

# **The Challenge of the Unknown – The Effect of Pay-What-You-Want on the Market Success of Publicly Subsidized Films**

*Cultural Institutions; Customer Satisfaction; Motion Picture Industry; Pay-What-You-Want; Pricing; Public Spending; Public Subsidies; Subsidies; Willingness-To-Pay*

*Producers and exhibitors often rely on or emphasize artistic and cultural merit to counter the economic non-viability of publicly-subsidized films. They fail to exploit innovative pricing and promotion mechanisms to increase market acceptance. Pay-what-you-want (PWYW) options, especially, could compensate for small advertising budgets. This option would allow exhibitors of independent films to compete with large chains more successfully. The results of an empirical study show that for relatively unknown films, which were represented by a surprise movie screening in the empirical investigation, pay-what-you-want options lead to higher satisfaction and higher self-generated revenues for subsidized movies than fixed ticket prices. PWYW may be considered a pricing tool to increase movie attendance and word-of-mouth multiplier effects for publicly-subsidized films.*

## **I. Introduction**

In 2011, subsidies by the German Federal Film Board (FFA) to promote German cinema amounted to € 101.9 million (see the annual report of the FFA, 2010). As Table 1 shows, subsidies have increased over the past 5 years. The artistic merit of German movies often carries greater weight for producers than economic considerations or potential market success (Jansen 2005). In this regard, the German film industry differs fundamentally from the US film industry since it relies on public funding and captures only a small market share (see Table 2). German film productions are marketed with such small promotion and advertising (P&A) budgets that the awareness of the movies on the release date is minimal (Eliashberg et al. 2000).

German films are subsidized by federal and state governments to promote national art and cultural diversity (Jansen 2005). Despite the economic non-viability of the German motion picture industry, theaters fail to compensate by using innovative pricing or promotion mechanisms to increase self-generated revenues. Often, the producers as well as exhibitors insist on the artistic and cultural merit of the subsidized films and reject ways to be more market oriented (Dietrich 2009). Eliashberg, Elberse, and Leenders (2006) call for a fuller analysis of appropriate pricing policies for movie theaters because pricing is critical at this stage of the value chain.

Year	2011	2010	2009	2008	2007
Feature films	39.2	31.6	27.9	32.5	33.8
Short films	0.75	0.53	0.56	0.66	0.63
Scripts	0.93	0.79	0.85	0.68	0.63
Distribution	10.0	7.68	6.74	6.04	6.45
Media support	7.9	10.9	10.9	7.00	7.00
Cinema investment	13.5	7.15	8.20	16.4	14.3
Digitization	15.0	-	-	-	-
Video stores	1.07	1.02	1.65	2.45	1.59
Video distributors	6.61	7.91	8.27	4.60	4.64
Additional prints	0.89	0.62	0.70	0.91	0.89
Training/Education	0.26	0.20	0.20	0.23	0.24
Research/Rationalisation/Innovation	0.28	0.20	0.25	0.30	0.30
Promotion for German cinema at home and abroad	5.45	5.33	5.40	6.74	6.43
Total Funding	101.9	73.9	71.7	78.5	76.9

Table 1: Type of funding (in EURO Million), 2007-2011

Source: FFA.

Year	2011	2010	2009	2008	2007
Admissions	129.5 Mill.	126.6 Mill.	146.3 Mill.	129.3 Mill.	125.4 Mill.
Box office gross (EURO)	958.0 Mill.	920.3 Mill.	976.1 Mill.	794.7 Mill.	757.9 Mill.
Theatre companies	1.171	1.205	1.213	1.224	1.228
Screens	4.640	4.699	4.734	4.810	4.832
Inhabitants per seat	103	100	99	98	98
Inhabitants per screen	17.622	17.397	17.292	17.074	17.024
Cinema admissions per inhabitant	1.58	1.55	1.79	1.58	1.52
Average admission price (EURO)	7.49	7.27	6.67	6.14	6.04
German films share in %	21.8%	16.8%	27.4%	26.6%	18.9%

Table 2: German theatrical market for motion pictures, 2007-2011

Source: FFA.

In Germany, pay-what-you-want (PWYW) pricing are innovative pricing and promotion tools available to increase the market success of subsidized movies. With PWYW, buyers may set any price above or equal to \$0 as the cost for their movie visit, and the exhibitor cannot reject it. Viewers can adjust the ticket price after the movie screening depending on their satisfaction with the quality and entertainment value of the experience. From studies about PWYW it is known that consumers develop more positive fairness perceptions and satisfaction when they participate in price-setting (Haws/Bearden 2006). Higher purchase intentions and preferences associated with

participative pricing mechanisms make PWYW appealing (Chandran/Morwitz 2005) and consumers also enjoy the control and novelty (Kim et al. 2009).

But results of the revenue effects of PWYW are ambiguous (Kim et al. 2009). Some smaller European movie theaters have used PWYW as a promotional tool with special surprise movie screenings (Spiegel Online 2003). Moviegoers gain additional entertainment value from the element of surprise since they do not know which movie they will see until the showing starts. The combination of PWYW with these special screenings may help theaters compete effectively with large chains to screen publicly-subsidized films, most of which have small P&A budgets and can benefit from word-of-mouth (Burzynski/Bayer 1977; Cooper-Martin 1992; Eliashberg et al. 2000; Mizerski 1982). Instead of stimulating the demand through ticket price cuts, implementing PWYW for movie screenings could raise demand as well as ticket revenues at smaller theaters, which could compensate for their competitive disadvantage in comfort and technical facilities compared to large chains. Increased self-generated revenues could lead to lower public subsidies to the motion picture industry in the medium term and make the German motion picture industry more economically viable.

