ABSTRACT (200 words)
The article analyses the meaning of the non-discriminatory principle in disputes concerning Standard Essential Patents (SEPs) under EU competition and contract law (i.e., ND prong). The article reviews the economics literature, looking at the welfare effect of price discrimination and the interpretation of the ND prong that is provided by a number of economists. Secondly, the article analyses the case law of the EU Court of Justice on Art. 102(c) TFEU and recent rulings by the German and British courts concerning the scope of the application of the ND prong. A strategy of discrimination in regard of royalty rates may be sanctioned, both under competition and contract law. However, Art. 102(c) requires a higher burden of proof than contract law. As a consequence, it is unsurprising that, to date, no case of royalty rate discrimination has ever been sanctioned in Europe as an abuse of dominance. While courts and economists generally agree that the ND prong is applicable only when licensees are ‘similarly situated’, to date, there is no common understanding of the meaning of this expression. In particular, it is unclear whether, and to what extent, licensees are ‘similarly situated’ if they are not competitors in the downstream market.

JEL codes
K21 Antitrust Law; L11 Production, Pricing, and Market Structure; L41 Monopolization; O34 Intellectual Property and Intellectual Capital

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I INTRODUCTION

I.A. Standardization and Standard Essential Patents

Standards are acquiring a growing relevance in the context of the digital economy. Standards, in fact, ensure communication compatibility (i.e., the so-called ‘interoperability’) between electronic devices that are produced by different manufacturers.  

The standardization process may follow three different paths:  

1. Standards are acquired via a process of negotiation between industry players, which are characterized by a high degree of innovation, patent rights safeguard the inventors’ incentives to invest in R&D and thus give the incentive to innovate. As noted by Padilla, Ginsburg and Wong-Ervin, the patent holder can either decide to implement the invention by itself (i.e., by manufacturing retail products that implement the invention) or by transferring the rights to third parties the right to use the patent via a licensing agreement. In the contest of an SDO, however, the patent holder’s exclusive right of exploitation should be balanced against other considerations. 

2. Finally, a technical specification may be implemented by the majority of industry players, thus becoming a de facto standard in the industry. Alternatively, public authorities at the national or international level may pick up a technical specification, which therefore becomes a legal standard in the industry.

3. In contrast to de facto and legal standardization, SDOs plan the standardization process ahead of time, before new products that implement the standard reach the retail market. In particular, SDOs ‘shape’ a new standard by selecting the ‘best’ technical specifications from amongst those solutions that are developed by its members. The broad membership of an SDA, which usually includes both patent holders and implementers, ensures that the standard developed by the SDO will indeed prevail in the industry; it is unlikely that any player will develop an alternative standard to that endorsed by the SDO.

In industries that are characterized by a high degree of innovation, patent rights safeguard the inventors’ incentives to invest in R&D and thus give the incentive to innovate. As noted by Padilla, Ginsburg and Wong-Ervin, the patent holder can either decide to implement the invention by itself (i.e., by manufacturing retail products that implement the invention) or by transferring the rights to third parties the right to use the patent via a licensing agreement.

In the contest of an SDO, however, the patent holder’s exclusive right of exploitation should be balanced against other considerations. When an SDO defines a technical standard for the industry, in fact, the patents that fall within the scope of the standard become ‘essential’: any firm that intends to rely on the SDO standard should first conclude a license agreement with all the holders of the Standard Essential Patents (SEPs) that are relevant to the use of the industry standard. In order to mitigate the strong bargaining power of the SEP holder in the context of license negotiations, SDOs usually require their members to ‘disclose’ the existence of any SEP before the standard is agreed upon, and to license the SEP to any third party on the basis of ‘Fair, Reasonable and Non-Discriminatory’ (FRAND) terms. A number of American authors refer to ‘Reasonable and Non-Discriminatory’ (RAND), rather than FRAND, undertakings. However, as noted by Justice Birss in Unwired Planet, “...there is no material difference between the two (expressions).” In the context of the present article, we refer to ‘FRAND’ rather than ‘RAND’, due to the ‘European’ focus of the article.

4 Ibid.
5 A number of authors have defined these organizations as Standard Setting Organizations (SSOs). However, the majority of the literature uses the expression ‘Standard Development Organizations (SDOs)’, rather than SSOs. Within these organizations, in fact, industry players jointly ‘develop’, rather than ‘select’, the technical specifications that are relevant to a new standard. The present article relies on the expression SDOs, in accordance with the view expressed in most of the literature.
6 For a detailed comparison of the governance and decision-making dynamics of different SDOs, see J. Baron, J. Contreras, M. Husovec, Pierre Larouche (2019), The Governance of Standard Development Organizations and their Policies on Intellectual Property Rights. This is a study carried out on behalf of the Joint Research Centre (JRC) of the European Commission. The text of the study is available at: https://ec.europa.eu/jrc/en/publication/making-rules-governance-standard-development-organizations-and-their-policies-intellectual-property (10.2.2020).
10 High Court of England and Wales, Unwired Planet v. Huawei, 5 April 2017. Case No. HP-2014-000005 [2017] EWHC 711 (Pat). Para. 89. For a detailed analysis of the Unwired Planet ruling by the High Court of England and Wales, see
The SDO merely encourages the SEP holder to license its patent on the basis of FRAND terms, but it has no active role in the bilateral negotiations between the licensor and the licensee. Consequently, in spite of the FRAND commitment, the SEP holder could rely on its strong bargaining power to ask for ‘excessive’ royalties from its licensees (i.e., ‘patent hold-up’). Alternatively, implementers might jointly boycott specific SEPs, in order to put pressure on the patent holder to lower the royalties requested – i.e., a strategy known as ‘reversed patent hold-up’ or ‘patent hold-out’.

Similarly, implementers could start using a patent even where there is the lack of a license agreement with the SEP holder, justifying the patent breach due to the ‘unfair’ license conditions that have been requested by the SEP holder. The increased relevance of standardization has thus increased court litigation and the recourse to arbitration in several industries. In the context of court litigation, while the SEP holder asks for an injunction ordering the implementer to stop breaching its patents and also asks for the award of compensatory damages, the implementers usually challenge the patent’s validity and rely on a breach of FRAND commitments by the SEP holder as a defense. Finally, implementers also rely on competition law as a defense in court proceedings, arguing that patent hold-up forecloses competition in the market, besides representing a breach of FRAND commitments by the SEP holder.

I.B. The objectives and structure of the article

During the past decade, the interpretation of FRAND terms has been at the centre of academic debate. In particular, while a number of authors have claimed that patent hold-up is a serious problem that requires antitrust intervention, others have dismissed such allegations, mainly claiming that there is no empirical evidence of systematic patent hold-up in most of the industries. Following this second line of reasoning, FRAND commitments would be sufficient to deal with the ‘unlikely’ issue of patent hold-up. Secondly, most of the academic debate has focussed on what a ‘reasonable’ royalty might be. In particular, economists have designed different methods with which to assess when the royalty rate requested by the SEP holder is indeed ‘reasonable’. On the other hand, as recognized by Contreras and Layne-Farrar, “far less attention” in the literature has been dedicated to the meaning of the non-discrimination obligation under FRAND commitments (i.e., the so-called ‘ND prong’). This article aims to fill this gap in the literature by analysing the meaning of the non-discrimination principle, by comparing its assessment under both the ND prong and EU competition law.

