THE USE OF ECONOMIC THEORY AND EVIDENCE IN UNIVERSAL MUSIC GROUP/EMI MUSIC

Enrique Andreu and Jorge Padilla*

Economists at Compass Lexecon

1. INTRODUCTION

This paper provides a review of the economic and econometric analysis carried out by the European Commission («Commission») in its assessment of the merger between Universal Music Holdings Limited («Universal») and the recorded music business of EMI Group («EMI»). The merging parties were active in discovering, developing and promoting recording artists as well as in recording and commercializing their music. The proposed acquisition was notified in February 2012. The merger was set to reduce the number of «major» recording companies from four to three. The Commission opened a Phase II inquiry in March 2012 and cleared the deal in September 2012 subject to remedies.

The *Universal Music Group/EMI Music* merger is of interest because it is one of the few Phase II cases where the Commission has proactively relied on economic evidence and because the Commission's theory of harm was novel, or at least not purely structural.

The Commission's competitive assessment focused on the market for the wholesale of digital music to retailers. The Commission was concerned that the merger would have allowed Universal, with nearly half of the available music in its hands post-merger, to extract better terms and conditions from digital music retailers, thereby reducing retailers' incentive to innovate and invest, and harming end-consumers. The Commission's theory of harm was based on a bargaining framework, whereby additional music repertoire provides decreasing to the value of a platform. This framework predicted an anti-competitive «size effect»: large recording companies have greater

^{*} We advised EMI Group during the Commission's review of Case M.6458 *Universal Music Group/EMI Music*. However, the opinions in this paper are our own and should not be interpreted as representing the views of Compass Lexecon's clients or other Compass Lexecon economists. We are thankful to Manuel Mertel and Sergey Khodjamirian for their assistance. All errors are our sole responsibility.

bargaining power than small recording companies, and are therefore able to extract better wholesale terms.

The Commission's theory of harm was supported by respondents to the market test. Most digital customers (13 out of 16) said that the size of a record company increases its bargaining power. Furthermore, the Commission analysed the commercial terms that Universal and EMI obtain from different download platforms and found that Universal obtains better terms on various key parameters. The Commission also performed a price-concentration regression analysis which allegedly confirmed its concerns: large recorded music companies enjoy considerable bargaining position vis-à-vis digital platforms and, as a result, can extract better terms. The Commission found that this effect is more pronounced for smaller digital platforms than for large digital platforms, such as Apple's iTunes or Spotify.

The parties questioned the theoretical underpinnings of the Commission's theory of harm. They explained that the Commission's theory hinged upon the assumption of «unconditional» (or «global») decreasing returns to repertoire; when this assumptions is relaxed to reflect reality, the Commission's bargaining model no longer supports the Commission's finding of unilateral effects and the Commission's theory of harm is left unsupported. The parties' economists argued that the music repertoires of the majors were complementary. As a result, they were able to extract a higher share of the platforms' revenues by negotiating separately rather than jointly. They thus concluded that the merger would be procompetitive and would eliminate a double marginalisation problem: the combined entity would bargain less aggressively because it would be interested in licensing its entire portfolio.

The parties also challenged the Commission's empirical findings. In particular, they argued that the econometric models proposed by the Commission were flawed. The parties' economists criticized the methodology used by the Commission because it did not control for differences in the quality of the recorded music companies' repertoires. They found that when those differences were taken into account the Commission's regressions no longer showed a positive and statistically significant relationship between margins and revenue shares. In other words, they found that all the data said was that a company with a higher quality repertoire had a greater revenue share and obtained higher margins. That is, while size did not confer bargaining power, quality did.

The Commission rejected all these criticisms and cleared the deal only after Universal agreed to sell a significant proportion of EMI's assets in the EEA and terminate certain licensing and distribution agreements.

This paper is structured as follows. In Section 2, we provide an overview of the Commission's decision by describing the transaction, the relevant product markets affected by the Commission and their structure, the Commission's theory of harm, the evidence used to support the Commission's theory, and the commitments proposed by the parties to address the

Commission's concerns. Section 3 sets out the Commission's economic analysis, the parties' critique, and the Commission's response to the critique. Section 4 presents our conclusions.

