Economic Effects of the New German Copyright Contract Law

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Abstract

This paper investigates some economic effects of recent amendments to the German Copyright Law on the German film industry. The changes assume the existence of a prevailing "structural superiority" of media companies over their contractual partners in labor markets which supposedly results in "unfair" contracts. We provide an economic approach to the matter. First, we consider potential effects and the plausibility of a "structural superiority" in terms of buyer power in the German film industry. Second, we consider how the new law affects risk allocation, incentives, transaction costs, and legal certainty in the business.

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1 Introduction

In March 1999, the German Federal Secretary of Justice, Herta Däubler-Gmelin, promised listeners at a symposium entitled "Culture is not free" that a political decision for amendments to the German copyright law (GCL) would promote the interests of creative workers.[1] Subsequently, the Federal Department of Justice set up a task force of five copyright experts to propose draft amendments to the GCL.[2] The task force's proposal was presented in May 2000 and served as the basis for the Federal Department of Justice's "legal draft of a law to enhance the contractual status of authors and performers." A modified version of that draft passed the Deutscher Bundestag (German Parliament) and the Deutscher Bundesrat (Senate of the Federal Parliament) in early 2002. The "act to enhance the contractual status of authors and performers" takes effect July 1, 2002.[3]

The amended copyright law fosters the creation and use of collective remuneration schemes, and prescribes a strict legal claim for "corrections" of contractual payments when the compensation paid the creative contractual party seems "disproportionate" (the "blockbuster" clause). The next Section gives a more detailed description of the amended GCL.

The legislative motivation for changing the copyright law was to assert "appropriate" compensation for creative workers in the film industry such as directors, actors, and screen writers. The redistributive argument was central to the drafting of the new GCL. This is illustrated by Däubler-Gmelin's comments on GCL before the German Parliament in 2001:

> "The 'Poor Poet' of Spitzweg – you all know the painting – is, no, can and must not be a correct description of the circumstances of the lives of creative workers in the 21st century."[4]

In addition, the law aims at protecting creative workers from financial risks they would otherwise have shifted on them by their contractual partners.[5]

[1] See Däubler-Gmelin (1999).

[2] The members of the task force were the Professors A. Dietz, U. Loewenheim, W. Nordemann, G. Schricker, and judge M. Vogel.

[3] Gesetz zur Stärkung der vertraglichen Stellung von Urhebern und ausübenden Künstlern, 22.03. 2002, BGBl I, 1155-1158.

[4] Original: "Der 'Arme Poet' von Spitzweg - Sie alle kennen das Bild - ist, nein, kann und darf keine korrekte Beschreibung der Lebensumstände der Kreativen im 21. Jahrhundert sein" , Deutscher Bundestag (2001), p. 17715. Author's translation. See also Bundesministerium der Justiz (2001).

[5] For instance, the risk argument appears in Bundesministerium der Justiz (2001), p. 17.

Given that German citizens in general enjoy the right to freely contract, why do legislators feel authors and performers need special protection? The answer, apparently, is that film producers, broadcasters, and other firms in the media industry enjoy a general "structural superiority," which leads to "unfair" and "unilaterally benefiting" contracts that exploit their creative contractual counterparts.[6]

Däubler-Gmelin (2000), p. 765, grossly underestimated the potential backlash, when she argued:

> "In the general sense of justice, there is little to oppose in the notion of appropriate compensation of creative talent, which shall become a legal duty [under this amendment], aside from the fact that it is rather novel for civil law to prescribe a just price for an output."[7]

The media industry has excoriated the legislation,[8] arguing that the prescriptions under the amendment hurt film financing and production in Germany, primarily through the introduction of legal uncertainty. Moreover, legal scholars condemn the act's inconsistency with labor legislation, constitutional law, and European Law.[9] Although, the initial proposal was subject to many changes and the final, adopted version of the amendments to the GCL is better defined than earlier drafts, the debate on the modified GCL remains very much alive.[10]

This paper provides an economic approach to the issue. Our focus lies on the effects of the new GCL in the labor markets for creative talent.

The paper proceeds as follows. Section 2 presents the main characteristics of the new copyright law. Section 3 analyzes its effects from an economic perspective. Section 3.1 considers how "structural superiority" in terms of "labor monopsony" or "buyer power" may affect the industry. Further the plausibility of significant buyer power in the German film industry is discussed. Section 3.2 analyzes the potential effects of encouraging the use of

[6]See e.g., Däubler-Gmelin's speech before the German Parliament (Deutscher Bundestag (2001).

[7]Original: "Gegen die angemessene Vergütung der Kreativen, wie sie zukünftig zur gesetzlichen Verpflichtung gemacht werden soll, kann ja nach allgemeinem Gerechtigkeitsverständnis so viel nicht einzuwenden sein, sieht man einmal davon ab, daß es im Zivilrecht eine gewisse Neuheit darstellt, den gerechten Preis einer Leistung gesetzlich vorzuschreiben". Author's translation.

[8]Industry lobbyists placed full page advertisements in prominent German newspapers and broadcasters launched a spot advertising campaign against the new law.

[9]For legal analysis, see e.g., Thüsing (2002), Kreile (2001), Poll (2001), Schack (2001), and Flechsig (2000). Gounalakis, Heinze, and Dörr (2001) provide a comprehensive and in-depth juridical expert study of the Department of Justice's draft of the new law.

[10]See e.g., Schwarz (2002).

collective remuneration schemes. This is done with the help of two standard models of union behavior: the "right-to-manage" model and the "efficient bargain" model. Section 3.3 investigates effects of the "blockbuster" clause. It is shown that the clause may give rise to a link between the efficient bargain model and the right-to-manage model. Further, its effects on risk allocation between producers and creative talent, incentives, and transaction costs are considered. Section 3.4 analyzes aspects of legal uncertainty introduced by the new GCL. Section 4 concludes.

2 The New German Copyright Law

As mentioned above, the amended copyright law seeks to counterbalance a supposed "structural superiority" of the contracting counterparty of originators.[11] Originators are defined as the creators of a work (§ 7 GCL). With respect to motion pictures, however, it is difficult to specify who qualifies as an originator under the GCL, since there are typically numerous major creative contributors involved in making a movie. Moreover, there is no legal rule to resolve this issue. In principle, then, several originators may become copyright owners, e.g., the director, the screenwriter, and the editor. This breaks with traditional case law, which (loosely) considers the director as the originator,[12] and the producer as the typical contractual counterpart. In the following discussion, we divide these contractual parties as "originators," "creative workers," "creative talent," and "authors" on one hand, and "producers" on the other. The producer is typically in charge of bringing production factors together needed to produce a movie. This includes hiring the writer to write the original screenplay, signing the major actors and the director, hiring the crew, doing the budget, and making sure the set gets made on time.

The core change to the copyright law is the new § 32 GCL. Under § 32 GCL

- originators have a right to demand modification of their contract when the arranged compensation is not "appropriate."

This right is inalienable. Thus, where contractual compensation is not considered appropriate, creative workers may claim additional payments.

[11] Despite the fact that it is the fundamental justification for the new law, no research has been done to assess the plausibility of this assumption.

[12] See Brehm (2001), p. 28. Note that the new GCL explicitly extends the scope of addressees of the copyright law. Section 3.4 discusses this issue.

So what is appropriate? The term "appropriate" can be inferred from the interplay of § 32 and § 36 GCL. First, § 32 GCL provides a legal stipulation that "collective remuneration schemes" are sufficient to guarantee appropriateness.[13] Second, § 36 GCL states that "associations of originators" may bargain with "associations of producers" or "single producers" about such remuneration schemes. Apparently, the authors of the legislation sought to encourage the making and application of a sort of collective wage agreement.

While adoption of collective compensation schemes is voluntary, one can reasonably expect that collective remuneration schemes will generally be accepted in the industry to take advantage of the associated legal certainty.[14] In any case, judges will resort to the legal presumption of collective remuneration schemes in legal disputes over appropriate wages. Therefore, we assume the new GCL establishes *de facto* industry-wide use of collective remuneration schemes.

The new copyright contract law also refers to the "blockbuster" phenomenon that can be found in many creative industries. Under § 32a GCL

- originators have a right to demand a change in their contract when their previous agreed compensation appears "disproportionate" from an *ex post* perspective, i.e., the originator's claim depends on the performance of the creative product.

As this right cannot be waived, the amended GCL introduces some type of mandatory sharing in such contracts. Interestingly, the authors of the legislation apparently doubt that the collective remuneration schemes they suggest are sufficient to guarantee appropriate compensation, so they explicitly added *ex post* compensation rules. Nevertheless, the legislator considers that collective remuneration schemes are sufficient to guarantee appropriate compensation provided that the respective collective compensation scheme explicitly include ex-post compensation rules.[15] Previous GCL also included a "blockbuster" clause. However, since its conditions of entitlement were very restrictive the clause was actually not enforced.

