

Does One-Size Copyright Fit All? Copyright and Innovation in Small Record Companies

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Abstract: This paper discusses empirical evidence on the importance of copyright as an incentive for technical innovation. It focuses on the case of small, ‘independent’ record companies in the context of widespread digital copying and a severe recession in the primary market of sound recordings. The evidence presented here implies that this type of firms: (1) regard copyright related factors hampering innovation to be of minor importance in comparison to other innovation obstacles; (2) consider problems with clearing copyrights to be a greater obstacle to innovative projects than problems with enforcing their own copyrights. We conclude that the innovation costs of copyright (and how to mitigate them) require greater attention.

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1. INTRODUCTION

An official objective of the copyright system is to promote “innovation and creativity” in the regulated sector.¹ Empirical studies of the effects of copyright – or its counterpart unauthorised copying – tend to focus on the relationship between the level of copyright protection and right holders’ revenues. Economists have taken the lead concerning such studies and digital copying in the record industry has received particular attention. For recent surveys of the literature see Liebowitz (2005a) and Liebowitz and Watt (2006).

This paper concerns an issue that the current debate has sidelined. Few studies address innovation and creativity itself. The transmission mechanism between additional revenues due to copyright protection and innovation has received little attention. It is usually taken for granted that there is a strong positive relationship between industry revenues and innovation intensity when conclusions are drawn from the correlation of industry revenues and unauthorised copying. By contrast, some authors have suggested that aspects of the current copyright system can hold back technological innovation (Merges, 1996; Boldrin and Levine, 2002; 2005; Depoorter and Parisi, 2002).

In order to determine whether the copyright system does inhibit innovation, this paper discusses right holders’ perception of copyright as an innovation incentive. The focus is on technological innovation and a particular type of right holders – small, ‘independent’ record companies that acquire and commercialise ‘rights related to copyrights’ for sound recordings. There is a nascent literature on ambiguous effects of

¹ As stated in the European Directive 2001/29/EC on ‘Copyright in the Information Society ...’ (EU 2001). The Directive explains that copyrights aim to foster substantial investment in creativity and innovation, *including network infrastructure*, in order to increase competitiveness in content provision, IT and other industrial and cultural sectors (paragraph 4). This directive is of seminal import. With it, the European Union has begun to regulate central issues of copyright (especially relating to the digital environment) on the supra-national Union level; this Directive does not mention the protection of certain ‘natural rights’ of authors to the works they created that are an additional justification for copyright in much of continental Europe. Note that the WIPO Copyright Treaty (WIPO, 1996) emphasises the role of copyright in ‘development’ and as an incentive for ‘literary and artistic creation’ and does not explicitly refer to investments in technical innovation concerning the dissemination of creative works.

unauthorised copying between different types of right holders. It has been argued on the basis of theoretical and empirical findings that the proportion of costs and benefits of the current copyright systems is less favourable for newcomers and fringe suppliers (Blackburn, 2004; Handke, 2006a; Banerjee et al., 2007; Kim, 2007). It thus seems likely that any innovation costs of the copyright system would be more easily observed in the case of fringe suppliers.

The empirical data discussed in this paper derives from a survey of owners/managing directors of several hundred record companies in Germany. Respondents were asked to state the importance of eleven factors inhibiting innovation within their enterprise in a matrix question design adopted from a major series of innovation surveys (OECD 1997; 2001; Eurostat, 2008). Two of these ‘innovation obstacles’ concerned copyright. One question addressed difficulties with enforcing the firms’ own copyrights as an indicator of the potential innovation benefits of invigorating copyrights enforcement. The other addressed difficulties with clearing rights for innovative projects as an indicator for one aspect of the innovation costs of the copyright system.

The main findings are that the firms surveyed: (1) regard both copyrights related innovation obstacles to be of minor importance relative to other obstacles; (2) consider difficulties with clearing copyrights to be a greater obstacle to innovative projects than problems with enforcing their own copyrights. The implication is that the innovation costs of copyright require more attention in the economics of copyright and copyright policy.

2. COSTS AND BENEFITS OF COPYRIGHT

The economics of copyright has identified a range of social costs and benefits associated with copyright systems. Like any form of state intervention, copyright entails social costs. Any conceivable copyright system results in administration and enforcement costs, including the transaction costs in trading copyrights (Gordon, 1982; Besen, Kirby and Salop, 1992). Furthermore, effective copyright enables right holders to charge higher prices than they could under competition from unauthorised copying (Plant, 1934). If copyright is associated with higher prices, the copyright

system generates access costs: potential users who value the work by more than the marginal cost of producing copies but less than the price being charged are excluded.