2. THE COMMISSION'S DECISION: AN OVERVIEW

The parties. Universal, a subsidiary of Vivendi, is the world's leading music recording company active in the discovery, development and promotion of artists, music recording, Artists and repertoire («A&R»), and wholesaling of recorded music. Universal is also active in online music retail, music publishing, artist management, merchandising, event management and event venue services. EMI Recording was also active in the discovery, development and promotion of recording artists and wholesale of recorded music, and had activities in music retail, music publishing, artist management and merchandising.

The transaction. In February 2012, Universal notified the Commission of its plans to acquire EMI Group's activities in A&R and in the wholesale of recorded music, retail music activities, certain publishing rights, and artist management and merchandising activities.

Market definition. The Commission distinguished between the Artist & Repertoire (or A&R) market, where music recording companies compete for artists, and the wholesale market for recorded music. This last market was further sub-divided between the wholesale market of physical records and the wholesale market of digital records. The Commission considered that it was not necessary to distinguish between digital downloads and streaming and it did not separate markets by genre, though it noted the different competitive dynamics of different genres, in particular classical music. The Commission did not distinguish between singles or compilations from single artist albums. Importantly, the Commission concluded that while piracy was an important phenomenon, it did not constrain the parties' wholesale prices and hence was not included as part of the relevant product market.

The Commission focused its competitive analysis on the market for the wholesale distribution of digital music ¹. In this market, music recording companies negotiate licensing deals to supply music to retail customers who then sell the music to end-consumers via their digital platforms (e. g. Spotify, Apple, Deezer, Amazon, telecoms operators, etc.).

The Commission did not find it necessary to conclude on the relevant geographic market for digital music given concerns existed both on a national and EEA-wide level.

Market structure. The market for recorded music comprised four worldwide record companies: Universal, Sony, EMI, and Warner (the «majors»)

¹ The Commission did not take a view on whether there is a two-sided market where the strength of a recording company in A&R gives it market power in wholesale, and vice versa.

and a large number of smaller independent firms (the «indies»). The majors are global, present not only in A&R but also downstream, and to some extent in retail. They have significant financial strength and a large diversified repertoire. The indies are smaller, national, and have a more limited budget for promotional and marketing expenditure. They often focus on a particular genre and are dependent on new releases rather than having a large back catalogue. They also have more limited access to mass media, in particular radio and television.

Based on IFPI data for 2010 and the parties' own data for 2010 and 2011, the combined value market shares of the parties in the wholesale of digital recorded music in the EEA would have been 40-50% with an increment of 10-20%. The Commission noted that the market share would have been above 50% in six Member States. Sony and Warner would have been left with market shares ranging between 10 and 20%, and there would have been a large number of smaller competitors (the indies) making up the rest of the EEA market.

Non-coordinated effects or unilateral effects. The Commission was concerned that the combined music repertoire of the merging firms would enable Universal, with nearly half of the available music in its hands, to extract better terms from digital platforms than in the absence of the merger. This would in turn impact innovative providers' ability to expand and launch new music offerings, reduce consumers' choice of digital music and harm cultural diversity.

The Commission's theory of harm was based on an economic framework, which predicts an anticompetitive «size effect»: large recording companies have greater bargaining power than small recording companies, and are therefore able to extract better wholesale terms.

The Commission claimed that access to additional repertoire becomes less and less valuable the wider the repertoire already available to the platform. Or, in technical terms, it claimed that music repertoires are «sub-additive». For the Commission, the sub-additivity of music repertoire implies that post-merger the merged entity would be in a stronger bargaining position and thus could extract higher rents and better terms. This is because, according to the economic model used in the Decision ², under decreasing returns relative to the size of the repertoire, a large recorded music company would have more bargaining power than a smaller one and, therefore, the wholesale terms that a recorded music company would be able to extract from platforms would depend on the size of its repertoire relative to the size of the repertoire available to the platform.