This study investigates the effects of applying PWYW to movie visits in terms of price satisfaction, overall satisfaction, and prices paid. PWYW in this setting refers to moviegoers paying what they want after they have seen a movie. This pricing mechanism is compared with fixed prices requiring viewers to pay a set price prior to the movie screening. The effects of both pricing mechanisms are compared in two viewing contexts.

Adopting the perspective of moviegoers, it can be predicted that perceptions of PWYW differ with the degree of knowledge about the movie to be shown, leading to variations in the prices paid, price satisfaction, and overall satisfaction under each condition. When a moviegoer knows nothing about the film before the screening, the scenario entails a high degree of uncertainty. This situation is labeled as a surprise movie screening. In a regular screening, the movie is announced ahead of time in cinema schedules that appear in a variety of media. In those situations, less uncertainty exists because viewers know in advance the type of movie they will be watching.

Our study contributes to the field of consumer research for cultural institutions, especially how moviegoers perceive and value different situations. These insights are especially relevant for movie theaters that focus on screening alternative or subsidized films.

To undertake this investigation, the article begins with a summary of previous research on movie ticket pricing. Thereafter, possible differences in consumers' underlying cognitive processes are discussed that may drive satisfaction and willingness to pay. Next, specific hypotheses about consumers' post-choice evaluations and payments are derived. The conceptual considerations are tested empirically using data from a field experiment. Finally, the implications of the study findings are discussed.

## II. Research on Ticket Pricing

Studies dealing with the effect of ticket pricing on cinema attendance indicate that demand is elastic with respect to price (Collins/Hand 2005; Dewenter/Westermann 2005). In German movie theaters, according to Dewenter and Westermann (2005), a negative price elasticity of demand in

the range of 2.40-2.76 exists. Alternative distribution channels, such as digital television channels and DVD players, have also changed the revenue streams of cinemas and revitalized patterns of home cinema consumption (Hadida 2010). The cross-price elasticity of other (substitute) cultural goods is positive and significant (Collins/Hand 2005; Dewenter/Westermann 2005).

In the film value chain, ticket pricing occurs in the exhibition stage and is legally controlled by exhibitors, although it is closely monitored by distributors (Eliashberg et al. 2006). Academic research focuses mainly on the reasons for uniform pricing practices and the potential implementation of new variable pricing schemes (McKenzie 2012). Behavior and structural characteristics of the movie industry, and regulatory constraints dominate these proposed explanations (Orbach 2004; Orbach/Einav 2007). From a behavioral perspective, for example, price differentiation may appear unfair because moviegoers are accustomed to uniform admission prices, which creates an implicit assumption that exhibitors' costs do not vary across movies. Price savings due to price differentiation may lower demand because moviegoers may regard discounted prices as negative quality signals (Orbach/Einav 2007). Agency and double-marginalization in the movie industry further promote uniform pricing because distributors want to maximize box office revenues and prefer a higher ticket price whereas exhibitors prefer high capacity utilization, which they can achieve through lower prices and price differentiation. High capacity also generates positive revenue effects through cross-selling (e. g., food and beverages, advertising) (Eliashberg et al. 2006).

Davis (2005; 2006) examines price differentiation across markets and the relationship between local competition and admission prices. He finds that ticket prices depend on the presence of other theaters in the local market, although the effect is relatively small, and price reductions resulting from the presence of a nearby rival theater are smaller than those resulting from the presence of a theater from the same chain. These results suggest that theaters are local monopolists and that business-stealing effects across theaters are small (McKenzie 2012).

Orbach and Einav (2007) recommend variable pricing strategies to increase exhibitors' profits, observing certain pricing practices that differentiate across show times and movies. According to Kimes and Wirtz (2003), movie theaters should develop variable pricing to obtain revenue management benefits such as better strategic control of inventory. Wirtz and Kimes (2007) also note that some movie theaters that have started pricing by day of week and time of day, as well as by seat location, have met with little resistance, although perceived unfairness persists as a serious concern that can cause dissatisfaction (Kimes/Wirtz 2003; Oliver/Swan 1989), lower purchase intentions (Campbell 1999), heightened price consciousness, and a focus on monetary sacrifices (Xia/Monroe/Cox 2004) as well as negative emotions such as disappointment, anger, and outrage (Austin/McGinn/Susmilch 1980). Although Kim et al. (2009) attribute PWYW-related price decreases of approximately 30 percent to the influences of fairness and satisfaction, they also find that altruism, price consciousness, and income have insignificant effects.

### III. Conceptual Considerations

In their conceptual model of movie success, Reddy et al. (1998) demonstrate that ticket price is an objective element of evaluation. Viewers buy tickets with little knowledge of the movie they

are about to see. Although the form may be familiar, the content is not (Reddy/Swaminathan/Motley 1998). Viewers must spend money and time to obtain the consumption experience. To predict its quality, they rely on customer-based (e. g., WOM), expert-based (professional critics' reviews), and peer-based (e. g., films nominated for awards) information sources (Hadida 2009). This reliance on multiple information sources indicates consumers' high risk perceptions (Chang/Ki 2005). Price satisfaction with the movie visit depends on the disconfirmation of expectations about perceived value (Ladhari 2007). Regrets about options not chosen (Taylor 1997) and disappointment in the chosen option (Inman/Dyer/Jian 1997) create an affective discrepancy between actual and expected performance.

