Information Asymmetry and Contracts in the Recorded Music Industry[1]

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Abstract. A new type of contractual arrangement in the music industry – the so-called "360-degree" or "equity" deals – allows a firm (e.g., a record label) to manage all of the activities of a music artist such as sales of recorded music, touring, merchandising, etc. Since these contracts internalize the positive externalities that exist between the recorded music market and the ancillary markets, it should be profit-enhancing for both the record label and the artist to strike such a deal. However, we observe very few 360-degree contracts. In this paper we study why artists can be reluctant to sign equity deals. A strong belief in the music industry is that record labels benefit from an information asymmetry at the expense of artists, and adopt a moral hazard behavior in income sharing. Using a representative survey of 710 professional musicians in France, we show that a past contractual experience with a record label decreases the incentives to sign a 360-degree deal. Moreover, the more an artist performs on stage, the more reluctant he is toward a 360-degree deal because his opportunity cost is higher although he would benefit the most from the internalization of the market externality.

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Key words. Information asymmetry; Moral hazard; Contracts; Recorded music industry; 360-degree deals

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1. Introduction

Since the late 1990s, recorded music sales have collapsed, whereas other music revenues such as performance rights (especially from radio and TV broadcasters), synchronization rights (when recorded music is used in a movie for instance), and above all concert revenues have increased. For instance, between 2006 and 2011, worldwide live music revenues increased from $16.6 billion to $23.5 billion[5] (+ 42%) while worldwide recorded music sales dropped from $22.4 billion to $16.6 billion[6] (– 26%).

Up to now, the recording companies' business model had relied mainly upon recorded music sales, which increased worldwide by 34.5% between 1991 and 2000. Record companies, and especially the three "majors" (Universal/EMI, Sony, Warner) which account for about 75% of worldwide music sales, used to view live music as useful only to the extent that it increased recorded music sales.[7] One reaction of record labels to the music sales downturn has been to try to change the contractual terms governing their relationship with artists, and to obtain a share of the growing revenue streams usually returned to artists (e.g., revenues from live music). This has given rise to the 360-degree deals, also called "multiple rights deals" or "equity deals", under which record labels receive a percentage of the earnings not only from record sales but also from concert revenue, merchandise sales, endorsement deals, etc. In exchange, the labels commit to fund and manage these activities and to develop new opportunities for the artists.

The British pop star Robbie Williams signed one of the first 360-degree contracts in 2002 with EMI. However, this model began to receive a lot of attention when Live Nation signed a highly publicized $120 million deal with superstar Madonna (Karubian, 2009, p. 422). In 2008, Warner Music Group CEO Edgar Bronfman told that his label "*now requires all new artists to sign 360 deals, and about a third of their already-signed artists are under such contracts.*"[8] Hence, whereas in early deals artists had a choice *not* to sign a 360-degree contract, and received massive advances for the assignment of their rights to compensate for the earnings in ancillary markets they accept to give away, most artists signing a 360-degree contract today do not get much by way of an advance and are not given the choice of another type of deal.

[5] This figure includes concert tickets sales, tour merchandising, music event sponsorships and other forms of concert-related revenues. Source: eMarketer (Global Music - Tuning Into New Opportunities).

[6] Source: International Federation of the Phonographic Industry (IFPI).

[7] This is why they used to provide artists with tour support (to help them touring) without expecting any return on concert revenues.

[8] http://techcrunch.com/2008/11/08/360-music-deals-become-mandatory-as-labels-prepare-for-free-music/ (accessed October 9, 2013).

Theoretically, as shown in the literature[9], 360-degree contracts should be considered as profit-enhancing for both artists and record companies since they internalize market externalities between the recorded music market and ancillary markets, especially the live music market. However, a decade after their appearance, 360-degree contracts are still very far to represent a significant stream of revenues for the recorded music industry. According to the BPI (the trade organisation of the British Recorded Music Industry), equity deals generated an extra-revenue of £76 million to UK record companies in 2011 (an increase of 14% on the previous year). However, they still represent less than 8% of the total revenues of UK record labels.[10] Record companies seem to encounter difficulties to implement such 360-degree deals.

This paper aims at investigating this paradox. What makes an artist reluctant to sign a contract that should theoretically be profit-enhancing for him? We argue that 360-degree deals encounter a major obstacle to their development due to the information asymmetry that arises in the contractual relation between an artist and his record company. An artist suffers from an information asymmetry on the actual revenues his music generates. This often leads to unfair contracts where the artist receives only a very small part of the revenues that his album sales generate. If artists accept such unfair contracts it is first because, up to now, artists had no choice. Due to the oligopolistic market structure of the recorded music industry, only a few firms – including the three majors – are able to offer an artist the promotion campaign and the distribution network required to reach success. A second reason is that releasing an album generates a positive externality on the artist's revenues from ancillary markets, especially the live music market. We argue that this information asymmetry makes artists reluctant to share all their revenues with a label as requested by 360-degree deals, and thus prevents efficient contracts to be implemented.

As stressed by Dionne (2012), empirically measuring information problems is a difficult task. Researchers are not privy to more information than decision makers: the information not observable for the uninformed agent are not observable by the econometrician either. Two solutions have been adopted to make up for that difficulty: (1) using confidential surveys and (2) developing econometric strategies that can isolate the desired effect. Our empirical strategy is a kind of mix of these two solutions. From a survey, we obtain information on various characteristics of a representative sample of 710 music artists. Although information asymmetry and the moral hazard behavior of record companies are not directly observable, we argue that we can use proxies of theses information effects and explain the opinion of artists towards 360-degree deals, conditional on a wide range of observed characteristics.

[9] See for instance Gayer and Shy (2006), Curien and Moreau (2009) or Dewenter et al. (2012)
[10] http://www.bpi.co.uk/media-centre/diversifying-income-streams-boost-2011-records-lab.aspx (accessed October 9, 2013).

The remaining of the paper is as follows. Section 2 reviews the literature. Section 3 describes the way traditional contracts are designed in the recorded music industry, presents 360-degree contracts, and introduces our research hypotheses. Data are presented in Section 4 while Section 5 is devoted to our empirical strategy and our estimation results. The results are discussed in Section 6 and Section 7 concludes.

2. Literature review

An abundant academic literature is devoted to the analysis of the crisis of the music industry. The bulk of this literature focuses on music piracy, either from a theoretical perspective (for a survey, see Belleflamme and Peitz, 2012) or from an empirical perspective (for a survey, see Waldfogel, 2012). Another stream of literature deals with the impact of music piracy on ancillary markets, especially on the live music market. Gayer and Shy (2006), Curien and Moreau (2009) and Dewenter et al. (2012) show that due to the existence of a positive externality from the recorded music market to the live music market,[11] file-sharing, while possibly hurting records sales, should enhance revenues from the live music market by increasing the audience of artists. Mortimer et al. (2012) provide empirical evidence that file-sharing indeed increases live music revenues, at least for the less known artists (for "stars," the impact is negligible). From an artists' survey, Bacache-Beauvallet et al. (2012) highlight that the more an artist under contract with a record company performs on stage, the more tolerant towards file-sharing he is.