[13]So far, however, what exactly defines such collective remuneration schemes is an open question.

[14]More precisely, the extent of a firm's deviation from collectively bargained compensation schemes depends on the expected litigiousness of the creative talent, the expected cost of legal disputes, and the firm's discount rate. If the firm's reputation is important, there may be no deviation at all.

[15]Note that the "blockbuster" clause 32a GCL is also effective for existing contracts, i.e., authors have a right to change existing contracts, if disproportionate gains arise after the law has become effective.

3 Economic Effects of the New GCL

In the following discussion, it is shown that the recent amendments to the copyright law have the potential to affect numerous explicit and implicit characteristics of labor contracts such as wages, income distribution, the allocation of risk between producers and creative talent, incentives, efforts, and transaction costs.

As the impact of the new GCL depends largely on the assumed market structure in the markets for creative labor, we state that, in general, we can only expect to see potentially positive effects from the new law in the event of a market failure. We begin our analysis by exploring the effects and the plausibility of the presumed "structural superiority" of producers, which has been used to justify the new law.

3.1 Initial Considerations with Regard to "Structural Superiority"

Monopsony

In economic terms, the supposed "structural superiority" of producers may best be described by the terms "buyer power" or "labor monopsony." [16] Robinson (1969), p. 215, first used the term "monopsony" to describe a market with a single buyer. Today the expression "labor monopsony" is applied to any model where individual firms face positively inclined labor supply curves. The consequences of monopsony can be analyzed with a simple "isolated firm" model. Assume a firm produces films by employing labor (L). The wage (w) is, due to the labor market monopsony, a function of the number of creative workers that are hired such that $w = w(L)$ represents the inverse labor supply function, with $dw/dL > 0$. Thus, the firm's profit function is

$$\pi(L) = R(L) - w(L)L,$$

where R denotes the firm's revenue function. R is assumed to be strictly concave and twice continuously differentiable. Profit maximization gives

$$\frac{dR(L)}{dL} = w(L) + \frac{dw(L)}{dL}L$$

or

[16] The following discussion of monopsony borrows from the survey of Boal and Ransom (1997).

$$R^{'} = MLC,$$

where $R^{'}$ denotes the monopsonist's marginal revenue product of labor.[17] MLC denotes the marginal cost of labor, which reflects not only the cost of the last employee employed, but also the difference in wage the monopsonist must pay for all previously employed workers, i.e., $dw(L)/dL$. Figure 1 displays the associated amount of labor employed (L_m) and the associated wage (w_m) earned by the creative talent. Note that w_m is the lowest possible level the monopsonist must pay the creative talent to employ the profit maximizing level of labor L_m.

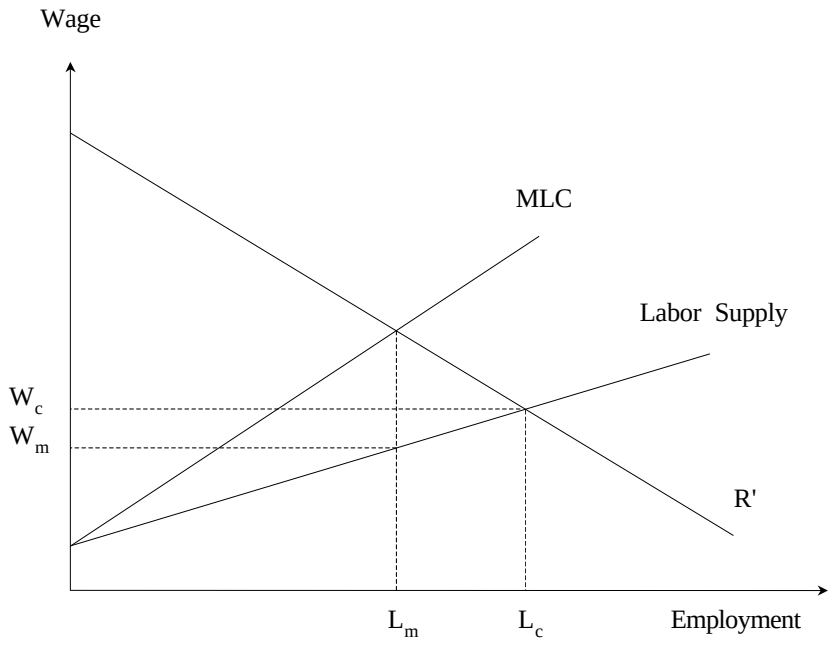

Figure 1: Wage and Employment Determination under Monopsony

Compare this to the competitive outcome. In a competitive labor market, the wage no longer depends on the quantity of labor employed by a single firm, but is determined by the market. It follows that each firm employs labor until the marginal revenue product equals marginal costs, which is determined at w_c. Hence, the firm hires the quantity L_c. This result is

[17] $R^{'}$ can be considered the monopsonist's "hypothetical labor demand function," although, strictly speaking, a monopsonist has no demand function since price and quantity are determined simultaneously. Here, the "hypothetical demand function" involves the same information as a regular demand function. See Blair and Harrison (1993).

efficient. We can see that under monopsony both wages and employment are lower than under competition. The associated welfare loss compared to the competitive outcome is given by

$$\int_{L_m}^{L_c} [R^{'}(L) - w(L)]dL.$$

Following Pigou (1924), p. 754, we may also define a measure of "exploitation" denoted by E. The first-order condition can be rearranged to

$$R^{'} = w(L) + \frac{dw(L)}{dL}\frac{w(L)}{w(L)}L$$

and we may write

$$E \equiv \frac{R^{'} - w}{w} = \varepsilon^{-1}, \text{ with } \varepsilon = \frac{dL}{dw}\frac{w(L)}{L}$$

E measures the deviation of wages from $R^{'}$ in percentage terms and is inverse to the elasticity of labor supply. The more elastic the labor supply function, the less monopsony power exists.[18] If $dw/dL = 0$, the labor supply is perfectly elastic and there is no monopsony power.[19] In general, monopsony power is weaker in the long run as long-run labor supply elasticities are typically larger than short-run elasticities. Workers can change jobs, move, or acquire skills to qualify for other professions. Under such a dynamic labor supply regime, the monopsonist must weigh short-run gains from exploitation against dynamic supply responses. Boal and Ransom (1997) present a simple model of dynamic labor supply that incorporates such considerations. They find that, within this setting, E is a weighted average of short-run and long-run inverse elasticities and depends positively on the monopsonist's discount rate. Hence, E may be smaller if the dynamics of labor supply are taken into account. Such considerations may help to understand why related empirical literature indicates monopsony power is relatively weak. Empirical studies on labor monopsony power show that even in textbook examples of monopsony such as the case of public school teachers in rural areas or coal mining, the rates of exploitation are very low and sometimes approach zero (see e.g., Luitzer and Thornton (1986); Beck (1993); Boal (1995)).

[18]However, E is not a measure of the deviation of wages from their competitive level when $R^{'}$ is not a horizontal line. For a short discussion of conditions that might imply a horizontal $R^{'}$ line, see Boal and Ransom (1997), p. 88.

[19]Under competition, E equals zero, because the marginal revenue product equals the wage.

Thus, while the basic monopsony model provides a valuable reference for the effects of buyer power, it is unlikely to fit many real world situations. Instead, one is much more likely to encounter oligopsonistic market structures, whereby several firms operate in a market. As we show below, the German film industry is characterized by such a market structure. Therefore, we turn our analysis to buyer power within a Cournot model.

Cournot Competition

The Cournot model assumes that firms simultaneously decide what quantity to produce.[20] Since creative labor is demanded in more or less fixed proportions to output, for instance, there is typically one director per film, it is straightforward to consider that broadcasters play an employment-setting game.

Consider a simple one-stage game in which two firms i, j choose their quantities of labor demand L_i and L_j simultaneously. The firm i's profit function is given by

$$\pi_i(L_i, L_j) = R_i(L_i) - L_i w(L), \text{ with } L = L_i + L_j$$

where R_i denotes firm i's revenue function. Each firm now maximizes its profits given the expected quantity of labor demand chosen by the other firm. The first-order condition of firm i is

$$\pi_i^{'} = R_i^{'}(L_i) - w(L) - L_i w^{'}(L) = 0.$$

Generalized to the case of n firms let

$$L \equiv \sum_{i=1}^{n} L_i,$$

and the first-order condition of firm i remains

$$\pi_i^{'} = R_i^{\prime}(L_i) - w(L) - L_i w^{\prime}(L) = 0.$$

[20]This assumption of competition in quantities well fits decision-making in the film industry. Producers and broadcasters typically decide on the number of films they will produce. For instance, broadcasters produce according to a previously set up program scheme. Since creative labor is more or less hired in fixed proportions to the output, this fits the Cournot model. Otherwise, Bertrand competition implies that producers set wages first and employ every worker willing to work at that wage level. This seems rather implausible. Further, the Cournot model implies the strongest "anti-competitive" outcomes for general oligopsony models. Therefore, the analysis of Cournot competition can be regarded as a "worst case" oligopsony analysis of buyer power.