While the theory of harm developed in this case has a structural flavour, it does not rely on a structural presumption. The increase in concentration is questioned because, under sub-additivity, it leads to an increase in bar-

² See Kai-Uwe Kühn and Jorge Padilla, 2002, «Union power, replacement and labour market dynamics», *Economic Journal*, vol. 112, pp. 317-343.

gaining power, and that increase in bargaining power is welfare reducing because it affects the incentives to invest in digital platforms. The Commission's case thus rested on (a) the sub-additivity assumption and (b) on the link between cash-flows and investment, and not merely on the high continued market share of the parties.

The Commission relied on the following evidence to support the existence of an anti-competitive «size effect» ³:

i) The Commission's market investigation found that the majority of digital customers (13 out of 16) confirmed that the bargaining power of a recording company in relation to digital customers increases with size. According to the customers, greater bargaining power translates into more disadvantageous commercial terms for

the customers. This was also the view of competitors.

ii) The Commission also compared various key parameters of the commercial terms imposed on eleven digital customers (e. g. Apple, Spotify, Vodafone, YouTube, etc.) by Universal with those imposed by EMI (which is smaller than Universal). The analysis concluded that Universal (the larger of the two) was able to secure more favourable terms with digital customers than EMI. According to the Commission, this analysis provided indications as to the current ability and incentive of Universal to obtain favourable licensing terms on the basis of its larger size. The Commission was thus concerned that an extension of these terms from Universal to EMI's repertoire would directly make digital customers worse off post-merger.

iii) The Commission also performed a quantitative price-concentration analysis showing that large recording companies are able to extract better terms from customers. More precisely, the Commission investigated the relationship between the margins of music record companies negotiating with a given platform and their revenue shares in α that platform using the following regression equation: $margin_{tcpr} = \alpha + \beta revenueshare_{tcpr} + \varepsilon_{tcpr}$ where t denotes time, c denotes country, p denotes platform and r denotes record company (the Commission allows for the term ε , to be broken down into various time and platform fixed effects). The Commission found that the coefficient of interest, β , is positive and statistically significant and concluded, therefore, that the rent that recorded companies can extract from digital music platforms increases with their size (measured in terms of revenues that a recorded music company's repertoire contributes to an online platform). The Commission also found that while this effect is particularly pronounced for relatively small online platforms, it is also present in platforms with significant bargaining power; and that there is a positive relation between the size of a recorded music company's repertoire and the wholesale price it negotiates with online platforms.

³ The Commission also relied on internal business strategy documents, but does not disclose the details of this assessment in its Decision.

Coordinated effects. The Commission raised no coordinated effects concerns even when this had been its main concern when assessing prior transactions in this market ⁴. The Commission excluded the risk of coordination between the majors based on a number of factual elements, such as different prices and pricing structures, confidential and bilateral negotiations, and the absence of a credible retaliation mechanism to ensure the coordination among the majors sustainable, among others.

Commitments. In order to address the Commission's concerns, in July 2012 Universal submitted commitments to divest a number of EMI and Universal assets, terminate certain licensing/distribution agreements, and adhere to a number of behavioural commitments. After negotiating an expanded remedies package in August 2012, the Commission concluded that the increase in size and bargaining power of the merged entity was not likely to allow Universal to impose disadvantageous commercial conditions to its digital customers.

3. THEORY OF HARM

The Commission's theory of harm was based on a bargaining model, which predicts that largemusic recording companies have greater bargaining power than small music recording companies. Using this model the Commission predicted that EMI's acquisition would allow Universal to extract better wholesale terms from its customers.

