of transaction platforms – in contrast to advertising-based two-sided markets – the Bundeskartellamt considers it possible for definition purposes not to separate the different market sides.” BKartA – Immonet/Immowelt, (n 29), page 2.

³¹BKartA – P7S1/Verivox, (n 29).

whether someone has bought a product because he or she has seen an ad) so that the platform is unable to charge a fee for it”.³²

The view taken by the authors interprets “transaction” narrowly, in that a transaction may not necessarily involve the exchange of money for goods/services. It may also involve cases where one side of the market only seeks the attention of the other side of the market. Different ads serve different purposes. Not every ad is aimed to make a consumer purchase a product or sign up for a service. Search and contextual advertisements that are typically subjected to a cost-per-click payment model are intended to elicit a response from consumers in the form of the purchase of a product or signing up for a service. Another kind of advertisement is a display ad that is generally used for brand advertising rather than having the consumers act on it.³³

Another shortcoming with the “observability” of a transaction is that the present technology makes it possible for the online newspapers to use advertising much like how the credit card market operates inasmuch as an online news platform may pay the advertiser based on the number of impressions that a particular advertisement receives. The US Supreme Court never got into examining this commonality between newspapers and credit card markets.³⁴ Evans also notes that online attention platforms facilitate observable transaction when a user clicks on an advertisement.³⁵ Thus, attention platforms have a changing nature. Interestingly, the possibility of the online newspaper portals using technology to calculate impressions was mentioned by Filistruchhi et al who remarked that

Only recently, using online tracking technology, has it become possible for a platform to charge advertisers for a transaction in which an internet user buys a product online from the seller after having seen their online advertisement. Such technological developments may eventually push some media markets to become two-sided transaction markets.³⁶

Thus, the authors were aware that technological developments make the relevant market boundaries porous. In view of this, the test they proposed cannot be termed technology-neutral and hence will lead to erroneous results, especially at a time when the technology is evolving rapidly.

³²Filistruchhi et al. (n 8), footnote 11.

³³Statement of Federal Trade Commission Concerning Google/DoubleClick FTC File No. 071-0170, Page 5.

³⁴Steven Semeraro, ‘Cooperation, Competition and Easterbrook’s Forgotten Insight: A Case Note on Ohio v. American Express’, (2018) 41 T. Jefferson L. Rev. 1, 11.

³⁵David S Evans, ‘Attention Platforms, the Value of Content, and Public Policy’ (2019) 54 (4) Review of Industrial Organization, 775–792, footnote 7.

³⁶Filistruchhi et al. (n 8), footnote 11.

3.2. “Transaction” platforms also compete with “non-transaction” platforms

The core idea behind defining a relevant market is to “identify those actual competitors of the undertakings involved that are capable of constraining those undertakings’ behaviour and of preventing them from behaving independently of effective competitive pressure”.³⁷ A relevant market is defined by identifying all those products that provide a “sufficient degree of interchangeability”.³⁸

So far as the “transaction” platforms are concerned, it implies that similar “transactions” can be made only by bringing two different groups of users together. Overall, it implies that a multi-sided “transaction” market can compete only with another multi-sided “transaction” market. This is confirmed by the SC in the Amex case. The SC observed:

Only other two-sided platforms can compete with a two-sided platform for transaction. A credit-card company that processed transactions for merchants, but has no cardholders willing to use its card, could not compete with Amex ...

Only a company that had both cardholders and merchants willing to use its network could sell transactions and compete in the credit-card market.³⁹

In footnote 9, the Supreme Court distinguishes “transaction” and “non-transaction” platforms by noting “[n]ontransaction platforms, by contrast, often do compete with companies that do not operate on both sides of their platform”.⁴⁰ Filistrucchi et al also note that “[o]ne of the consequences of defining only one market is that a firm would be either on both sides of the market or on none”.⁴¹ This means that in order to complete a “transaction” a firm needs to be present on both sides. Thus, the SC and the academic paper that it relies upon indicate that a “transaction” platform will compete with a similar “transaction” platform only. This is a critical point regarding the business model of the two-sided “transaction” markets.

In general, not only do platforms compete with similar platforms, they also compete with one-sided markets. For instance, Free-to-air TV that is financed by advertising and Pay-TV may be substitutes as far as the

³⁷Commission Notice on the definition of relevant market for the purposes of Community competition law (97 /C 372 /03), paragraph 2.

³⁸Case 85/76 *Hoffmann-La Roche v Commission* [1979] ECR 461, paragraph 28; T-340/03 – *France Télécom v Commission*, ECLI: EU: T: 2007:22, paragraph 80.

³⁹*Ohio et al. v American Express* (n 9), page 14, Citing Filistrucchi et al. (n 8) 301.

⁴⁰*Ohio et al. v American Express* (n 9), footnote 9; However, the example of television network competing with newspapers to sell advertising that it chooses to substantiate this point is flawed, as a television network may also operate on both sides.

⁴¹*Ibid* 301.

viewers are concerned.⁴² However, there are glaring exceptions to the proposition that a “transaction platform” competes only with another “transaction platform”. So far, we do not have a large body of competition law cases on platforms. The following text presents some cases where competition authorities found a “transaction” platform to be competing with a one-sided market. This part is not comprehensive and is aimed at illustrating the limitations of the “transaction market” approach. If a “transaction” market competes with a one-sided market, then it makes no sense to define a “transaction” market as one all-encompassing relevant market.⁴³

Two-sided online portals that bring users and service providers often satisfy the test proposed by Filistrucchi et al. inasmuch as two sides engage in an observable transaction that can facilitate a two-part tariff by the platform. It has been found that hotel-booking portals may not be competing with hotels’ own website⁴⁴ or other offline channels.⁴⁵ Also, travel ticket booking platforms that connect suppliers such as airlines and travel agents do not compete with airline websites.⁴⁶ However, another “transaction” platform, taxi aggregators, have been found to be competing with traditional taxi services that is a single-sided market.⁴⁷ These taxi services could either be owned by one company or owned by several individuals. In one Indian example, Meru owns a fleet of taxis that the Indian competition authority (CCI) found to be competing with OLA and Uber that are both “transaction” markets. The CCI also found that individually owned taxis (black-and-yellow taxis in Kolkata) can also compete with OLA and Uber.⁴⁸

Interestingly, it has been found that the competition in the taxi service market exists in the opposite direction as well. Thus, it is not asymmetrical. In a merger between Sheffield City Taxis Limited and Mercury Taxis (Sheffield) Limited, the UK competition agency, the Competition and Market Authority (CMA), observed that the merging parties, both one-sided markets, would get close competition from taxi aggregators such

⁴²Martin Peitz and Tommaso Valletti, ‘Reassessing Competition Concerns in Electronic Communications Markets’ (2015) 39 Telecommunications Policy 896–912; see also, Evans (n 35), footnote 7.