We now define a firm-specific rate of exploitation E_i by rearranging the equation above to

$$R_i' - w(L) = L_i w' \frac{w(L)}{w(L)} \frac{L}{L} = L_i \frac{w(L)}{L} \varepsilon^{-1},$$

such that

$$E_i \equiv \frac{R_i'(L_i) - w(L)}{w(L)} = \frac{L_i}{L} \varepsilon^{-1}.$$

Obviously, E_i is the same for all firms in the symmetric case, i.e., where $R_i^{'}$ is equal for all firms. Note that E_i is decreasing in the number of firms in the market. In the asymmetric case, where $R_i^{'}$ differs across firms, an employment-weighted average of these individual rates of exploitation can be expressed by

$$E \equiv \sum_{i=1}^{n} E_i \frac{L_i}{L} = [\sum_{i=1}^{n} (\frac{L_i}{L})^2] \varepsilon^{-1},$$

where the expression in brackets represents the Herfindahl-Hirschmann index H. This concentration index is based on market shares that can be represented per unit (which implies that the maximum value of H is 1) or in percent (which implies that the maximum value of H is $10,000$). Note that there is no unambiguous relationship between the concentration of firms and the market outcome, because a firm's market shares are endogenous and depend on n and the distribution of $R^{'}$ among firms.[21]

Nevertheless, H may provide an useful indication of possible buyer power for practical purposes (Tirole (1992), p. 223). For instance, the US Department of Justice and the Federal Trade Commission use the index in guidelines for evaluating mergers.[22] Similarly, Dobson, Waterson, and Chu (1998), p. 13, suggest in a paper prepared for the UK Office of Fair Trading, "In the case of oligopsony, generally the greater the concentration of buyers then the greater is the distortion in factor price and quantity below the competitive level, other things being equal." The N-firm concentration ratio (CR-N) is

[21] For instance, if one firm systematically realizes a higher margin revenue product, it will also yield a higher market share. More generally, it can be stated that with asymmetric firms concentration need not be related systematically to welfare. Note that, although E and H are endogenous, a positive correlation between E and H can be interpreted as evidence of buyer power. The reason is that, in the case of perfect competition, E equals zero.

[22] According to these guidelines, market concentration can be broadly characterized as unconcentrated if $H < 1000$, moderately concentrated if $1000 < H < 1800$, and highly concentrated if $H > 1800$ (Department of Justice and Federal Trade Commission (1997)).

another measure of concentration. It simply adds up the individual market shares of the N-largest (measured in terms of market share) firms in the market.

The Herfindahl-Hirschmann index is a more useful concentration measure than the N-firm ratio, because the N-firm ratio does not reflect the distribution of market shares among the N firms. Nevertheless, the N-firm ratio is used by competition authorities, for instance, by the German Bundeskartellamt and the Australian competition authority (see Bundeskartellamt (2001)).

A somewhat more direct relationship between the number of firms in the market and oligopsony power can be described within a symmetric Cournot model if we assume that $w(L) = L$. Under this assumption, the first-order condition of firm i becomes

$$\pi_i^{'} = R_i'(L_i) - L - L_i = 0.$$

In the symmetric case, we have $L = nL_i$ and may write

$$R_i'(L_i) - nL_i - L_i = 0$$

or

$$L_i = \frac{R_i'(L_i)}{(1+n)}.$$

Since we know that $w(L) = L$ and $L = nL_i$, it follows that

$$w(L) = R_i'(L_i)\frac{n}{(1+n)}.$$

This implies that, with an increasing number of firms in the industry, w converges rather quickly to the competitive outcome, whereby $w = R^{'}$.

Experimental evidence on number effects in the symmetric Cournot model indicate that the role of the number of firms in the market is potentially more important than the Cournot model suggests. Huck, Normann, and Oechssler (2001) show that three-firm oligopolies tend to confirm the Cournot prediction, while more than three firms typically produce results that surpass the Cournot outcome in the direction of the competitive result.[23] In contrast,

[23]Note that Huck, Normann, and Oechssler (2001) consider the case of oligopoly, rather than oligopsony. However, the cases may be viewed to produce analogous results. As Dobson, Waterson, and Chu (1998), p. 13, put it:"...it is straightforward to apply the principles of oligopoly theory to model situations of oligopsony where strategic interaction occurs between a few buyers competing in a market...".

two firms tend to surpass the Cournot outcome in the opposite direction.[24]

In summary, our discussion suggests that the legislative presumption of "structural superiority" may be described by "labor monopsony," which represents a type of market failure. Our analysis further suggests that a large number of firms and low concentration rates in the labor markets of the German motion picture industry limit the extent of potential exertion of such buyer power. The next section explores number and concentration characteristics in these markets to check the plausibility of a presumption of "structural superiority."

Plausibility of Significant Buyer Power

Any analysis of buyer power needs to define the relevant market. In the case of the German film industry, there exist numerous single labor markets, i.e., each creative profession in the German film industry addressed by the new GCL may be considered to operate in a separate labor market. We can reasonably restrict our analysis here to the concentration of firms in the output market, since creative labor is hired in more or less fixed proportions to the output. Hence, concentration in the output market reflects buyer concentration in the input markets. More specifically, we consider two output markets. First, the "theatrical market," which consists of German motion pictures produced for initial release in theatres. Second, the "market for German television fiction," which requires contributions from creative talent for products such as TV dramas or serials. While we make this distinction partly in deference to data availability, it should be noted that creatives themselves distinguish between working for the "big screen" and television.

The theatrical market is characterized by a large number of small production companies. In 2000, there were 127 companies involved in the production of 75 theatrical movies. 108 companies were attached to the production of just one movie (Roth (2001), p. 19). Production companies are often related to larger vertically integrated media companies such as Kirch Media, CTL-UFA, or public broadcasters that are sometimes referred to as "production-groups" (Röper (2000)). For this reason, we have classed each production company that is owned (disregarding the actual stake) by a larger media company or public broadcaster to these production-groups. Table 1 indicates the

[24]Number effects may also be important with respect to potential collusion of buyers. Following Blair and Harrison (1993), p. 43, there may be structural conditions that impede such acting. One of these conditions is a "fewness of buyers". It is argued that the smaller the number of buyers and the higher the concentration in the market the lower the cost of reaching, implementing and controlling an agreement. Conditions that may facilitate collusion are: homogeneous products, a low elasticity of supply, and sealed bids.

Production-Group	Market Share
Kirch	0.15
ZDF	0.09
WDR	0.07
RTL Group	0.07
Arte	0.06
CR-3	0.31
CR-5	0.44

Source: SPIO, Media Perspektiven, own calculations.

Table 1: Market Concentration in German Theatrical Film Production in 2000

market shares of the largest production groups in theatrical film production in 2000 and gives associated N-firm concentration ratios (CR-N).[25]

As is apparent, the concentration ratios in the market are low. Compared to the benchmark levels of the German competition authority, which presumes joint market dominance in the case of CR-3 $\geq 50\%$ and CR-5 $\geq 67\%$ (Bundeskartellamt (2001)), such concentrations are indeed very low. Therefore, we suggest that buyer power is clearly insignificant in the theatrical market.

The market for television fiction is also characterized by a large number

[25]The allocation of production companies to production-groups is based on the information about firm's stakes provided by Media Perspektiven (2001). Further, M. Roth of SPIO provided a listing of the production companies of all German theatrical movies in 2000. Where more than one production-group was involved in the production of a movie (which was the case in eight instances and involved three production groups) each of the N groups was considered to have a share of $1/N$ of the movie. Where a production-group co-produced with one or more foreign firms, we counted the maximal one of these foreign companies to receive a prudent result. The potential influence of (independent) co-producing German firms was completely ignored so that the larger production group received the entire associated market share. Thus, our computation is likely to overestimate actual market shares. Due to the insolvency of parts of the "Kirch Group" in 2002, the market structure will likely change in the future. However, it is an open question as to whether we will observe higher or lower concentration ratios. RTL Group was created in early 2000 following the merger of CLT-UFA, a TV and radio group owned by Bertelsmann AG (with the German newspaper group WAZ) and the Belgian-Canadian Groupe Bruxelles Lambert (GBL), with the British production company Pearson TV owned by the UK-based media group Pearson plc. In July 2001, Bertelsmann became majority shareholder of RTL Group following a stock swap with GBL. In December 2001, Bertelsmann entered into an agreement with Pearson plc to acquire its 22% stake in RTL Group, raising Bertelsmann's interest in RTL Group to 89%. The remaining 11% of RTL Group is publicly traded (www.rtlgroup.com, May 19, 2002).

Production Group	Market Share
CTL-UFA	0,15
Springer	0,08
Kirch	0,06
Holtzbrinck	0,04
Studio Hamburg	0,03
Tele-München/Kloiber	0,03
Bavaria	0,02
Heinrich Bauer Verlag	0,02
CR-3	0.29
CR-5	0.36
CR-8	0.44

Source: Röper (2000), own calculations.