The social benefit of copyright is that this institution provides an incentive to supply creative works, where this incentive would otherwise be below a socially desirable level. Copyright is often justified as a means to organise the private financing of public goods (Liebowitz and Watt, 2006).² Where a copyright system improves the supply of creative works, consumers may benefit from an effective copyright system even if it leads to higher prices. Due to these dynamic benefits of copyright, an efficient copyright system could improve suppliers' and consumers' net welfare simultaneously, which is often regarded to be a Pareto improvement.

There are two ways in which the supply of cultural products may improve. First, new cultural products (or content) with beneficial attributes may be introduced to the market. New products will be advantageous if they are superior substitutes for previously available products (if only because they are better adapted to current preferences or because consumers value novelty) or if they fill a niche that was previously not catered for. Second, new ways of delivering and presenting cultural products may be introduced, which have one of the aforementioned beneficial attributes. The empirical part of this paper is directly concerned with the latter type of advances – in particular concerning media technology – in contrast to much of the economic literature on copyright.

Copyright is ambiguous even if the focus is entirely on the welfare of suppliers, all of which we assume to be right holders for the sake of clarity. On the one hand, an effective copyright system enables right holders to exclude unauthorised users, to set prices above marginal costs, thereby increasing revenues above the competitive level. However, some of the costs associated with a copyright system fall on suppliers in the regulated industries. Suppliers in the cultural industries will often play a dual role as right holders and users of copyrighted works owned by others, subject to the types of products supplied and specific copyrights arrangements. Copyright deters suppliers from using protected works where the transaction costs for obtaining right holders' consent and the price demanded by copyright holders exceed

² Copyrights may thus allow those investing in the production and dissemination of creative works to recoup the fixed costs of creation. Another perspective is that effective copyrights allow right holders to raise revenues that are closer to the overall value of the creative works they supply. Landes and Posner (2003) also insist that a copyright system that allocates clear-cut, exclusive rights with a single right holder (or as few right holders as possible) may reduce transaction costs.

the expected revenues of use. That is, copyright protection drives up right holders' revenues and costs. Landes and Posner (1989; 2003) identified such a constellation clearly with regards to derivative creations.

Most economic models of copyright assume that some of the costs of copyright increase with the strength of the rights defined and the strength of enforcement (Watt, 2000; Landes, 2002) and copyright protection is subject to diminishing returns. If some of the increasing costs of copyright fall on right holders themselves, there is a point beyond which the marginal benefits of copyright protection for right holders are lower than their marginal costs so that further expansions of copyright protection would not benefit suppliers (Landes and Posner, 1989; 2003; Watt, 2000; Landes, 2002).³ In short, copyright is a costly institution with decreasing returns for right holders beyond a certain level of protection. Too much copyright protection could hurt right holders' interests.

The economics of copyright discusses several constellations in which unauthorised copying/use does not have to diminish suppliers' profits. The suggested market solutions include first mover advantages (Boldrin and Levine, 2002; 2005), joint sale of complements, versioning (Varian, 2005), indirect appropriability and price discrimination (Liebowitz, 1985) or even network effects (Takeyama, 1994). The debate on market solutions concerns the benefits of copyright, which may be modest if there are alternative ways to compensating those who invest in the creation and dissemination of creative works. By contrast, this study focuses on the dynamic costs of copyright in terms of obstructing innovation.

It has been argued that the statutory monopoly that copyright entails could hold back new types of use (Boldrin and Levine, 2002; 2005). This may be the case, for example, because copyright requires protracted negotiations between a number of right holders before authorised new services can be introduced to the market (Merges, 1996; Einhorn, 2001; Depoorter and Parisi, 2002)⁴ or because intellectual property rights are used strategically by incumbents to sustain barriers to entry (Kim, 2007; Bhattacharjee et al., 2007). Where this is the case, copyright would entail dynamic costs over and beyond what is acknowledged in much of the literature. The empirical

³ If a greater share of the social benefits of copyrights than of the social costs of copyrights accrue to right holders, these will prefer a higher level of copyright protection than consumers.

⁴ Subject to some variations in national legislations, right holders include record companies and publishers, as well as performing artists and composers/authors. Negotiations also take place between and within organisations representing these groups, in particular collecting societies.

part of this paper addresses this issue by studying right holders' perception of the consequences of copyright for technical innovation, such as the introduction of new carrier formats.