By turning the ticket price into a participative element, PWYW makes the payment a function of the movie experience. If moviegoers pay what they want after watching a movie, they can express their opinions of perceived value and mitigate any cognitive dissonance they may feel if they must pay for an unsatisfying experience (Mitchell/Boustani 1994). Haws and Bearden (2006) find increased consumer fairness perceptions and satisfaction in participative price-setting mechanisms. Therefore, hypothesis  $H_1$  is:

*H1: Moviegoers' price satisfaction is generally higher in a PWYW setting rather than in a fixed price setting.*

For movies, overall satisfaction correlates strongly with experiential stimulation, which includes a well-being dimension (Fornerino/Helme-Guizon/Gotteland 2008). Ladhari (2007) reveals that the pleasure and arousal a film creates also can have significant effects on satisfaction. Therefore, effects of PWYW on satisfaction beyond price satisfaction should be addressed conceptually. To participate in price-setting, consumers must actively value their movie visit to choose their payment, which requires a cognitive effort because consumers rarely have solid ideas about product valuation (Bettman/Luce/Payne 1998). Franke, Keinz, and Steger (2009) reveal that customer participation benefits customers only if they already have good insights into their own preferences and can express those preferences in monetary terms.

In addition, price determination in PWYW systems is governed by social exchange norms (Kim et al. 2009; Osterhus 1997) and the cognitive processes involve norms of distribution (Ariely/Bracha/Meier 2009). The additional effort may cause distress and even lead to dissatisfaction while a fixed price demands minimal cognitive effort. The service convenience model (Berry/Seiders/Grewal 2002) highlights transaction convenience – that is, the consumer's perceptions of the time and effort required to complete the exchange (Farquhar/Rowley 2009). Orbach and Einav (2007) find that when confronted with a menu of variable pricing schemes, consumers often become confused and avoid a purchase. Especially for a hedonic product such as a movie, the focus on price in the PWYW process may harm perceptions of the experience (Eliashberg et al. 2000; Hirschman/Holbrook 1982; Ladhari 2007).

Further, payments in a PWYW pricing scheme generally are collected after the service. Applying PWYW with a payment before the movie, for example, would be unrealistic and eliminate the function of the payment scheme as a means to reduce the financial risk of the movie consumption experience. According to the mental accounting perspective, payment timing can have varying effects on the consumption experience (Prelec/Loewenstein 1998). Payment after a movie, for

example, feels onerous since moviegoers perceive they have paid for nothing because the movie experience already has begun to depreciate.

Overall, the supposed positive effect of PWYW on price satisfaction ( $H_1$ ) argues for a positive outcome whereas the other aspects argue for a negative outcome of PWYW on overall satisfaction compared to a fixed price. Following prior research (Kim et al. 2009), it can be assumed that the effects of PWYW depend on the special characteristics of hedonic movie consumption. According to Hirschman and Holbrook (1982), hedonic goods fulfill primarily emotional needs. The hedonic character of movie consumption highlights the emotional aspects of pleasure and arousal in evaluation processes (Ladhari 2007) and getting a deal may be less relevant. Collins and Hand (2005) contend that ticket price variations affect the time, day, and theater chosen but not the basic choice of whether to see a movie. Therefore, it can be assumed that price satisfaction will be of minor importance compared to other aspects of the movie experience that determine overall satisfaction. Thus, a PWYW pricing mechanism applied after the movie experience, compared with a set price, may have a negative effect on overall satisfaction with the movie visit during the post-choice evaluation.

*H2 a: Overall satisfaction with a movie visit is lower in a PWYW setting than in a fixed price setting.*

These negative effects on overall satisfaction may be lower for a surprise movie screening. Vanhamme and Snelders (2001) confirm that surprise is an emotional determinant of satisfaction. Moreover, the PWYW price mechanism can compensate for the risk of choosing an unknown movie. We assume that the pricing mechanism and the viewing context may interact and lead to an attenuation of the negative effect of PWYW on overall satisfaction in case of a surprise movie screening.

*H2 b: The negative effect of PWYW on overall satisfaction is attenuated in a surprise movie screening.*

Next, the effects of PWYW as a ticket pricing mechanism under normal compared to surprise movie conditions are discussed. A movie visit represents an experience good, meaning that consumers do not know its value until they experience it. A PWYW decision after movie consumption reflects the consumers' own experience and valuation of the movie, perceptions of the fairness of the movie theater, and time spent. If moviegoers attend a surprise screening, they experience higher uncertainty regarding the genre, quality, and entertainment value of the movie than in a regular movie showing. Therefore, mitigating cognitive dissonance becomes even more important than for a regular movie showing, when visitors at least can make informed decisions and develop expectations on the basis of their movie-related knowledge. PWYW pricing should therefore offer a fairer pricing mechanism and encourage positive evaluations of price in a surprise movie screening.

*H3: Moviegoers' price satisfaction in a PWYW setting is higher for a surprise screening than for a regular movie showing.*

During their emotional experience, customers have varying levels of satisfaction. In a surprise movie screening, the positive emotional experience of surprise should offer a stronger determinant of affective evaluations because moviegoers do not even know what kind of movie they will see. The positive emotional reaction may increase their willingness to pay, whereas a regular movie showing involves no surprise and thus a lesser emotional experience.

*H4: Moviegoers' PWYW payments are higher for surprise screenings than for regular movie showings.*

## IV. Data and Method

The setting for our empirical study was a German student-organized cinema that shows mostly alternative movies from the European film industry. The October 2010 experiment spanned two days (Monday and Tuesday). Ticket prices for this theater are usually €1.50. To determine the level of empirical support for our hypotheses, a field experiment with a 2 (fixed price vs. PWYW) x 2 (regular movie screening vs. surprise movie screening) between-subjects design was conducted, as shown in Figure 1. In one experimental group (regular screening), viewers knew which movie would be screened but in the other group viewers knew only that the screening would feature a surprise movie. In both contexts, the same film was screened, the German movie production "Vincent will Meer" (<http://www.vincent.film.de>), which had been released in April 2010. In the film, "a young man suffering from Tourette's syndrome absconds from an institution with two other inhabitants to travel to Italy to fulfill his mother's last wish" (see <http://www.imdb.com>). Production and sales promotion were government-funded by the German federal film board retroactively because of the movie's box-office success. Government aid amounted to about €1,500,000 according to the reference film principle (see the annual report of the German federal film board, 2010). At the time of the experiment, German box office receipts for this movie totaled \$7,319,877 (<http://boxofficemojo.com>) as self-generated revenues and total attendance equaled 1,020,911 (German federal film board, 2010).