Table 2: Market Concentration in German Television Fiction Production in 1998

of small production companies. In 1998, there were 101 German production companies that produced 300 movies for television, i.e., TV dramas or serials with run times of about 90 minutes (Röper (2000), p. 19). As in the theatrical market, vertical integration is also a feature of the television market.[26] Table 2 indicates the market shares of the largest production groups in television market in the year 1998 and gives associated N-firm concentration ratios (CR-N).[27]

Obviously, concentration ratios are also low in the market for German television fiction. As a whole, this suggests that buyer power is not significant in the labor markets associated to the production of movies in Germany.

[26]Note that Röper (2000) considers the market for productions made for hire only. Therefore, potential productions produced by the broadcasters themselves are neglected. Such productions are a rare with respect to TV dramas and serials. Only news, sports, and magazine-type shows are typically produced by broadcasters Lange (1997), p. 3. Thus, Röper (2000) provides data that is relevant to our analysis.

[27]Röper (2000) allocates a production company to a production-group, if the production-group has a stake of 25% or more. In the case of N co-producing production-groups each of the N groups was considered to have a share of $1/N$ of the market. Market shares are based on minutes run time. Note that Table 2 considers the production of television fiction as a whole, i.e., it includes programs such as soaps and talk shows. However, this may actually contribute to overestimating buyer concentration in television movie production, because the production of soaps is more concentrated than total television production and accounts for a relatively high share of total production (Röper (2000), p. 24). Further, Röper (2000) states that television movie production is characterized by "intense competition", p. 19.

The term "structural superiority" applied to in the German motion pictures industry appears to be a political phrase without economic equivalent.

Therefore, we may conclude that the new copyright law uses a misleading presumption about the German motion picture industry.

We now examine the economic effects of the new law. We first consider legally fostered collective remuneration schemes, then examine the effects of the blockbuster clause.

3.2 Effects of Collective Remuneration Schemes

The effects of collective remuneration schemes promulgated by §32 of the new GCL may be analyzed with the help of models of trade union behavior.[28] The literature discusses two standard types of models of the influence of unions on wage and employment: the "right-to-manage" model and the "efficient bargain" model.[29] Both models utilize the idea that unions have indifference curves defined over wages and employment,[30] but the models differ in their assumptions regarding what unions and employers bargain about. While the right-to-manage model assumes that the parties negotiate about wages only, the efficient bargain model considers that negotiations are over wages and employment levels. These assumptions are crucial for the implications of the models. The efficient bargain model can result in outcomes with more-than-efficient, less-than-efficient, or efficient employment levels. In contrast, the right-to-manage model generally implies less-than-efficient employment levels.

Although we will show that the assumptions of the efficient bargain model are poorly suited to the provisions of § 32 GCL, this model is presented first, because, as we will see, the blockbuster clause provides a link between the efficient bargain and the right-to-manage model.

Efficient Bargain Model

The idea of the bargaining contract curve with respect to the unionization of the labor market was first proposed by Leontief (1946) and later developed by McDonald and Solow (1981). Labor is considered essential for production,

[28] See Creedy and McDonald (1991) for a review of such models.

[29] The expression "right-to-manage" model was suggested by Nickell (1982).

[30] Several types of union utility functions have been suggested in the literature. Oswald (1982) proposes a function that defines union utility as the sum of the utilities of its members. The union's maximization problem then depends on the expected utility derived from employment and unemployment of each member. Other versions such as those contained in McDonald and Solow (1981) include the alternative wage available without unions.

so that the firm's profit is zero when no bargain can be agreed on. Following McDonald and Solow (1981), the union's objective function can be written as

$$U = u(w_u, L, w_a),$$

where w_u denotes the real wage the union can achieve, w_a is the alternative real wage available without unions and L is the employment level of organized workers. The objective function is assumed to be twice continuously differentiable and strictly quasi-concave. Further, assume that its first partial derivatives with respect to w_u and L are strictly positive.[31] This objective function gives the union's indifference map as shown in Figure 2, where the unions preference order is $I_3 > I_2 > I_1$. The profit maximizing firm's indifference map consists of isoprofit curves derived from the firm's profit function

$$\pi(w_u, L) = R(L) - w_u L,$$

where $R(L)$ is assumed to be strictly concave and twice continuously differentiable in L. Firm's seek to reach their most preferred isoprofit curve, which, in this case, is π_3. Accordingly, the isoprofit curves in Figure 2 are such that for the firm $\pi_3 > \pi_2 > \pi_1 > \pi_{\min}$. In a competitive labor market the firm's demand curve for labor $R^{'}$ cuts through the peak points of its isoprofit curves.

The contract curve is formed by the points of tangency between the employer's isoprofit curves and the union's indifference curves and lies between C at the lowest wage the union will accept, and $C^{'}$, which is the lowest level of profit $\pi_{\min}$ that the firm will accept. MaCurdy and Pencavel (1986) suggest that there exist three potential types of contract curves, which are illustrated in Figure

They analyze how the form of the contract curve depends on the specific objective function of the union. If the union's objective function is $U = [w_u - w_a]L$, i.e., a form of rent maximization, then the contract curve within their framework is vertical as displayed by CC'' in Figure 3 (MaCurdy and Pencavel (1986), p. $S13$). If we assume that the alternative wage w_a is the competitive wage, this implies that the employment level is efficient. For other objective functions, contract curves such as CC' and CC''' are feasible. This implies that collective wage schemes may result in more, less or equal employment than under the alternative setting without unions. Therefore, the efficient bargain model is only efficient in the sense that is satisfies the

[31] It is also assumed that the union does not affect the overall price level in the economy.

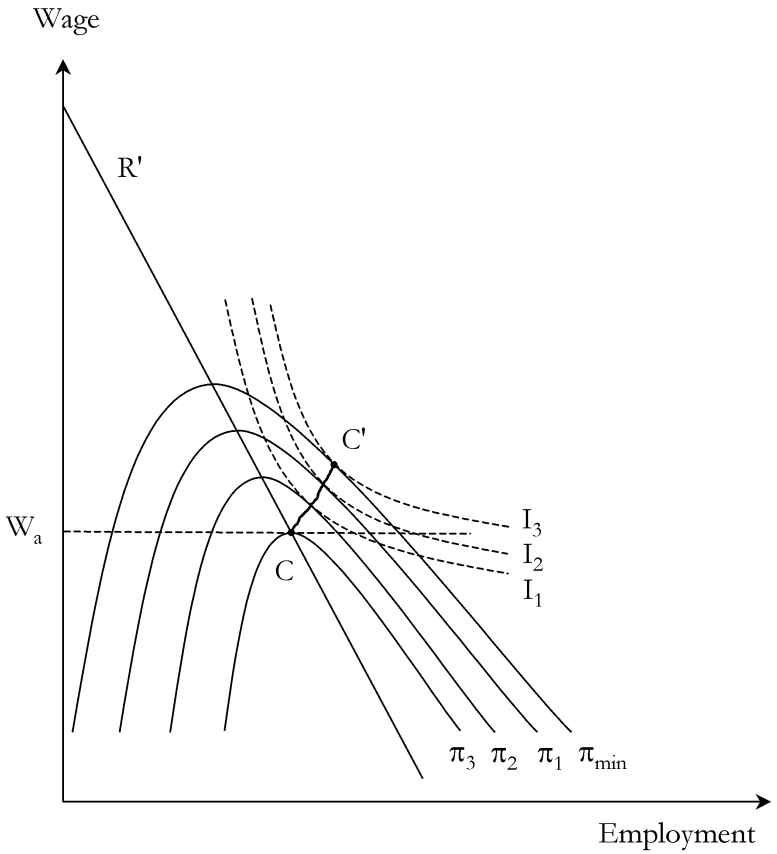

Figure 2: Contract Curve Formation in the Efficient Bargain Model

preferences of the union and the firm. From society's standpoint, the efficient bargain model generally implies a misallocation of resources as employment levels differ from the competitive level. Moreover, since profits will always be lower with unions, some firms may exit the market. Therefore, unions may indirectly lead to lower levels of employment regardless the actual shape of the contract curve.

Right-to-Manage Model

Just as with the efficient bargain model the right-to-manage model assumes that unions and firms have objective functions such as those used above. Again, it is assumed that the firm will negotiate with the union, because, without a bargained agreement, profits are zero.