The data discussed below was collected among small, independent record companies. This type of firms seems particularly suitable to study any adverse implications of copyright for technical innovation. On the one hand, record companies virtually always operate as right holders and users. They usually acquire permanent copyright entitlements themselves and they need to 'clear' copyrights held by others – say authors/publishers and performing artists – in order to commercialise sound recordings. On the other, the primary market served by record companies – in which copies of sound recordings are sold to end-consumers – exhibits substantial technological change with the diffusion of digital copying technology. What is more, several recent studies suggest that unauthorised copying has asymmetric effects, favouring larger, incumbent right holders over fringe suppliers and newcomers.

An empirical study by Blackburn (2004) suggests that, while sales of publications by previously well-known artists are diminished as file-sharers substitute purchased copies for downloads, file-sharing appears to boost record sales of as-yet-unknown artists. Handke (2006a) reports on a boom of market entries by smaller record companies in the context of widespread digital copying. Bhattacharjee et al. (2007) find that releases by smaller record companies exhibit longer survival times in the charts after the emergence of file-sharing networks. The partial erosion of copyright protection due to unauthorised digital copying coincides with greater competitiveness of fringe suppliers and newcomers relative to major incumbents in the market for sound recordings.

Such findings are consistent with the casual observation that some well-established superstar creators and the major intermediary firms that own and commercialise copyrights are the most vociferous campaigners for increasing copyright protection, while many newcomers and fringe suppliers seem less bothered by unauthorised copying. One possible explanation for divergent interests in copyright protection is that there are economies of scale in the administration of rights so that smaller right holders have a lower net benefit from participation in the copyright system. Another possible explanation draws from the insights in cultural economics that creative works have experience goods attributes (Nelson, 1970; Caves, 2000) and that markets for them exhibit bandwagon effects (Leibenstein 1950; Strobl and Tucker

2000) as consumers seek to mitigate quality uncertainty by following market signals (Kretschmer et al. 1999; see also Bikhchandani et al. 1992). Therefore, the effective promotion of new products and the cultivation of reputations are important factors in determining commercial success. Unauthorised copying could diminish consumers' search costs and the risk of buying creative works for which little pre-purchase information is available in the traditional mass media (cf. Kretschmer et al. 1999; Bhattacharjee et al., 2007; and on the 'exposure effect' of file-sharing Liebowitz, 2005). Sampling via file-sharing may thus boost demand for releases by fringe suppliers and newcomers, if unauthorised downloads are imperfect substitutes for authorised copies. Record companies may even find it rational to actively make free samples available.⁵

If copyright does obstruct innovation, these 'innovation costs' should be particularly visible among fringe suppliers, where the countervailing benefits of the copyright system are probably less pronounced. This paper discusses empirical evidence on the relative significance of copyright as an incentive for innovation for small, so-called 'independent' record companies. The data allows for a comparison of the perceived significance of unauthorized use and the problems that the copyright system entails for innovative projects within this group of firms. It also allows for a comparison between copyright related obstacles to innovation and other factors hampering innovation.

III. THE VUT SURVEY

The data discussed in this paper stems from an online survey among the members of the industry-lead body 'Verband unabhängiger Tonträgerunternehmen' ('Association of Independent Record Companies' (VUT)), which ran in July and August 2005. A descriptive overview of results is available in Handke (2006b).

The VUT caters predominantly for small, so-called 'independent', record companies in Germany. It does not commit much of its resources on campaigning for copyright protection in the face of digital copying, nor does it oppose the campaigns

⁵ In the survey reported on here, nearly half of all respondents confirmed that their record company made 'free' copies available to end-consumers in 2005 (Handke, 2006b).

by larger record industry lead-bodies such as the ‘International Federation of the Phonographic Industry’ (IFPI).

There are financial incentives for record companies to join the VUT, because members enjoy a 20% rebate on obligatory payments to the authors’ collecting society GEMA per reproduction of a copyrighted work (for details see Handke, 2006a). Some larger independent record companies are not captured in the VUT survey because they are only members of another industry-lead body, the IFPI Germany, in which the major four record companies play a leading role and which offers further concessions with the GEMA for a higher annual membership fee.⁶

For the VUT survey, a list of 1,013 contact partners in as many member firms was available. Contact partners were owners and/or executives. They received emails with an introduction and a unique, personal access code to the online survey. There was little valid and recent information on the characteristics of VUT members available prior to the survey, and previous surveys among this type of firms had resulted in low response rates. Therefore, no prior sampling was employed and the survey addressed all VUT members. The characteristics of respondents were checked against prior information on key characteristics. The share of corporations with a turnover over €500,000 and €1 million, the share of firms founded before 1999 or in the periods between 2000-2002 and 2002-2004, and the extrapolated turnover of ‘indies’ in comparison to estimates of IFPI Germany estimates all lay within the expected parameters.⁷ Overall, respondents of the VUT survey are assumed to be a reasonable approximation of a representative sample of small, independent record companies in Germany.

