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SURVIVAL IN THE CULTURAL MARKET: THE CASE OF TEMPORARY EXHIBITIONS

Survival in the cultural market: The case of temporary exhibitions[♠]

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ABSTRACT

The aim of this paper is to identify empirically the factors that influence the duration of the temporary exhibitions, distinguishing between prolonged and non prolonged ones. We use a sample of 259 exhibitions that took place in Italy over the period 2002-2005. The empirical evidence allows for the identification of some structural characteristics of this market and the existence of observable differences between prolonged and non prolonged shows.

Key words: survival models; temporary exhibitions; art market; Italy.

JEL classification: C6, D2, Z1.

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1. Introduction

A number of studies investigates the factors that characterizes successful project-based products in the cultural industry (Bagella and Becchetti, 1999; Simonoff and Ma, 2003; Delmestri et. al., 2005; Deuchert et al., 2005; Maddison, 2005; Foord, 2009). The analysis has focussed mainly on movies and performing arts, but there are other cultural industries, temporary exhibitions among them, for which some factors can be identified (Frey and Meier, 2006; Onofri and Scorcu, 2006).

In fact, the recent increase in the supply of temporary exhibitions has been usually explained in terms of cost, finance and organizational advantages with respect to permanent exhibitions. The low elasticity of intertemporal substitution, coupled with aggressive advertising strategies that emphasize uniqueness and exclusiveness as well word-of-mouth effects, could offer an explanation for the increased demand. The growing importance of temporary exhibitions has been explained also by their alleged positive economic impact on local economies (Skinner, 2006); local authorities consider temporary shows an efficient, cheap and easily to implement promotional instrument, and this makes less difficult the provision of external (often public) funds. However, the increased size of the temporary shows market might lead to some rather uncomfortable consequences. In a given period, exhibitions compete for a given amount of money and leisure of the potential attendance, and one (temporary or permanent) successful exhibition is likely to crowd out others in terms of admissions. Moreover, an oversupply is likely to emerge, lowering the average artistic quality and leading to the quick maturity of the market.

Temporary exhibitions, motion pictures and performing arts markets have a number of similar features. Competition is mainly in terms of admissions than in terms of prices. The increasing reliance on promotional policies raises the sunk costs for these products. These products usually have a finite (and often quite short) life cycle, and no late adjustments are possible once the productive process has been completed[1]; the judgment upon the artistic quality of the product unfolds only after the premiere, through specialized critics' reports and the word-of-mouth of the public (Elliott and Simmons, 2008; McKenzie, 2009; McKenzie, 2010). These markets are therefore quite

[1] The well known adjustment of the Puccini's Madame Butterfly, following an unsuccessful premiere, is the exception rather than the rule. In recent times, the increased competitive pressure has shortened the product life cycle and made more unlikely any adjustments.

risky, because of the uncertain product quality, also in presence of well known superstars (Caves, 2000; De Vany, 2006).

There are, however, also several important differences between movies and live performances on the one hand and temporary exhibitions on the other. In the short run, the introduction of a movie in the theatrical circuit comes at the expenses of another movie, as the number of screens is fixed and there is a full crowding out, whereas in the latter case the supply of spaces is (to a certain extent) more elastic, as temporary shows can be hosted in museums but also in multi-purpose spaces and buildings. As a consequence, rivalry among products might be higher and the struggle for survival stiffer for live shows and movies than for temporary exhibitions[2].

This might help to explain why the survival time in the former markets is endogenous: distributors might opt for an early, unanticipated, withdrawal from the market of a unsuccessful movie[3], an effect magnified when the supplier of the movie is the owner of the exhibition space himself. The minimum survival time (the planned opening period) of a temporary show is instead predetermined (as well the admission price, the type of catalogue, etc.) on the basis of the expected flow of admissions during the exhibition life cycle, that in turn depends on some structural characteristics, such as type, time and location of the show, etc.

The duration of the show is part of the optimal expected profit maximizing strategy. In fact, in its extreme form, the nobody knows principle states that the market outcome of a product cannot be influenced by any conditioning variables (Albert, 1998). A weaker (and more reasonable) form of the principles recognizes the existence of a set of conditioning variables that, ceteris paribus, can modify the likelihood of the success of the product, even if the actual market outcome continues to be largely unpredictable; hence, significant forecast errors in admissions might emerge. Whereas unexpectedly unsuccessful shows cannot be closed in advance, unexpectedly successful shows might be prolonged[4].

The aim of this paper is to empirically evaluate the effect of some structural characteristics of the exhibitions both in terms of expected success (announced survival time) and actual success (actual survival time, possibly longer than announced). To the extent that some observable differences emerge among prolonged and not prolonged

[2] At the local level, organizers avoid self-defeating overlaps in the timing of these shows.

[3] De Vany (2004; 2006) shows that survival time in the US movie market depends upon the rank of the box office revenues.

[4] Exogenous constraints, like the unavailability of borrowed works of art, can sometimes prevent the prolongation.

shows, the comparison of the duration models for the two groups can shed some light on the characteristics of successful products.

The rest of the paper is structured as follows. Section 2 summarizes the main characteristics of the methods used whereas Section 3 describes the characteristics of the dataset and the conditioning variables. Section 4 presents the main empirical findings and Section 5 concludes.