⁴³Tim Wu also has also criticised the “transaction market” theory by pointing to some practical cases where a two-sided “transaction market” competes with a single-sided market. Tim Wu, ‘The American Express Opinion, the Rule of Reason, and Tech Platforms’ (2019) 7 Journal of Antitrust Enforcement, 104–127.

⁴⁴BKartA – HRS, B9-66/10, decision of 20.12.2013.

⁴⁵Such as sales of hotel rooms by telephone and e-mails, reservation forms on the hotels’ own websites and sales via offline travel agencies and tourism organisations. Ibid 26.

⁴⁶Case No COMP/M.4523-Travelport/Worldspan, 21/08/2007, paragraphs 39–59.

⁴⁷Case No. 25-28 of 2017, Meru Travel Solutions Pvt. Ltd. v M/s ANI Technologies Pvt. Ltd. and others.

⁴⁸Ibid.

as Uber and Gett.⁴⁹ This is, however, not a uniform approach as the Spanish competition authority considered taxi app intermediaries falling in a different relevant market as compared to 1. Taxi radio/phone based intermediaries, 2. Taxi hail operators.⁵⁰ The Singapore competition authority also decided that there was no substitution between a two-sided taxi booking platform and street-hailed taxi service.⁵¹

If consumers can switch from an e-commerce platform to brick-and-mortar shops, then the relevant market cannot be e-commerce services. Instead, the relevant market will be a broader retail service to consumers. In one Indian case, which was a merger decision between two online retail “transaction” platforms viz. eBay and Flipkart, the Indian competition authority, indicated that an overall B2C market or its sub-segment online B2C market may exist, thus defining relevant market at the platform level.⁵² However, the relationship between online retailing and traditional retailing – whether complements or substitutes – is still not known and arguably depends on national preferences, product characteristics, and technological and business innovation.⁵³

“Transaction” market approach is problematic also for the reason that innovation may make it possible for a one-sided market to compete with such platforms. Disruptive innovation is known to blur market boundaries.⁵⁴ Especially at a time when technology is experiencing rapid changes, the law needs to be flexible enough to accommodate changes. It appears that the conceptual understanding of “transaction” and “non-transaction” platforms has been developed keeping in mind the differences between the media market and the credit card market. This conceptual understanding is not universal, however.

⁴⁹ME/6548-15, Completed acquisition by Sheffield City Taxis Limited of certain assets and business of Mercury Taxis (Sheffield) Limited, Decision of 13 October 2015.

⁵⁰Kyriakos Fountoukakos, André Pretorius and Lisa Geary, ‘Market Definition in a Rapidly Changing (Digital) World: The Case of Ride-Sharing’ (2018) Competition Policy International. <<https://www.competitionpolicyinternational.com/market-definition-in-a-rapidly-changing-digital-world-the-case-of-ride-sharing/>> (accessed on 10 May 2019).

⁵¹Case number: 500/001/18, Sale of Uber’s Southeast Asian business to Grab in consideration of a 27.5% stake in Grab, 24 September 2018, paragraphs 138–144.

⁵²Notice under Section 6 (2) of the Competition Act, 2002 jointly given by eBay Singapore Services Private Limited and Flipkart Limited. <https://www.cci.gov.in/sites/default/files/Notice_order_document/C-2017-05-5050.pdf> (accessed on 11 May 2019).

⁵³Hans W. Friederiszick and Ela Glowicka, ‘Competition Policy in Modern Retail Markets’ (2016) 4(1) Journal of Antitrust Enforcement 42–83.

⁵⁴Alexandre de Stree and Pierre Larouche postulate that “... with disruptive innovation, firms compete to displace one another from a central position in the broader ecosystem, by shifting and creating relevant market(s) so as to occupy a central stage overall”. Alexandre de Stree and Pierre Larouche, Disruptive Innovation and Competition Policy Enforcement, DAF/COMP/GF(2015)7, 6.

3.3. Alternative approaches

There are several other attempts as well to categorize platforms into pre-defined categories for the purpose of market definition. For instance, the Bundeskartellamt proposed that in the presence of two-sided positive network effects it is reasonable to define only one market. In a 2015 paper, the Bundeskartellamt observed that “[b]ilateral positive network effects occur in particular where the platform serves to connect two or more user groups for the purpose of direct interaction. Such platforms can be referred to as *matching platforms*”.⁵⁵ The Bundeskartellamt terms platforms that witness only one-sided positive indirect network effects, which is the case with advertisement driven platforms, as “audience providing” platforms.⁵⁶

The Bundeskartellamt proposed in its paper that “at least in the case of *matching platforms* where the connection of the two user groups is the actual product offered by the platform it can be reasonable to define only one market”.⁵⁷ However, noting that there can be exceptions, the Bundeskartellamt observed that where

one side does not depend on a successful matching result to satisfy its demand. In these cases, a definition of just one market would fail to cover competitive relations that are potentially important. The question of whether one should define one or two markets, therefore, needs to be decided on a case-by-case basis.⁵⁸

In the *Immonet/Immowelt* merger decision, the Bundeskartellamt defined one single market because of the presence of bilateral positive indirect network effects, which lead to a largely uniform demand.⁵⁹

It is crucial to note that e-commerce platforms may display two-sided positive indirect network effects. But as shown above, it is possible that e-commerce platforms may compete with one-sided markets. Likewise, in some cases, viewers may also value advertisements on media platforms that bring together advertisers and consumers, triggering indirect network effects in both directions. Still, the platform does not have an observable transaction for the purpose of the test proposed by Filistrucchi et al. Thus, different tests lead to incoherent results.

Another test has been suggested by Wismer and Rasek in an OECD paper. The authors observe that “[i]n particular, some non-transaction

⁵⁵BKartA, B6-113/15 (n 29) 3.

⁵⁶Ibid 3.

⁵⁷Ibid 5.

⁵⁸Ibid 6.