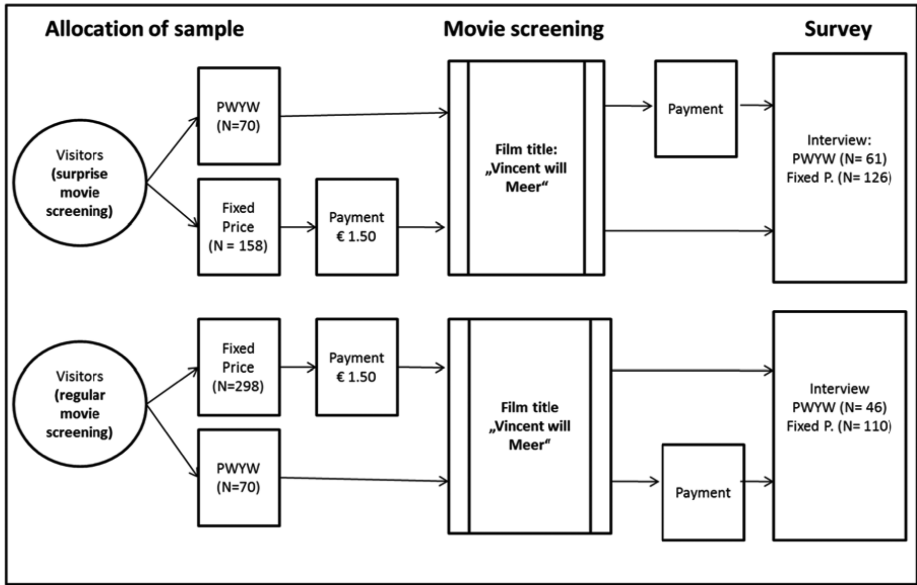


Figure 1: Field experiment design

Source: Author’s illustration.

For the experimental procedure, each day visitors were randomly assigned to one of the two pricing groups to avoid any self-selection bias. To reduce the financial risk of the experiment for the theater, visitors in the PWYW condition groups were limited to 70 people for each film condition. Visitors in the fixed price condition paid the regular price of €1.50 before seeing the movie and they completed our study questionnaire after they watched the movie. Moviegoers in the PWYW condition did not pay before seeing the movie but instead were asked to pay after seeing the movie, which represents a realistic PWYW condition since visitors can base their payment choices on their perceptions of the movie experience. At the box office, a cashier asked respondents to pay what they wanted. After customers paid their self-determined price they received the same questionnaire as visitors in the fixed price condition. To avoid negative effects on satisfaction because of long waiting lines at the box office after the movie, the prices paid per person were not documented. We only gathered the sum of the prices paid per person. After the elimination of data from visitors who refused to take part in interviews, the survey sample consisted of 343 moviegoers across all conditions (see Figure 1).

These respondents completed a series of questions by indicating their answers on a seven-point Likert-type scale ranging from 1 = “strongly disagree” to 7 = “strongly agree.” In order to measure overall price and movie satisfaction as service-related constructs, the questionnaire included the single-item measures (“I’m satisfied with my cinema visit”; “I’m satisfied with the price paid for the cinema visit”; “I liked the film I watched”) (Baker/Grewal/Parasuraman 1994). “The price I paid was fair for the exhibitor” was used to measure fairness (Bolton/Warlop/Alba 2003). Altruism, loyalty and price consciousness were measured as items adopted from (Kim et al. 2009) that



refer to individual characteristics that have been identified as drivers of price in PWYW settings (see Appendix). Customers in the PWYW conditions were asked to name the price they had paid at the box office.

## V. Results

Table 3 shows the descriptive statistics for the prices paid (box office revenues) in the two PWYW conditions. On average, viewers of the surprise movie screening paid more ( $M = €1.67$ ) than viewers of the regular movie condition ( $M = €1.38$ ). In comparison with the regular ticket price, payments by viewers of the surprise screening were 11.3 percent higher.

	Surprise Movie	Regular Movie
PWYW in € (mean)	1.67	1.38
Regular price in €	1.50	1.50
Price deviation*	+ 11.3%	- 8%
Number of tickets sold	70	70

Table 3: Price, unit sales, and revenues

\* Deviation from regular unit price of €1.50.

In the next step, the viewers' stated prices in the PWYW conditions are analyzed. Figure 2 shows the percentage distribution of prices paid as stated by the moviegoers. Overall, 54.3 percent of viewers paid higher prices, while 23.4 percent paid less for their cinema tickets compared with the regular price. The stated payments in the PWYW groups (dependent variables) are similar to the actual average prices paid, which indicates that the bias caused by misrepresentation of the actual paid price in the survey is relatively small. In the surprise movie screening condition, respondents offered a price of €1.80 (standard deviation [sd] = .09) on average, while in the regular movie condition, the average stated payment was €1.55 (sd = .10).