The right-to-manage model immediately appears better suited to our

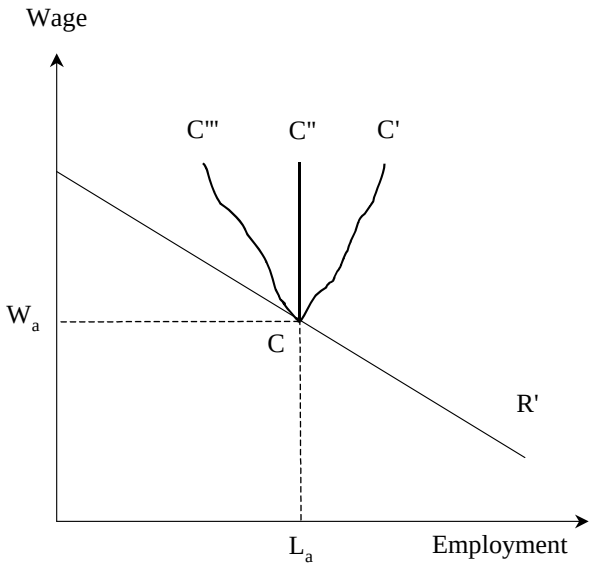

Figure 3: Possible Forms of Contract Curves in the Efficient Bargain Model

analysis than the efficient bargain model. First, it does not assume that creative workers and producers bargain over *both* wage and employment levels – only wages are subject to negotiations. This fits the prescriptions of the new GCL, which explicitly refers to the determination of wages only. Second, it has been argued in the literature that unions rarely negotiate directly about employment levels (e.g., Brown and Ashenfelter (1986)).[32]

The right-to-manage model assumes that, while the union can influence wages, the firm is free to set its profit-maximizing level of employment. Thus, there is bargaining over wages only when employers control employment. The negotiated wage then depends on the union's and the employer's relative bargaining power. More specifically, the right-to-manage model generates outcomes in the wage and employment space that lie along each firm's labor demand curve R'. This is because each point on the demand curve represents the profit-maximizing employment level for a given wage. The outcome is characterized by the tangency between the firm's labor demand curve R' and

[32]Another view is that bargaining about work practices may be a sufficient proxy for direct negotiations over employment levels (McDonald and Solow (1981)). However, the appropriateness of such an approximation is controversial. For a review, see Clark (1990). Farber (1986) suggests that there may be no negotiations over employment levels due to an incentive problem. In the efficient bargain model, the marginal revenue product is generally less than the wage, which gives an incentive for the firm to behave opportunistically in that it reduces employment at the negotiated wage.

the union's indifference curve I as depicted in Figure 4.

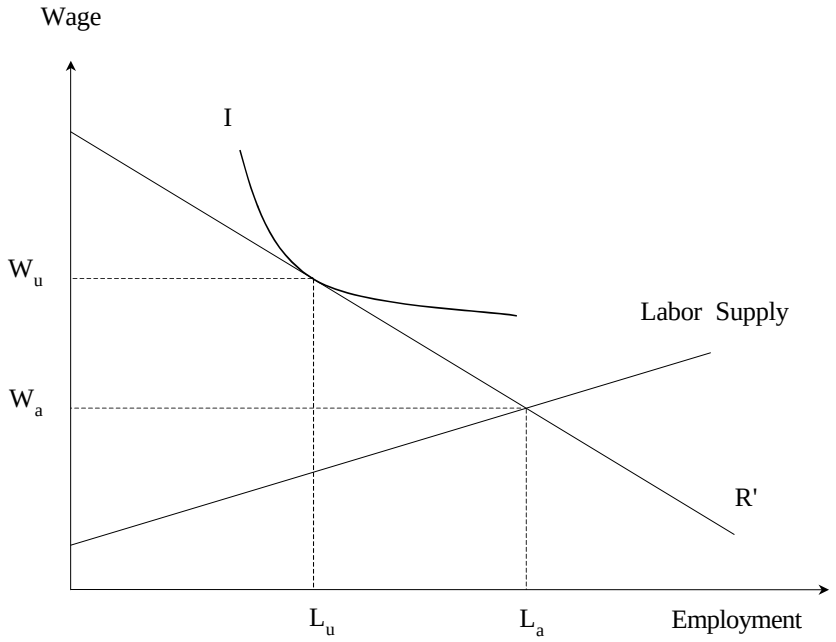

Figure 4: Wage and Employment Determination under the Right-to-Manage Model

In general, the negotiated wage w_u is higher than the alternative wage w_a, while the employment level L_u is lower than L_a.[33] If we assume that w_a equals the competitive wage w_c, a welfare loss $\int_{L_m}^{L_c}[R^{'}(L)-w(L)]dL$ is created. A rise or decrease in the overall remuneration of creative workers depends on the elasticities of labor demand and supply. Nevertheless, for a wide range of elasticities an increase in the overall income of creative workers can reasonably be assumed. On the other hand, the firm's profits will fall unless the union has no bargaining power. This may entail an indirect negative effect on creative workers, since decreasing profits may trigger cuts of employment to the extent that producers exit the market. Table 3 recapitulates the effects of § 32 GCL according to the efficient bargain and the right-to-manage model.

Overall, we may conclude that the legally encouraged application of collective remuneration schemes by the new GCL will lead to higher wages for

[33]When the union completely controls the bargaining process, the right-to-manage model is equivalent to the traditional textbook union monopoly model. On the other hand, if the firm controls the negotiations, then (w_a, L_a) is the solution. See Manning (1987) for a detailed analysis.

	Union Model	
	Efficient Bargain	Right-to-Manage
Direct Effects:		
Wage	+	+
Total Worker Remuneration	+	+
Employment	?	-
Profits	-	-
Efficiency	-[a]	-
Indirect Effects:		
Total Worker Remuneration	-	-
Employment	-	-

[a]Only for vertical contract curves efficient levels of employment are possible.

Table 3: Economic Effects of Collective Remuneration Schemes Under Different Models of Union Behavior

those creative workers that are employed. It may well be possible that total remuneration to creative workers is lower, however, when indirect effects of collective remuneration schemes are considered. In any case, efficiency losses can be expected.

3.3 Effects of the "Blockbuster" Clause

According to § 32a of the new GCL originators have the right to demand a change of an existing contract, if the previously agreed on payment is disproportionate from an ex-post perspective. In economic terms this can be interpreted as a provision that prescribes the introduction of sharing contracts. This may affect transaction costs, the allocation of risk between producers and creative talent, and producers' and creative talent's efforts.[34]

[34]Some of the arguments we discuss in the following have also been analyzed in the context of the *Droit de Suite*, which is a legal instrument that is concerned with the idea of protecting artist. The Droit de Suite entitles an artist to a portion of the revenues (French version) or the capital gain (Italian version) obtained from all future resales of his artwork. Perloff (1998) summarizes much of the economic literature on the issue. However, though it provides a good starting point the wisdom provided by that literature is only partly transferable on the analysis of the new GCL. First, the literature does not refer to the issue of collective remuneration schemes. Second, its focus often refers to specific characteristics of the production of artworks such as paintings instead of motion pictures. For instance, Solow (1998) concentrates on the question how the Droit de Suite affects the individual artist's incentives to produce art at different points in time. The idea behind his

The bargaining process between unions and producers may also be affected by that prescription. We turn to the latter point first.

The Right-to Manage Model Reconsidered

Anderson and Devereux (1989) argue that the adoption of profit-sharing contracts may provide a link between the right-to-manage and the efficient bargain models of trade union behavior. An optimal contract can use profit-sharing to establish the efficient bargain outcome within a right-to-manage framework. To see this, we first consider the efficient bargain solution. Assume the firm's profit function is

$$\pi(w_u, L) = R(L) - w_u L$$

and the unions's utility is represented by

$$U(w_u, L, w_a) = Lu(w_u) + (\bar{L} - L)u(w_a),$$

where $\bar{L}$ is total union membership. In addition, assume that labor is essential for production, so that the firm's profit is zero if no bargain can be agreed on. Then the bargaining process is characterized by the generalized Nash solution, where the optimal pair (w_u^*, L^*) solves the problem

$$\max B^* = \pi(w_u, L)^{(1-\alpha)}(L(u(w_u) - (u(w_a)))^{\alpha}$$

with respect to w_u and L. The parameter α is the relative bargaining power of the union, with $\alpha \in [0, 1]$. This gives the solution

$$R_L = w_u^* - [(u(w_u^*) - u(w_a)/u'(w_u^*)], \tag{1}$$

$$w_u^* = (1 - \alpha)R_L + \alpha\frac{R}{L^*}. \tag{2}$$

The first of the two equations describes the optimal employment rule for the efficient bargain. Since R_L is smaller than w_u^* the optimal wage lies above the labor demand curve unless the union's relative bargaining strength α is zero. In Figure 5 this is depicted as point N, which lies on the union-firm contract curve CC'''.

analysis is that the financial interest in sold works that is generated by the Droit de Suite provides an incentive to maintain the future value of the artist's work by restricting or expanding future output. This argument, however, comes form the theory of the durable goods monopolist as described by Coase (1972). Since the demand for motion pictures in general declines sharply in time the analysis does not seem to be applicable to that market (see e.g., De Vany and Walls (1999)).