A. THE COMMISSION'S THEORY

The Commission's model is based on three assumptions. *First*, music repertoires are «sub-additive»: access to additional repertoire becomes less and less valuable the wider the repertoire already available to the platform. Or, in other words, as a digital platform adds music repertoire, the value of the platform increases, but at a decreasing rate. *Second*, a digital platform and a recording company bargain under the common assumption that the platform has already secured deals with all other recording companies. In other words, each record company is seen by the platforms as the «last negotiator» or «marginal negotiator». *Third*, a recording company can credibly threaten to withdraw its repertoire of music if negotiations break down.

These assumptions together imply that failing to reach a deal with a large recording company is more detrimental for a digital platform than failing to reach a deal with a small recording company. This is because, in case negotiations break down, it is more costly for the platform to find a replacement for a large repertoire than a small repertoire. As a result, a platform would be willing to offer better terms to large recording companies than to their smaller competitors.

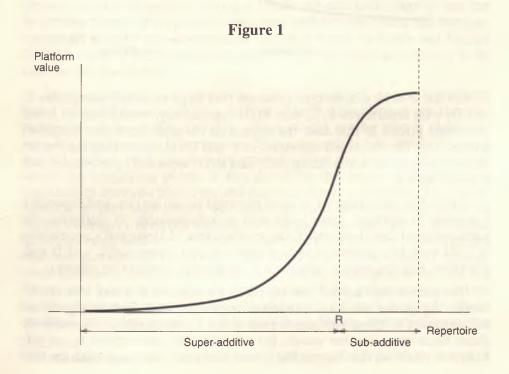
⁴ See Case No. M.3333 Sony/BMG (2004), Case No. M.5272 Sony/SonyBMG (2008).

According to the Commission's model, Universal would have controlled post-merger almost half of the music available in the world. The value of its repertoire would have been significantly larger than in the pre-merger scenario and also much larger than the repertoire of its competitors. Digital platforms would have found it difficult to reject a deal with Universal, since replacing its repertoire would have been practically impossible. Therefore, Universal would be able to extract higher rents than pre-merger.

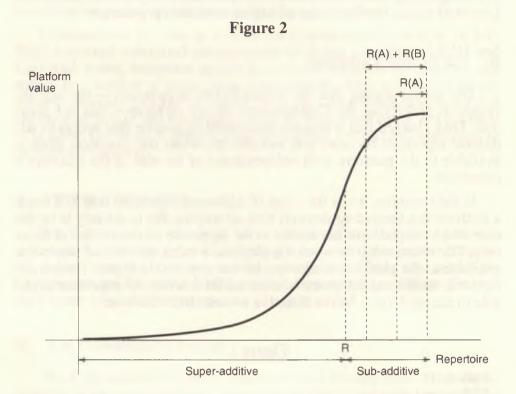
B. THE PARTIES' CRITICISMS

The parties argued that the sub-additivity assumption —the key assumption underlying the Commission's theory of harm— was not justified. They claimed that it was not reasonable to assume that access to additional repertoire becomes less valuable the wider the repertoire already available to the platform with independence of the size of the platform's repertoire.

In their opinion, while the value of additional repertoire may fall when a platform has secured agreements with all majors, this is unlikely to be the case when the platform has access to the repertoire of one or two of them only. The relationship between the platform's value and size of repertoire available to the platform would thus be that depicted in Figure 1 below. In Figure 1, additional repertoire is super-additive when the repertoire available to the platform is below R, and is sub-additive otherwise.



When the platform's value is as in Figure 1, a merger between two small recorded music companies, A and B, would lead to higher rent extraction and thus to higher wholesale prices. This is because the merged entity will be able to threaten to withhold more valuable repertoire than any of its components, A and B, could have done pre-merger. See Figure 2 below.

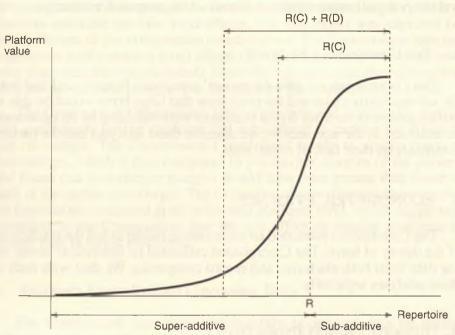


On the contrary, a merger between two large recorded companies C and D, with repertoires R(C) and R(D) respectively, would lead to lower wholesale prices. In this case, the impact on the platform's unit margin of withholding the combined repertoire of C and D is smaller than the impact on unit margins of withholding R(C) and R(D) separately pre-merger. See Figure 3 below.