418 electronic questionnaires were completed. According to the VUT survey, members had an extrapolated turnover of €216 million and employed 3,800 individuals in what amounted to 2,180 full time equivalents (excluding musicians). In a rough comparison with the turnover estimates of IFPI Germany for the entire

⁶ The IFPI charged an annual fee of €875 for ‘associated membership’ in 2004 and much higher amounts for full members that are entitled to participate in decision-making within the lead-body.

⁷ A traditional concern with online surveys is that they generate a bias in favour of technology-savvy respondent. Owners/executives of firms that commercialise media content are extremely likely to have functioning email accounts and to be IT-literate, however, so that problems with such a bias should be negligible.

German record industry, the VUT members' market share was about 12% and their share of employment is considerably higher (Handke, 2006b).⁸

In order to avoid distortions by including firms for which the commercialisation of sound recordings was a marginal activity (say to promote other music related services such as live appearances), all firms were excluded who reported that the activities of a record company accounted for 20% or less of total turnover. Firms that reported to be subsidiaries of a larger corporation were also excluded. The results presented below refer to a maximum number of 294 respondents. (For descriptive statistics on basic characteristics of firms covered see appendix 1).

The results of the VUT survey need to be interpreted before the following background. First, the German record industry is undergoing a severe recession since 1998. Industry revenues as reported by IFPI Germany had fallen by nearly 42% from a historic peak of €2.83 billion in 1997 to €1.65 billion in 2004.⁹ Second, the diffusion of digital copying technology has affected the market of sound recordings in the period discussed. Third, these developments coincide with a boom of market entries by small record companies (see Handke, 2006a).

IV. COPYRIGHT AND FACTORS HAMPERING INNOVATION

The central data discussed in this paper were produced in a matrix of questions on the significance of eleven factors hampering innovation (also referred to as 'innovation obstacles' or 'factors' in this paper). Respondents were asked to 'rate how important the following factors were in hampering or preventing innovation activities in your enterprise'. The method is adopted from the latest Community Innovation Survey (CIS), a major innovation measurement exercise developed under the auspices of the OECD and EU, which has been running every four years since 1993 (see Eurostat, 2008). Respondents could mark one of five options to signal the perceived importance

⁸ Since the IFPI Germany figures do not specify whether they represent full time equivalents, employment figures cannot be compared with great precision. As it is, the share of VUT member firms in overall employment would be between 18-33%, depending on whether the number of staff or full time equivalents are used for comparison with IFPI Germany estimates for the entire market.

⁹ Real terms at 2000 prices.