The new business models and the changes in contractual organization that digitization suggests for the music industry (e.g. Bourreau et al., 2012) or more widely for content industries (e.g. Varian, 2005) have also been studied. Regner and Barria (2009) and El Harbi et al. (2011) analyze the pay-what-you-want model. Halonen-Akatwijuka and Regner (2009) show that the digital technology may lead to a change in the ownership of copyright with a shift from the label to the artist. Regner (2004) analyzes efficient contracts for digital content between artists and consumers, and shows that endogenous incomplete contracts based on fair and reciprocal behaviour may achieve a first-best allocation of information goods.

However, academic papers devoted to 360-degree contracts are scarce. Dewenter et al. (2012) show in a theoretical setting that file-sharing may induce record labels to switch from the traditional business model, where recorded music and live music are managed separetely, to 360-degree deals. Curien and Moreau (2009) highlight, also in a theoretical setting, that an artist could benefit from a 360-degree contract since his record label would be incentivized to increase its promotion expenditures to enhance the demand of both recorded music and live

[11] The existence of such an externality from recorded music to live music consumption is empiricaly validated by Montoro-Pons and Cuadrado-Garcia (2011). Note that Dewenter et al. (2012) consider the positive externality between live music and recorded music in both directions.

music. Karubian (2009) provides an extensive description of 360-degree deals, and highlights the potential benefits but also the pitfalls that such deals generate for star artists as well as for lesser known artists (see below). However, the relative importance of these benefits and pitfalls is not assessed.

Our paper contributes to the existing literature by being the first to assess empirically the incentives of an artist to sign a 360-degree deal conditional on his present and past contractual situation as well as on many other artist's characteristics. This allows us to highlight the specific role of information asymmetry that characterizes the contractual organization in the recorded music industry, which neither Dewenter et al. (2012) nor Curien and Moreau (2009) take into account.

3. Contracts in the recorded music industry

In this section we describe the standard record contracts in the music industry, and show that they encompass an information asymmetry between artists and record labels that induces moral hazard from the latter. We argue that this market failure reduces the incentive of artists to sign 360-degree contracts, whereas such contracts would in theory be profit-enhancing for both parties. We then propose two testable hypotheses to explain this puzzling situation.

3.1 Standard record contracts

Releasing an album is a highly risky process. The "nobody knows" rule states that in cultural industries the success of a project is hardly predictable (Caves, 2000). Due to the experience good nature of music, the potential value of an album remains unknown until it is released. Not surprisingly, the standard contract between a record company and a music artist states that the risk is shared by both parties. The artist receives a percentage of record sales (royalties), whereas the record company funds the fixed cost of releasing the album (mainly due to recording, promotion and distribution costs). The record company also often pays the artist an "advance against royalties" – which is recoupable – so that he has enough money to live while recording the album (Krasilovsky and Shemel, 2003). Such a contract raises two potential issues. First, it can be subject to moral hazard from the record company (see Caves (2000) and Grossman and Hart (1986) on the more general problem of moral hazard in contractual arrangements). Second, this type of contracts turns out to be suboptimal since it does not take into account the positive externality from the recorded music market towards the live music market. We discuss these two issues in more detail below.

Moral hazard in recording contracts

A typical record contract generates a strong information asymmetry between the record company and the artist. The amount of records sales, which determines the artist's royalties, remains unobservable to him "*because the label keeps the books that determine the earnings remitted to the artist.*" (Caves, 2000, p. 65). For instance, "*in a long dispute between the Beatles and EMI and its U.S. subsidiary Capitol, undercounts of sales for royalty calculations were alleged, as were transfers of 'free' promotional records to subsidiaries that released them for commercial sale.*" (Caves, 2000, p. 65). This information asymmetry is well documented by industry professionals. For instance, according to George Howard, former president of Rykodisc (now a subsidiary of Warner Music Group)[12] "*if you don't believe this information asymmetry still exists, […] get your hands on a royalty statement from most labels to artists. I* defy *you to make heads or tails out of it, even if you're an accountant and it's your money.*" He adds that "*virtually every artist believes that* any *agreement presented to them by a label/publisher is severely skewed in the favor of the label. Whether this is true or not is irrelevant; it speaks to the lack of ethical fiber — based on information asymmetry and lack of transparency — endemic to this business.*"

Furthermore, the effective value of the nominal royalty rate is reduced by what Passman (2003) called a series of "cheats" that the labels include into the standard contract. For instance, the royalty rate is reduced by an arbitrary "packaging charge" or, until recently, by a breakage charge introduced in the 1950s when music was recorded on fragile shellac records (Caves, 2000). Moreover, if the album is successful enough so that the artist's share of the profits exceeds the advance, the artist will have to reimburse fully this advance to the label (the advance is said to be "recoupable"). Music video production costs ($50,000 to $100,000) and about half of marketing and promotion costs are also recoupable (Karubian, 2009). Finally, most contracts specify that if the costs of one album remain unrecouped, the deficit is repaid from excess earnings of a past or a future album (which is called "cross-collateralization"). Hence, incurring substantial costs in recording one album could leave an artist in debt for the rest of his major label life (Karubian, 2009).

How can we explain the persistence of such unfair contractual terms that prevent artists to collect a significant share of the revenues that their albums generate? The first explaination is that up to now, they did not have any real outside option. In an oligopostic market such as the recorded music market controlled by a few major companies, not being signed by one of these majors prevents the artist to obtain significant promotion and marketing expenses as well as, most of the time, radio airplay, which remains the main driver of recorded music sales (Peitz and Waelbroeck, 2005). Hence, until the 1990s, only low-potential artists decided to self-release their album (Burke, 1997). The second and probably main reason is that recording an album, even if it generates no direct revenues for the artist, generates positive externalities on

[12] http://blog.tunecore.com/2011/07/information-asymmetry-in-the-recorded-music-business.html (accessed October 9, 2013)

ancillary markets, especially on the live music market. This is why for an unsigned artist "*any deal is a good deal*" (Karubian, 2009, p. 437). Radio airplay, video broadcast, advertising and media interviews, that are usually allowed by the release of an album with a music label, are factors that are also very favorable to the live music career of an artist. It is indeed on stage that most artists make the bulk of their revenues (Connolly and Krueger, 2007).[13] The financial terms of artists' contracts with concert promoters are generally much more favorable than those with recording companies. "*Artists who generate significant ticket sales can contract to receive most of the profits from these sales. Despite promoters' consolidation, artists have been able to negotiate contracts with them that allocate most—eighty-five to ninety percent—of the income from the tours, after their costs are recouped, to the artists. This dynamic differs from that of the artist with record companies.*" (Karubian, 2009, p. 420).