Given that the repertoire of each recorded music majors, and especially Universal's repertoire, tends to be seen as indispensable by platforms, the parties argued that the competitive implications of Universal's acquisition of EMI were best modelled as a merger between companies C and D and, therefore, that the merger would not produce anti-competitive effects.

The parties also argued that the merger would not increase Universal's bargaining power vis-à-vis platforms materially and lead to significant higher prices to those customers even if the Commission's sub-additivity claim holds true. In other words, the sub-additivity assumption is not sufficient to establish that bargaining power materially increases with the size





of a recorded music company's repertoire. Whether that is the case or not depends on «the bargaining setting». While sub-additivity implies that the bargaining power of a company increases with its size under the bargaining model used by the Commission, which is based on Kühn and Padilla (2002)⁵, some of the assumptions underlying that model are unlikely to be valid in the case at hand.

Most importantly, the model assumes away buyer power. It assumes that a recorded music company will be able to fully appropriate the «incremental» value of its portfolio, which would not be true if platforms were assumed to have buyer power. This assumption does not fit the case at hand because platforms have bargaining power and large platforms have significant bargaining power. It also dismisses the impact of piracy in the negotiations between platforms and recorded music companies. This is unjustified: at very least piracy will likely increase the bargaining power of digital customers deriving significant revenue from the sale of hardware devices playing both legitimate and pirated music. The model also does not take into account the incentives of recorded music companies to sponsor small platforms in order to limit the buyer power of large platforms in the future, and hence misjudges the implications of the proposed transaction on this segment of customers. Finally, the model assumes that retail prices are fixed and independent of wholesale prices. Hence, it overestimates the

⁵ See note 2 supra.

incentives of the recorded music companies to increase wholesale prices and the potential anticompetitive impact of the proposed transaction.

C. THE COMMISSION'S RESPONSE

The Commission rejected the parties' criticisms. It responded that both the sub-additivity claim and the prediction that large firms would be able to extract greater rents from digital platforms were validated by its econometric analyses. In the next section, we describe those analyses and the parties' comments on their lack of robustness.

4. ECONOMETRIC EVIDENCE

The Commission estimated an econometric model to test the predictions of the theory of harm. The Commission estimated its theoretical model using data from both platforms and record companies. We deal with each of those analyses separately.

A. EVIDENCE USING PLATFORM DATA

The Commission collected sales and royalty payments data from six major digital music platforms. Data was collected on a monthly basis for the period 2009 to 2011, for 14 countries in the EEA. Each platform provided this data for each of the top seven record companies.

The Commission examined the relationship between the size of a record company (vis-à-vis the platform) and the terms it extracted from the platform. The Commission measured the size of a recording company in terms of the recorded music company's downstream revenue share, which is the proportion of the platform's total retail music revenues attributed to that recording company's music. The Commission measured the ability of a record company to extract better terms from a given platform using the share of revenues of the platform stemming from the repertoire of that music recording company that are accrued by this company through payment of royalties. The Commission refers to this measure as the «margin» obtained by the recorded music company.

The Commission first examined whether there is correlation between size of the recording company and its ability to extract better terms (*i. e.* higher «margins»). The results indicated a positive correlation between size and margin. The Commission also found that this correlation was larger for smaller platforms.

The Commission then carried out a regression analysis to investigate the relationship between size of the record companies and their ability to extract better terms while taking account of potentially confounding factors. In the baseline specification, the Commission linked the recording company's margin to its downstream revenue share, while controlling for country, platform and time specific fixed effects. The size effect was captured by the coefficient of the downstream revenue share. The Commission also ran regressions with company fixed effects (in which case the downstream revenue share variable was excluded). Under this specification, the relationship between the size and margins was captured by the company fixed effect.