⁵⁹BKartA – Immonet/Immowelt, B6-39/15 (n29) 2.

platforms may be launched with one side only, and the second side may be added at a later stage”.⁶⁰ This proposition is in conflict with the test proposed by Filistrucchi et al. Amazon or for that matter any other e-commerce platform may not be a “transaction” platform if one goes by the proposition of Wismer and Rasek. There is a possibility to operate the buyer side of the platform without having the seller side. This possibility is not just theoretical. Amazon first was catering to the buyer side only when it started in 1995. After gaining the “critical mass” it opened its platform to the sellers as well.⁶¹ Also, the original Atari VCS videogame console functioned as a VI (Vertically Integrated) model and so did Yellow Cab.⁶²

4. Lessons for economics

An attempt to categorize platforms into “transaction” and “non-transaction” platforms that cannot be generalized is not very helpful for competition enforcement. To the extent we have understood multisided platforms, the presence of indirect network effects is the primordial element that influences competitive assessment.⁶³ Only due to network effects, the price structure and price level differ from a one-sided market. Additionally, for this reason, it is crucial to take all sides into account while assessing the effects of a firm’s impugned conduct. Network effects can exist in one direction or both directions, resulting in different competitive dynamics. All in all, two-sided markets should be approached as a concept, not as a theory.

There are examples that do not fit into the defined pigeonholes of “transaction” and “non-transaction” platforms. There can be problems with a pedantic application of this theory in enforcement. Competition cases are becoming highly technical and time consuming. Working against tight deadlines, especially in merger cases, a dogmatic application of such concepts is bound to lead to errors. Thus, demand-side substitution (also supply-side substitution in some cases) is the right way to define relevant markets even with respect to multi-sided platforms. Although in the *Immonet/Immowelt* merger decision the

⁶⁰Sebastian Wismer & Arno Rasek, (n 28) 57.

⁶¹Amazon Annual Report, 2014 <<https://ir.aboutamazon.com/static-files/d6263104-b6fa-401a-aa29-3b66ec713f76>> (accessed on 11 May 2019).

⁶²Andrei Hagiu and Julian Wright (n 7).

⁶³Wright and Yun also note that even though there is a lack of consensus on the definition of two-sided platforms, generally they are characterized by cross-group effects, or indirect network effects. Wright and Yun, (n 27), footnote 1.

Bundeskartellamt referred to the online real estate platforms as a type of “so called transaction platforms” with pronounced bilateral effects, it also resorted to the demand-side substitutability test to define the relevant market.⁶⁴ The Bundeskartellamt deemed it proper to define a single market

if demand on the part of both user groups is largely uniform and the possibilities of the user groups to switch provider do not essentially differ. Here the opposite market side consists of property providers and property seekers which both use a property intermediation service. With all the feasible possibilities to switch to an alternative intermediary, both user groups would inevitably be brought together again.⁶⁵

Interestingly, in its 2019 Facebook decision, the Bundeskartellamt refrained from using the previous terminology of “transaction platform” or “match-making platform” while defining the relevant market and instead relied on demand-side substitution. The Bundeskartellamt observed that “[b]ased on the concept of demand-side substitutability, the Bundeskartellamt defines the product market as a private social network market with private users as the relevant opposite market side”.⁶⁶ The recently issued Abuse of Dominance Enforcement Guidelines by the Competition Bureau Canada also avoids a predefined approach to the relevant market definition in the case of multi-sided platforms.⁶⁷ In order for the courts and antitrust authorities to properly undertake a factual enquiry, it is important not to have any preconceived notions about platforms.

Evans and Schmalensee, while avoiding the nomenclature and conceptual foundations used by Filistrucchi et al. for “transaction markets”, observe “platforms that provide services that, by their very nature, are jointly and unseverably consumed by two different types of consumers” offer essentially a single service that competes with another similar service provided by a different platform.⁶⁸ Even Evans and Schmalensee suggest that platforms that “jointly and unseverably consumed by two types of customers” do

⁶⁴BKartA – Immonet/Immowelt, B6-39/15 (n 29).

⁶⁵Ibid 2.

⁶⁶The Bundeskartellamt, Facebook case summary (n 5) 3.

⁶⁷In paragraph 16, the Competition Bureau Canada observes, “Depending on the facts of a case, the Bureau may define a product market as one side of a multi-sided platform (i.e. consider the effects of a price increase on one side of the platform)”. ... In other cases, the Bureau may view it appropriate to define a market to include multiple sides of the platform <[https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/vwapj/CB-ADEG-Eng.pdf/\\$file/CB-ADEG-Eng.pdf](https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/vwapj/CB-ADEG-Eng.pdf/$file/CB-ADEG-Eng.pdf)> (accessed on 13 May 2019).

⁶⁸The authors provide the example of an online reservation service provided to diners and restaurants. They note that the service these two groups consumer is reasonably interchangeable with services provided by other online restaurant reservation services. David S. Evans and Richard Schmalensee, ‘Applying the Rule of Reason to Two-Sided Platform Businesses’, (2017) 26 U. Miami Bus. L. Rev. 1, 3–5.

not compete with single-sided businesses.⁶⁹ This approach invites the competition authorities to take a factual enquiry to identify if a service is actually “jointly and unseverably consumed by two types of customers” and refrains from devising pigeonholes that prejudice the highly factual relevant market enquiry that can reveal commercial realities.⁷⁰

In general, too much formalization by suggesting a “bright-line” test to explain market phenomena may complicate legal enforcement, rather than introducing legal certainty. Instead, the effort of economics should be to explain the underlying economic reasons that have bearing on legal enforcement.⁷¹ As argued above, with respect to multi-sided platforms the presence of indirect network effects is the prime factor that influences competition law.

In general, a pedantic approach to two-sided markets may also create frictions between different laws. Advocate General Spuzner, in his Opinion with respect to Uber, stated that as a platform Uber exercises “decisive influence” by way of “indirect control” over the drivers, unlike intermediation platforms such as those that are used to make hotel bookings or purchase flight tickets, and hence the platform and drivers are in an employer-employee relationship.⁷² By this rationale, Uber is a one-sided market, as there are no two different groups of consumers. This illustrates that the economic classification of market phenomena into certain categories with pre-defined features and hence calling for a particular treatment in law is not the right approach. While for the purpose of facts at hand in Spuzner’s Opinion, the element of control was decisive in order to decide the relationship between Uber and drivers, for the purpose of deciding market definition and measuring market power in competition law basic elements such as substitutability, presence of indirect network effects and multihoming are relevant.

Indeed, the concepts and definition related to two-sided platforms are still unsettled and it may be too early to devise a general framework with

⁶⁹Ibid 9–10.