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11 Ibid.
14 Supra, Petrovic (2013)
16 See, for instance:
17 See, for instance:
19 For an overview of the different methods proposed by economists to calculate ‘reasonable’ royalty rates in SEP disputes, see:
Brooks and Gerardin have argued that FRAND are ‘contractual’ obligations between the SEP holder, the SDO and the potential licensees.\(^{21}\) This view is shared by the majority of the authors of the literature.\(^{22}\) As recently noticed by Hovenkamp, most breaches of contract do not violate competition law.\(^{23}\) In particular, competition law enforcement is triggered by the fact that the SEP holder has market power, and the alleged discriminatory behaviour can ‘forclose’ on competition in the market. By contrast, such requirements do not exist under the ‘ND prong’. As a consequence, competition and contract law both sanction discriminatory behaviour by the SEP holder, but they can be applied in ‘parallel’, rather than by being substitutable.\(^{24}\) Under Art. 102(c) of the Treaty on the Functioning of the European Union (TFEU), an undertaking abuses its dominant position “when applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage.”\(^{25}\) When the SEP holder demands different royalty rates from its potential licensees for the same patent portfolio, it implements a strategy of price discrimination; a strategy that could, in principle, fall within the scope of the application of Art. 102 (c) TFEU, as well as representing a breach of the FRAND commitment by the patent holder.

The Court of Justice of the European Union (CJEU) has never clarified the meaning of the non-discrimination obligation in disputes concerning SEPs, either from a contractual or from a competition law perspective. In particular, in its seminal ruling in *Huawei v. ZTE*, the EU Court of Justice listed a number of steps that the SEP holder and the potential licensees should follow during the license negotiations. If such steps are not followed, then the SEP holder would likely breach its dominant position in the case that it asked for a court injunction.\(^{26}\) Nevertheless, in *Huawei v. ZTE*, the CJEU did not clarify the meaning of the FRAND obligation. In its 2017 Communication on SEPs, the European Commission recognized that the principle of non-discrimination implies that the SEP holder should license the patent to any implementer who is ‘similarly situated’.\(^{27}\) According to the Commission, “…given that FRAND is not one-size-fits-all, solutions can differ from sector to sector and depending on the business models in question.”\(^{28}\) On the other hand, the Commission did not provide any further detail on this issue: the 2017 Communication does not define when different licensees are ‘similarly situated’, and thus when discrimination would indeed be prohibited. Similarly, in its 2010 Guidelines on Horizontal Cooperation Agreements, the European Commission pointed out that the SEP holder is required to license the essential patent on FRAND terms.\(^{29}\) However, the document does not clarify the nature of the non-discriminatory obligation. During recent years, a number of German and British courts have analysed the meaning of the non-discrimination obligation in a selection of judgments concerning SEP related disputes. In particular, the meaning of the ND prong was extensively discussed by the High Court of England and Wales in *Unwired Planet*.\(^{30}\) After having been upheld on appeal,\(^{31}\) the ruling is currently pending at the UK Supreme Court, which will have the last word on the dispute.\(^{32}\)

The present article analyses the meaning of the non-discrimination principle under EU competition law and under the ND prong. The article will first review the economics literature, in particular, looking at the welfare effect of price discrimination (Section II.A) and discussing the interpretations of the ND prong that are provided by a number of economists (Section II.B). Secondly, the article analyses the CJEU case law on Art. 102(c) TFEU.

\(^{21}\) “…a FRAND commitment is the result of a voluntary contract between essential patent holders and a standards-setting organization, with the important corollary of the meaning of that commitment must be determined through the legal methods of contractual interpretation.” R. Brooks, D. Gerardin (2011), “Interpreting and Enforcing Voluntary FRAND Commitments” 9(1) International Journal of IT Standards and Standardization Research: 1-23. At 2.

\(^{22}\) A number of European authors have supported this view by looking at the case of the European Telecommunications Standards Institute (ETSI), the major SDO in Europe that is active in the area of electronic communications standards. ETSI, based in Nice, is governed by French law. Under French contract law, the FRAND undertaking is an “accord de principe”, which creates a legally binding obligation for the SEP holder.


\(^{26}\) Such an interpretation has also been followed by the High Court of England and Wales in *Unwired Planet*. In the judgment, Justice Birss ruled that a FRAND undertaking “…gives implementers legal rights and obligations…” that are “…enforceable in court irrespective of competition law”.

\(^{27}\) Supra. [2017] EWHC 711. Para. 723.


\(^{31}\) Ibid.


\(^{33}\) Supra. [2017] EWHC 711.


\(^{32}\) The oral hearings took place in October, 2019. At the time of writing, the Supreme Court has not yet ruled on the case. Information about the pending case is available at: https://www.supremecourtuk/cases/uksc-2018-0214.html (11.2.2020).
The files of the FTC and European Commission investigations into the Rambus case are available at: https://ec.europa.eu/competition/eloiode/nief/case_details.cfm?proc_code=1_38636 (11.2.2020). This argument was put forward by Koren W. Wong-Ervin (Director of Antitrust & IP Policy Litigation at Qualcomm) at the OECD Competition Committee Roundtable on “Licensing of IP Rights and Competition Law” (Paris, 6th June 2019), in order to explain the reasons for what was essentially over-declaration in the context of SDOs. The text of the document is available at: https://www.competitionpolicyinternational.com/oecd-competition-committee-roundtable-on-licensing-of-ip-rights-and-competition-law-june-6-2019-note-by-koren-w-wong-ervin (11.2.2020).

I.C. The scope of the article – a couple of disclaimers

This article compares the breach of the non-discrimination obligation by the SEP holder as a possible breach of the ND prong and as an abuse of dominance under Art. 102 (c) TFEU. On the other hand, the article does not discuss the dominant position of the SEP holder. A number of scholars have extensively debated whether holding a standard essential patent generates a presumption of dominance. In particular, while some authors have argued that the standardization process creates a monopoly right for the SEP holder, which can exercise its market power in the bilateral negotiations with potential licensees, other scholars have pointed out that an SEP does not automatically generate market dominance. By counting how often SEPs are cited in follow-up patent applications, Layne-Farrar and Padilla have concluded that SEPs do not automatically generate market power. According to these authors, only a limited number of SEPs receive a higher number of citations in follow-up patent applications in comparison to other ‘non-essential’ patents. This is mainly due to the phenomenon of ‘over-declaration’, whereby SDOs’ members tend to claim ‘too often’ that one of their patents is ‘essential’ for the standard. On the basis of the Rambus case law, in fact, SDO members may be sanctioned under antitrust law if they do not disclose their patents during the process of the standard definition within the SDO. Secondly, Layne-Farrar and Padilla point out that standardization is a rather long and complex process, in which different technical specifications are assessed by different SDO working groups. As a consequence of this lengthy process, and in view of the disclosure obligation, patent holders often declare a patent to be ‘essential’, although the patent refers to a technical specification that will not be included at a later stage within the SDO standard. As mentioned above, the issue of SEP market power will not be discussed in the present article: in the following pages we assume that the SEP holder does indeed have market power, and thus its behaviour may trigger the enforcement of Art. 102 TFEU. However, in the ‘real world’, this assumption would not work: a case by case assessment of the ‘essentiality’ of each patent should be carried out in order to determine the market power of the SEP holder.

Economists traditionally differentiate between those forms of price discrimination that harm a rival (“primary line of injury”) and those that harm a firm’s direct customer (“secondary line injury”). According to...
Advocate General Wahl, cases of price discrimination that only cause a secondary line of injury are “extremely rare”, a dominant firm that is not active in the downstream market, in fact, would not have any incentive to discriminate against its customers. In line with this type of argument, Swanson and Baumol have argued that competition law should only sanction forms of royalty rate discrimination when the SEP holder is ‘vertically integrated’. In such a scenario, the SEP holder may require its downstream competitors to pay a higher royalty rate in comparison to its subsidiary, thus distorting competition in the downstream market. Swanson and Baumol thus suggest that competition law should only sanction a primary line of injury in the context of SEP related disputes.