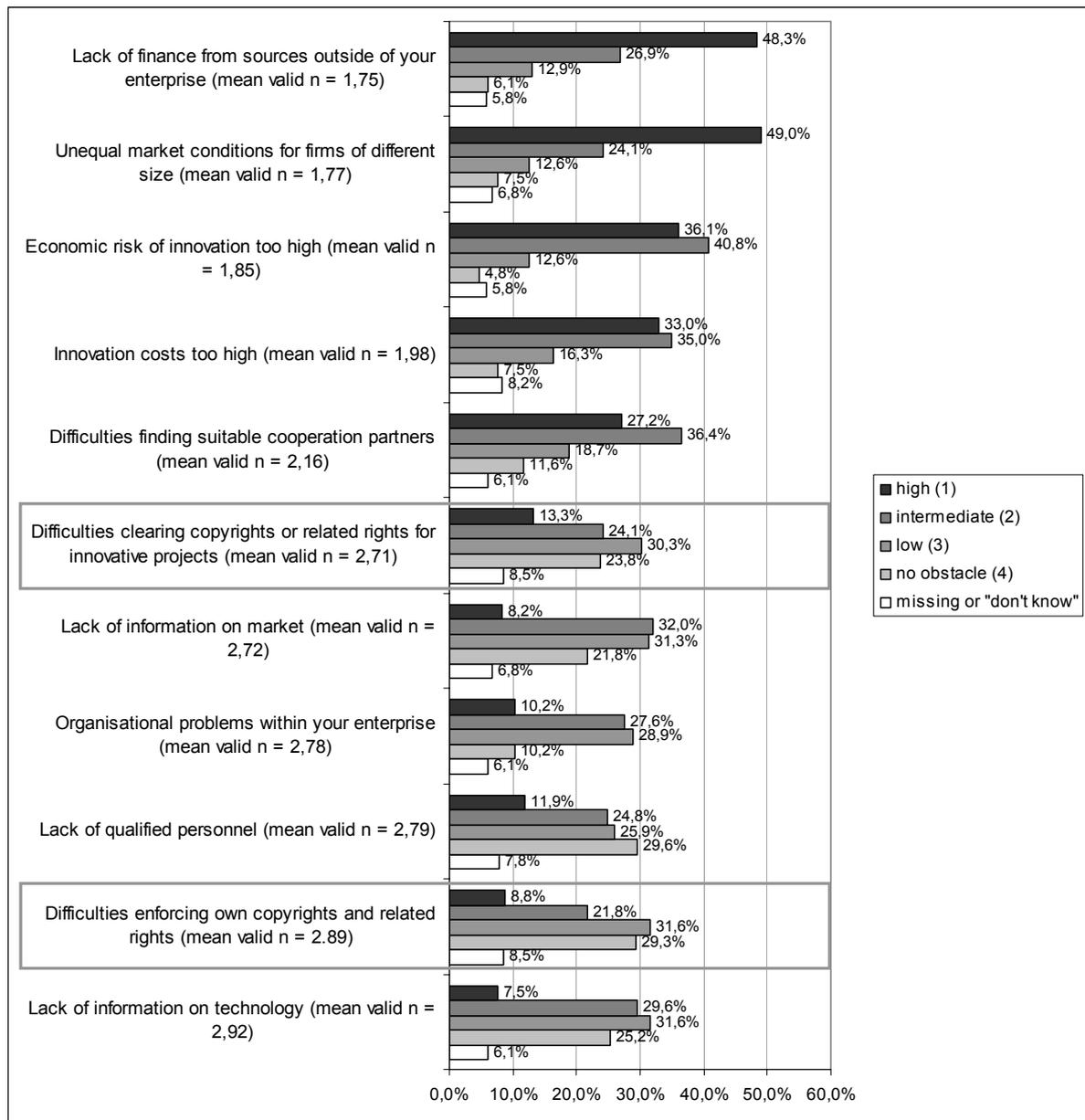
of factors: 'high', 'medium', 'low', 'not experienced', or 'don't know'. The eleven factors were programmed to appear in random sequence to reduce order bias.

This question on 'innovation obstacles' was immediately preceded by questions on technical innovations, including (1) internet presence of the firm generally, (2) sales of physical sound-carriers through online-shops, (3) downloads or ringtones introduced to the market, (4) novel physical sound-carriers introduced to the market (e.g. enhanced CD, DVD, SA-CD), (5) digital rights Management (DRM). Respondents thus had a guideline on what the concept of 'innovation' referred to for the purpose of the questions on factors hampering innovations.¹⁰

Figure 1 provides an overview of the results for the eleven 'factors hampering or preventing innovation' addressed in the VUT survey. The results come in two clusters. A first cluster consists of five factors with a mean value between 1.75 and 2.16, indicating that the average respondent regarded the innovation obstacle to be of 'intermediate' importance. The mean value for the remaining six factors fall between 2.71 and 2.92. In this second cluster, the respondents regarded the importance of the innovation obstacle to be 'low' on average. A non-parametric test for significant differences between the means of neighbouring factors shows that the difference between the lowest ranking factor in the upper cluster and the highest ranking factor in the lower cluster is significant at the 0.001 level. Not all ranks within the two clusters are significant (see appendix 2).

¹⁰ By providing such a guideline, the VUT survey adopted an 'object approach' and diverged from the CIS. For a discussion of 'object' versus 'subject approaches' for innovation surveys in the cultural industries see Handke (2008). For a general discussion see OECD (1997; 2001).

Figure 1: The significance of ‘factors hampering innovation’ according to small and medium sized record companies (ranked by median of valid responses)



A central challenge in discussing the innovation effect of a copyright system is to distinguish the innovation costs and benefits of copyright protection. In order to do so, the VUT survey introduced two innovation obstacles related to copyright, which are framed by grey rectangles in figure 1. The rating of the ‘difficulties clearing copyrights or related rights for innovative projects’ provides an indication of the perceived innovation costs of the copyright system. The rating for ‘difficulties with enforcing (the firms’) own copyrights and related rights’ provides an indication of the

innovation cost of unauthorised copying and thus, by implication, the potential benefits of strengthening copyright enforcement.