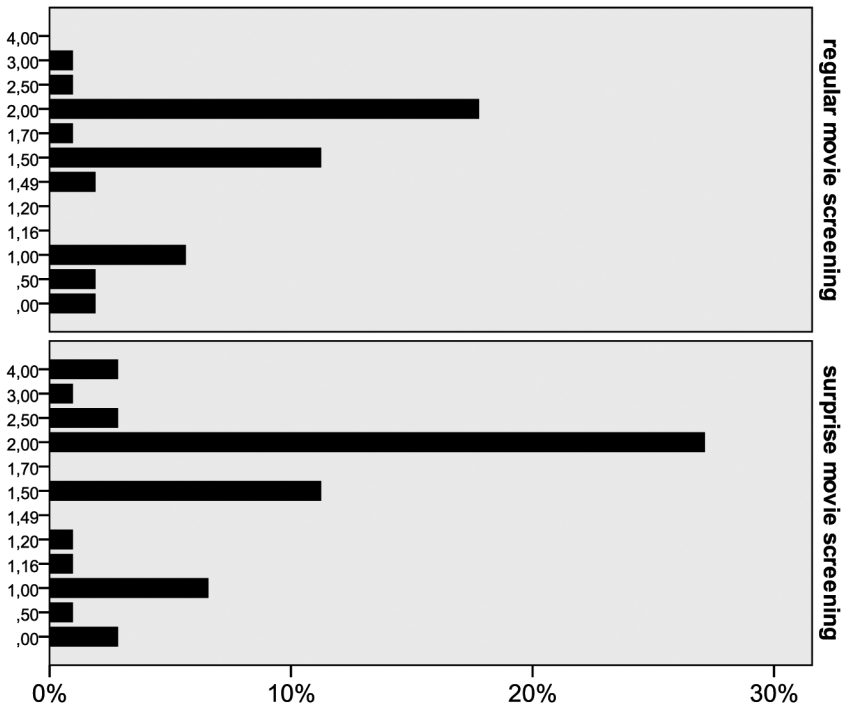


Figure 2: Percentage distribution of prices paid as stated by viewers (€; regular unit price: €1.50)

To analyze the effect of movie type and pricing scheme on price satisfaction, a one-way analysis of variance (ANOVA) was conducted with movie satisfaction as a covariate ( $p < .00$ ). Price satisfaction differs significantly ( $p < .05$ ) according to the pricing scheme and movie type ( $p < .05$ ). Because price satisfaction is higher in the fixed price condition ( $M = 6.5$ ,  $sd = .06$ ) than in the PWYW condition ( $M = 6.3$ ,  $sd = .08$ ),  $H_1$  must be rejected. In the surprise movie screening condition ( $M = 6.5$ ,  $sd = .07$ ), price satisfaction is greater than in the regular movie condition ( $M = 6.3$ ,  $sd = .08$ ), in line with  $H_3$ .

In an ANOVA in which overall satisfaction is the dependent variable and movie satisfaction is a covariate ( $p < .00$ ), the effects proposed in  $H_{2a}$  and  $H_{2b}$  were analyzed. Overall satisfaction is significantly higher ( $p < .05$ ) in the fixed price condition ( $M = 5.7$ ,  $sd = .06$ ) than PWYW pricing ( $M = 5.4$ ,  $sd = .09$ ), in support of  $H_{2a}$ . As predicted in  $H_{2b}$ , viewers who pay what they choose express significantly higher customer satisfaction ( $p < .00$ ) in the surprise movie condition ( $M = 6.1$ ,  $sd = .08$ ) than in the regular movie condition ( $M = 5.1$ ,  $sd = .09$ ).

A hierarchical ordinary least squares (OLS) regression was conducted to analyze the proposed contextual differences in the effects of PWYW on payments. For all independent variables, the variance inflation factor is below the cut-off criterion of 4.0, so multi-collinearity is not a problem. The assumptions of linearity, homoscedasticity, independence of errors, and normality of the error distribution also are met. The first step of the hierarchical OLS regression considered the constructs identified as drivers of price in PWYW settings by (Kim et al. 2009) as independent vari-

ables. As Table 4 shows, the R-square value indicates that our proposed model explains 28 percent of the variation of stated payments. Fairness is a significant driver of prices, although movie satisfaction had no influence on stated payments.

Step 1		Unstandardized Coefficients		Significance		Variance Inflation Factor
Variable	B	SE	T	$p >  t $		
Constant	.766	.601	1.921	.200		
Altruism	-.180	.083	-2.184	.031		1.232
Loyalty	.012	.055	.210	.834		1.251
Price consciousness	-.063	.049	-1.284	.202		1.209
Fairness	.283	.051	5.578	.000		1.084
Movie satisfaction	.066	.072	.991	.364		1.255
Notes: $R^2 = .32$ ; Adj. $R^2 = .28$ ; $F(5,100) = 9.233$ , $p < .000$ .						
Step 2		Unstandardized Coefficients		Significance		Variance Inflation Factor
Variable	B	SE	T	$p >  t $		
Constant	.219	.652	.366	.737		
Altruism	-.151	.083	-1.833	.070		1.270
Loyalty	-.000	.055	.002	.998		1.265
Price consciousness	-.051	.048	-1.061	.291		1.226
Fairness	.294	.050	5.845	.000		1.096
Movie satisfaction	.095	.072	1.308	.194		1.306
Movie type (dummy)	.252	.124	2.024	.046		1.145
Notes: $R^2 = .34$ ; Adj. $R^2 = .30$ ; $F(6, 99) = 8.616$ , $p < .000$ .						

Table 4: Hierarchical OLS regression on prices paid, PWYW conditions

Altruism significantly and negatively influenced stated payments, which may indicate that the respondents' statements about altruism reflect socially desirable responses. Loyalty had no significant effect. The study results thus confirm the results of Kim et al. (2009) and Reinartz/Kumar (2002) regarding the lack of correlation between loyalty and willingness to pay. Price consciousness, as a control variable, was not relevant for price paid, either. The hedonic character of the movie could explain this result since the movie experience is more important than finding a good deal (Hirschman/Holbrook 1982). When movie type as a dummy variable (surprise = 1, regular = 0) is added to the regression model in the second step, there is a significant R-square change of .03 ( $F(1, 99) = 4.098$ ,  $p < .05$ ). Thus, PWYW payments are higher for a surprise movie screening than for a regular movie setting, in support of  $H_4$ , even when the main drivers of price in PWYW settings are the control variables.