In the context of Standard Essential Patents, royalty rate discrimination is not as ‘rare’ as has been argued by Advocate General Wahl. Royalty rate discrimination is a rather common practice, which can be implemented both by a vertically integrated firm, in order to exclude downstream competitors, and by a non-vertical integrated firm. In Unwired Planet v. ZTE, Unwired Planet was accused of implementing a strategy of price discrimination, since it requested a higher royalty rate from ZTE in comparison to the rate previously agreed with Samsung for the same patent portfolio. Unwired Planet is an example of a Patent Assertion Entity (PAE): a non-vertically integrated firm that acquires patents from different inventors; after having established a portfolio of complementary patents, a PAE will license the portfolio to third parties and actively engage in court litigation to safeguard its patent rights. Like any other PAE, Unwired Planet may have an incentive to request different royalty rates from different licensees. As Carlton and Shampine recognize, although price discrimination is usually pro-competitive, “...it also allows the patent holder to extract the consumer surplus associated with the standard, which can... be an exercise of hold up.” As further discussed in Section II.A, certain forms of price discrimination (i.e., first degree price discrimination) may be detrimental to the consumers’ welfare. In addition, it is worth reminding the reader that, unlike US antitrust law, Art. 102 TFEU sanctions both exclusionary and exploitative abuses. In particular, Art. 102(c) specifically sanctions forms of secondary lines of injury that are caused by price discrimination. While there may therefore be efficiency considerations behind a price discrimination strategy, one of the questions investigated in this article is whether, and to what extent, such conduct would breach Art. 102 (c) TFEU when implemented by a non-vertically integrated SEP holder.

A third disclaimer concerns the scope of the non-discrimination obligation. The SEP holder may discriminate against its potential licensees, both in relation to the royalty rate requested and to the requested contractual terms (e.g., length and geographical scope of the license; patents covered by the agreement; the legal entities that are entitled to benefit from the license; arbitration/court jurisdiction in case of disputes). Art. 102(c) refers to ‘dissimilar conditions’, by thus covering both price and non-price contractual conditions. Similarly, the ND prong is sufficiently ‘broad’ to cover any form of discrimination. However, the present article will only discuss the case of royalty rate discrimination. Extending the non-discrimination obligation to every contractual term of the license agreement would imply that the SEP holder would have the duty to conclude ‘photocopy’ license agreements with every licensee. The latter would be an inefficient approach, both for the SEP holder and the licensees, since it would limit the freedom of contract of the parties. On the contrary, the question investigated in this article is whether, and to what extent, the SEP holder may charge different royalty rates to different licensees when the license agreements concern the ‘same product’ – i.e., the same portfolio of Standard Essential Patents.

A debate that has recently emerged in the literature concerns whether the SEP holder would be required to ‘license to all’ implementers within the production chain or, alternatively, whether it might decide to license the patent only to the end-product, rather than to the component manufacturers. The present article will discuss

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42 Supra, Swanson, Baumol W. (2005), 27.
43 A similar position has also been supported by Gerardin and by Crane. According to these authors, where there is a lack of vertical integration, the SEP holder will have no incentive to discriminate against its licensees. Supra, Swanson, Baumol W. (2005), 28.
47 For an analysis of the PAEs’ business models and possible competition law concerns, see:
49 D. Gerard (2005), “Price Discrimination under Article 82(2)(c) EC: Clearing up the Ambiguities”. Working Article of the Global Competition Law Centre of the College of Europe, p.4. The article is available at: https://www.coleurope.eu/content/gecl/documents/GCLC%20Research%20Articles%20or%20Article%2082%20EC.pdf (18.2.2020).
50 See, for instance:
the non-discrimination obligation under EU competition and contract law from a general perspective, without entering into the debate around ‘license to all’ vs. ‘access to all’. Finally, the article will discuss the principle of non-discrimination under EU competition, rather than under US antitrust law. The breach of the non-discrimination obligation is one of the core aspects of the on-going FTC v. Qualcomm case in the USA. The current article, however, will only discuss this topic from a ‘European’ perspective.

II. THE ECONOMISTS’ PERSPECTIVE ON THE PRINCIPLE OF NON-DISCRIMINATION

Economists have looked at the non-discrimination principle from two perspectives. First of all, from a competition policy perspective, economists have debated the welfare effect of price discrimination. When the SEP holder requests different royalty rates from its licensees, it implements a strategy of price discrimination vis-à-vis its customers (i.e., the potential licensees). In Section II.A, we discuss what the pre-conditions are to effectively implement a strategy of price discrimination and the impact of different forms of price discrimination on the consumers’ welfare. The economics literature on the welfare effect of price discrimination will be discussed in the light of the peculiarities of discriminatory royalty rates. By contrast, Section II.B compares the economists’ views on the ND prong. In particular, this section discusses the circumstances under which the licensees should benefit from the same royalty rate; in other words, what are the circumstances under which royalty rate discrimination would be prohibited as a breach of the ND prong.

II.A. Welfare effects of royalty rate discrimination

According to Varian, a firm discriminates against its customers when it sells two or more similar goods at prices that are in different ratios to their marginal costs. Traditionally, the economics literature has recognized that a firm can implement an effective strategy of price discrimination when three cumulative conditions are fulfilled: the firm has a high degree of market power; the firm can prevent arbitrage; the firm can estimate the customers’ valuation of a product, and thus it can adjust the price accordingly.

As discussed in the previous pages, the SEP holder’s market power cannot be presumed, and a case-by-case assessment is required in order to determine the real ‘essentiality’ of the patent(s). Carlton and Shampine point out that the SEP holder’s market power “...is exacerbated when manufacturers make significant investments based on the standard...” In such a case “…the manufacturers can become ‘locked in’ to the standard.” If the market power condition is fulfilled, the SEP holder will be able to limit arbitrage and to estimate the licensee’s evaluation of patent value. The licensee agreement, in fact, determines the geographic areas and the legal persons who are entitled to use the patent – i.e., the license cannot be traded and thus it cannot be the subject of arbitrage. Secondly, the number of potential licensees is rather ‘limited’: a limited number of implementers is usually interested in developing retail products that build upon the SDO standard. In light of the bilateral nature of the licensing negotiations and the limited number of market players, the SEP holder can estimate the customer’s reservation price: on the basis of industry practices and the history of previous license agreements, the SEP holder has sufficient information to determine a royalty rate that matches the maximum willingness to pay of each potential licensee. In the presence of market power, the SEP holder is thus likely to have the necessary tools to implement an effective strategy of price discrimination by varying the royalty rate that is requested from every licensee.

Since the work of Pigou, economists have traditionally identified three degrees of price discrimination:

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50 Supra, Borghetti, Nikolic, Petit.
52 In 2017, the US Federal Trade Commission filed a complaint against Qualcomm at the Federal Court of the Northern District of California. Qualcomm is a major manufacturer of semi-conductors that are installed in a number of IT products, in particular, mobile phones. Qualcomm’s business model is two-fold: it produces and sells chips to mobile phone manufacturers and licenses its patents on cellular technology. Qualcomm, in fact, holds several SEPs that are relevant to the 4G and 5G communication technology. Among the allegations put forward by the FTC, Qualcomm breached antitrust rules by refusing to license its patents to a number of chip manufacturers (i.e., Qualcomm competitors), by thus foreclosing the competition in the chips market. In May, 2019, the Federal District Court upheld the FTC complaint. The case is pending for appeal at the time of writing. The case summary and the relevant documents are available on the FTC website: https://www.ftc.gov/enforcement/cases-proceedings/141-0199/qualcomm-inc (21.1.2020).
58 A. C. Pigou (1920), The Economics of Welfare (London: Macmillan).
First-degree price discrimination, which takes place when a firm is able to perfectly discriminate among its customers, adjusting the price of the product to the individual customer’s willingness to pay. First degree price discrimination is equivalent to ‘personalised pricing’: every customer pays a different price for the same product.