Both copyright related obstacles are in the lower cluster. That is, the independent record companies surveyed regarded several innovation obstacles to be of greater significance than either of the two copyright related factors.¹¹ The more important factors are: a ‘lack of external finance’, ‘unequal market conditions for firms of different size’, ‘the economic risk of innovation’ and ‘innovation costs’, as well as ‘difficulties finding suitable cooperation partners’. These findings imply that among small, independent record companies, difficulties with the copyright system are relatively unimportant as an obstacle to innovation.

Tables 1 a and b exhibit the result of a non-parametric test for a difference in means between the two factors relating to copyright. The mean response concerning ‘difficulties clearing copyrights’ is significantly lower than the mean for ‘difficulties enforcing copyrights’ at the 0.01 level. That is, on average the independent record companies surveyed perceive the clearance of rights to entail greater obstacles to innovation than the possibility of unauthorised copying due to a lack of copyright enforcement.

Tables 1 a and b: Testing for a difference between the importance of ‘clearance of copyrights’ and ‘enforcement of copyrights’* as factors hampering innovation

a) Ranks

		N	Mean Rank	Sum of Ranks
Clearance of copyrights – Enforcement of copyrights*	Negative Ranks	79 ^(a)	65,03	5137,50
	Positive Ranks	47 ^(b)	60,93	2863,50
	Ties	138 ^(c)		
	Total	264		

* Abbreviations of ‘difficulties with clearing copyrights and related rights for innovative projects’ and ‘difficulties with enforcing own copyrights and related rights for innovative projects’.

^(a) Clearance of copyrights < Enforcement of copyrights

^(b) Clearance of copyrights > Enforcement of copyrights

^(c) Clearance of copyrights = Enforcement of copyrights

b) Test Statistics^(a)

	Z	Asymp. Sig. (2-tailed)
Clearance of copyrights – Enforcement of copyrights*	-2,911 ^(b)	,004

* Abbreviations of ‘difficulties with clearing copyrights and related rights for innovative projects’ and ‘difficulties with enforcing own copyrights and related rights for innovative projects’.

¹¹ Two categories referred two copyrights, so that it is possible that a single question on the innovation costs of copyrights would have been ranked higher among the factors hampering innovation. Dealing with copyrights in a single category would have obscured the essential difference between the innovation costs of copyrights and the innovation costs of unauthorized copying, i.e. insufficient copyrights enforcement.

- (a) Wilcoxon Signed Ranks Test
(b) Based on positive ranks.

The first main finding from this analysis is that small, independent record companies regard the innovation obstacles associated with the copyright system to be of minor importance. The second main result is that respondents consider difficulties with clearing copyrights to be a greater obstacle to innovative projects than problems with enforcing their own copyrights. Concerning technical innovation, the innovation costs of copyright exceed their benefits by a statistically significant margin.

V. FIRM CHARACTERISTICS AND THE IMPORTANCE OF COPYRIGHT RELATED INNOVATION OBSTACLES

In order to interpret the results presented in section IV, this section discusses the correlation of basic firm characteristics and the perceived importance of copyright related innovation obstacles. (For descriptive statistics on firm characteristics, see appendix 1.) Table 2 presents the results of bivariate, non-parametric correlations (Spearman's rho) that provide some basic insight into four issues.

First, there are reasons to believe that for fringe suppliers the innovation costs of copyright are probably more important and the innovation costs of unauthorized copying less important than for major right holders (see section II). If that is the case, the proportion between the innovation costs and benefits of copyright established here cannot be generalized for all record companies. This raises the question whether there is any recognizable split between firms above and below a certain size. Within the independent firms covered by the VUT survey, there are no significant correlations between two indicators of firm size – the number of staff in full time equivalents and firm turnover in 2004 – and the reported importance of copyright related innovation obstacles. (The correlation coefficient between the number of staff and the enforcement of copyrights even brings up the wrong sign, implying that small firms are more likely to report on difficulties with incomplete enforcement.) If there is a threshold of firm size above which record companies would experience greater difficulties with incomplete enforcement than with clearing rights, it lays beyond the small 'indies' covered in the VUT survey.