Now assume that employment is determined unilaterally by the firm, i.e., a right-to manage approach. Further, consider the introduction of a profit-sharing compensation scheme

$$y = w_{fix} + \frac{\lambda}{L}[R - w_{fix}L], \tag{3}$$

where y is total income per worker, w_{fix} is the fixed payment per worker and λ/L is the profit-share that is paid to each worker. Then the firm's profit function is

$$\pi(w_{fix}, L, \lambda) = R - yL = (1 - \lambda)(R - w_{fix}L). \tag{4}$$

This implies that the firm's optimal employment level is given by

$$R_L = w_{fix}. \tag{5}$$

Note that the optimal employment level is independent of the profit share parameter λ, because the profit-sharing contract operates like a neutral profit tax. Now consider that the union and the firm bargain over w_{fix} and λ subject to the restriction that employment is determined by equation (5). Then the optimal bargain can be defined as the pair $(\bar{w}_{fix,}\bar{\lambda})$, that is given by the solution of the problem

$$\max B^* = \pi(w_{fix}, L, \lambda)^{(1-\alpha)}(L(u(y) - (u(w_a)))^{\alpha}$$

with respect to w_{fix} and λ and subject to equations (3) and (5). Anderson and Devereux (1989), p. 430, show that the first-order conditions with respect to w_{fix} and λ to hold simultaneously require that $\alpha = \bar{\lambda}$, i.e., that the optimal profit-share equals union power in the bargain. Then using equations (3) and (4) implies that

$$\bar{y} = (1 - \alpha)R_L + \alpha\frac{R}{L}, \tag{6}$$

where $\bar{y}$ denotes the optimal total income per worker. Furthermore, w_{fix} can be written as

$$\bar{w}_{fix} = \bar{y} - [u(\bar{y}) - u(w_a)/u'(\bar{y})], \tag{7}$$

where $\bar{w}_{fix}$ is the optimal fixed income per worker. Now it is clear that equations (5) and (6) are identical to (1) and (2). Therefore, the optimal

profit-sharing scheme within the right-to-manage model replicates the outcome of the efficient bargain model.[35] Why is this the case? An efficient contract in general requires that there are negotiations over *both* employment and the division of total surplus.[36] A profit-sharing contract can achieve the same, since it allows for an independent choice of the fixed wage and the profit-sharing parameter. Figure 5 illustrates this result.

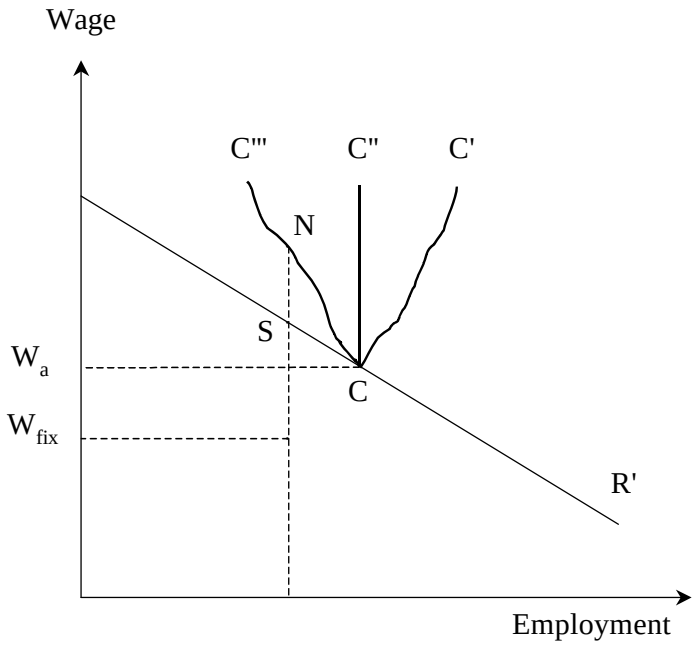

Figure 5: Wage and Employment Determination under the Right-to-Manage Model with Profit-Sharing Contracts

The fixed wage w_{fix} is chosen so that the firm chooses point S on the labor demand curve.[37] The total income per worker is then determined by the associated efficient-bargain point on the contract curve N. Employment

[35]The result of the equivalence between the profit-sharing contract and the efficient bargain model does not depend on the particular union's objective function used here. However, $\alpha = \bar{\lambda}$ only holds for the union's preference functions that are linear in employment. See Anderson and Devereux (1989), p. 431-432.

[36]A similar result is provided by the solution of bilateral monopoly problem. Already Bowley (1928) has shown that bilateral monopolists have incentives to cooperate in order to maximize "joint profits," i.e., to negotiate the efficient solution. Stigler (1987) suggests that it is helpful to consider the outcome of such cooperation by analyzing a fully vertically integrated firm, i.e., to consider the two bilateral monopolists as one vertically integrated entity.

[37]In the case where the union has no bargaining power, $\alpha = 0$, w_{fix} equals R_L.

can be lower (as depicted in Figure 5), higher or constant compared to a setting without the union. This depends on the specific form of the contract curve. Another result is that w_{fix} must lie below w_a, if $u^{''} < 0$. To see this, consider that, if $u^{''} < 0$, the condition $u^{'}(y) < u^{'}(x) < u^{'}(\bar{w})$ for $y > x > \bar{w}$ must hold. Now it can be written:

$$u(y) = u(\bar{w}) + \int_{\bar{w}}^{y} u^{'}(x)dx > u(\bar{w}) + (y - \bar{w})u^{'}(y),$$

which is equivalent to

$$\bar{w} > y - \frac{u(y) - u(\bar{w})}{u^{'}(y)}.$$

Since the right-hand term of the equation above equals w_{fix}, it follows directly that $\bar{w} > w_{fix}$.

To sum up the "blockbuster"clause of § 32a GCL has the potential to foster the replication of the efficient bargain outcome within the a right-to-manage framework. However, we cannot conclude that the usage of profit-sharing contracts is generally preferable to fixed compensation contracts.

In any case, § 32 and 32a GCL can be expected to cause negative effects (see Table 3). Furthermore, § 32a may give rise to more inefficiencies. We turn to such problems in the following sections.

Risk Allocation and Incentives

The "blockbuster" clause also affects the allocation of risk between producers and creative talent, and may alter contractual incentives. We now discuss the interplay of risk allocation and incentives in the context of moral hazard.

Chisholm (1997) suggests such an approach for the motion picture industry. She presents an analysis of sharing contracts in the context of a principal-agent framework with asymmetric information. This model assumes that a film's performance depends positively on the level of effort chosen by creative talent. Creative talent is considered to engage in a positive level of effort due to the reputation effect of performance on the expected future income stream. However, beyond that level, an inducement to exert more effort is required to offset the disutility of effort. The moral hazard problem here is caused by the fact that it is virtually impossible to monitor the actual efforts of creative talent during the production process. Creative talent such as actors and directors always have, compared to the producer, superior information about their choice of effort. Therefore, there always exists the possibility of undetected shirking. In this context, sharing contracts may help to prevent

opportunistic behavior. Conversely, the use of sharing contracts may also introduce a trade-off between efficient risk allocation and incentives.

To clarify the problem, assume first that both the principal (producer) and the agent (e.g., the director) are risk-neutral.[38] Here, the solution to the incentive problem is trivial: the principal offers a contract to the agent that fully insures the principal's income and leaves the agent with all the risk ("franchise contract"). This contract has the desirable attribute that the agent chooses his highest level of effort. In this case, there is no trade-off between efficient risk allocation and incentives, because neither the principal nor the agent care about risk and all allocations of risk are efficient. The situation changes, however, if the agent is risk-averse. Here, efficient risk allocation is characterized by a fixed-wage contract, whereby the risk-neutral principal bears all the risk. This gives rise to a trade-off between efficient risk allocation and incentives: if the agent receives a secure income, he has no incentive to increase his effort.

While we have no empirical knowledge about the actual risk preferences of producers and creative talent, we may consider that they are asymmetric. Like Chisholm (1997), we suggest that creative talent is risk-averse, while producers are risk-neutral, because the participation of creative talent in film production is limited at most to a few of films per year. Therefore, the diversification of risk through a high number of projects is problematic. In contrast, producers may engage in a many projects and diversify their risks. In addition, human capital is difficult to diversify, because it is non-marketable. Firms, on the other hand, have the possibility to diversify their financial assets in capital markets.