⁷⁰The correct market definition can be reached “only after a factual inquiry into the ‘commercial realities’ faced by consumers”. *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451, 482 (1992) (quoting *United States v. Grinnell Corp.*, 384 U.S. 563, 572 (1966)).

⁷¹On the limitations of bright-line economic tests in competition law see, Franklin M. Fisher, ‘Economic Analysis and “Bright-Line” Tests’ (2007) 4(1) *Journal of Competition Law and Economics* 129–153.

⁷²Opinion of Advocate General Szpunar delivered on 11 May 2017 Case C-434/15 *Asociación Profesional Elite Taxi v Uber Systems Spain SL*. As per Spuzner, Uber sets the price of the service provided, Uber sets the necessary conditions that vehicles and drivers need to satisfy, drivers receive a financial reward from Uber, and finally Uber exerts indirect control over the quality of services through its ratings function, paragraphs 45–51.

respect to two-sided platforms.⁷³ Any economic test needs to be strength tested first keeping in mind different enforcement scenarios. In view of this, the Majority's attempt to accommodate the "transaction" market approach is premature at best.

5. Lessons for law

The US Amex case also raises critical questions about the nature of optimal interaction between economics and law. As an organic discipline law borrows insights from multiple streams including economics. It is still, however, not clear as to the standards that an economic theory must conform to before it starts informing (at times shaping) the legal enforcement. So far this paper showed the limitations in the "transaction" platform approach adopted by the US Supreme Court that had originally been proposed by an academic paper. The following part demonstrates the problems that a hasty adoption of a particular economic theory can cause for legal enforcement.

5.1. "[H]ow courts should use new developments in economic or scientific theory"⁷⁴

The adoption of the "transaction" market approach by the US Supreme Court raises the same question that Brodley and Hay raised almost forty years ago with respect to the swift adoption and subsequent disenchantment with the Areeda-Turner test by several courts.⁷⁵

Professors Areeda and Turner proposed their test to identify predatory pricing in their seminal paper in 1975.⁷⁶ Areeda and Turner proposed Average Variable Cost (AVC) as the proxy for marginal cost and posited that prices below reasonably anticipated average variable cost are predatory and prices at or above reasonably anticipated average variable cost are non-predatory.⁷⁷ Several leading contemporary commenters had critiqued the test.⁷⁸ This, however, did not

⁷³Janusz A. Ordover, 'Comments on Evans and Schmalensee's "The Industrial Organization of Markets with Two-Sided Platforms"' (2007) 3(1) Competition Policy International 181, Ordover observes, "Thus—like free-riding or network effects were before—2SPs [two-sided platforms] may be a passing concept which calls for analytical vigilance but does not require a policy revolution".

⁷⁴Joseph F. Brodley and George A. Hay, 'Predatory Pricing: Competing Economic Theories and the Evolution of Legal Standards', (1981) 66 Cornell L. Rev. 738 794.

⁷⁵Ibid.

⁷⁶P. E. Areeda and D. F. Turner, 'Predatory Pricing and Related Practices under Section 2 of the Sherman Act' (1975) 88(4) Harvard Law Review 697.

⁷⁷Ibid.

⁷⁸E.g. F. M. Sherer, 'Predatory Pricing and the Sherman Act: A Comment', (March 1976) 89(5) Harvard Law Review 869–890; Oliver E. Williamson, 'Predatory Pricing: A Strategic and Welfare Analysis' (1977) 87 Yale

prevent some lower courts from adopting the test.⁷⁹ The SC, however, never adopted this test and in the landmark *Brooke Group* case in 1993, instead of relying on AVC, as proposed by the Areeda-Turner test, the Court instead held that “a plaintiff seeking to establish competitive injury resulting from a rival’s low prices must prove that the prices complained of are below *an appropriate measure* of its rival’s costs [emphasis added]”.⁸⁰ The US Supreme Court has repeatedly declined to benchmark the type of cost below which the prices will be considered predatory.⁸¹ Consequently, lower courts have been following different standards of cost to determine predatory pricing.⁸² This is not to say that an economic test has to be foolproof. As is the case, the Areeda-Turner test has received criticism even after being adopted by several courts.⁸³

The early adoption of the Areeda-Turner test was premature for the reasons that first, it did not reflect an economic consensus; second, as opposed to what appeared initially, the test was difficult to apply legally. For these reasons, some courts chose not to rely upon the test.⁸⁴ Moreover, this test was too demanding for the plaintiffs and made proving predation extremely difficult.⁸⁵ Incidentally, proving harm on the aggregate if an all-encompassing relevant market is defined for a platform also plunges the plaintiff into a herculean task. Here again, a wrongly defined single market based on a flawed “transaction” market test will make it difficult for the plaintiff to prevail before antitrust authorities and courts.

In the EU, the Court of Justice endorsed the Areeda-Turner test in 1991 in *AKZO* holding that prices below AVC are irrational and thus unlawful.⁸⁶ The Court also developed the test further and held that prices above AVC but below Average Total Cost (ATC) are unlawful if they

L.J.; W. J. Baumol, ‘Quasi-Permanence of Price Reductions: A Policy for Prevention of Predatory Pricing’ (1979) 89(1) *Yale Law Journal* 4–5; see, Herbert Hovenkamp, ‘The Areeda–Turner Test for Exclusionary Pricing: A Critical Journal’ (2015) 46 *Rev Ind Organ* 209–228; see also, Brodley and Hay (n 74).

⁷⁹See, e.g. *International Air Indus., Inc. v. American Excelsior Co.*, 517 F.2d 714 (5th Cir. 1975); *Hanson v. Shell Oil Co.*, 541 F.2d 1352 (9th Cir. 1976); *Janich Bros., Inc. v. American Distilling Co.*, 570 F.2d 848 (9th Cir. 1977); see also, Hovenkamp (n 78); see also, Herbert Hovenkamp, *Federal Antitrust Policy: The Law of Competition and Its Practice* (Fifth Edition, 459).

⁸⁰*Brooke Group v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209 (1993), 222.

⁸¹See, *Cargill, Inc. v. Monfort of Colorado, Inc.*, 479 U.S. 104, 117–118, n. 12 (1986); *Matsushita Elec. Industrial Co. v. Zenith Radio Corp.*, 475 U.S. 574, 585, n. 8 (1986); *Brooke Group v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209 (1993), 222, footnote 1; *Atl. Richfield Co. v. USA Petroleum Co.*, 495 U.S. 328, 341 n. 10 (1990).

⁸²To see the different standards of cost adopted by different Circuits see, ABA Section of Antitrust Law. *Antitrust Law Developments* (7th ed. 2012), 278–283.