Table 2: Bivariate correlations between several firm characteristics and the reported importance of copyright related innovation obstacles (Spearman's rho)

			Clearance of copyrights ^(a)	Enforcement of copyrights ^(b)
Firm size	Number of staff ^(c)	Correlation Coefficient	,082	,061
		Sig. (2-tailed)	,243	,386
		N	203	204
	Turnover	Correlation Coefficient	,009	-,008
		Sig. (2-tailed)	,891	,904
		N	240	240
Firm age		Correlation Coefficient	,083	,050
		Sig. (2-tailed)	,176	,415
		N	269	269
Number of technical innovations introduced		Correlation Coefficient	-,105	-,008
		Sig. (2-tailed)	,087*	,902
		N	268	268
Clearance of copyrights ^(a)		Correlation Coefficient	1,000	,503**
		Sig. (2-tailed)	.	,000
		N	269	264
Enforcement of copyrights ^(b)		Correlation Coefficient	,503**	1,000
		Sig. (2-tailed)	,000	.
		N	264	269

^(a) Abbreviation of 'difficulties with clearing copyrights and related rights for innovative projects'

^(b) Abbreviation of 'difficulties with enforcing own copyrights and related rights for innovative projects'

^(c) Full time equivalents

* Correlation is significant at the 0.10 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

A similar question arises concerning firm age. Many younger firms have been founded after the rapid diffusion of relevant digital copying technology among end-consumers began in the late 1990s. Such firms might cope better with digital copying, which should show up in less concern with copyright enforcement. However, there is no significant correlation between firm age and the importance of copyright related innovation obstacles. It seems that younger firms experience very similar copyright related innovation obstacles as the older 'indies' that continue to operate.

Third, more innovative and more conservative firms may make different experiences with copyright related innovation obstacles. To shed some light on this issue, a crude measure of firm innovativeness was developed. The variable on the 'number of technical innovations introduced' reflects for how many of the following technical innovations the firm had introduced products or services on the market by 2004: (1) internet presence of the firm generally, (2) sales of physical sound-carriers through online-shops, (3) downloads or ringtones, (4) novel physical sound-carriers (e.g. enhanced CD, DVD, SA-CD), (5) digital rights Management (DRM). There is no apparent effect between technical innovativeness and difficulties with the enforcement of copyrights. Yet, more innovative firms are somewhat more likely to report on

difficulties with clearing rights for innovative projects. The correlation between the number of technical innovations introduced and difficulties with clearing copyrights is not very pronounced, however.¹² This is consistent with a situation in which firms experience difficulties with clearing rights when they innovate. That the correlation is not very pronounced could be explained by two circumstances. On the one hand, the innovation costs of copyright may prevent the adoption of some of the technical innovations covered altogether. On the other, innovation costs may concern other types of innovative projects than those measured in the variable used here.¹³

Finally, the correlation between difficulties with the clearance of copyrights and with the enforcement of copyrights provides some evidence whether these two opposing effects of copyright on innovation are experienced simultaneously. The correlation is positive, quite pronounced and significant at the .001 level. Much of this correlation could be due to different interpretations of the scale between respondents. However, the correlation coefficients between all but two other pairs of ‘factors hampering innovation’ were considerably lower.¹⁴ That is, those firms that do experience copyright related innovation costs often experience difficulties with clearing rights and difficulties with enforcing their own rights at the same time.

VI. CONCLUSIONS

The effects of a copyright system on innovation in the regulated sectors are not trivial, since effective copyright fosters incentives to innovate and increase the costs of follow-up innovations at the same time. This paper discusses whether difficulties with enforcing copyrights or with clearing copyrights hamper technical innovation in independent record companies. The results of a survey among several hundred

¹² This result is particularly noteworthy because the indicator of innovativeness includes the adoption of DRM measures, a main point of which is to administer and enforce copyrights.

¹³ For a more extensive discussion on measuring innovation in the cultural industries, see Handke (2008).

¹⁴ These correlations are not fully reported here. The correlation coefficients (2-tailed, Spearman’s rho) between responses for ‘innovation costs too high’ and ‘economic risk of innovation too high’ is 0.571 and that for ‘lack of market information’ and ‘lack of information on technology’ is 0.543 (both significant at the 0.001 level). For all other 52 possible pairs of factors hampering innovation, the correlation coefficients were lower than that for the two copyright related factors, ranging from 0.467 (significant at the 0.001 level) for ‘lack of qualified personnel’ with ‘lack of information on technology’ and 0.017 (and a significance of 0.780) between ‘copyright enforcement’ and ‘economic risk of innovation too high’.