The suboptimality of standard record contracts

The existence of a positive externality from the recorded music market towards the live music market, as well as the existence of the reverse externality, make standard record contracts suboptimal since these externalities are not internalized.[14] A 360-degree deal (where the recording company manages both activities), but also self-releasing an album (where the artist manages both activities), are two forms of vertical integration that allow to internalize these market externalities and that could lead to higher agregate profits than running both activities separately. Dewenter et al. (2012) show that under pervasive piracy an integration of record and concert management can lead to higher profits for the label. In a setting where there can be no market expansion, they show that significant network effects from concert attendance on record sales lead labels to charge higher prices in the concert ticket market. Stimulating record sales by reducing the concert ticket's price is indeed less rewarding with pervasive piracy. Moreover, Curien and Moreau (2009) also show that artists could benefit from granting record companies a share of their ancillary revenues. This grant should indeed lead to wider exposure through a higher quality release. The artist should then benefit from an increase in the demand for CDs, as well as for live performances and ancillary goods.

Yet, up to now, neither self-releasing nor 360-degree deals were considered as relevant business models in the recorded music industry. As stressed above, self-releasing an album used to be a very risky strategy since it often prevents the artist to access to promotion channels and efficient distribution networks. Record companies considered up to the early

[13] Concerts provide a much larger source of income for artists than record sales or publishing royalties. Connolly and Krueger (2007) report that 73% of the average income for 35 top artists who toured in 2002 came from live concerts, whereas less than 10% came from recording sales and 7% from publishing rights.

[14] Only the positive externality from the live music market towards the recorded music market was somewhat internalized, since in some contracts the record company provided the artist with "tour support". Performing live was considered as a booster for recorded music sales.

2000s, 360-deals as of low interest since the cost of diversification exceeded the expected benefit. First, the key competencies required in the recorded music market are different from those in ancillary markets (including the live music market), and labels usually did not have the expertise on these business areas.[15] To acquire this expertise music labels had to rely on costly Mergers & Acquisitions deals. In June 2007, Universal Music Group purchased Sanctuary Group for about 88 million dollars. The most valuable assets of the target were not its famous music labels but rather its artists' career management, merchandising and live music businesses.[16] Second, in the early 2000s the value of the live music market was small compared to the recorded music market; in 1999, the turnover of the US live music market only amounted to 10% of the US recorded music sales.[17]

3.2 The rise of 360-degree deals?

Over the period 1999-2010, the value of the live music market has been multiplied by three, whereas the recorded music market lost about half of its turnover. In 2010 in the US, the live music business market amounted to 61% of the recorded music market. This is why record companies now consider 360-degree deals of much higher interest. However, if a 360-degree deal is a means to solve the suboptimality issue of record contracts, it does not solve the information asymmetry issue, as we explain below. In this respect, 360-degree deal even presents a main pitfall. The loss that the artist suffers by sharing his tour revenues with his label is more certain than the potential benefit. The former is clearly explicited in the contract as a percentage of the various revenues included in the deal[18] (x% of tour revenues, y% of merchandising sales, etc.), whereas the latter remains much more intangible. It is indeed far from obvious to define objective criteria of an efficient management of an artist's activities as well as of what new career opportunities should be.

We argue that the information asymmetry in conventional record contracts, which is documented above, has an impact on the artists' willingness to sign a 360-degree contract. Artists with large ancillary revenues should be the more able to secure a profitable 360-degree deal.[19] Yet they could actually be more reluctant because their high direct loss is unbalanced

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[15] "*The labels do not know how to do anything besides sell records. They don't know how to sell concert tickets or T-shirts. Why should I give them a chunk of my money unless they add something? I'd rather share that money with a concert professional or a T-shirt specialist.*" Peter Paterno, Attorney for Dr. Dre, Pearl Jam, Metallica, ... See : http://articles.latimes.com/2005/sep/12/ business/fi-korn12 (accessed October 9, 2013).

[16] See: http://articles.latimes.com/2007/jun/16/business/fi-universal16 (accessed October 9, 2013).

[17] Source: Pollstar Magazine for the live music business, and RIAA for the recorded music sales.

[18] Here are excerpts from a 360-degree deal contract (Karubian, 2009, p. 460): "*You hereby irrevocably grant and assign to Label and Label is entitled to receive, collect, and keep for Label's own account throughout the Term an amount equal to ____ percent (__ %) of Artist's Net Touring Receipts.*"

[19] At a first glance, the relative bargaining power of established and unsigned artists with record companies has no reason to be impacted from the shift from traditional to 360-degree deals: "*armed with statistics of their*

by the potential benefit that depends on the fairness of their label. If an artist believes, rightly or wrongly, that his label adopts a moral hazard behavior as regards the calculation of his record sales royalties, he will probably be reluctant to include his live music revenues in the deal. Conversely, an artist who is currently not under contract has no choice but to accept such a contract. An unprofitable contract is better than no contract since it allows the artist to release an album (without bearing the production costs) that – hopefully – will be widely distributed and benefit from promotion efforts by the label.

3.3 Research hypotheses

From the arguments above, we elaborate two research hypotheses. First, artists who are not currently under contract are, according to the « *any deal is a good deal* » principle, the most prompt to sign a 360-degree deal. However, among them, those who have a past contractual experience have already experienced the moral hazard behavior of record companies. Although they are currently in the same situation—both of them do not have a contract—an artist with a past experience with a record company should be more reluctant to sign a 360-degree deal than an artist without such an experience[20]. Hence, we can state our first hypothesis:

Hypothesis 1. *Among the artists who are not currently under contract, those who have a past contractual experience with a record label are more reluctant to sign a 360-degree deal.*

Artists with large ancillary revenues, i.e. who are touring a lot, should theoretically benefit the most from such a 360-degree deal: the higher their ancillary revenues the larger the positive externality to be internalized, and thus the higher their additional profit. However, due to the moral hazard behavior of recording companies, these artists should actually be the most reluctant to accept a 360-degree deal. They have more to lose from a "hold-up" of their recording company. The second hypothesis is therefore as follows:

Hypothesis 2. *Artists with large ancillary revenues, i.e. who are touring a lot, are the most reluctant to accept a 360-degree.*

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recent tours, merchandise sales, and album sales, established artists and their managers can negotiate with labels to arrange an exchange of relatively equitable assets: high upfront payments and favorable terms, such as higher royalty rates, in return for interest in projected future revenue streams." (Karubian, 2009, p. 442).

[20] An other possibility would have been to test whether artists under contrat (and thus aware of the moral hazard behavior or record labels) are less prompt to sign a 360-degree deal than artists without contract. However, such a test is biased because, whatever the behavior of the record label, the expected gain of an artist under contract is lower than the expected gain of an unsigned artist (for the former it is the profit arising from a 360-degree deal minus the profit arising from a standard contract, for the latter it is just the profit arising from a 360-degree deal).