Given these assumptions, we proceed with the help of a simple model. Consider a risk-neutral principal, the producer, and a risk-averse agent, say, the director. If both parties agree on a contract, the director can choose whether he wants to perform the task with high effort a_h or low effort a_l, with $a_h > a_l$. The level of effort is not observable to the producer. The producer earns a random revenue Y that depends positively on the performance of the film. If the film is a success, Y equals y_s. If the film is a flop, Y equals y_f. The director's choice of effort affects the probability distribution of Y such that high effort action a_h implies a higher probability of $Y = y_s$. Further, assume that the probability of a successful film $Y = y_s$, conditional on the director's effort a_i, is p_i, $i \in \{h, l\}$, where $1 > p_h > p_l > 0$. In this framework, the expected utility of the director who signs a contract $C = \{w_s, w_f, a_i\}$ is

$$U(a_i) = p_i u(w_s) + (1 - p_i)u(w_f) - c(a_i),$$

[38]The following analysis is based on the presentation of Wolfstetter (1999), Chapter 11.

where $u(\cdot)$ is a strictly concave function, w_s and w_f is the director's salary when the film is a success or failure, respectively, and $c(a_i)$ is a positive function that represents the director's disutility from effort. The producer's expected profit is

$$\pi_i = p_i(y_s - w_s) + (1 - p_i)(y_{f-} w_f).$$

Thus, the marginal rates of substitution (MRS) between w_f and w_s of the director and the producer are

$$\left.\frac{dw_f}{dw_s}\right|_{U(a_i)=const} = \frac{p_i}{1-p_i}\frac{u'(w_s)}{u'(w_f)},$$

$$\left.\frac{dw_f}{dw_s}\right|_{\pi_i=const} = \frac{p_i}{1-p_i}.$$

Figure 6 illustrates some implications of that model in an Edgeworth box diagram.

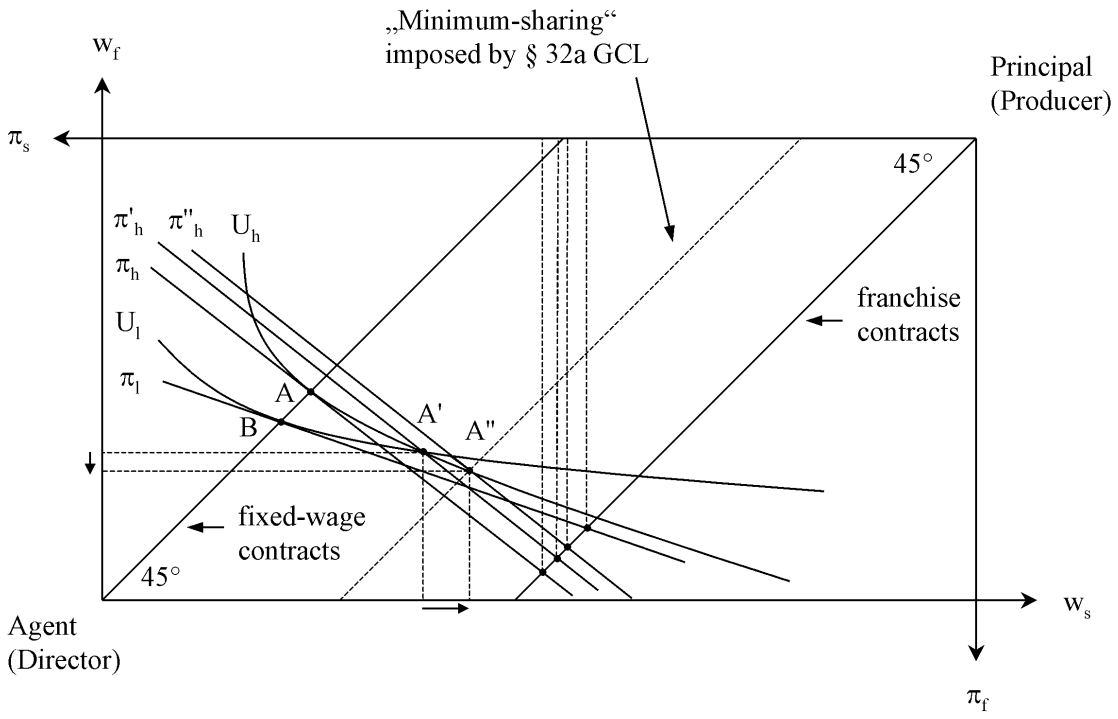

Figure 6: The Effect of the "Blockbuster" Clause on Risk Allocation

The agent's indifference curves U_l and U_h represent his reservation expected utility $\overline{u}$ in a low and high effort state, respectively. The different positions of the indifference curves arise from the differences in disutility from effort $c(a_i)$. Likewise, the principal's isoprofit curves are denoted as π_l and π_h. The slopes of the indifference curves and of the isoprofit curves reflect the fact that the agent's and the principal's MRS in the high-effort state are higher than in the low-effort state, because $p_h > p_l$.

To assess the effects of the new GCL, we first consider the efficient allocation of risk. Efficient allocation is fully characterized by three conditions. First, the MRS of the principal and the agent are identical: only then are further gains from a reallocation of risk impossible. Since agents are assumed to be risk-averse, all efficient allocations must lie on the "fixed-wage contracts" line, because only there the agent's income is fully secure (implying that $w_s = w_f$). Second, the agent's reservation expected utility level $\overline{u}$ must be reached or he will reject the contract. Third, the principal's expected profits are maximized. In Figure 6, expected profits can be read from the intersection of the principal's isoprofit curves with the "franchise contracts" line.

Obviously, point A represents an efficient allocation of risk: the principal's expected profits are maximized (π_h), the agent's utility level is $\overline{u}$ and both principal and agent have the same MRS. In A, the principal offers a pure fixed-wage contract to the agent that requires high-level effort a_h. However, full income insurance leads to the moral hazard problem. As the agent's effort is not observable, he might shirk and choose the low effort a_l. In this case, full income insurance would lead to a situation represented by point B. Although the agent still reaches $\overline{u}$, the principal's profits fall from π_h to π_l. This is inefficient. The principal now may offer an incentive contract to the agent to achieve a higher level of profit. Since the agent is risk-averse, this inevitably constitutes the trade-off between efficient risk allocation and incentives. Nevertheless, second-best allocations are still obtainable. Point $A^{'}$ represents the outcome of a second-best contract. This contract has the desirable characteristic that the agent is indifferent between exerting high or low effort, and the principal may implement the high-level action. In $A^{'}$, the principal reaches his second best profit level $\pi_h^{'}$ by implementing a sharing contract.

Now consider the effects of imposing a "minimum-sharing" provision as demanded by § 32a GCL. Obviously, if the provision is not binding $A^{'}$ would still be realized. In contrast, a binding "minimum-sharing" provision as indicated in Figure 6 leads to a less efficient allocation of risk. In this case, $A^{'}$ is no longer feasible. The principal offers a contract to the agent that maximizes expected profits subject to the "minimum-sharing" provision. That contract

is represented by A'' and gives (compared to A') the following changes:

First, expected profits are lower, because $\pi_l' > \pi_l''$. Second, if the movie is a flop, the agent's wage is lower. In the case of success, the agent's wage is higher.[39] Third, A'' represents a less-than-second-best efficient allocation of risk, because risk has been "shifted" from the risk-neutral principal to the risk-averse agent. This contradicts the legislative intent of the new GCL, which seeks to prevent a shifting of risk from producers to creative talent. Overall, A'' represents an allocation of risk that is less efficient than the second-best contract.

Note that A is not the only first-best efficient contract within the framework of the model presented here. For instance, if the differences in probabilities p_h and p_l become smaller, or if the parameter g_s is assumed to decrease, a contract which requires only a low level of effort a_l from the agent – similar to that represented by B – could also be offered to the agent. Indeed, all parameter constellations that imply $\pi_l > \pi_h$ would induce the principal to offer a "fixed-wage" contract that in turn induces the agent to choose the low-effort action a_l. Nevertheless, the introduction of a "minimum-sharing" provision would cause analogous effects to the incentive contract case discussed above, and, in particular, risk-shifting on creative talent and lower profits. The reason is that efficient "fixed-wage" contracts are impossible to realize when the "blockbuster" clause is applied.

Further, the introduction of the "minimum-sharing" provision may also give a result where low-effort contracts are exchanged for high-effort contracts. Here, the necessary compensation paid to creative talent for the legally induced risk-taking is larger than the compensation necessary to induce creative talent to choose the high-effort action a_h. Therefore, 32a GCL could also lead to more contracts that induce high effort.

There is yet another incentive effect of the "blockbuster" clause, i.e., the effect of the new law on producers' incentives to promote the sale of the films they produce.[40] For instance, such promotional activities include efforts to sell a film on the international market. Whether the legally forced introduction of sharing contracts affects such promotional activities will depend on the definition of the "shared" pool. If the pool consists of profits, there

[39]The effect of the new GCL on the allocation of risk may also imply a redistributive aspect between different types of agents. From an *ex post* perspective, creative talent attached to more successful projects may receive higher incomes, while creative talent attached to failures may earn less income under the new legislation. This holds, if the number of projects that the average creative employee realizes is sufficiently small and the distribution of the projects performance is sufficiently skewed.