⁸³See, Herbert Hovenkamp (n 78).

⁸⁴Brodley and Hay (n 74), 793.

⁸⁵*Ibid.*

⁸⁶*AKZO Chemie BV v Commission of the European Communities*, Case C-62/86, ECLI:EU:C:1991:286.

are proved to be part of a plan to eliminate a competitor.⁸⁷ Subsequently, the Commission in its Guidance Paper on Article 102 TFEU has shown the preference for choosing Average Avoidable Cost (AAC) as the appropriate lower benchmark cost for determining predation.⁸⁸ Indeed, in *Post Danmark*⁸⁹ the CJEU appeared to adopt the AAC benchmark.⁹⁰

It is also important to note that as opposed to the Areeda-Turner test that provided the long desired cost benchmark that restricted judicial discretion, the “transaction” platform test fulfils no such purpose. For this reason, it is even more important to refrain from crafting legal rules based on economic theory that do not drastically help the administration of competition law.⁹¹

The above discussion raises an important question about the process through which a scientific or economic thought must pass before it matures into law and starts affecting social welfare. At this stage, it is better to reproduce Professor Stigler’s statement made around fifty-years ago that even Brodley and Hay had cited with respect to the Areeda-Turner test.

A new idea does not come forth in its mature scientific form. It contains logical ambiguities or errors; the evidence on which it rests is incomplete or indecisive; and its domain of applicability is exaggerated in certain directions and overlooked in others. These deficiencies are gradually diminished by a peculiar scientific aging process, which consists of having the theory “worked over” from many directions by many men. This process of scientific fermentation can be speeded up, and it has speeded up in the modern age of innumerable economists. But even today it takes a considerable amount of time, and when the rate of output of original work gets too large, theories are not properly aged. They are rejected without extracting their residue of truth, or they are accepted before their content is tidied up and their range of applicability

⁸⁷Ibid, paragraph 72.

⁸⁸Communication from the Commission – Guidance on the Commission’s enforcement priorities in applying Article [102] of the EC Treaty to abusive exclusionary conduct by dominant undertakings (2009/C 45/02), paragraphs 26 and 27.

⁸⁹Case C-209/10, *Post Danmark A/S v Konkurrencerådet*, ECLI:EU:C:2012:172.

⁹⁰Robert O’Donoghue and Jorge Padilla, *The Law and Economics of Article 102 TFEU* (Hart Publishing, 2nd edn, 2013) 304–305.

⁹¹In general legal rules based on economic theories pose challenges.

... while technical economic discussion helps to inform the antitrust laws, those laws cannot precisely replicate the economists’ (sometimes conflicting) views. For, unlike economics, law is an administrative system the effects of which depend upon the content of rules and precedents only as they are applied by judges and juries in courts and by lawyers advising their clients. Rules that seek to embody every economic complexity and qualification may well, through the vagaries of administration, prove counterproductive, undercutting the very economic ends they seek to serve.

Justice Breyer in *Barry Wright Corporation v. Ilt Grinnell Corporation*, et al. 724 F.2d 227 (1st Cir. 1983), 234.

ascertained with tolerable correctness. A cumulative slovenliness results, and is not likely to be eliminated until a more quiescent period allows a full resumption of the aging process.⁹²

While there cannot be mathematically calibrated standards to determine a “peculiar scientific aging process”, it is safe to say that a reasonable passage of time allows a theory to be critiqued and reformed. The academic work that the SC relies upon to support the “transaction” platform approach to market definition appeared in 2014.⁹³ Indeed, the concept of “transaction” platform is new to competition law that was incorporated into law without critical scrutiny either by academics or by courts.⁹⁴

5.2. Review standards for new economic theories and tests

The following part presents an enquiry into the learning process that the EU competition law institutional framework adopts vis-à-vis new economic insights based on academic work. This exercise is aimed at exploring if new economic theories pass through a “scientific aging process” before they become law in the EU.

5.3. The European Commission

There are two channels through which economic insights enter EU competition law. First, the EU competition law framework incorporates economic teachings through hard law (block exemption regulations⁹⁵) and soft law (guidelines⁹⁶) instruments. Before regulations and guidelines are finalized they go through extensive debate and discussion process. Second, through the decisions of the Commission. Even in the second channel, economic insights are well contested both by the Commission

⁹²G. Stigler, *Essays In the History of Economics* 14 (1965) (Quoted In D. Dewey, *The Theory of Imperfect Competition* 22–23 (1969)).

⁹³Filistrucchi et al. (n8) note that their 2014 paper was based on a 2010 report submitted to the Netherlands Competition Authority in 2010 (*Mergers in Two-Sided Markets – A Report to the NMA*). The distinction between the “transaction” and “non-transaction” platforms was originally proposed by Lapo Filistrucchi in 2008, although using a different nomenclature (*A SSNIP Test for Two-Sided Markets: The Case of Media* (NET Institute Working Paper no. 08-34, 2008)). The fuller enunciation of the “transaction” market approach, however, features only in their 2014 paper (n 8).

⁹⁴Tim WU notes that a Westlaw search for federal and state cases that used both the terms ‘transaction platform’ and ‘antitrust’ returns nothing prior to the June 2018 American Express decision. Wu (n 43), footnote 43.

⁹⁵First block exemption Regulation was on vertical restraints in 1999. Commission Regulation (EC) 2790/99 on the application of Article 81(3) of the Treaty to vertical agreements and concerted practices, [1999] OJ L148/1.

⁹⁶Starting with the Commission Notice on Guidelines on Vertical Restraints [2000] OJ C 291/1.

and by opposite parties before they become part of the law. Ever since the changes brought by Commissioner Monti in 2003, including the creation of the post of the Chief Competition Economist (CET), the Commission has strived to ensure that EU competition law is fully compatible with economic learning.⁹⁷

DG Competition is the first stage where the economic assessment is done. DG Competition is an administrative authority and arguably is better at complex economic assessments and empirical analysis compared to a judicial system as it has in-house expertise, a general acceptance of economics and the opportunity for lawyers and economists to work together.⁹⁸ It has been suggested that an adversarial system is more suited to the assessment of economic evidence where it may go through the process of assertion and refutation.⁹⁹ Remarkably, the procedure before the Commission cannot be termed as purely inquisitorial in that parties involved can request meetings with the case team and submit documents making particular claims.¹⁰⁰

Over time, the Commission has gained experience in evaluating complex economic evidence. Various checks have been suggested in order to determine the relevance and significance of economic analysis presented before the Commission.¹⁰¹ Parties are required to explain the methodology and data they use in their economic evidence.¹⁰² It is also incumbent upon the parties to show that their technique (economic or econometric analysis) has been generally accepted in the scientific community.¹⁰³ A new economic theory, therefore, can be put through optimal scrutiny where the parties and the Commission have the opportunity to exchange views on the same.