4. Data

Our dataset has been built from a postal survey[21] conducted during fall 2008 of French musicians who are members of Adami, the French organization for the collective administration of performers' rights. Adami, which collects the sums paid for the use of artists' recorded works, had over 9,000 musicans among its members in 2008. Only musicians who have already participated in an album commercialized by main retailers can join Adami. There are also strong incentives for professional musicians to join, because Adami guarantees the collection of royalties on their music, especially from radio airplay and TV broadcast. We conducted a questionnaire survey on approximately 4,000 musicians, randomly drawn from the 9,000 musicans members of Adami. With a response rate of about 20%, we finally have 710 artists in our database.[22]

4.1 Dependent and explanatory variables

Our dependent variable (*360DEAL*) is binary and takes the value 1 if the artist answered the following question in the affirmative: "*Given your present situation, do you consider that a 360-degree contract would be favorable to you*".[23] It takes the value 0 if the artist answered that he considers that a 360-degree contract would be rather or very unfavorable to him.[24]

To test our first hypothesis, we distinguish among the artists who were not under contract with a record company at the time they answered the survey, the artists who have the experience of a contractual relation with a record company (*CONTRACT_BEFORE* = 1)—and thus may have experienced the consequences of the information asymmetry—and those who do not have such an experience (*CONTRACT_BEFORE* = 0). In the regressions below, as far as the contractual situation is concerned, the reference category corresponds to the artists who are not currently under contract and who never signed a contract in the past with a record label.

[21] The survey was conducted with a specialized survey company, ISL.

[22] Information available on the members of Adami allows us to compare our sample to the full population in terms of gender, age, region of residence, and amount of rights that the artists receive from Adami. The comparison shows that the composition of our sample is relatively close to that of the full population.

[23] We aggregate two positive answers: "very favorable" and "rather favorable". We discuss this aggregation in the robustness section.

[24] 206 artists who did not answer this question are excluded from the analysis. We deal with the possible sample selection issue in the robustness section.

The dummy variable *LIVE* takes the value 1 if the artist performed a lot on stage in 2007 (if he performed 11 times and more), and the value 0 otherwise. *LIVE* is used as proxy for the intensity of the artist's activity in ancillary markets.[25] We also introduce two dummy variables that allow us to distinguish artists under contract who have an intense live activity (*CONTRACT_LIVE*) from those under contract who have a low activity (*CONTRACT_NOLIVE*). We also construct the dummy variables *CONTRACT_ BEFORE_LIVE* and *CONTRACT_BEFORE_NOLIVE* in a similar way.

4.2 Main control variables

Besides a moral hazard behavior from their record companies, another reason could explain why artists reluctant to sign a 360-degree deal. In the digital age, their outside option—self-releasing their music—became much more credible. Of course, self-release strategies have existed for a long time. However, according to Burke (1997), up to the 2000s this practice mainly concerned musicians rejected by record labels. In the digital age, lower entry barriers[26] have led to a dramatic increase in the number of new artists who record and distribute their music all on their own. In May 2009, more than 5 million rock, pop, hip-hop and punk musicians or bands were registered on MySpace (Ifpi, 2010). Digitization also allows "stars" to self-release their music—see for instance the well-known example of the rock band Radiohead that profitably self-released and self-distributed online its album *In Rainbows* in 2007. Hence, "*the totally DIY (Do-It-Yourself) model is certainly not for everyone — but that's the point. Now there's choice*" (Byrne, 2007). The new opportunities that the DIY model offers should reduce the incentives to sign a 360-degree deal for the artists who feel able to follow such a path.

We thus control for the entrepreneurship abilities of an artist, through his self-release experience. The dummy variable *SELFRELEASE* takes the value 1 if the artist is not currently under contract but had self-released an album during the three years preceding the survey, and the value 0 otherwise. We also take into account that artists who have already seized digital technologies at the production level as well as at the promotion level could be more prone to choose the DIY model. For the recording stage, we use a dummy reflecting the use of a homestudio (*HOMESTUDIO*). A homestudio is composed of a computer, some relevant software and additional devices, which allow an artist to record his music with an almost professional quality. For the distribution/promotion stage, we use a variable that reflects to what extent an artist relies on MySpace to promote his music towards his public or

[25] We have no information on other ancillary markets such as merchandising or sponsoring. However, the live music market represents the most important of these ancillary markets. See footnote 13.

[26] Byrne (2007) highlights, somewhat roughly, that with digitization recording costs have sharply declined, manufacturing and distribution costs approach zero and that promotion costs are also much lower (online promotion is almost free through Facebook, blogs, etc.).

professionals (record companies, concert promoters, etc.). MySpace is a social network founded in 2003 which was, at the time we made our survey, the main social network for musicians (it is now superseded by Facebook). In 2008, about 120 million users and 5 million musicians had a page on MySpace. Usually, an artist's page offered songs for download or streaming, photos, videos, a biography, tour dates, as well as the list of the artist's friends. MySpace offered a free promotion tool and negotiations with local concert promoters were much easier when the artist could boast of many "friends" on MySpace who lived in the region. In our survey, artists were asked how frequently they updated their MySpace page: at least every week (reference category), every month (*MYSPACE2* = 1, 0 otherwise), less frequently (*MYSPACE1* = 1, 0 otherwise). We also consider artists who did not have any MySpace page (*MYSPACE0* = 1, 0 otherwise).

4.3 Other control variables

Our main assumption is that an artist who already experienced the moral hazard behavior of a record label will be more reluctant to sign a 360-degree deal. However, this reluctance can be mitigated for some artists. For instance, the level of education (*HIGHEDUCATION*) of an artist could have a positive effect on his willingness to sign a 360-degree deal: the more an artist is educated the more able he is, or he believes he is, to bargain with a record label. We also include the variable *MANAGER*, which is a dummy that takes value 1 if the artist has a manager to help him to find and negociate commitments and business opportunities. A manager could also help him to better negociate a 360-degree deal. Conversely, artists who have a manager could be more aware of the pitfalls of a record contract and of the difficulties to avoid them and thus could be more reluctant towards 360-degree deals. Thus the overall effect of the *MANAGER* variable is indetermined.

We include the artist's age (*AGE1* to *AGE5*) as an independent variable, as well as whether he lives outside the Paris area or not (*NONPARIS*), and the artist's gender (*GENDER*). We also control for other characteristics that could affect the artist's attitude towards a 360-degree deal. The artists's income (*INCOME1* to *INCOME5*) could also affect the way he views 360-degree contracts: the higher his income, the lower his willingness to share his revenues with his label. We moreover include a dummy variable to identify artists who perform "popular" genres of music (*POPULAR*). The first and highly publicized 360-degree deals were signed by popular music artists such as Robbie Williams or Madonna. This could influence the opinion of other popular music artists on the opportunity to sign such a deal. *GOLD* is a variable that reflects the artist's popularity; it takes the value 1 if the artist has already won a music award and/or a gold record. We also include a variable (*INTERMITTENT*) to account for a specificity of the French music market: the *intermittence* system. This system allows artists who experience unemployment periods within a year to receive a monetary compensation provided that they reach a minimal threshold of activity within this year.

INTERMITTENT is a dummy that equals one if the artist indeed received a monetary compensation during the previous year. An artist who benefits from the intermittence system has to negociate frequently with professionnals in the music industry, including record labels if he participates to recording sessions as a side-musician. He is thus probably more aware of the way music labels may behave and should be more reluctant towards 360-degree deals. Descriptive statistics are provided in Table 1 below and the contruction of the variables is described in Table 4 in appendix.