[40]The promotional activity effect is analyzed in the context of the *droit de suite* by Karp and Perloff (1993).

will be no distortion. The argument is analogous to the standard neutrality argument concerning the effects of profit taxes on the firm's decisions. Profit-sharing does not affect the producers' marginal decisions on promotional effort. Maximizing the "pool" is still optimal. On the other hand, if collective remuneration schemes base on revenues or alternative "pools" that are different from the firm's profits, then promotional activities will be affected, because the producer bears all the cost of promotion, but receives only a fraction of the associated revenues. Therefore, the expected return from investing into film promotion may decline under the new legislation.

Transaction Costs

The "blockbuster" clause effectively turns fixed payment contracts into share payment contracts. This affects the transaction costs of contracting, because the cost of share and fixed payment contracts differ. In the case of the motion picture industry, fixed payment contracts are typically standardized forms that require simple information such as the working title of the film, the name of the producer, and payment of the creative talent.[41] In general, the marginal cost of drafting, monitoring, and enforcing the contract is small.

On the other hand, share payment contracts could imply significant transaction costs. Imagine, say, that a director's compensation is tied to the revenue of a film. First, defining the contract can be costly. What sources of revenues should be included? Do revenues include theatrical revenues, revenues from pay-TV and free-TV, DVD, video, in-flight entertainment, merchandising, foreign markets? Should the director's payment vary with reruns on television? Second, disclosure obligations have to be negotiated to enable the contractual parties to monitor the film's success. Such monitoring is also costly. Ultimately, the director or a representative may have to control the books of the producer. Third, administrative costs with respect to the recording and the disclosure of respective data will be created. Things get even more complicated where profits, and not revenues, are used as the relevant pool of share payments; should costs include production costs only or are distribution expenses also included? Do production costs include overbudget penalties? Do distribution expenses include transportation insurance, etc.? Fourth, law enforcement costs, i.e., costs of litigation may also be generated.[42]

[41] See Chisholm (1997) and Weinstein (1998) for detailed descriptions of contracting practices in the US film industry.

[42] Germany has several trustee organizations that administer the exploitation rights of creative talent. For instance, GEMA, the *Gesellschaft für musikalische Aufführungs- und mechanische Vervielfältigungsrechte* (The society for musical performing and mechanical

Which party will bear the cost? One way to consider this question is to treat legally induced transaction costs as a tax. In general, the answer to this question then depends on the price elasticities of labor demand and supply. The party with the lower elasticity will bear the larger share of that cost.[43] Moreover, under the reasonable assumption that infinite and zero price elasticities can be excluded, both parties will have to bear the artificially increased transaction costs of contracting.

To sum up, significant transaction costs can be expected from compliance with the "blockbuster" clause.

3.4 Effects of Other Prescriptions

Apart from the two main prescriptions discussed so far, the new GCL also gives rise to vagueness that may cause legal uncertainty. Since legal certainty enables economic transactions, legal uncertainty may hinder transactions and may increase incentives to move to other jurisdictions with greater legal certainty. Against that background, we briefly consider two issues: uncertainty attached to the definition of "appropriate" compensation and uncertainty linked to the extended scope of addressees under the new GCL.

Following the wording of § 36 I GCL, "associations of originators" and "associations of producers" shall be legally qualified to conclude agreements on remuneration schemes. It remains unclear what exactly qualifies these associations. § 36 II GCL seeks to clarify the situation by stating that associations must be "representative," "independent," and "empowered," but it is far from obvious what these adjectives actually mean. Moreover, it is possible that more than one association could be qualified to conclude collective remuneration schemes. Therefore, rival remuneration schemes may be negotiated. The question than arises as to which scheme is relevant for defining appropriate compensation. While § 32 I GCL states that collective bargaining contracts (*Tarifverträge*) dominate collective remuneration schemes, it

reproduction rights) passes on royalty payments to originators. One might suspect that these organizations could offer their infrastructure to help to reduce transaction costs from sharing contracts. However, since § 32a GCL allows individual legal claims to change existing contracts it seems unlikely that these organizations will actually collect associated *ex post* payments. Statements in personal conversations with representatives of these organizations support that presumption. Nevertheless, one should not exclude the possibility that future collective remuneration schemes may include such cooperation. Provided that these organizations play a role in monitoring or collecting royalties, there would still be transaction costs, since new types of revenues, e.g., from selling foreign theatrical rights of a film, would have to be implemented by these organizations.

[43]For an analysis of tax incidence in a partial equilibrium model, see Musgrave and Musgrave (1989). A general equilibrium approach is presented by Harberger (1962).

remains an open question which collective wage agreements provide a reliable benchmark and whether any relevant collective wage agreements exist. Therefore, legal uncertainty is introduced by the law.

Further, § 36 III, IV GCL and § 36a GCL prescribe conciliation proceedings proposed by a mediator (*Schlichtungsverfahren*) to specify appropriateness when (i) both parties wish such procedure, or (ii) when one party demands such procedure.[44] The arbitration board then suggests an agreement to the parties. If this agreement is not accepted, the parties may take legal action. In this case, the courts have to decide on the appropriate – or "just" to use Däubler-Gmelin's term – price of creative work. At this point, we can only speculate about the likelihood as to the legal uncertainty introduced, because the courts' definition or definitions of "appropriate" compensation can hardly be predicted. Consider, for example, that judges will have to assess the factors to define a "just" price such, risk bearing, costs, and revenues. In addition, judges may choose from a variety of ethical standards such as those proposed by Bentham, Rousseau, Marx, and Rawls, which imply differing concepts of justice.[45]

Finally, due to § 75 IV GCL, the central prescriptions § 32 and § 32a GCL apply to performing artists. Under § 73 GCL, a performing artist is "who recites or performs an opus or who artistically plays a part in reciting or performing an opus."[46] Therefore, the new GCL, compared to previous regulations, gives a broad definition of addressees. With respect to the production of motion pictures, originators with legal claims for "appropriate" compensation potentially include many of the participants. For instance, the director, the director of photography, the editor, the sound editor, actors, the production designer, the art director, the costume designer, and the screenwriter. This may cause legal uncertainty, because it seems rather difficult to define rules that stipulate which creative worker accounts for a given amount of creative merit. The production of every film is different. Sometimes the director may provide the driving creative force of a project, sometimes the screen-writer contributes the chief creative ingredient and sometimes this role is played by an actor. Presently, it is an open question as to who exactly will be entitled to receive "appropriate" compensation.

This is also important with respect to new exploitation methods. According to § 31 IV GCL, which was not amended, contracts between originators and users may only refer to known exploitation methods. Therefore, if new

[44]Provided that the other party has not started to negotiate within three months, or, one year of negotiations has not produced results, or, finally, one of the parties states unequivocally that the negotiations have failed.

[45]See e.g., Musgrave and Musgrave (1989) for a brief description of these concepts.

[46]Author's translation.

opportunities of exploitation emerge, new contracts have to be concluded. This has been the case in the past with respect to the introduction of video, DVD, and internet-based exploitation. Such new contracting becomes more difficult, however, when the range of addressees increases. Therefore, the introduction of new exploitation methods may be hindered by these recent changes in copyright law. This may only be limited by § 75 GCL, which prescribes, that performing artists may elect a single representative to assert their claim from § 32, 32a GCL.

4 Conclusion

The main motivation for the amendment package to Germany's Copyright Law, the "act to enhance the contractual status of authors and performers" is based on redistributive arguments derived from an *ad hoc* presumption by legislators as to the existence of a "structural superiority" of producers against their creative contractual counterparts.

Our analysis of the economic effects of the new GCL reveals two things. First, it is implausible to presume that there exists buyer power in the German motion picture industry, so the changes to copyright law are based on a misleading presumption. Second, the redistribution of income toward creative talent under the new law is likely to generate economic inefficiencies. This implies that the "price" of redistribution of income for the benefit of some members of the pool of creative talent is higher than the gains.

More specifically, our analysis shows that the legally fostered application of collective remuneration schemes under § 32 and § 36 GCL can be expected to cause inefficient employment levels in relevant labor markets. Further, German producers overall will realize lower profits, due to several effects, i.e., the redistribution of income via collective remuneration schemes, the distortion of efficient risk allocation triggered by the "blockbuster" clause 32a GCL, an increase in associated transaction costs, and reduced incentives for producers to promote their films. In addition, legal uncertainty with respect to the definition of "appropriate" compensation and concerning the extended scope of addressees of the GCL may adversely affect producers.

It is important to note that, despite the potentially higher levels of wages and total worker remuneration, creative talent may also be hurt by the new law. First, § 32a GCL contradicts the legislative objective of lowering originator risk by actually shifting risk onto them by lowering the secure part of their income. Second, creative talent can be expected to bear a share of the rising transaction costs associated to the new rules. Third, the amended GCL may reduce employment levels in the industry. Thus, while employed

workers gain higher wages, others are no longer employed. This effect depends on the specific model of union behavior suited to the market. However, it is clear that lower producers' profits and legal uncertainty will increase incentives to produce film outside of the scope of the GCL. This inevitably will adversely affects the economic well-being of creative labor.

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