⁹⁷ Jorge Padilla, 'The Role of Economics in EU Competition Law: From Monti's reform to the State aid Modernization package' (28 September 2015) <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2666591> (accessed on 11 May 2019).

⁹⁸ Speech by Lars-Hendrik Röller <http://ec.europa.eu/competition/speeches/text/sp2005_017_en.pdf> (accessed on 11 May 2019).

⁹⁹ Damien J. Neven, 'Competition Economics and Antitrust in Europe' <http://ec.europa.eu/dgs/competition/economist/economic_policy.pdf> (accessed on 11 May 2019) page 32.

¹⁰⁰ Article 27 of Regulation (EC) No 1/2003; See, Commission notice on best practices for the conduct of proceedings concerning Articles 101 and 102 TFEU (2011/C 308/06), paragraphs 42, 43, 60, 70, 78, 81, 82, 99, 106 and 107.; see also, Neven (n 99) page 23; for a lucid description of the procedure before the Commission, see, Wouter P. J. Wils, 'The Combination of the Investigative and Prosecutorial Function and the Adjudicative Function in EC Antitrust Enforcement: A Legal and Economic Analysis' (2004) 27(2) *World Competition: Law and Economics Review* 202–224.

¹⁰¹ DG Competition Best Practices For The Submission of Economic Evidence and Data Collection in Cases Concerning The Application Of Articles 101 and 102 TFEU and in Merger Cases. These Best Practices are equally applicable to the Commission as well, paragraph 6.

¹⁰² *Ibid.*, e.g. see paragraphs 32 and 44.

¹⁰³ *Ibid.*, paragraph 40.

5.4. Judicial review

The General Court is the second stage where the economic evidence and methodology interact with the legal process. In the EU, the Commission enjoys broad discretion in the matters involving complex economic assessment.¹⁰⁴ Thus, the Court limits its review to verifying whether the relevant rules on procedure and on the statement of reasons have been complied with, whether the facts have been accurately stated and whether there has been any manifest error of appraisal or a misuse of powers.¹⁰⁵ In general, economists and economics in court proceedings have been less influential in court proceedings as compared to the Commission.¹⁰⁶ Even in the cases where the Court examines economic arguments, it rarely performs its own independent economic analysis and instead relies mostly upon the economic assessment of the Commission or the economic arguments advanced by the parties.¹⁰⁷

Aside from economic evidence, what is the level of judicial review with respect to new economic theories? Clearly, economic theory or technique is not a piece of evidence. Rather, evidence is required to support the application of a particular economic theory. While the General Court can undertake a comprehensive relook at the facts that underpin economic theories advanced by the Commission,¹⁰⁸ this form of check-and-balance is seemingly unavailable for assessing the appropriateness of economic theory. The following comment by the CJEU underlines the nature and extent of review by the General Court with respect to complex economic matters.

... The Court must therefore limit its review of such an appraisal to verifying whether the relevant procedural rules have been complied with, whether the statement of the reasons for the decision is adequate, whether the facts have been accurately stated and whether there has been any manifest error of appraisal or a misuse of powers.¹⁰⁹

¹⁰⁴Case C-7/95 P *Deere v Commission* [1998] ECR I-3111, paragraph 34.

¹⁰⁵Case 42/84, *Remia BV and others v Commission of the European Communities*, ECLI:EU:C:1985:327; see also, T-340/03 – *France Télécom v Commission*, ECLI: EU: T: 2007:22, paragraph 129; see also, Article 230 TFEU.

¹⁰⁶Ianosis Lianos, “Judging” Economists. Economic Expertise in Competition Law Litigation. A European View’, CLES Working Paper Series 1/2009, 4.

¹⁰⁷*Ibid*, footnote 8.

¹⁰⁸Joined Cases T-68/69, T-77/89 *Società Italiana Vetro SpA and Others v Commission* [1992] ECR II-1403, paragraph 95; see also, B. Vesterdorf, ‘Economics in Court: Reflections on the Role of Judges in Assessing Economic Theories and Evidence in the Modernised Competition Regime’ in M. Johansson, N. Wahl and U. Bernitz (eds), *Liber amicorum in Honour of Sven Norberg: A European for All Seasons* (Brussels, Bruylant, 2006) 511, Vesterdorf argues that one of the reasons behind the creation of CFI (now General Court) was the “need for a court of first instance to review comprehensively and rigorously the factually complex decisions that the Commission adopts in the field of competition”.

¹⁰⁹*Remia BV and others v Commission of the European Communities* (n 105), paragraph 34; see also, Joined cases 56 and 58–64, *Établissements Consten S.à.R.L. and Grundig-Verkaufs-GmbH v Commission*

The proceedings before the General Court are adversarial in nature where the parties are given the chance to contest the evidence.¹¹⁰ In some cases, parties make references to economic literature before the General Court. Parties also have the possibility to use economic experts at the oral hearing stage before the General Court.¹¹¹ It is, however, not clear if the General Court will unpack and examine an economic test or technique based on an academic work that the Commission has relied upon. Bo Vesterdorf, who was the president of the General Court (then CFI) from 1998 to 2007, also suggests the duty and responsibility of the General Court with respect to new theories is limited to scrutinizing the nature of the evidence relied upon in support of such theories.¹¹² It appears that an extensive review of new economic theory already adopted by the Commission may be inhibited by the standard of limited review for complex economic assessments that the courts have been following. Any such review is limited to the test of “manifest error”.¹¹³ For instance, the General Court in *Wanadoo* upheld the choice of a particular method used by the Commission to calculate the rate of recovery of cost.¹¹⁴ In this case, the appellant had argued that the Commission had modified its “cost of recovery” test.¹¹⁵ The Court held that

As a preliminary point, it should be recalled that, as the choice of method of calculation as to the rate of recovery of costs entails a complex economic assessment on the part of the Commission, the Commission must be afforded a broad discretion. The Courts review must therefore be limited to verifying whether the relevant rules on procedure and on the statement of reasons have been complied with, whether the facts have been accurately stated and whether there has been any manifest error of appraisal or a misuse of powers.¹¹⁶

Some of the cases where the courts in the EU laid down economic tests are conditions for collective dominance in the *Airtours* case, predatory pricing test in *Akzo* and *Tetra Pak II*, the refusal to supply test in *Oscar Bronner*,

of the European Economic Community, ECLI:EU:C:1966:41, page 347, where the CJEU held that the review of Commission’s complex evaluations on economic matters is “confined... to an examination of the relevance of the facts and of the legal consequences which the Commission deduces therefrom”.