Second-degree price discrimination means that the firm discriminates between its customers by granting discounts once a specific purchase quota is achieved (i.e., ‘non-linear pricing’). This form of price discrimination includes two-part tariffs as well as ‘versioning’ - i.e., offering the ‘same’ product at different quality levels and prices.

Third-degree price discrimination occurs when the firm charges different prices to different groups of customers. Third-degree price discrimination is rather common in the ‘real’ economy, and it is generally justified by fairness considerations. For example, a movie theatre grants a special tariff to certain categories of ‘vulnerable’ consumers, such as retired people, students, or children below a certain age.

Each degree of price discrimination has a different impact on the consumers’ welfare. In particular, economists generally agree that the second and third forms of price discrimination are generally pro-competitive, since they are justified by efficiency considerations (i.e., second degree) and they can enlarge the potential number of customers who can afford a product (i.e., third degree). On the other hand, first degree price discrimination has an ‘ambiguous’ effect on consumers’ welfare. Firstly, personalised pricing may increase the product affordability for a larger number of consumers and thus facilitate the welfare re-distribution among the different categories of consumers. The seller, in fact, might charge a lower price to ‘budget conscious consumers’, who have a lower reservation price, and who are also expected to be ‘poorer’ in terms of personal income. Secondly, first degree price discrimination can eliminate deadweight losses that are associated with monopolies. By increasing product affordability, first degree price discrimination increases the overall product output, thus maximizing the total welfare. First degree price discrimination would thus be justified both on the basis of efficiency considerations and on welfare re-distribution arguments. Nevertheless, it is worth remembering that the objective of price discrimination is to “capture as much consumer surplus as possible”, while welfare distribution is only a side effect of such a strategy. Via personalised pricing, in fact, the seller will match the maximum reservation price of each customer: while increasing the total welfare, first degree price discrimination thus shifts the consumers’ welfare to the seller.

The ambiguous effect of first-degree price discrimination has only been discussed in the economics literature; there has never been any case of antitrust enforcement vis-à-vis personalised pricing. The reason is simple: economists have always assumed that personalised pricing is possible in theory, but not in practice; in the real world, the seller would not have enough information about the maximum reservation price of every customer to implement a strategy of personalised pricing. As Varian argued almost twenty years ago, the digital economy is challenging this assumption: the increasing flow of data allows the seller ‘to better know’ its customers and to implement pricing schemes that are on the borderline with first-degree price discrimination; this statement is also true in the case of Standard Essential Patents. As Padilla and Wong-Ervin recognized recently, “…with respect to SEPs, first and third degree differential pricing are most often observed.” Similarly, Layne-Farrar has recognized that first degree price discrimination is a common practice in industries that are characterized by standardization. According to this author, this is due to the fact that license negotiations are usually conducted at a bilateral level between the SEP holder and the ‘limited’ number of implementers who are interested in licensing the portfolio of patents: “if (bilateral) negotiations reveal enough information (to the SEP holder), patent licensing may approach

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56 Supra, Gerard (2005).
58 Ibid.
60 This conclusion is also supported by the recent working article by Bergemann, Castro and Weintraub. By comparing first and third degree price discrimination, the authors argue that the monopolist maximizes its profits in case of personalised pricing, by thus increasing its welfare.
first-degree price discrimination.”

When the patent holder sets ‘individual’ royalty rates for each of the licensees, a case-by-case analysis of the welfare effect of such a strategy would thus be required.

Not every author agrees with the conclusion that SEP license negotiations are characterized by first degree price discrimination. According to Contreras and Layne Farrar, for instance, volume discounts prevail in SEP licensing agreements: the patent holder grants a rebate to the licensee in a case where the latter accepts to license the entire patents portfolio, rather than individual Standard Essential Patents (i.e., second degree price discrimination). In addition, the authors notice that the SEP holder often sets different royalty rates for different geographical markets, by thus dividing the potential licensees into different groups on the basis of the geographical area in which the license agreement will be enforced (i.e., third degree price discrimination). As argued above, second and third degree price discrimination strategies do not harm the consumers’ welfare; this assumption is also true in relation to the discriminatory royalty rates relating to Standard Essential Patents.

To sum up, if an SEP holder has market power, it has the necessary tools with which to implement an effective strategy for price discrimination. In particular, the SEP holder may implement a form of first-degree price discrimination: the SEP holder charges a different royalty rate to every potential licensee, by matching the reservation price of every license. As argued above, first degree price discrimination has an ‘ambiguous’ effect on the consumers’ welfare: ‘personalised royalties’ could lead to a transfer of welfare from the licensees to the SEP holder. The goal of competition law is the consumers’ welfare standard, personalised royalties may hamper the welfare of some licensees, but not necessarily the welfare of the final consumers. As discussed in Section III.A, an analysis of the effect of royalty rate discrimination on the welfare of final consumers, rather than on the welfare of the licensees, would be required in any competition law analysis. In other words, a royalty rate discrimination strategy would be harmful only if it distorted downstream competition among implementers, thus harming final consumers. This would be the case, for instance, if an implementer decided not to release a new product onto the market, because it would be required by the SEP holder to pay a higher royalty rate in comparison to its competitors. In such a context, the consumers’ welfare would be harmed, due to the resultant decrease in the choice of products that are available on the market.

II.B. The scope of the ND prong: when can the SEP holder discriminate?

Economists have discussed the meaning of the ‘ND prong’, debating the circumstances under which the SEP holder could discriminate against its licensees. In particular, three interpretations of the non-discrimination obligation have been put forward in the literature. The first considers the non-discrimination obligation as an ‘absolute’ obligation for the SEP holder: after having accepted the FRAND commitment, the patent holder will have to license the essential patent to every licensee with the same royalty rate and the same licensing conditions.

As a result of such an interpretation, the non-discrimination principle is de facto equivalent to a Most Favourite Nation (MFN) obligation: when the SEP holder concludes a license agreement, it will have to grant the same conditions to other licensees in any further agreement, independently of the specific circumstances of each case. The MFN approach would create a level-playing field among all licensees; on the other hand, it would be a rather inefficient approach. First of all, aware of the MFN obligation, the SEP holder would rather ask initially for a ‘high’ royalty rate; ‘higher’ than the average rate that the patent holder would likely demand if it could discriminate its licensees. Secondly, the royalty rate would remain ‘fixed’, independently by the long term success/failure of the retail products implementing the patented technology. The patented technology would get inevitably outdated by new technological developments after sometimes. However, due to the MFN obligation,

64 Ibid. p.817.
65 Supra, Contreras, Layne-Farrar (2017), at 192.
66 Ibid.
67 Ibid.
68 The requirement that price discrimination is prohibited only if it causes a distortion of competition in the downstream market has also been recognized by the US Supreme Court case law relating to the application of the Robinson-Patman Act. The latter legislation prohibits forms of price discrimination that are imposed by wholesalers vis-à-vis retailers (i.e., secondary line of injury). Unlike Art. 102(c) TFEU and Section II of the Sherman Act, the Robinson Patman Act does not require the presence of market power in order to trigger its enforcement. Consequently, the US Supreme Court has followed a restrictive interpretation of the scope of this legislation for the past two decades. For an analysis of the trends in US federal courts in relation to the application of the Robinson Patman Act, see Hagit Bulmash (2012), “An Empirical Analysis of Secondary Line Price Discrimination Motivations” 8(2) Journal of Competition Law & Economics: 361-397.
70 The expression ‘Most Favourite Nation (MFN) obligation’ derives from international trade law. In particular, in the context of the WTO/GATT rules: when State A concludes a trade agreement with State B that lowers the bilateral custom duties and/or limits an important quote, State A is required to extend the same condition to any of the other WTO Member States. The objective of the MFN obligation is to encourage multilateral, rather than bilateral, trade negotiations. Exceptions to the application of the MFN clause are allowed only in the case of regional free trade agreements. The meaning of the MFN obligation can be applied mutatis mutandis to license negotiations in the case of a literal interpretation of the non-discrimination obligation.
71 Supra, [2017] EWCH 711, Para. 497.
the SEP holder would be forced to keep the same royalty rate, though no implementer would be interested anymore in licensing the patent. The MFN approach is thus inefficient, since it does not incentivize the diffusion of the patented technology and it does not adapt to market and technological developments. In addition, the MFN approach is also ‘unfair’, a ‘small’ implementer, manufacturing products where the essential patent has only a marginal importance, will have to pay the same royalty rate like a ‘major’ implementer, which manufactures products that mostly rely on the essential patent. By way of example, according to the MFN approach, manufacturers of smart phones would have to pay the same royalty rate for a patent ‘essential’ for the implementation of a WIFI technology like a manufacturer of washing machines. Most of the new washing machines connect to the Internet via a WIFI connection, in order to allow the remote control of the device. However, a washing machine still primarily aims at ‘washing’ clothes rather than communicating with the world – i.e. the relevance of a patent essential for WIFI technology is much lower for a washing machine than for a smartphone. In view of its inefficiency and its unfairness, it is not surprising that the MFN interpretation of the ND prong has not been supported by any author in the literature.