Table 1 – Descriptive statistics

Variable	Obs	Mean	Std. Dev.
360DEAL	504	.464	.499
CONTRACT	708	.201	.401
LIVE	693	.514	.500
CONTRACT_LIVE	691	.140	.348
CONTRACT_NOLIVE	691	.062	.242
CONTRACT_BEFORE	663	.416	.493
CONTRACT_BEFORE_LIVE	648	.171	.377
CONTRACT_BEFORE_NOLIVE	648	.241	.428
SELFRELEASE	689	.374	.484
HOMESTUDIO	694	.601	.490
MYSPACE3	710	.203	.402
MYSPACE2	710	.162	.369
MYSPACE1	710	.137	.344
MYSPACE0	710	.463	.499
AGE1	710	.017	.129
AGE2	710	.104	.306
AGE3	710	.290	.454
AGE4	710	.330	.470
AGE5	710	.242	.429
INCOME1	659	.249	.433
INCOME2	659	.226	.419
INCOME3	659	.319	.466
INCOME4	659	.168	.375
INCOME5	659	.038	.191
GENDER	708	.445	.497
HIGHEDUCATION	692	.468	.499
NONPARIS	710	.521	.500
POPULAR	710	.256	.437
INTERMITTENT	703	.418	.494
GOLD	710	.194	.396
MANAGER	702	.171	.377

Note: The number of observations varies across variables because of unanswered questions by some artists.

5. Empirical strategy and results

Since our dependent variable (*360DEAL*) is binary, we estimate the following Probit model:

$$P_t = \Pr(360DEAL = 1) = \Phi(\beta_0 + \beta X_t) = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{\beta_0 + \beta X_t} e^{\frac{-z^2}{2}} dz$$

where $z = \beta_0 + \beta X_t$, P_t is the probability that *360DEAL* = 1 for observation t, X_t is a vector of explanatory variables (including control variables), and β is the parameter vector to be estimated.

5.1 Main results

In our regressions, the reference category is the artists without contract and who never get a contract in the past. We compare the attitude towards 360-degree deals of this subpopulation with the attitude of three other subpopulations: the artists without contract but who already had a contract in the past, the artists under contract with an intensive live activity and the artists under contract with no live activity. We first test Hypothesis 1. Regression (1) in Table 2 allows us to check that *ceteris paribus*, artists without a contract, but who had been signed by a record label in the past (*CONTRACT_BEFORE*), are significantly more reluctant to accept a 360-degree deal than artists who never signed a contract (the reference category in the regressions). Since both types of artists are not currently under contract, the only difference that could explain their attitude towards 360-degree deals is their past experience with a record company and the moral hazard they may have experienced. Table 3 provides marginal effects. It shows that for an artist not currently under contract, having an experience of contractual relationship with a music label reduces by 12 percentage points the probability to consider as favorable a 360-degree deal as compared to artists without such an experience.

Regression (1) and (2) in Table 2 also validate our second hypothesis. The more an artist under contract has potentially to share with his record label – because he is touring a lot (*CONTRACT_LIVE*) – the less he considers as favorable a 360-degree deal. Being under contract and touring a lot reduces by 22 points of percentage the probability to declare himself as favorable to a 360-degree deal as compared to artists who never get a contract. This is not the case for artists under contract who perform little on stage (*CONTRACT_NOLIVE*). A similar result also appears, though at a lesser extent and less significantly, when *CONTRACT_BEFORE* and *LIVE* are interacted. An artist without contract but who experienced business relationships with a record label is less prompt to sign a 360-degree deal when he performs a lot on stage. Notice that when the *LIVE* variable is not interacted, see regression (3), this variable turns out to be unsignificant. An intensive live activity by itself does not make an artist more reluctant to sign a 360-degree deal. This reluctance actually comes from the conjonction of touring a lot and to have the experience of relationship with a record label.

Table 2 – Main probit regressions

360DEAL: Dependent variable	(1)	(2)	(3)
CONTRACT			-0.386*
			(0.204)
LIVE			-0.075
			(0.158)
CONTRACT_LIVE	-0.584**	-0.587**	
	(0.233)	(0.233)	
CONTRACT_NOLIVE	-0.094	-0.087	
	(0.269)	(0.270)	
CONTRACT_BEFORE	-0.310**		-0.321**
	(0.153)		
CONTRACT_BEFORE_LIVE		-0.351*	
		(0.197)	
CONTRACT_BEFORE_NOLIVE		-0.274	
		(0.187)	
SELFRELEASE	-0.321**	-0.318**	-0.307*
	(0.162)	(0.162)	(0.162)
HOMESTUDIO	-0.327**	-0.337**	-0.335**
	(0.149)	(0.152)	(0.150)
MYSPACE0	-0.267	-0.277	-0.272
	(0.185)	(0.188)	(0.185)
MYSPACE1	-0.076	-0.080	-0.070
	(0.202)	(0.202)	(0.201)
MYSPACE2	-0.282	-0.290	-0.283
	(0.207)	(0.209)	(0.207)
AGE2	0.094	0.093	0.051
	(0.488)	(0.488)	(0.487)
AGE3	0.082	0.081	0.036
	(0.479)	(0.479)	(0.478)
AGE4	0.166	0.162	0.134
	(0.478)	(0.478)	(0.478)
AGE5	0.233	0.227	0.223
	(0.490)	(0.490)	(0.490)
INCOME2	0.122	0.130	0.126
	(0.200)	(0.201)	(0.200)
INCOME3	-0.142	-0.133	-0.153
	(0.199)	(0.201)	(0.200)
INCOME4	0.126	0.134	0.104
	(0.234)	(0.236)	(0.236)
INCOME5	-1.028**	-1.016**	-1.014**
	(0.493)	(0.494)	(0.486)
GENDER	-0.159	-0.164	-0.150
	(0.143)	(0.144)	(0.143)
HIGHEDUCATION	0.366***	0.363***	0.359***
	(0.132)	(0.133)	(0.132)
NONPARIS	-0.027	-0.030	-0.037
	(0.134)	(0.134)	(0.133)
POPULAR	0.367**	0.367**	0.355**
	(0.158)	(0.158)	(0.158)
INTERMITTENT	-0.251*	-0.239	-0.261*
	(0.144)	(0.149)	(0.155)
GOLD	0.088	0.095	0.109
	(0.170)	(0.171)	(0.171)
MANAGER	-0.371**	-0.373**	-0.415**
	(0.184)	(0.184)	(0.181)
CONSTANT	0.435	0.440	0.529
	(0.496)	(0.496)	(0.499)
N	429	429	429
Prob > chi2	0.000***	0.000***	0.000***
Pseudo-R2	0.100	0.100	0.095
chi2	58.830	58.941	56.144

* p < 0.1 ** p < 0.05 *** p < 0.01

Table 3 – Marginal effects (calculated at sample means)

Variables	Changes in probability (1)	(2)
CONTRACT_LIVE	- 0.216**	- 0.217**
CONTRACT_BEFORE	- 0.121**	
CONTRACT_BEFORE_LIVE		- 0.134*
SELFRELEASE	- 0.125**	- 0.124**
HOMESTUDIO	- 0.129**	- 0.133**
INCOME5	- 0.325**	- 0.322**
HIGHEDUCATION	+ 0.143***	+ 0.142***
POPULAR	+ 0.145**	+ 0.145**
MANAGER	- 0.142**	- 0.142**