‘indies’ suggest that these firms experience copyright related innovation obstacles to be significantly less important than several other factors hampering innovation, such as lack of external finance, excessive costs and risks associated with innovation or difficulties with finding suitable cooperation partners. That is, copyright may not be a particularly effective lever for policy makers to foster innovation among the types of firms surveyed in this study. What is more, of the two opposing innovation obstacles related to copyrights, difficulties with clearing rights are experienced to be significantly more important than problems with incomplete enforcement of copyrights.

There is no significant correlation between firm size or firm age and the difficulties with copyrights reported. The main results seem to hold throughout the population of firms covered, even though it seems likely that the experience of major firms, which were not covered in the survey, would be more favourable concerning a high level of copyright protection. Innovative firms are more likely to experience difficulties with clearing rights as innovation obstacles. There is also considerable evidence that the two copyright related innovation obstacles are experienced simultaneously.

This paper explores issues that have been largely sidelined in the economic literature on copyright. It will probably take several further studies before firm conclusions and policy implications can be drawn.

The findings presented here illustrate that the innovation costs of the existent copyright system are substantial at least among small, independent record companies. Landes and Posner (1989) find that in theory, each copyrighted work has its own optimal level of copyright protection, depending for example on its social value. The transaction costs of such a flexible, ‘tailor-made’ copyright system could be prohibitively high, however. If there are systematic differences in the preferred level of protection between easily distinguishable types of suppliers, there might be some scope for greater flexibility.

Kim (2007) has argued that it may be rational for some smaller suppliers to opt out of the copyright system altogether. In practice, right holders may prefer not to apply some rights where the promotion effect of free use is high in relation to copyright related payments, while applying others in order to benefit from the popularity of their works in related markets. Right holders may also want to retain the option to reassert copyrights, say if they grew up to a point where their interest in

copyright protection resembled those of the major suppliers. Of course, this does not mean that such a system would be efficient. The Creative Commons initiative attempts to establish greater choice for suppliers of creative works beyond a binary selection between full and permanent participation in a ‘one size fits all’ copyright system or no statutory protection at all.

Finally, many of the independent record companies reported that they experienced difficulties with clearing copyrights and with insufficient copyright enforcement simultaneously. It thus seems desirable to continue to explore whether specific aspects of the copyright system can be adapted in order to sustain the innovation incentives associated with effective copyright, while reducing transaction costs or the potential for strategic use of copyright entitlements current regulations may entail.

In the current period of substantial technological change in the record industry and markets regulated by copyrights more generally, the innovation costs of the existent copyright system require much more attention than they have received in the economic literature so far.

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APPENDICES

Appendix 1: Descriptive statistics for main characteristics of the record companies covered in this study

	N	Minimum	Maximum	Mean	Std. Deviation
Firm size – Number of employees ^(a)	211	,00	55,00	2,2280	4,43576
– Turnover ^(b)	251	2	12	4,66	1,877
Firm age	294	1	28	7,03	5,754
Number of technical innovations introduced ^(c)	284	1	6	3,81	1,138

^(a) Full time equivalents

^(b) Measured on an ordinal scale with a minimum of 2 (€0) and a maximum of 12 (>€6,000,000).

^(c) Number of affirmative responses on a set list of five types of technical innovations, see section IV.

Appendix 2: Test statistics for differences in the means of neighboring ‘factors hampering innovations’ (Wilcoxon Signed Ranks Test)*

	Z	Asymp. Sig. (2-tailed)
Lack of external finance (1) – Unequal market conditions (2)	-,354 ^(a)	,723
Unequal market conditions (2) – Economic risk (3)	-1,235 ^(a)	,217
Economic risk (3) – Costs of innovation (4)	-2,330 ^(a)	,020
Costs of innovation (4) – Cooperation partners (5)	-2,694 ^(a)	,007
Cooperation partners (5) – Clearance of copyrights (6)	-6,608 ^(a)	,000
Clearance of copyrights (6) – Market information (7)	-,086 ^(a)	,932
Market information (7) – Organisational problems (8)	-,902 ^(a)	,367
Organisational problems (8) – Lack of personnel (9)	-,355 ^(a)	,722
Lack of personnel (9) – Enforcement of copyrights (10)	-1,156 ^(a)	,248
Enforcement of copyrights (10) – Technological information (11)	-,248 ^(a)	,804

* For the full title of factors, see table 1. The numbers in brackets refer to the rank of the factor according to the mean of valid n as reported in table 1. The double lines mark the boundaries of cluster 1 (mean valid n between 1.75 and 2.16) and cluster 2 (mean valid n between 2.71 and 2.92).

^(a) Based on positive ranks.