## VI. Discussion

This study offers new insights into whether participative pricing mechanisms affect consumer perceptions and valuation. PWYW was considered as an innovative pricing mechanism and it was

hypothesized that price satisfaction and revenues of PWYW differ with respect to the type of movie screening. Existing models of transaction convenience and mental accounting provide theoretical support for our hypotheses since cognitive effort, social exchange norms, and postponed payments tend to lead to negative effects of PWYW on post-choice evaluations and prices paid. The predictions were validated with a field experiment designed to assess price satisfaction, overall satisfaction with the movie experience, and prices paid in a PWYW setting. The average prices in the PWYW conditions reflect our theoretical considerations: a participative pricing scheme leads to higher prices only if applied to a surprise movie screening. This price increase is 11.3 percent over regular ticket prices. But if the theater applied PWYW to a regular movie showing, it could suffer price decreases of eight percent. Our regression analysis also indicated that prices paid depend mainly on fairness considerations, in line with Kim et al. (2009). In the surprise movie screening condition, the PWYW mechanism apparently lets consumers express their dissatisfaction with the movie. Also in line with our hypotheses, for regular movies, a fixed ticket price and prepayment create higher overall satisfaction than a PWYW pricing scheme does. But the negative effect of PWYW on overall satisfaction is attenuated for surprise movie screenings. Unexpectedly, PWYW negatively affected price satisfaction for regular movie showings, too. Perhaps, this finding can be explained by perceived inconvenience when visitors had to evaluate the prices they were willing to pay for this movie visit.

Any interpretation of the study results must include limitations. The PWYW and fixed price manipulations may be confounded by payment timing because the effect of a fixed payment before viewing and PWYW after viewing was compared. An application of PWYW before watching the movie would be rather unrealistic and eliminate the benefit of reduced financial risk, which is why the more realistic application of PWYW after the movie screening was adopted. However, the possible confusion associated with this and the possibility of a self-selection bias choice has to be acknowledged since visitors were randomly assigned to the two pricing schemes but not to the surprise versus regular movie showing. Because respondents in the PWYW conditions stated their paid prices, our results may reflect an over-reporting or social desirability bias that may distort the results for price differences and determinants. The same concern holds for self-reports of perceived price fairness. In addition, our results on the profitability of the two pricing mechanisms cannot be generalized because PWYW was compared with a single exogenous fixed price. Only with the assumption that the regular ticket price is optimal and derived from a price-response function conclusions can be drawn about the profitability of PWYW versus fixed price. Finally, attendees at this student cinema are accustomed to paying very little (i.e., regular price of €1.50), so the relevance of price as a major evaluation attribute may be limited. Because the sample consisted mainly of students with low budgets, the movie visit still turns out to be a deliberate buying decision. In relation to the available income of students the buying decision should be of importance.

Our study results have practical implications for movie theaters that show European (including German) publicly-subsidized movies. The artistic merit of these movies often has greater importance than economic considerations or potential market success (Jansen 2005). In this setting the viewer faces uncertainty about the quality and the entertainment value of the screened movie. The application of PWYW allows visitors to adjust the ticket price after the screening according to their satisfaction with the experience. PWYW thus lowers the financial risk of the movie visit.

The movie theater may profit from an increase of self-generated revenues compared with a fixed price setting. Also, publicly-subsidized movies have small P&A budgets, and PWYW offers an effective promotion tool that could lead to higher movie attendance and word-of-mouth (WOM) multiplier effects (Kim et al. 2009). Framing screenings as special surprise movies could encourage people to visit the movie theater. Several smaller German movie theaters already use PWYW with these special screenings as a promotional tool that helps them compete effectively with large chains that screen blockbusters from the US film industry. Overall, these effects show that PWYW may act as an effective pricing tool to promote the economic viability of publicly-subsidized German film productions.

Public subsidies at the state level in the form of conditionally repayable interest-free loans to the film producers would be more likely to be repaid. At the federal level of German films, subsidies are closely tied to the reference film's performance. Thus, an increase of visitors resulting from the application of PWYW as a pricing tool would imply increased public subsidies for the production companies. The net effect on the level of public subsidies cannot be pre-estimated based on this study.

Both PWYW and the possibility of increased self-generated revenues remain relatively understudied (Krider 2006). Several directions for further research can be proposed. Studies of the application of new pricing schemes should analyze the information effect of the amount of public subsidies on the willingness-to-pay of visitors for movie screenings in a pay-what-you-want setting. Studies from other publicly-subsidized industries show mixed results about the crowding effect of subsidies on willingness-to-pay for the subsidized products (Maddison 2004).

Additional studies could analyze the possible negative aspects of PWYW, as induced by mental accounting effects. Chandran and Morwitz (2005) find that participative pricing leads to a greater intent to purchase, but the cognitive effort associated with PWYW could reduce the possibility of visitors choosing a cultural institution that employs this price mechanism. Because the findings cannot be generalized to other cultural institutions, it would be interesting to replicate our results on overall satisfaction, price satisfaction, and revenues for other cultural goods, such as theater performances or festivals (Bauer/Herrmann/Huber 1995; Krebs/Pommerehne 1995). Hausmann (2006), for example, discusses adopting proven pricing strategies to increase self-generated revenues in museums. Considering the relevance of cross-selling for exhibitors, the effects of PWYW pricing on cross-selling for food and beverages should also be analyzed.