A second interpretation of the non-discrimination obligation has been put forward by Mariniello. The author suggests that “the FRAND commitment waives the patent holder’s right to refuse to license its IP rights to anybody seeking such a license.” On the other hand, the patent holder could differentiate the royalty rate on the basis of the specific circumstances of each licensee. As recognized by Justice Birss in Unwired Planet, this interpretation “… is very weak. Since the FRAND undertaking already obliges licensors to offer licenses to everyone, it does not add anything.” In view of these considerations, it is not surprising that no other author has supported the view expressed by Mariniello.

According to the third interpretation of the ND prong, the non-discrimination obligation is applicable only if the licensees are ‘similarly situated’. Such interpretation was first proposed by Gilbert; the author, however, did not define when licensees are ‘similarly situated’. Other authors have built upon the concept introduced by Gilbert. According to Carlton and Shampine, “… competing firms are similarly situated if ex ante they expect to obtain the same incremental value from the patented technology compared with the best alternative available to be incorporated into the standard.” Coming back to our previous example, a manufacturer of washing machines and a producer smart phones would be ‘similarly situated’, according to Carlton and Shampine, only if they would expect to gain the same benefit from the patented WIFI technology. The expectation should be formed ex ante: before the standard is defined within the SDO; before the relevant patents become ‘essential’ for the standard. The test elaborated by Carlton and Shampine is based on an ex ante hypothetical scenario; it would be quite difficult to implement such standard in practice, since industry standards are usually developed quite ahead in comparison to the release of retail products that implement them. Therefore, it would be hard for the implementers to determine ex ante the value of the patented technology and thus assessing if two potential licensees are indeed ‘similarly situated’.

A number of authors have argued in favour of a ‘narrow’ interpretation of ‘similarly situated’ standard. To this regard, Sidak recognizes that licensees are similarly situated only if they implement the relevant standard in products in the same market (i.e. competing products). Secondly, different implementers are ‘similarly situated’ only if the license agreements concern the same patents portfolio. Thirdly, licensees would be ‘similarly situated’ only if the cost of licensing faced by the SEP holder would be comparable in both transactions. For instance, the SEP holder would engage in ‘shorter’ negotiations to license the entire patents portfolio to implementer A (i.e., lower the transaction costs) rather than negotiating multiple agreements with implementer B, who is interested in concluding separate license agreements concerning individual patents that are included in the portfolio. According to Sidak, in view of the different transaction costs that are faced by the SEP holder in this hypothetical scenario, implementers A and B would not be ‘similarly situated’ – i.e., the patent holder could thus request different royalty rates from the two licensees.

A narrow interpretation of the ND prong de facto makes the non-discrimination obligation meaningless. As Cano Perez notes, with the advent of the Internet of Things (IoT) and 5G technologies, a large number of manufacturers from different industries will have to engage in license negotiations with the holders of patents that

74 Ibid. p. 525.
75 Ibid. p. 532.
80 Ibid. p. 361.
81 Ibid. p. 363.
are relevant to the new communications standards.82 The latter standards will not only be relevant for smart phone producers; car manufacturers and producers of home appliances (e.g., TVs, washing machines, fridges…) will need to obtain a license for the use of patents that are relevant to IoT and 5G technologies. If the licensees were to implement the standard in the same product market in order to be considered ‘similarly situated’ (i.e., as suggested by Sidak), the manufacturers of smart phones, home appliances and cars would not be considered to be ‘similarly situated’ – i.e., the non-discrimination obligation would not be applicable.

As Sidak recognizes, “there is no generally accepted test (in the literature) to determine whether two implementers are similarly situated”.83 As further discussed in Section III.B, courts in Europe have generally accepted the ‘similarly situated’ standard for the interpretation of the ND prong. However, there is no common view on the factors that have to be taken into consideration in order to apply such a standard.

III. THE LEGAL PERSPECTIVE ON THE PRINCIPLE OF NON-DISCRIMINATION

As mentioned in the introduction, a dominant firm breaches Art. 102(c) TFEU when it applies “dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage”. Price discrimination clearly falls under the scope of ‘dissimilar conditions.’ The discrimination can take different forms: besides classical discrimination, in the form of different retail/wholesale prices, the dominant company can discriminate against its customers via selective price cuts and target rebates. Art. 102(c) TFEU clarifies that price discrimination is not abusive per se: a dominant company breaches this provision if it differentiates the price of its products/services in relation to ‘equivalent transactions’, and by placing certain customers at a ‘competitive disadvantage’ in comparison to ‘other trading partners’. Finally, as further discussed in the following paragraphs, the CJEU case law has recognized that the dominant company can put forward ‘objective justifications’.

In Section III.A, we review the CJEU case law concerning Art. 102 (c) TFEU, in order to determine an applicable standard for the analysis of a strategy of royalty rate discrimination that is carried out by an SEP holder vis-à-vis its licensees. In particular, we discuss the CJEU case law on ‘equivalent transactions’, ‘competitive disadvantage’ and ‘objective justifications’ in the context of royalty rates discrimination. As mentioned in the introduction, we take for granted that the SEP holder has market power, in order to trigger the enforcement of Art. 102(c). In the ‘real world’, however, such a conclusion cannot be taken for granted. The analysis carried out in Section III.A is purely ‘speculative’: to date, no court in Europe has ever sanctioned any SEP holder for a breach of Art. 102(c). In Unwired Planet, for instance, the High Court of England and Wales rejected the argument that Unwired Planet breached Art. 102(c) TFEU, since the royalty rate requested from ZTE was substantially higher than that one previously agreed with Samsung.84 According to the court, Unwired Planet did not breach Art. 102(c), since the royalty rate discrimination did not distort competition between ZTE and Samsung in the downstream market.85 Section III.A thus aims to identify the possible steps of the analysis of such hypothetical case, on the basis of the CJEU case law and in light of the discussion on the welfare effects of price discrimination that was carried out in Section II.A.

In Section III.B, on the other hand, we review a number of recent rulings by German and British courts. These tribunals have analysed the non-discrimination obligation of the SEP holder as a possible breach of the ND prong. Section III.B thus compares recent national rulings on the ND prong with the economists’ views that were discussed in Section II.B, in order to identify common trends in the interpretation of the non-discrimination obligation by the national courts of the EU Member States.