The Commission's regressions yielded positive and statistically significant coefficients for the variables that were meant to capture the effect of size on margin. The Commission's used these results to predict margins post-merger, which it then compared to pre-merger margins of the parties, and found that post-merger margins would have been greater than those of each of the parties pre-merger. The Commission also obtained these results for regressions computed at an individual platform level, which suggested, according to the Commission, that the size effect on smaller platforms is greater than in larger platforms.

B. EVIDENCE USING RECORD COMPANIES' DATA

The Commission also requested monthly aggregated data on digital sales from six record companies to its largest customers (platforms) for 14 countries in the EEA. The data was broken down by transaction type (download/streaming) and product (track/album). It included information on sales units, wholesale revenue and repertoire size. Data was aggregated to yearly level in order to ensure consistency across record companies.

The Commission examined whether larger recorded music companies were able to extract better commercial terms from the platforms. It linked the wholesale unit price paid to a record company to the size of its repertoire, while controlling for customer, country and time fixed effects, and modelled separately album and track downloads. The Commission reported results that were consistent with a positive and statistically significant relationship between the size of the repertoire and the wholesale prices charged for both albums and tracks. The difference between the post-merger (predicted) price levels, and the parties' pre-merger price levels were positive and statistically significant.

The Commission also requested track-level data from four large record companies on their digital sales. Data was provided for two countries and for the largest platforms. Each record company provided data for its 5,000 most successful tracks over the period 2008 to 2012. The data included information on unit sales and wholesale revenues. As with the platform and aggregate-level record company data, the Commission used the track-level data to test whether larger recorded music companies were able to extract better commercial terms from the platforms. The Commission linked the wholesale unit price of a recorded music company to its repertoire size, controlling for the rank and age of the song. It also included tier, customer

and time fixed effects. Regressions were run separately for each of the two countries. The results reported by the Commission showed a positive and statistically significant relationship between the size of the repertoire and the wholesale unit price.

The Commission's quantitative analysis thus suggested the existence of a positive relationship between the size of a recording music company's repertoire and the terms it can extract from digital customers. The Commission concluded that its quantitative analyses supported the theory of harm in this case and validated its underlying assumptions.

C. THE PARTIES' CRITICISMS

The parties' economists assessed the Commission's econometric analysis. In particular, they concluded that the Commission's empirical findings were not robust. They also concluded that the interpretation given by the Commission to its empirical results was flawed and could not be relied upon. We explain their arguments in some detail in what follows.

Robustness. Most importantly, they noted that a positive correlation between margins and market shares does not necessarily imply that high market shares are the cause of high margins, as the Commission presumed. High market shares may have been a reflection of, rather than a cause for, higher margins. The positive relationship could have been caused by a number of factors not associated with market power, such as for example differences in the quality of the repertoires of competing music recording companies. In fact, the parties' economists found that including company fixed effects in the Commission's regressions caused the relationship between margins and market shares to become statistically insignificant. This finding undermines the Commission's evidence in support of its theory of harm, since it indicates that differences in margins are likely to be the consequence of quality differentials across record companies' repertoires, rather than of differences in their bargaining power.

The Commission used platform data to investigate the relationship between size and the ratio of the wholesale and retail prices («margin») of a recorded music company's repertoire. This would have been consistent with the Commission's theory of harm if retail prices were fixed. However, this is not likely to be the case. If retail prices are not fixed, the Commission's empirical analysis only tells that platforms apply lower mark ups to the repertoires of larger companies. This has no implications with respect to the decreasing returns claim.