¹¹⁰B. Vesterdorf, ‘Economics in Court: Reflections on the Role of Judges in Assessing Economic Theories and Evidence in the Modernised Competition Regime’ in M. Johansson, N. Wahl and U. Bernitz, *Liber Amicorum in Honour of Sven Norberg: A European for All Seasons* (Brussels, Bruylant, 2006) 511, page 527.

¹¹¹Vesterdorf, B (n 108), 527.

¹¹²Bo Vesterdorf (2005) Standard of Proof in Merger Cases: Reflections in the Light of Recent Case Law of the Community Courts, *European Competition Journal*, 1:1, 3–33, page 23.

¹¹³Remia BV and others v Commission of the European Communities (n 105), paragraph 34.

¹¹⁴T-340/03 – *France Télécom v Commission*, ECLI: EU: T: 2007:22, paragraphs 129, 153, upheld by Case C-202/07 P, *France Télécom SA v Commission of the European Communities*, ECLI:EU:C:2009:214.

¹¹⁵T-340/03 – *France Télécom v Commission*, (n 114), paragraph 16.

¹¹⁶*Ibid*, paragraph 129.

IMS and Magill, and the rebate test in Michelin and British Airways.¹¹⁷ Barring the test for predation, however, none of these tests owes its genesis to one particular academic work. The EU courts define, modify and alter economic tests based on the prevailing economic assumptions which command a common economic consensus of that time. These concepts, therefore, already go through the process of criticism and reform before they translate into law. Accordingly, legal tests based on such economic tests are less prone to quick changes. The Commission first mentioned collective (joint) dominance in *Alcatel/AEG Kabel* merger decision.¹¹⁸ Since then the Community Courts clarified and developed the test to identify collective dominance.¹¹⁹ Likewise, test for rebates¹²⁰ and refusal to supply¹²¹ have also witnessed gradual evolution and clarification over a period of time.

In general, courts are more deferential to peer-reviewed academic study as compared to a study conducted for the purpose of litigation.¹²² Moreover, the court may have a tough time analysing a recent economic theory based on academic work, as there may not be much academic literature critiquing that particular theory.

It seems that new economic insights and new theories more easily make entry into the US legal system as compared to the EU system. In contrast to the judicial review of matters involving economic analysis in the EU, where the General Court exercises restraint, judges in the US exercise far greater power and discretion while analysing economic theories and concepts.¹²³ The institutional design of the antitrust enforcement provides

¹¹⁷B. Vesterdorf (n 108).

¹¹⁸Case No IV/M.165 – ALCATEL / AEG KABEL, Date: 18.12.1991

¹¹⁹See, Case T-102/96, Gencor Limited v. Commission [1999] ECR II-753; Case C-68/94 and C-30/95, France and Société commerciale des potasses and de l'azote and Entreprise minière and chimique v Commission ECLI:EU:C:1998:148; Case T-342/99, Airtours plc v. Commission [2002] ECR II-2585.

¹²⁰Case 85/76, Hoffman-La Roche v. Commission [1979] ECR 461; Case 322/81, NV Nederlandsche Banden Industrie Michelin v Commission of the European Communities, ECLI:EU:C:1983:313; Case T-203/01, Manufacture française des pneumatiques Michelin v Commission of the European Communities [2003] ECR II-4071; Case C-95/04 P, British Airways plc v Commission of the European Communities [2007] ECR I-02331; C-413/14 P, Intel v Commission, ECLI:EU:C:2017:632.

¹²¹Court of Justice of the EU, Telefis Eireann and Independent Television Publications Ltd v. Commission (Magill), Joined cases C-241/91 and C-242/91, ECLI:EU:C:1995:98; Oscar Bronner GmbH & Co KG v Mediaprint Zeitungs- und Zeitschriftenverlag GmbH & Co KG, Case C-7/97, ECLI:EU:C:1998:569; IMS Health GmbH & Co. OHG v. NDC Health GmbH & Co. KG, C-418/01, ECLI:EU:C:2004:257; EU General Court, Microsoft v. Commission, T-201/04, ECLI:EU:T:2007:289.

¹²²Richard Posner, 'The Law and Economics of the Economic Expert Witness' (Spring, 1999) 13(2) The Journal of Economic Perspectives, 91–99, 94.

¹²³See, John E. Lopatka and William H. Page, 'Economic Authority and the Limits of Expertise in Antitrust Cases', (2005) 90 Cornell L. Rev. 617; William Kovacic, 'Antitrust Decision Making and the Supreme Court: Perspectives from the Thurgood Marshall Papers', The Antitrust Bulletin/Spring 1997. Kovacic points out the following reasons that influence judges' rulemaking: judge's own ideology, a judge's past experience in the fields of antitrust law and industrial organization economics, brief-writing and oral advocacy skills of lawyers, and judge's law clerks.

a broader doorway to the US judges to bring in their own value judgments into law.¹²⁴

Lopatka and Page state that US Supreme Court's decision in *Sylvania*¹²⁵ (the Court, in this case, overturned the per se rule against non-price vertical restraints established in the *Schwinn*¹²⁶ case) was driven by Chicago School economics that entered the Court's deliberative process through the legal and economic literature, not through expert testimony.¹²⁷ Gavil notes that in this case among other factors Justice Powell's advocacy of the rule of reason approach vis-à-vis vertical non-price restraints proved influential on other judges.¹²⁸ In turn, Justice Powell might have been influenced by the memorandum prepared by his law clerk, who supported Chicago School economics arguments of "Posner, Baxter, and Bork".¹²⁹

It is unlikely in the EU context that the courts will rely upon on its own on any piece of evidence or economic theory not adduced by the parties, as "proceedings before the Courts of the European Union are *inter partes*".¹³⁰

Interestingly, in the Amex case, there was no occasion to test the "trans-action" market approach as per the *Daubert* Standard,¹³¹ as this test was not raised by the parties in their expert testimony. The US Supreme Court in the *Daubert v Merrell Dow Pharmaceuticals* set out the following standard for the admissibility of an expert testimony as evidence: (a) whether a theory or technique can be (and has been) tested, (b) whether the theory or technique has been subjected to peer review and publication, (c) what is the known or potential rate of error of the theory or technique, and (d) whether the theory or technique enjoys a widespread acceptance.¹³² Especially with the point (d) the Court observed, "a known technique

¹²⁴Lopatka and Page highlight the importance of the institutional context by noting "It is critical to recognize, however, that the institutional context of litigation influences how courts receive and apply economic theory". John E. Lopatka and William H. Page, 'Economic Authority and the Limits of Expertise in Antitrust Cases', (2005) 90 Cornell L. Rev. 617, page 620.