III.A. The CJEU case law on Art. 102(c) and its relevance for royalty rate discrimination

III.A.1. Equivalent transactions

The concept of ‘equivalent transactions’ was first interpreted by the CJEU in United Brands.86 According to the Court, to determine whether transactions involving the same product are indeed ‘equivalent’, the European Commission should analyse the “differences in transport costs, taxation, customs duties, the wages of the labour force, the conditions of marketing, the differences in the parity of currencies, the density of competition…”87 On the other hand, the Court pointed out that the different levels of demand for bananas in different EU Member States would not be sufficient to justify a persistent price disparity within the EU common market.88 The United Brands case law has been consistently upheld in subsequent CJEU jurisprudence: the Court has generally looked

85 Ibid.
87 Ibid, para. 228
88 Ibid, para. 229.
at the nature of the product/service that is sold by the dominant company to its customers and has assessed whether the different supply costs that are faced by the dominant company has made the transactions ‘equivalent’. For instance, in British Airways, the CJEU concluded that the sale of airline tickets by British Airways to different travel agents in the UK represented ‘equivalent transactions’. 88 Although the tickets concerned different destinations, the CJEU considered the type of service provided by British Airways to different travel agents to be equivalent.

The reference of Art. 102(c) to ‘equivalent transactions’ mirrors the ‘similarly situated’ standard discussed in section II.B. Since United Brands, in fact, the Court has emphasized that the scope of the non-discrimination rule, under Art. 102(c), is not ‘unlimited’; it is applicable only if the dominant firm engages in ‘equivalent transactions’ with its customers. From this perspective, the ‘MFN approach’ to royalty rate discrimination would not fit with the CJEU case law on ‘equivalent transactions’.

In view of the CJEU case law, we might argue that agreements concluded by the SEP holder with different licensees are ‘equivalent transactions’ when they concern the same patents portfolio (i.e., the same product). Secondly, the United Brands case law emphasizes the importance of comparing the costs that are faced by the dominant undertaking in order to supply different customers, rather than the differences in terms of product demand. In the IP world, the marginal cost of licensing is close to zero: the major cost faced by the patent holder is the initial R&D investment that is faced in order to develop the new technology. Once the technology is patented, the SEP holder can conclude an almost unlimited number of license agreements -i.e., the marginal cost of each license agreement is limited to the negotiation time that is taken up by the SEP holder with each potential licensee. As discussed in Section II.B, the SEP holder would face a lower ‘cost’ in negotiating a license agreement that covered the entire patents portfolio than in negotiating multiple agreements covering the individual patents that are included in its portfolio. 89 In view of this consideration, the license agreement covering the entire patents portfolio would not be an ‘equivalent transaction’ to one covering a ‘bundle’ of agreements relating to individual patents within the portfolio. In such a scenario, therefore, Art. 102(c) would not be applicable.

Finally, it is doubtful that the additional factors put forward by economists to narrow down the scope of the application of the ‘similarly situated’ standard would fit with the CJEU case law on ‘equivalent transactions’. Firstly, the criterion that the licensees should expect ex-ante the same value from the licensed technology in order to be considered ‘similarly situated’, does not find any correspondence in the CJEU case law on ‘equivalent transactions’. 92 Similarly, Sidak’s proposal that the licensed standard has to be implemented in the same product market does not fit with the United Brands case law. 93

III.A.2. Competitive disadvantage

The concept of ‘competitive disadvantage’ has also been interpreted by CJEU case law. In British Airways, the Court ruled that a price discrimination strategy implemented by a dominant firm vis-à-vis its customers is not per se in breach of Art. 102 (c): price discrimination can be abusive only if “…it tends to distort the competitive relationship” among the customers of the dominant firm.94 The distortion of competition in the downstream market, in fact, can harm the consumers’ welfare. Traditionally, the Court ‘presumed’ the distortion of competition in the downstream market if one of the customers had to pay a higher price in comparison to an ‘other trading partner’ (i.e., competitors). In particular, the Court of Justice ruled in British Airways that the European Commission was not required to prove that the price discrimination caused “an actual quantifiable deterioration in the competitive position” of the discriminated customer.95 Similarly, in Clearstream, the General Court did not assess whether the price discrimination had resulted in a loss of market share for the customers who were discriminated against.96

The case law on ‘competitive disadvantage’ has recently been revised by the CJEU in MEO.97 Similarly to British Airways, the Court ruled that Art. 102(c) TFEU does not require the European Commission / NCA to ‘quantify’ the competitive disadvantage suffered by the customer discriminated against.98 Nevertheless, unlike British Airways, the Court pointed out that there is no presumption that the competitive disadvantage suffered by the customer discriminated against distorts competition in the downstream market. According to the CJEU:

94 Ibid. para. 136-141.
98 Supra, Case C-95/04 P. para. 144.
99 Supra, Case T-95/04 P. para. 145.
102 Ibid. para. 27.
“...the mere presence of an immediate disadvantage affecting operators who were charged more, compared with the tariffs applied to their competitors for an equivalent service, does not, however, mean that competition is distorted or is capable of being distorted.”

In particular, in line with the more effects-based approach to Art. 102 TFEU that is followed by the CJEU in Intel, in MEO, the Court added that the competition enforcer should take into consideration “all the relevant circumstances” in order to determine whether price discrimination may produce a competitive disadvantage that distorts competition in the downstream market. In particular, by analogy with Intel, the CJEU ruled that the competition agency should take the following elements into consideration as being relevant factors:

- the negotiating power of the customer of the dominant firm as regards the tariffs;
- the conditions for charging those tariffs;
- the duration and amount of the tariffs;
- the existence of a strategy by the dominant firm that aims to exclude from the downstream market one of the trading partners “which is at least as efficient as its competitor”.

The relevance of MEO on the interpretation of the ‘competitive disadvantage’ condition has been debated in the literature. While some authors have pointed out that MEO has substantially increased the burden of proof faced by a competition agency in order to prove the existence of a competitive disadvantage, others have argued that the ruling does not substantially change the previous case law. Ritter, for instance, notices that “MEO sets a low threshold for the required level of harm”. The author notices that the CJEU ruled, in MEO, that the competitive disadvantage should be ‘capable of distorting competition’, rather than being ‘likely to cause a restriction of competition’ – i.e., a higher threshold of abuse.

In view of the CJEU case law that has been discussed in the preceding paragraphs, we might argue that the enforcement of Art. 102(c) would not be triggered by the mere fact that the licensee who is discriminated against would suffer a ‘competitive disadvantage’ as a result of the payment of a ‘higher’ royalty rate in comparison to that requested of its competitors. The royalty rate discrimination should be ‘capable of distorting’ competition among the licensees in the downstream market. As a consequence, there should be a causal link between the royalty rates discrimination, the competitive disadvantage suffered by the licensee who is discriminated against, and the distortion of competition in the downstream market. On the other hand, in the light of MEO, the competition agency would not be required ‘to quantify’ the distortion of competition among licensees, but simply to prove the ‘potentially’ negative effect of the royalty rate discrimination on the competition in the downstream market (i.e., being ‘capable’ of distorting competition).

An hypothetical case matching these conditions would be the following: due to the royalty rate discrimination, the licensee who is discriminated against would not be able to conclude a license agreement with the SEP holder, and thus it would not be able to launch a new product in the retail market, as initially planned. The latter would represent a competitive disadvantage that would be ‘capable’ of distorting competition in the downstream market and that would negatively affect the consumers’ welfare – i.e., final consumers would not benefit from the release of a new retail product that was implementing the standard.