* p < 0.1 ** p < 0.05 *** p < 0.01

As far as the main control variables are concerned, entrepreneurship experience, as well as the adoption of digitital tools at the production stage, impact as expected an artist's opinion towards 360-degree deals. We find that artists not under contract but who have selfreleased an album in the past three years, which reflects entrepreneurship abilities, are less prone to consider as favorable a 360-degree deal than artists who did not selfrelease an album (– 12 points of percentage in the probability of considering favorable such a deal). Likewise, artists who use a homestudio are less interested in 360-degree contract (– 13 points of percentage). However, digitization at the promotion level has no impact on artists' opinion on 360-degree deal. An artist who updates his MySpace page frequently is not significantly less reluctant to sign a 360-degree deal. We could have expected that the more an artist is active on MySpace, the more he considers herself as able to self-promote. He should thus be less willing to accept a 360-degree deal. This result is consistent with previous works that show that if musicians are indeed very active on social networks (posting video on YouTube, twitting, …) this activity does not, up to now, translate in a significant increase in audience (Bastard et al., 2013). Self-promotion online is probably more difficult than it was anticipated.

We also note with no surprise that the higher the income of an artist (*INCOME5*), the less likely he considers as favorable a 360-degree deal which would signify to share some of this income with his record label. The marginal effect is of 32 points of percentage as compared to artists belonging to the lowest category of income. Most of the other control variables are also significant and have the expected sign. The coefficient of *POPULAR* is positive and significant, as expected. Artists who have at least an undergraduate education level (*HIGHEDUCATION*) are also, and very significantly, more favorable towards 360-degree deals. Finally, artists who hired a professional to help them to manage their career (*MANAGER*) are significantly more reluctant to sign a 360-degree deal.

5.2 Robustness checks

A potential pitfall with our empirical estimation is the possible endogeneity of the *CONTRACT* and *LIVE* variables. An unobserved variable might indeed simultaneously affect both the contractual situation of an artist or his success on stage and the artist's opinion on 360-degree deal. The celebrity and/or success of an artist, his bargaining power, or his ability to secure a good deal could play such a role. Note that we already included in our regressions the variable *GOLD* that accounts for the success/notoriety of an artist. Moreover, the potential endogeneity between *360DEAL* and *CONTRACT* or *LIVE* is positive and we find a significantly negative correlation between both variables. Hence, this endogenity issue could only reduce the significance of our result, not explain it[27].

A second potential issue is that we are not observing the equation for the population as a whole, since 29% of the artists in our sample did not answer to the question on 360-degree contracts. Maybe only the artists who felt able or interested to sign such a contract answered the question. When compared to the remaining artists, the proportion of artists under contract is lower among those 206 artists. They also use digital tools less often to record their musical projects. Our results might thus suffer from a selection bias that the Heckman selection estimation can solve by estimating the probability of being favorable to 360-degree contract, conditional on whether or not the artist answered the question. We ran such a Heckman selection estimation. The first equation is a Probit on a dummy variable that equals one if the

[27] However, we properly test for the exogeneity of *CONTRACT*. We use as an instrumental variable the variable *WEBPAGE*, a dummy variable that takes the value 1 if the artist has a web page, and the value 0 otherwise. We argue that *WEBPAGE* satisfies exclusion and inclusion restrictions. First, there is no reason to believe that having a web page could have a direct effect on the dependent variable (the opinion on 360-degree deal). Second, *WEBPAGE* is correlated with *CONTRACT* (p-value < 0.01 in a simple probit model with *CONTRACT* as the dependent variable and *WEBPAGE* as the independent variable). The inclusion restriction of our IV is thus also satisfied. Since our potentially endogenous variable (*CONTRACT*) is binary, we cannot use an IV procedure to test for the exogeneity of *CONTRACT* using *WEBPAGE* as an instrumental variable. As suggested by Wooldridge (2002), we run a bivariate probit with our structural probit, and a second probit using *CONTRACT* as the dependent variable and including our IV in the covariates. A bivariate probit approach provides a test of exogeneity. Under the exogeneity assumption, the error terms of both corresponding underlying equations included in the bivariate probit are not correlated, that is, the null hypothesis of exogeneity can be stated as $\rho = 0$. A likelihood ratio test of the significance of ρ is thus a direct test of the exogeneity of *CONTRACT*. If $\rho \neq 0$, only the results of the bivariate probit have to be considered. But if $\rho = 0$, it is appropriate to use the univariate probit model. In Table 5 in the appendix, columns 2 and 3 display the results of the bivariate probit. The second column corresponds to the regression with *CONTRACT* as the dependent variable, and includes the IV. It confirms that the instrumental variable *WEBPAGE* is correlated with *CONTRACT*. Table 5 also reports that the estimated value for the parameter ρ is not significantly different from zero. These results suggest that *CONTRACT* is indeed exogeneous (formally we cannot reject the exogeneity of *CONTRACT*, using *WEBPAGE* as an instrumental variable, since we cannot reject the hypothesis that $\rho = 0$). Finally, for about the same reasons that *CONTRACT* we could also imagine the *LIVE* variable to be endogeneous. Talent or bargaining power could impact both the success on stage of an artist and his willingness to sign a 360-degree deal. Using *WEBPAGE* as an instrumental variable (which is positively correlated with *LIVE* in a simple probit with p < 0.000), we find that we cannot reject the exogeneity of *LIVE* (see Table 6 in the appendix).

artist answered to the question on 360-degree contracts (*SELECTION*). The second equation is our previous Probit equation. We add in the exogenous variables a dummy variable (*BROADBAND*) that equals 1 if the artist has a broaband Internet access at home. As required, this exogenous variable affects the probability that the artists feel concerned with 360-degree contracts. A simple probit between *SELECTION* and *BROADBAND* shows that such a correlation is very significant ($p < 0.000$). Table 7 in appendix shows that our estimations do not suffer from a selection bias (formally we cannot reject the independence of both equations since we cannot reject the hypothesis that $\rho = 0$).

We also made several other robustness checks.[28] First of all, we checked that our results are robust when we use sample weights that adjust for differences between our sample and the full population of Adami members, according to gender, age, region of residence, and amount of rights the artist receives from Adami. In the survey, artists were asked how many times they had performed on stage in the last twelve months, and four answers were proposed: 0, 1 to 10 times, 11 to 50 times, and more than 50 times. We aggregated the two last and the two first modalities since this configuration provide the more significant results. However, we also ran our regression with the full four modalities of the live concerts variable instead of three, without significative changes in our results. Likewise, four answers were proposed to the question on 360-degree deals ("very favorable" / "rather favorable" / "rather unfavorable" / "very unfavorable"). In our main regressions, we constructed the binary variable *360DEAL* by grouping the two first and the two last answers. Though this binary variable best fits our data, we also ran estimations with an ordered probit with the four answers, and obtained similar qualitative results. Our *SELFRELEASE* variable identifies artists who self-released an album in the past three years and who are not currently under contract. We checked that our results remain unchanged when we consider the self-release behavior whatever the present contractual situation of the artists. Finally, our database contains a few inactive artists, who could have a biased opinion on 360-degree deals. We therefore ran our estimations on the subsample of "active" artists, that is, artists who had either worked in recording sessions or performed live at least once within the last twelve months. Our main results remained unchanged.