## Zusammenfassung

*Florian Drevs; Der Reiz des Unbekannten – Der Einfluss von Pay-What-You-Want auf den Markterfolg staatlich geförderter Filme*

*Filmindustrie; Kulturelle Einrichtungen; Kundenzufriedenheit; Öffentliche Ausgaben; Öffentliche Zuschüsse; Partizipative Preismechanismen; Preispolitik; Zahlungsbereitschaften*

*Produzenten und Kinobetreiber berufen sich oftmals auf den künstlerischen oder kulturellen Wert, um die geringe Marktfähigkeit öffentlich subventionierter Filmproduktionen zu rechtfertigen. Es*

*werden bislang nur selten innovative Preis- und Kommunikationsinstrumente eingesetzt, um den Markterfolg als kulturelle Institutionen zu erhöhen. Insbesondere der Einsatz von Pay-What-You-Want (PWYW) Preismodellen könnte den Nachteil kleiner Werbebudgets ausgleichen, um erfolgreich mit großen Kinoketten zu konkurrieren. Die Ergebnisse einer empirischen Untersuchung zeigen, dass Pay-What-You-Want (PWYW) als innovatives Preisinstrument vor allem bei relativ unbekanntem, alternativen Filmen, die durch einen Überraschungsfilm in der Studie abgebildet wurden, zu höherer Zufriedenheit und höheren Ticketeinnahmen führen kann. Bei PWYW handelt es sich somit um ein geeignetes Preisinstrument um die Besucherzahl und die Weiterempfehlungsrate von öffentlich subventionierten Filmen zu erhöhen.*

## References

- Ariely, D., A. Bracha and S. Meier (2009), Doing Good or Doing Well? Image Motivation and Monetary Incentives in Behaving Prosocially, in: *American Economic Review*, 99(1), 544-555.
- Austin, W., N. C. McGinn and C. Susmilch (1980), Internal standards revisited: Effects of social comparisons and expectancies on judgments of fairness and satisfaction, in: *Journal of Experimental Social Psychology*, 16(5), 426-441.
- Baker, J., D. Grewal and A. Parasuraman (1994), The influence of Store Environment on Quality Inferences and Store Image, in: *Journal of the Academy of Marketing Science*, 22(4), 328-339.
- Bauer, Hans H., Andreas Herrmann and Frank Huber (1995), Kundenorientierung von Non-Profit-Unternehmen – Das Beispiel eines öffentlichen Theaterbetriebes, in: *Journal for public and nonprofit services (ZögU)*, 18 (4), 385-397.
- Berry, L., K. Seiders and D. Grewal (2002), Understanding Service Convenience, in: *Journal of Marketing*, 66(3), 1-17.
- Bettencourt, L. A. (1997), Customer Voluntary Performance: Customers as Partners in Service Delivery, in: *Journal of Retailing*, 73(3), 383-406.
- Bettman, J. R., M. Luce and J. W. Payne (1998), Constructive Consumer Choice Processes, in: *Journal of Consumer Research*, 25(3), 187-217.
- Bolton, L. E., L. Warlop and J. W. Alba (2003), Consumer Perceptions of Price (Un)Fairness, in: *The Journal of Consumer Research*, 29(4), 474-491.
- Burzynski, M. H. and D. J. Bayer (1977), The Effect of Positive and Negative Prior Information on Motion Picture Appreciation, in: *Journal of Social Psychology*, 101(2), 215.
- Campbell, M. C. (1999), Perceptions of Price Unfairness: Antecedents and Consequences, in: *Journal of Marketing Research (JMR)*, 36(2), 187-199.
- Chandran, S. and V. G. Morwitz (2005), Effects of Participative Pricing on Consumers' Cognitions and Actions: A Goal Theoretic Perspective, in: *Journal of Consumer Research*, 32(2), 249-259.
- Chang, B.-H. and E.-J. Ki (2005), Devising a Practical Model for Predicting Theatrical Movie Success: Focusing on the Experience Good Property, in: *Journal of Media Economics*, 18(4), 247-269.
- Collins, A. and C. Han (2005), Analyzing moviegoing demand: an individual-level cross-sectional approach, in: *Managerial and Decision Economics*, 26(5), 319-330.
- Cooper-Martin, E. (1992), Consumers and Movies: Information Sources for Experiential Products, in: *Advances in Consumer Research*, 19, 756-761.
- Davis, P. (2005), The effect of local competition on retail prices: The U.S. motion picture exhibition market, in: *Journal of Law and Economics*, 48(2), 677-707.
- Davis, P. (2006), Spatial competition in retail markets: movie theaters, in: *The RAND Journal of Economics*, 37(4), 964-982.
- Dewenter, R. and M. Westermann (2005), Cinema Demand In Germany, in: *Journal of Cultural Economics*, 29(3), 213-231.