An open question, after MEO, concerns the welfare effects of different forms of price discrimination. As argued in Section II.A, economists agree that, in certain circumstances, only first degree price discrimination (i.e., personalised royalty rates) would have a negative effect on the consumers’ welfare. On the other hand, second (i.e., discounts granted to license the entire patent portfolio) and third degree price discrimination (i.e., setting different royalty rates in different geographical areas) would not negatively affect the consumers’ welfare – i.e., they would not be considered to be anti-competitive forms of conduct. In view of the well-established economics literature in this field, we could argue that only a strategy of individual royalty rates could fall under the scope of the application of Art. 102(c). In particular, in light of MEO, the personalised royalty rates should cause a ‘competitive disadvantage’ to the licensee who is discriminated against, in order to be ‘capable’ of distorting competition in the downstream market. Nevertheless, this remains a purely academic speculation: in MEO, in fact, the Court of Justice did not draw any distinction between different degrees of price discrimination. As a consequence, further guidance from the Court of Justice in this regard would be welcome.

101 Supra, case C-525/16, para. 28.
102 Supra, case C-525/16, para. 31.
105 Supra, case C-525/16, para. 37.
III.A.3. Objective justifications

In MEO, the CJEU emphasized that while the competition agency faces the burden of proof concerning the existence of ‘equivalent transactions’, and it has to prove that the ‘competitive disadvantage’ is capable of distorting competition in the downstream market, the dominant firm can put forward ‘objective justifications’, in order to argue that the price disparity is legal.107 While objective justifications are possible in theory, in practice, they have rarely been accepted by the Court. This is because most of the cases sanctioned under Art. 102(c) TFEU concern forms of price discrimination that are connected with the customers’ nationality – i.e., cases that have a close link to the EU’s internal market integration.108 In accordance with United Brands case law,109 the Court of Justice has never accepted objective justifications vis-à-vis forms of price discrimination amongst customers who are based in different EU Member States. Consequently, the patent holder could argue that the royalty rate discrimination was needed to recover the R&D investments that had been sunk; without being able to discriminate, the patent holder would not have enough resources to invest in innovation. Furthermore, the SEP holder could argue that the royalty rate differentiation leads to forms of optimal prices that benefit the implementers, by thus increasing the consumers’ welfare. Such a justification would be acceptable, unless the royalty rate discrimination is linked to the customers’ nationality. In a case where the SEP holder varied the royalty rates charged to different licensees who are based in different EU Member States, the CJEU would be unlikely to justify such a strategy.

III.B. Interpretation of the ND prong by the courts of the EU Member States – recent developments

III.B.1. Scope of the application of the ND prong

A number of British and German courts have discussed the scope of the application of the ND prong in SEP related disputes. Most of the tribunals have pointed out that the principle of non-discrimination is applicable only to ‘comparable situations’, thus endorsing the ‘similarly situated’ licensee standard that was discussed in Section II.B.110 The Düsseldorf Landgericht (LG, Düsseldorf District Court), for instance, has emphasized that “...the dominant company can react differently to different market conditions. (In such a case), unequal treatment (of its licensees) is therefore objectively justified.” 111 However, German courts have generally failed to discuss under what circumstances the two licensees are ‘similarly situated’. In Unwired Planet, the High Court of England and Wales took a different approach. After having reviewed the three interpretation of the ND prong that are discussed in Section II.B, Justice Birss argued that the application of the non-discrimination obligation requires the calculation of a “...benchmark” FRAND rate...”, “...which is applicable to all licensees seeking the same kind of license.”112 In other words, potential licensees would be entitled to ask for an ‘average’ license rate from among the rates that had previously been concluded by the SEP holder with other licensees in relation to the same patents portfolio. According to Justice Birss, this is the “general non-discrimination obligation” which stems from the ND prong.113 Rather than listing the conditions whereby two licensees would be ‘similarly situated’, Justice Birss relied on the benchmark approach in order to identify discriminatory royalty rates that substantially deviate from such a benchmark rate. The approach proposed by Justice Birss was upheld by the Court of Appeal of England and Wales.114 However, as recently argued by Gerardin, the approach followed by Justice Birss is debatable, and it finds no endorsement in the CJEU case law.115 At the moment of writing, it remains to be seen whether the UK Supreme Court will uphold the benchmarking approach followed by Justice Birss.

The approach proposed in Unwired Planet relies on a benchmark amongst the rates granted to ‘all’ licensees – i.e. the implementers that are active in different industries. To return to the example of the WIFI standard discussed in Section II.B, in such case the benchmark would be the average rate previously agreed by the SEP holder in those license agreements that have been concluded with smartphone producers and washing machine manufacturers. Due to the greatly divergent relevance of WIFI technology for these electronic devices, the benchmark approach runs the risk of being ‘unfair’. The benchmark approach does not take into consideration the

107 Supra, case C-525/16, para. 31.
109 Supra, case 27/76, para. 233.
110 See, for instance, LG Dusseldorf, case n. 4c O 81/17, ruled on 11.07.2018. para. 271.
111 Translation from the German version of the ruling carried out by the author.


relevance of the patent for each licensee. By relying on the average of the rates previously granted by the SEP holder, the washing machine producers would pay a ‘too high’ rate in comparison to their willingness to pay for the license. On the other hand, the smart phone producers would benefit from the benchmark approach, since they would be able to ask for a royalty rate that was far below the expected value of the patented technology that is implemented in their products.

The divergent approach used by the German and British courts in relation to the application of the ND prong shows that this issue is far from being settled. It remains to be seen how other courts, especially the EU Court of Justice, will interpret the scope of the ND prong in the future.

III.B.2. The burden of proof: the disclosure obligation of the SEP holder

The German courts have introduced a far reaching interpretation concerning the applicable burden of proof for a discriminatory behaviour by the SEP holder. In Sisvel v. Haier, the Düsseldorf Oberlandesgericht (OLG, Düsseldorf Higher Regional Court) pointed out that the burden of proof lies with the party putting forward the allegation of discriminatory behavior by the SEP holder (i.e., the potential licensee). Nevertheless, the court also recognized that the licensee does not have any regular knowledge of the licensing practice of the SEP holder, since license negotiations are usually conducted on a bilateral level. Consequently, when the potential licensee puts forward an allegation of discriminatory behaviour, the SEP holder has the duty to provide evidence of the terms that have previously been agreed with other licensees. The German courts have thus recognized a de facto ‘disclosure’ obligation by the SEP holder in relation to the royalty rates previously agreed with other licensees concerning a specific patents portfolio. The LG Düsseldorf has further emphasized that the disclosure should be ‘full’ – i.e., providing detailed information about the licensing conditions as well as the name of the parties with whom the SEP holder has previously concluded a license agreement. In case that the disclosed documents have provided prima facie evidence of discrimination, it would be up to the SEP holder to justify the different treatment, by explaining that the potential licensee was not ‘similarly situated’ to the previous licensees.

According to the OLG Karlsruhe, this reversed burden of proof is justified by the CJEU ruling in Huawei. In the latter judgment, in fact, the Court of Justice pointed out that the SEP holder has the duty to make the first license offer, specifying “…the amount of the royalty and the way in which that royalty is to be calculated.”

According to the OLG Karlsruhe, the SEP holder would thus have the duty to disclose information concerning previous license agreements, in order to show that its offer is indeed FRAND, and is thus non-discriminatory.

The OLG Karlsruhe has also pointed out that the scope of the disclosure obligation depends on the specific circumstances of the case. In a case where the alleged discriminatory terms correspond to a standard contract that has been previously accepted by third parties, it would be sufficient for the SEP holder to prove that the new license agreement complies with the standard contract, without disclosing further information about the other licensees. By contrast, if the SEP holder has previously concluded several license agreements including divergent conditions, the SEP holder would have to disclose the contracts in court proceedings and prove that the alleged discriminatory terms are either substantially similar to previous ones, or that they are ‘justified’ – i.e., the potential licensee is not ‘similarly situated’ if compared to previous ones.