6. Discussion

Our results confirm that the moral hazard behavior of record companies in their contractual relationship with artists reduces the incentives of the latter to sign a 360-degree deal. Without being currently under contract, the mere experience of past contractual relationships with a record label is sufficient for an artist to make him consider that a 360-degree deal would be unfavorable to him. In our regressions, since we control for a large set of variables (age, musical genre, self-release experience, the use of digital technology, etc.) only this contractual

[28] Regressions results relative to these robustness checks are available upon request from the authors.

experience – and thus the information asymmetry – seems able to explain this different opinion among artists who never had a contract. Interestingly enough, artists who have a manager – and are thus probably more aware of the harshness of contractual relationships within the music industry – are more reluctant towards 360-degree deals. Artists under contrat and who are touring a lot are also very significantly less prompt to sign such a contract. Since they currently benefit from the positive externality that recorded music generates towards live music without sharing their touring revenues, they are obviously those who have the more to lose by signing a 360-degree deal. The negative impact of the moral hazard behavior is considered as more important than the theoretical benefit that both the record company and the artist might yield from the internalization of the externality that recorded music generates for ancillary markets.

Finally, our results explain the difficulties that recording labels encounter to implement profit-enhancing 360-degree deals and thus why they still represent a small share of the music industry revenues (see introduction). The artists who are the more favorable to such contracts are the less known artists, who are not, and never have been, under contract. For them "*any deal is a good deal*" and the lack of experience of the contractual relationship with a record label could lead them to underestimate the moral hazard behavior of the latter. However, artists not under contract but with a self-release experience, and who thus probably exhibit some entrepreneurship abilities, are less prone to sign 360-degree contracts. Likewise, the most profitable artists, i.e. those under contract and who are touring a lot, are also reluctant to sign a 360-degree deal. They prefer to keep a traditional contract in which they manage and keep the bulk of revenues from concerts. Finally digitization, which is the *raison d'être* of 360-degree contracts, also weakens them by enhancing the potential of the Do-It-Yourself model.

7. Concluding remarks

The recorded music industry considers that 360-degree deals are one of the ways to overcome the downturn of music sales that they have suffered since the beginning of this century and the rise of digital music. Such deals allows music labels to benefit from the growing ancillary markets (including the live music market) whose growth, at least partially, comes from the positive externality that recorded music (whether legal or illegal) generates towards them. In the present paper we studied whether the interests of music labels and artists towards such deals are aligned. Theoretically, they should be since the internalization of this externality increases total surplus and should allow record labels to improve their profit while maintaining at least stable revenues for artists. Furthermore, the greater the market externality, the greater the benefits of the internalization should be for both parties. Hence, the most successful artists should be the most prompt to sign 360-degree deals.

Yet, 360-degree deals have remained quite scarce, and mainly involve either stars (in exchange of massive cash advances) or artists signing their first contract. In this paper we have analyzed the incentives and pitfalls artists encounter by signing 360-degree deals. We especially studied if artists fear a possible moral hazard behavior from record labels that could prevent the former to let the latter manage all of their music related activities.

Using a representative survey of 710 professional musicians in France, our main findings support the hypothesis that artists fear a moral hazard behavior of their record label in signing a 360-degree deal. All other things being equal, for artists currently not under contract, to have been signed in the past is enough to decrease the incentives to sign a 360-degree deal. This suggests that those artists are aware of the difficulties associated with contractual relationships with a record label. Moreover, the more an artist has to share, i.e. the more he performs on stage, the more reluctant he is toward a 360-degree deal whereas he should benefit the most from such a contract. Finally, the artists who are the more prompt to accept such a deal are the ones who do not have and never had a contract with a record label. However, they usually are far to be the most profitable for the record labels.

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Appendix

Table 4 – Description of the variables

Variable	Description
360DEAL	takes the value 1 if the artist declared to be interested in signing a 360 degree deal, and 0 otherwise.
CONTRACT	takes the value 1 if the artist is under contract, and 0 otherwise.
LIVE	takes the value 1 if the artist performed more than 10 times on stage during the previous year, and 0 otherwise.
CONTRACT_LIVE	takes the value 1 if both CONTRACT and LIVE take the value 1, and 0 otherwise.
CONTRACT_NOLIVE	takes the value 1 if CONTRACT takes the value 1 and LIVE takes the value 0, and 0 otherwise.
CONTRACT_BEFORE	takes the value 1 if the artist is not under contract but has been under contract with a record label in the past, and 0 otherwise
CONTRACT_BEFORE_LIVE	takes the value 1 if both CONTRACT_BEFORE and LIVE take the value 1, and 0 otherwise.
CONTRACT_BEFORE_NOLIVE	takes the value 1 if CONTRACT_BEFORE takes the value 1 and LIVE takes the value 0, and 0 otherwise.
SELFRELEASE	takes the value 1 if the artist is not currently under contract but had self-released an album during the three years preceding the survey, and 0 otherwise.
HOMESTUDIO	takes the value 1 if the artist has a homestudio, and 0 otherwise.
MYSPACE3	takes the value 1 if the artist updates his MySpace page at least every week, 0 otherwise
MYSPACE2	takes the value 1 if the artist updates his MySpace page at least every month, 0 otherwise
MYSPACE1	takes the value 1 if the artist updates his MySpace page less frequently than every month, 0 otherwise
MYSPACE0	takes the value 1 if the artist does not have a MySpace page, 0 otherwise
AGE1	takes the value 1 if the artist is less than 25 years old, 0 otherwise
AGE2	takes the value 1 if the artist is between 25 and 34 years old, 0 otherwise
AGE3	takes the value 1 if the artist is between 35 and 44 years old, 0 otherwise
AGE4	takes the value 1 if the artist is between 45 and 54 years old, 0 otherwise
AGE5	takes the value 1 if the artist is more than 54 years old, 0 otherwise
INCOME1	takes the value 1 if the artist earned less than €9,000 in 2007, and 0 otherwise.
INCOME2	takes the value 1 if the artist earned between €9,000 and €15,000 in 2007, and 0 otherwise.
INCOME3	takes the value 1 if the artist earned between €15,000 and €30,000 in 2007, and 0 otherwise.
INCOME4	takes the value 1 if the artist earned between €30,000 and €60,000 in 2007, and 0 otherwise.
INCOME5	takes the value 1 if the artist earned more than €60,000 in 2007, and 0 otherwise.
GENDER	takes the value 1 if the artist is a woman, and 0 otherwise.
HIGHEDUCATION	takes the value 1 if the artist holds a master degree (at least), and 0 otherwise.
NONPARIS	takes the value 1 if the artist does not live in Paris or in the "Ile de France" region (i.e., in the Paris area), and 0 otherwise.
POPULAR	takes the value 1 if the artist declares that his main musical genre, is popular music, and 0 otherwise.
INTERMITTENT	takes the value 1 if the artist receives a monetary compensation during the previous year from the *intermittence* system, and 0 otherwise
GOLD	takes the value 1 if the artist has already won a music award and/or a gold record, and 0 otherwise.
MANAGER	takes the value 1 if the artist has a manager, and 0 otherwise.