Interpretation. The parties' economists argued that, even assuming that the empirical findings in the Decision were robust, quod non, they did not validate the sub-additivity (or decreasing returns) assumption underpinning the Commission's theory of harm. According to the parties' economists, evidence of a positive relation between margin and size can be consistent with both sub-additivity (decreasing returns) and super-additivity (increasing re-

turns) depending on the underlying bargaining model. The Commission's bargaining model presumes that platforms have no bargaining power; they can just accept or reject the take-it-or-leave-it offers made by recorded music companies. With this model in mind, the Commission's interpretation is correct. However, the assumption that platforms have no bargaining power irrespective of their size is unrealistic. Had the Commission used a more realistic model where large platforms, such as Apple's iTunes or Spotify, enjoy greater bargaining power than smaller one, especially start-ups, it would have had to interpret its empirical findings differently. Evidence that the relationship between margin and size is particularly pronounced for relatively small online platforms would show that the outcome of negotiations between recorded music companies and platforms depends on the bargaining power of the platforms.

Merger effects. The parties' economists also explained that the Commission's methodology was bound to over-estimate the potential anti-competitive effect of the merger, as it presumed that Universal's rivals would not even try to profit from Universal's exercise of bargaining power by expanding supply. Attempts by merging parties to reduce supply were bound to have been met by an expansion of supply from rivals.

D. THE COMMISSION'S RESPONSE

In its Decision, the Commission rejected all criticisms made by the parties. It concluded that they were either not substantiated or, in any event, did not contradict the Commission's position.

The Decision acknowledges that «theoretical models may predict [increasing returns] or [decreasing returns] (or both)», but states that «the relevant question is whether there is a size effect irrespective of the underlying [assumptions of the model]» and stresses that «what is important is that [its] investigation has confirmed that the size effect exists».

The Commission defended its empirical analyses arguing that it had taken into account (a) buyer power by conducting regressions at platform level, since those regressions showed evidence of a size effect for all platforms, irrespective of their size; (b) piracy in the retail market, since it measured the size of the repertoire of each recorded music company relative to the total retail sales of platforms; and (c) quality differentials. The Commission argues its measure of company size, the retail revenue share, is a quality adjusted measure of the product line length of a recorded music company and that it can be thought of as the number of quality units that the company offers to the retailer. The Commission also claims that it controlled for repertoire quality in its track-level regressions, which provide results that are consistent with those of the platform-level regression. Finally, the Commission concludes that the results obtained when introducing company fixed effects are inconsistent, which in its opinion indicates that its inclusion is unjustified.

5. CONCLUDING REMARKS

Universal's acquisition of EMI's recorded music business was cleared in Phase II in September 2012, subject to a substantial remedies package. As explained above, the Commission's concerns were based on (i) a theoretical model which assumed that the contribution of additional songs to the value of a digital music platform was decreasing in the number of songs (the sub-additivity claim), and (ii) econometric evidence showing that the ability of recorded music companies to extract better deals and conditions was positively related to the size of their repertoires.

The Commission's theory of harm is controversial. It relies on a series of assumptions that appear unrealistic: (a) digital platforms have no bargaining power irrespective of their size, (b) retail prices are not a function of the terms and conditions negotiated at a wholesale level, and (c) the repertoires of recorded music companies are not complementary —i. e. digital platforms can succeed having access to the repertoire of only one or two of the majors—. The Commission's Decision seems to recognise that its theory of harm was problematic. In paragraph 521, the Decision appears to downplay the importance of a robust theoretical framework and shifts the focus to the Commission's qualitative and econometric evidence on the existence of a size effect.

The empirical evidence supporting the Commission's case is not without problems either. The Commission claims that its regressions take account of quality differentials and buyer power. We are unpersuaded. The Commission's approach is unconventional, hard to understand and even harder to interpret. The Commission has not properly explained why the positive relationship between size and margins —the key to its case— collapsed when record company fixed effects were included. The Commission's arguments to dismiss the importance of this finding are in plain contradiction with its position in other merger cases, such as *Deutsche Börsel NYSE Euronext*⁶, where it relied on a similar finding —i. e. evidence that the relationship between two variables was not robust to the introduction of fixed effects— in exactly the opposite manner —i. e. rejecting the existence of a relationship—.

⁶ Case M.6166 Deutsche Börse/NYSE Euronext.