Obviously, the disclosure obligation by the SEP holder might affect trade secrets. At the start of every license negotiation, in fact, the SEP holder usually requests that the implementer conclude a ‘Non-Disclosure Agreement’ (NDA) in order to safeguard its trade secrets. According to OLG Düsseldorf, the implementer’s refusal to conclude an NDA during the initial phase of the negotiations does not release the SEP holder from its obligation under Huawei case law to include a price calculation method in its initial license offer. However, in the case where there is the lack of an NDA, the SEP holder would have to provide less detailed explanations of the calculation methods of the FRAND rate. In a number of cases, the OLG Düsseldorf has ordered the implementer to conclude an NDA with the SEP holder covering the documents disclosed during the court proceedings. The court introduced this obligation when the SEP holder had to disclose the license agreements previously concluded with third parties in order to justify the ‘fair’ and ‘non-discriminatory’ nature of the rates requested, and when the parties had not previously concluded any NDA during the license negotiations. According to Makris and Tapia,

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117 Ibid.
116 Ibid.
119 Supra, LG Düsseldorf, 4a O 15/15, para. 393.
121 Supra, Case C-170/13, Para. 63.
122 OLG Karlsruhe, case n. 6 U 183/16, ruled on 30.10.2019. Para. 132.
123 Ibid., para. 133.
124 Ibid., para. 133.
125 OLG Düsseldorf, case n. I-2 U 23/17. Para. 22.
126 Ibid.
the approach followed by the OLG Düsseldorf is not effective; while it is correctly motivated by the need to safeguard confidential information, it fails to safeguard the interests of the SEP holder. The implementer, in fact, could misuse the information disclosed during the court proceedings in order to gain commercial advantage. The authors have argued in favour of an ‘attorneys’-eyes-only’ approach, an approach that has so far been rejected by the German courts.

To sum up, German courts have thus recognized a reversed burden of proof in the case of prima facie discrimination, in order to compensate for the information asymmetry between the SEP holder and the potential licensee. Such asymmetry is indeed a relevant issue in the contest of court proceedings concerning a breach of the ND prong. However, with the lack of clarification of the substantial meaning of the ND prong, the disclosure obligation might become a burden for the SEP holder, since the latter would be required to disclose information about ‘all’ of the license agreements previously concluded in relation to a specific patent portfolio, even though the potential licensee might not be ‘similarly situated’ to the previous ones. On the other hand, the obligation for the implementer to conclude a non-disclosure obligation that is limited to the court proceedings might fail to safeguard the business secrets of the SEP holder, and it might be insufficient to compensate for the disclosure obligation. In conclusion, where there is a lack of clarification of the conditions for the application of the ‘similarly situated’ standard, the disclosure obligation might represent far too great an obligation for the SEP holder.

IV. CONCLUSIONS: ND PRONG Vs. ART. 102 (C) TFEU

As mentioned in the introduction, the non-discrimination obligation in SEP related disputes has generally received less attention in the literature if compared to the issue of what is a ‘fair’ and ‘reasonable’ royalty rate. The present article aimed to fill this gap in the literature by analyzing, from a European perspective, the principle of non-discrimination under contract (i.e., the ‘ND prong’) and EU competition law (i.e., Art. 102 TFEU).

By comparing these two legal fields, we have noticed that their application threshold is rather different: while the ND prong is a general obligation (i.e., a commitment undertaken by every SEP holder during the standardization process within an SDO), Art. 102(c) TFEU is applicable only if the SEP holder has market power. As argued in Section I.C, due to the phenomenon of patents ‘over-declaration’, the market power of the SEP holder cannot be presumed. Secondly, Art. 102(c) TFEU can sanction a strategy of royalty rate discrimination by the SEP holder vis-à-vis its licensees only in a case where such a strategy may ‘distort’ competition amongst licensees in the downstream market. In accordance with MEO case law, while the extent of the distortion of competition does not need to be ‘quantified’, the latter cannot be presumed a priori to be a result of the competitive disadvantage suffered by the licensees against whom there is discrimination. Thirdly, the distortion of competition should harm the consumers’ welfare. On the basis of the economics literature reviewed in Section II.A, only personalised royalty rates (i.e., first degree price discrimination) may hamper the consumers’ welfare in certain circumstances. The latter condition has never been openly recognized by the CJEU case law on discriminatory pricing. However, it is well accepted in the economics literature that only first degree price discrimination may have an ‘ambiguous’ effect on the consumers’ welfare, while second and third degree price discrimination are harmless. Finally, the SEP holder may put forward objective justifications. For example, the dominant firm could argue that the discriminatory royalty rates aim to be compensation for previous investments in R&D; in other words, the discriminatory strategy was intended to foster innovation.

A strategy of royalty rate discrimination may be considered a breach of the ND prong if the licensees are ‘similarly situated’ and if there is evidence that the requested terms are indeed different (i.e., discriminatory). On the other hand, the ND prong does not require evidence of market power, distortion of competition, harm of consumers’ welfare. In view of these considerations, it is not surprising that no case of royalty rate discrimination has ever been sanctioned in Europe under Art. 102(c) TFEU, either in case of ‘public’ (i.e., decision of a National Competition Authority / European Commission) or ‘private’ enforcement of EU competition law (i.e., the requests of court injunctions/awards of damages by the licensees who are discriminated against). To sum up, the ND prong and Art. 102(c) TFEU ‘co-exist’, since they can both sanction royalty rate discrimination by the SEP holder, but the enforcement of EU competition law is ‘unlikely’ due to the higher burden of proof faced by the claimant. Although no claimant in Europe has ever fulfilled such a heavy burden of proof, there is no reason to exclude a priori discriminatory pricing from the scope of the application of Art. 102(c). Discriminatory pricing is an exploitative abuse: a ‘rare’ type of abuse that should be assessed in accordance with the case-by-case approach that characterizes EU competition policy.

In spite of the different thresholds of application, the ND prong and Art. 102 (c) TFEU share a number of similarities. In particular, the ‘similarly situated’ standard under the ND prong is comparable to the concept of ‘equivalent transactions’ under Art. 102 (c) TFEU. Both competition and contract law thus tolerate a ‘certain degree’ of discrimination. For instance, the non-discrimination obligation would be applicable only if the SEP holder licensed the ‘same’ patents portfolio. If that was not the case, the licensing agreements concluded by the

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129 Ibid, 213.
SEP holder could not be considered to be ‘equivalent transactions’ under United Brands case law, while the licensees would not be considered to be ‘similarly situated’ in accordance with the national case law that was reviewed in Section III.B.

In spite of these similarities, there is no agreement on the precise meaning of these expressions. As discussed in Section II.B, economists have failed to provide an exhaustive list of conditions through which to determine when two licensees are ‘similarly situated’. Similarly, the case law of the German and British courts, which was reviewed in Section III.B, has revealed that there is no common understanding of the scope of application of the ‘similarly situated’ standard. In particular, it is unclear whether two licensees are ‘similarly situated’ when they are not competitors in the downstream market. To return to the example discussed throughout the article, the question is whether, and to what extent, the manufacturers of washing machines and mobile phones can be considered to be ‘similarly situated’ when they license a number of patents that are relevant to the implementation of WIFI standards, even though they are not competitors in the retail market. This issue is particularly relevant in view of the advent of IoT and 5G technologies, the open question is whether licensees from different industries should pay the same licensee’s fee to the holder of SEPs relevant for these new communication standards.

To conclude, EU competition and contract law can both sanction discriminatory royalty rates that are requested by the SEP holder from its licensees. However, the conditions that trigger the enforcement of Art. 102 (c) are substantially ‘higher’ if compared to a breach of the ND prong. The main unclear aspect concerns the precise definition of the ‘similarly situated’ standard: a standard that is accepted, in principle, by the majority of the economists and national courts in order to determine when licensees should benefit from the same royalty rates. However, it is currently unclear what the conditions are that determine when licensees are ‘similarly situated’. The case law of the national and EU courts will hopefully clarify this aspect in the future.