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- Dietrich, M. (2009), Market orientation, performance, and competition in the German Museum Industry, in: *Journal for Public and Nonprofit Services, Special Issue 37*, 22-43.
- Donthu, N. and D. Gilliland (1996), Observations: The Infomercial Shopper, in: *Journal of Advertising Research*, 36(2), 69-76.
- Eliashberg, J., A. Elberse and M. A. Leenders (2006), The Motion Picture Industry: Critical Issues in Practice, *Current Research, and New Research Directions*, in: *Marketing Science*, 25(6), 638-661.
- Eliashberg, J., J.-J. Jonker, M. S. Sawhney and Berend Wierenga (2000), MOVIEMOD: An Implementable Decision-Support System for Prerelease Market Evaluation of Motion Pictures, in: *Marketing Science*, 19(3), 226-243.
- Farquhar, J. D. and J. Rowley (2009), Convenience: a services perspective, in: *Marketing Theory*, 9(4), 425-438.
- Fornerino, Marianela, Agnès Helme-Guizon and David Gotteland (2008), Movie consumption experience and immersion: impact on satisfaction, in: *Recherche et Applications en Marketing (English Edition)*, 23(3), 93-109.
- Franke, N., P. Keinz and C. J. Steger (2009), Testing the Value of Customization: When Do Customers Really Prefer Products Tailored to Their Preferences?, in: *Journal of Marketing*, 73(5), 103-121.
- Goldberg, L. R., J. A. Johnson, H. W. Eber, Robert Hogan, Michael C. Ashton et al. (2006), The international personality item pool and the future of public-domain personality measures, in: *Journal of Research in Personality*, 40(1), 84-96.
- Hadida, A. (2009), Motion picture performance: A review and research agenda, in: *International Journal of Management Reviews*, 11(3), 297-335.
- Hadida, A. (2010), Commercial success and artistic recognition of motion picture projects, in: *Journal of Cultural Economics*, 34(1), 45-80.
- Hausmann, A. (2006), Preispolitische Optionen zur Erläuterung von Museumsbetrieben, in: *Zeitschrift für öffentliche und gemeinwirtschaftliche Unternehmen*, 29 (3), 241-258.
- Haws, K. L. and W. O. Bearden (2006), Dynamic pricing and consumer fairness perceptions, in: *Journal of Consumer Research: An Interdisciplinary Quarterly*, 33(3), 304-311.
- Hirschman, E. C. and M. B. Holbrook (1982), Hedonic Consumption: Emerging Concepts, Methods and Propositions, in: *Journal of Marketing*, 46(3), 92-101.
- Inman, J. J., J. S. Dyer and J. Jia (1997), A generalized utility model of disappointment and regret effects on post-choice valuation, in: *Marketing Science*, 16(2), 97.
- Jansen, C. (2005), The Performance of German Motion Pictures, Profits and Subsidies: Some Empirical Evidence, in: *Journal of Cultural Economics*, 29(3), 191-212.
- Kim, J.-Y., M. Natter and M. Spann (2009), Pay What You Want: A New Participative Pricing Mechanism, in: *Journal of Marketing*, 73(1), 44-58.
- Kimes, S. E. and J. Wirtz (2003), Has Revenue Management become Acceptable?, in: *Journal of Service Research*, 6(2), 125-135.
- Krebs, S. and W. W. Pommerehne (1995), Politico-economic interactions of German public performing arts institutions, in: *Journal of Cultural Economics*, 19(1), 17-32.
- Krider, R. E. (2006), Research Opportunities at the Movies, in: *Marketing Science*, 25(6), 662-664.
- Ladhari, R. (2007), The movie experience: A revised approach to determinants of satisfaction, in: *Journal of Business Research*, 60(5), 454-462.
- Maddison, D. (2004), Causality and museum subsidies, in: *Journal of Cultural Economics*, 28(2), 89-108.
- McKenzie, J. (2012), The economics of movies: A literature survey, in: *Journal of Economic Surveys*, 26(1), 42-70.
- Mitchell, V. W. and P. Boustani (1994), A Preliminary Investigation into Pre- and Post-Purchase Risk Perception and Reduction, in: *European Journal of Marketing*, 28(1), 56-71.
- Mizerski, R. W. (1982), An Attribution explanation of the disproportionate influence of unfavorable information, in: *The Journal of Consumer Research*, 9(3), 301-310.
- Oliver, R. L. and J. E. Swan (1989), Consumer Perceptions of Interpersonal Equity and Satisfaction in Transactions: A Field Survey Approach, in: *Journal of Marketing*, 53(2), 21-35.
- Orbach, B. Y. (2004), Antitrust and pricing in the motion picture industry, in: *Yale J. Regulation*, 21(2), 317-367.
- Orbach, B. Y. and L. Einav (2007), Uniform prices for differentiated goods: The case of the movie-theater industry, in: *International Review of Law and Economics*, 27(2), 129-153.
- Osterhus, T. L. (1997), Pro-social consumer influence strategies: when and how do they work?, in: *The Journal of Marketing*, 61(4), 16-29.
- Prelec, D. and G. Loewenstein (1998), The Red and The Black: Mental Accounting of Savings and Debt, in: *Marketing Science*, 17(1), 4-28.
- Reddy, S. K., V. Swaminathan and C. M. Motley (1998), Exploring the Determinants of Broadway Show Success, in: *Journal of Marketing Research*, 35(3), 370-383.
- Reinartz, W. and V. Kumar (2002), The mismanagement of customer loyalty, in: *Harvard Business Review*, 80(7), 86-94.

Spiegel Online (2003), Kino-Aktion "Pay After": Erst gucken, dann zahlen, Online-Artikel: <http://www.spiegel.de/kultur/kino/0,1518,236678,00.html>

Taylor, K. (1997), A Regret Theory Approach to Assessing Consumer Satisfaction, in: *Marketing Letters*, 8(2), 229-238.

Vanhamme, J. and D. Snelders (2001), The role of surprise in satisfaction judgements, in: *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 14, 27-45.

Wirtz, J. and S. E. Kimes (2007), The Moderating Role of Familiarity in Fairness Perceptions of Revenue Management Pricing, in: *Journal of Service Research*, 9(3), 229-240.

Xia, L., K. B. Monroe and J. L. Cox (2004), The Price Is Unfair! A Conceptual Framework of Price Fairness Perceptions, in: *Journal of Marketing*, 68(4), 1-15.

## Appendix

Overview of items and constructs as drivers of price in PWYW settings, adopted from Kim et al. 2009:

Construct	Items	Source of Scale Items	Cronbach's Alpha
Altruism	I love to help others. I have a good word for everyone. I am concerned about others. I make people feel welcome. I anticipate the needs of others	International Personality Item Pool (Goldberg et al. 2006)	.79
Loyalty	I'm a regular customer in the movie theater. I say positive things about this movie theater to others. I encourage friends and relatives to visit the movie theater. I'm committed to the movie theater.	(Bettencourt 1997)	.81
Price consciousness	Before I buy a product, I often check the prices of different retailers to obtain the best benefit. I usually purchase items on sale only. I usually purchase the cheapest item.	(Donthu/Gilliland 1996)	.76