Table 5 – Biprobit to check for endogeneity of the *CONTRACT* variable

	BIPROBIT	
	360DEAL	***CONTRACT***
CONTRACT_LIVE	-0.674**	
	(0.341)	
CONTRACT_NOLIVE	-0.238	
	(0.404)	
LIVE		0.439
		(0.326)
CONTRACT_BEFORE	-0.340*	-13.136
	(0.175)	(9432.596)
SELFRELEASE	-0.353*	-11.397
	(0.190)	(8436.631)
HOMESTUDIO	-0.318**	0.707**
	(0.152)	(0.303)
MYSPACE0	-0.290	-1.254***
	(0.191)	(0.415)
MYSPACE1	-0.102	-0.468
	(0.204)	(0.426)
MYSPACE2	-0.283	-0.381
	(0.207)	(0.524)
AGE2	0.047	-0.631
	(0.488)	(0.883)
AGE3	0.071	-1.061
	(0.477)	(0.805)
AGE4	0.155	-0.703
	(0.476)	(0.827)
AGE5	0.229	-0.458
	(0.488)	(0.839)
INCOME2	0.135	-0.207
	(0.200)	(0.446)
INCOME3	-0.130	0.452
	(0.199)	(0.456)
INCOME4	0.132	-0.067
	(0.235)	(0.507)
INCOME5	-0.993**	6.394
	(0.497)	(5148.124)
GENDER	-0.159	-0.711**
	(0.145)	(0.285)
HIGHEDUCATION	0.375***	0.573**
	(0.133)	(0.275)
NONPARIS	-0.027	0.182
	(0.134)	(0.275)
VARIETY	0.368**	-0.555*
	(0.158)	(0.321)
INTERMITTENT	-0.258*	-0.407
	(0.145)	(0.324)
GOLD	0.097	0.138
	(0.171)	(0.309)
MANAGER	-0.349*	0.746**
	(0.191)	(0.362)
WEBPAGE		1.222***
		(0.321)
CONSTANT	0.488	0.101
	(0.514)	(0.860)
ρ	0.095	
	(0.275)	
N	428	
P	0.000***	
chi2	104.963	
LR test of $\rho = 0$: chi2(1) = 0.1216 Prob > chi2 = 0.7274		

* p < 0.1 ** p < 0.05 *** p < 0.01

Table 6 – Biprobit to check for endogeneity of the *LIVE* variable

	BIPROBIT	
	360DEAL	***LIVE***
CONTRACT_LIVE	-0.589**	
	(0.239)	
CONTRACT_NOLIVE	-0.129	
	(0.285)	
CONTRACT		0.286
		(0.236)
CONTRACT_BEFORE	-0.310**	0.109
	(0.153)	(0.183)
SELFRELEASE	-0.318*	-0.121
	(0.162)	(0.171)
HOMESTUDIO	-0.330**	-0.467***
	(0.149)	(0.167)
MYSPACE0	-0.273	-0.328
	(0.185)	(0.214)
MYSPACE1	-0.095	-0.394*
	(0.203)	(0.223)
MYSPACE2	-0.282	-0.307
	(0.207)	(0.238)
AGE2	0.056	0.286
	(0.489)	(0.516)
AGE3	0.073	0.055
	(0.479)	(0.505)
AGE4	0.157	-0.155
	(0.478)	(0.506)
AGE5	0.227	-0.396
	(0.489)	(0.520)
INCOME2	0.134	0.223
	(0.200)	(0.223)
INCOME3	-0.134	0.499**
	(0.199)	(0.219)
INCOME4	0.134	0.817***
	(0.235)	(0.267)
INCOME5	-1.015**	0.542
	(0.493)	(0.431)
GENDER	-0.152	-0.411**
	(0.144)	(0.161)
HIGHEDUCATION	0.373***	-0.137
	(0.133)	(0.150)
NONPARIS	-0.024	0.008
	(0.134)	(0.152)
VARIETY	0.371**	0.106
	(0.158)	(0.185)
INTERMITTENT	-0.253*	1.209***
	(0.145)	(0.157)
GOLD	0.091	0.584***
	(0.170)	(0.201)
MANAGER	-0.367**	0.382*
	(0.185)	(0.204)
WEBPAGE		0.386**
		(0.179)
CONSTANT	0.437	-0.510
	(0.495)	(0.536)
ρ	0.006	
	(0.104)	
N	428	
P	0.000***	
chi2	183.642	
LR test of $\rho = 0$: chi2(1) = 0.0034 Prob > chi2 = 0.9533		

* p < 0.1 ** p < 0.05 *** p < 0.01

Table 7 – Heckman probit selection model

	SELECTION	***360DEAL***
CONTRACT_LIVE	0.322	-0.622***
	(0.236)	(0.215)
CONTRACT_NOLIVE	1.231***	-0.380
	(0.381)	(0.273)
CONTRACT_BEFORE	0.050	-0.275*
	(0.135)	(0.143)
SELFRELEASE	0.055	-0.313**
	(0.146)	(0.148)
HOMESTUDIO	0.283**	-0.362***
	(0.137)	(0.136)
MYSPACE0	-0.126	-0.169
	(0.177)	(0.183)
MYSPACE1	-0.126	-0.031
	(0.202)	(0.188)
MYSPACE2	-0.105	-0.206
	(0.210)	(0.200)
AGE2	0.013	0.065
	(0.483)	(0.450)
AGE3	-0.200	0.123
	(0.461)	(0.439)
AGE4	-0.498	0.297
	(0.458)	(0.439)
AGE5	-0.353	0.331
	(0.467)	(0.448)
INCOME2	-0.034	0.112
	(0.179)	(0.181)
INCOME3	0.123	-0.168
	(0.178)	(0.179)
INCOME4	0.236	-0.002
	(0.223)	(0.225)
INCOME5	-0.388	-0.737
	(0.349)	(0.504)
GENDER	-0.162	-0.093
	(0.135)	(0.134)
HIGHEDUCATION	0.192	0.250*
	(0.129)	(0.145)
NONPARIS	0.151	-0.061
	(0.127)	(0.123)
VARIETY	0.033	0.289*
	(0.153)	(0.158)
INTERMITTENT	0.151	-0.260**
	(0.133)	(0.132)
GOLD	0.269	0.004
	(0.172)	(0.163)
MANAGER	0.209	-0.380**
	(0.191)	(0.171)
BROADBAND	0.535**	
	(0.217)	
CONSTANT	0.012	0.752
	(0.525)	(0.461)
ρ	-1.083	
	(0.919)	
N	567	
chi2	54.038	
LR test of $\rho = 0$: chi2(1) = 1.89 Prob > chi2 = 0.1695		

* p < 0.1 ** p < 0.05 *** p < 0.01