¹²⁵Cont'l T.V., Inc. v. GTE Sylvania Inc., 433 U.S. 36 (1977).

¹²⁶United States v. Arnold, Schwinn & Co., 388 U.S. 365 (1967).

¹²⁷Lopatka and Page (n 124), 634.

¹²⁸Andrew I. Cavil, 'A First Look at the Powell Papers: Sylvania and the Process of Change in the Supreme Court', (Fall 2002) Antitrust, at 8, 9–11.

¹²⁹Ibid; see also, William Kovacic, 'Antitrust Decision Making and the Supreme Court: Perspectives from the Thurgood Marshall Papers', The Antitrust Bulletin/Spring 1997 for the important role played by law clerks in judicial decision making.

¹³⁰Case C-386/10 P, Chalkor AE Epexergasias Metallon v European Commission ECLI:EU:C:2011:815, paragraphs 64–65; Case C-272/09 P, KME Germany AG and Others v Commission, ECLI:EU:C:2011:810, paragraphs 104–105.

¹³¹*Daubert v Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993); Subsequently in *Kumho Tire Co. v Carmichael*, 526 U.S. 139 (1999), the SC clarified that the *Daubert* standard was applicable to all types of testimony and not just scientific testimony.

¹³²*Daubert v Merrell Dow Pharmaceuticals, Inc.* (n 131), 593–594.

which has been able to attract only minimal support within the community may properly be viewed with skepticism”.¹³³ Thus, if the expert testimony relies on a study or a particular technique, the same can be challenged as per the *Daubert* Standard. Indeed, the validity of an even famous study can be challenged.¹³⁴ In the AmEx case, there was no occasion to test the “transaction” market approach against the *Daubert* Standard either at the District Court or at the Appeal Court stage. It was argued back in 2006 that the EU could adopt a similar standard to *Daubert* to analyse economic evidence.¹³⁵

The above discussion illustrates that in the EU a new economic theory can be put through rigorous review at the Commission. Once, however, this theory is approved by the Commission, it is unlikely that the General Court will alter that theory in totality. Also, there may be an inclination on the part of economists working at antitrust bodies to leave the analysis of the merit of new theories to academic journals, where a new theory can go through rigorous peer review to ensure consistency and empirical relevance.¹³⁶ However, as this paper shows an academic study as well warrants proper scrutiny before its legal adoption, especially in those cases where a particular theory is still new. In the EU the Commission can carry out this task properly. In comparison to the EU, the US legal system gives enormous discretionary powers to judges who at times use their own thoughts and independent learning to incorporate economic theories. All in all, this makes the US system more prone to the vagaries of untested economic insights.

6. Conclusion

Multi-sided platforms are becoming ubiquitous in the modern economy. It is, therefore, crucial that the competition law community correctly understands and accordingly devises implementable rules to ensure consumer welfare in the platform economy. While economics has enriched our understanding of platforms, much still needs to be discovered. Indeed, the rising number of academic papers on multi-sided platforms indicates the heightened efforts to clearly understand the platform

¹³³Ibid, quoting Downing, 753 F. 2d, at 1238, internal quotation and citation omitted.

¹³⁴Barneinstein notes “Even reliance on heavily cited studies can be problematic. Many initial studies, even when they are published in reputable scientific journals and achieve quick prominence, are contradicted by later, more accurate studies”. David E. Bernstein, ‘Expert Witnesses, Adversarial Bias, and the (Partial) Failure of the Daubert Revolution’, (2008) 93 Iowa L. Rev. 451, 477.

¹³⁵Neven (n 99) 32.

¹³⁶Lars-Hendrik Röller, ‘Economic Analysis and Competition Policy Enforcement in Europe’ <<http://ec.europa.eu/dgs/competition/economist/nma.pdf>> (accessed on 11 May 2019), 16.

competition. This paper dealt with one such academic effort to classify platforms into “transaction” and “non-transaction” platforms for the purpose of market definition, which was swiftly elevated into law by the US Supreme Court in its *Amex* decision. It has been posited that in the case of “transaction” markets, there is one all-encompassing relevant market comprising of all sides of a platform. Whereas, every side of a “non-transaction” platform needs to be defined separately.

The paper demonstrated that the test underpinning the identification of a “transaction” platform is flawed for two reasons. First – the requirement for the observability of a transaction between two different sides of a “transaction” platform fails to account for the different purposes for which two sides come together on a platform. As shown in the paper, the interaction between two sides does not take place only for the reason of exchange of money for services/products. Some advertisers reach consumers through platforms merely for creating brand awareness. Second – as opposed to what the US Supreme Court and the academic work it relied upon posited, some “transaction” platforms also compete with a single-sided market. The paper cited some such real and also theoretical examples to identify holes in the “transaction” platform approach to market definition. The paper also demonstrated that some alternative methods to classify platforms into predefined groups for the purpose of market definition are mutually incoherent and thus legally repugnant. Overall, any predefined categories for the purpose of market definition also fail to account for disruptive innovation that is known to blur the market boundaries.

Based on the above, the paper suggested lessons for economics and law. In view of the imperfections of pre-defined approaches to correctly identify relevant markets with respect to platforms, regard should be had to demand-side (and at times supply-side) substitution to identify the relevant market. Additionally, such imperfect tests also illustrate the limitations of “bright-line” economic tests often proposed to help antitrust authorities and courts. Instead, the optimal solution is to explain the underlying economic reasons that can facilitate a case-by-case analysis.

The final part of the paper showed the problems that the hasty adoption of an economic test can cause and argued that a new economic theory must go through a “scientific aging process” before it starts shaping law. A gradual process of criticism and reform strengthens a theory and increases its utility. An examination of the EU competition law institutional framework suggested that a new economic theory can be

subjected to rigorous scrutiny only at the Commission. The US system, in contrast, allows a broader doorway to an uncontested economic theory to inform the law.

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