2. Model design

The duration of an exhibition can be viewed as its 'survival time' and models for survival analysis can be used to study this issue. Let *T* the duration of a certain event which may be regarded as a random variable with a probability, $F(t) = P(T \leq t) = \int_0^t f(t)dt$, where *f(t)* is the probability density function. The probability to survival beyond time *t* is the survival function, $S(t) = P(T > t) = 1 - F(t)$. The hazard ratio, *h(t)*, represents a measure of risk reflecting the probability of failure in an infinitesimally small time interval between *t* and *t + dt*, given that the subject has survived up to time *t*, and satisfies:

$$h(t) = \lim_{dt \to 0} \frac{P(t < T \leq t + dt \geq |T \geq t)}{dt} = \frac{f(t)}{S(t)} \quad (1)$$

Several specifications for the hazard rate are used in the empirical analysis (Hosmer and Lemeshow, 1999). A flexible approach to modeling the relationship between the covariates and the survival or other censored outcome is the Proportional Hazard (PH) model (Cox, 1972). In this model the hazard function is modeled as:

$$h(t, Z) = h_0(t) \exp(\beta' \mathbf{Z}) \quad (2)$$

where $h_0(t)$ is an unspecified baseline hazard function, ***Z*** is a covariate vector, and the parameter vector β identifies the effects that the covariates have on the hazard function. The PH Cox model is essentially a multiple linear regression of the logarithm of the hazard on the covariates, with the baseline hazard being an 'intercept' term that varies with time. The covariates then act multiplicatively on the hazard at any point in time.

When such an assumption of proportional hazard does not hold, the PH Cox model may entail serious bias and loss of power when estimating or making inference about the effect of a given prognostic factor on the failure event (Abrahamowicz et al., 1996). In such a case, the accelerated failure time (AFT) model represents an alternative. The survival proportion for a given risk group at any time, $S(t)$, is equal to:

$$S(t) = [S_0(t)]^{\exp(\beta'\mathbf{Z})} \tag{3}$$

where $S_0(t)$ is the baseline survival function and $exp(\beta'\mathbf{Z})$ is an 'acceleration factor'. This latter specification will be used in our empirical analysis.

3. Data

The dataset is based on raw information collected from the website of the Italian newspaper 'La Repubblica' over the period 2002-2005. The dataset does not contain all temporary exhibitions held in Italy during the period under scrutiny as most of the exhibitions included are "top products", developed with high national or international quality standards, managerial criteria and carefully monitored through a relatively rich set of variables. These exhibitions are therefore characterized by significant organizational costs and the (ex-ante) publicly announced opening (i.e. survival) period is set as a part of a profit maximizing process. As a consequence, such products are more likely to be highly responsive to (expected and unexpected) market outcomes compared to several other non market oriented exhibitions (e.g. those with free admission, without reliable information about admissions,…).

Exhibitions differ widely in terms of attendance and duration: a show that remain open for few weeks or for several months is not a temporary one. Likewise, a show with an exceedingly low number of admissions is likely not to be the outcome of a profit maximizing process of input selection and market scrutiny[5]. As a consequence, in the following empirical analyses we discard (somewhat arbitrarily) the exhibitions with less than 100 admission per day or less than 10,000 total admissions, and those with a duration lower than 50 or higher than 250 days. Table 1 summarizes descriptive statistics for both the original and the selected datasets.

[5] Some of these exhibitions are the outcome of cultural policies of local authorities that follow only in part a discernible economic reasoning.

[TABLE 1 ABOUT HERE]

Columns 1-3 show the original sample statistics, whereas the selected sample descriptive statistics are displayed in columns 4-6. The selected sample consists of 197 out of 257 different temporary exhibitions that took place in Italy in the period 2001-2005. The average number of admissions, *adm*, is 76,347 in the original sample and the average days of opening, *days*, of the exhibition is 96.3, which leads to an average of 793 admissions per day of opening. The selection introduced in the process of estimation appears relevant more in terms of attendance (+22.5 per cent with respect to the original dataset) than in terms of opening days (+6.4 per cent).

Several covariates might influence the exhibitions' survival time. Prolonged exhibitions, *prolonged*, are one fifth in the original sample and one fourth in the selected sample (21.0 per cent and 24.4 per cent, respectively). Seasonality is captured by four different dummies: January, 1-March, 31, *season1*; April, 1-June, 30, *season2*; July, 1-September, 30, *season3*; October, 1-December, 31, *season4*. Exhibitions are more frequent in summer and winter, 60 per cent of the total number of exhibitions in both samples. A yearly time dummy variable is also introduced, reaching the maximum in 2003 both in the original sample (34.7 per cent of temporary exhibitions) and in the selected sample (32.0 per cent).

We classify exhibitions by location, using a set of dummy variables: *north*, for exhibitions located in the more populated and affluent Northern regions of Italy; *centre*, for those in Central regions of Italy; and *south,* for those that took place in the Southern regions of Italy (excluded variable). There are no significant differences in the distributions of the two samples about the seasonality pattern and the yearly share whereas the share of the exhibitions held in the Northern regions increases from 57.6 percent in the original sample to 61.4 per cent in the selected sample. In this latter case, one third of the exhibitions took place in the Centre (in most of the cases in Rome) and less than 10 per cent in the Southern regions.

An additional information is whether the exhibition was held in a regional capital, *cap,* possibly characterized by a larger and more cosmopolite attendance. Slightly less than 30 per cent of the exhibitions took place in a regional capital, giving a picture of quite geographically dispersed market. A dummy variable, *mult*, identifies whether exhibitions took place in several distinct buildings or locations, a case in which a multiple ticket is issued.

Temporary shows were divided in term of size using three dummy variables: the small group, *small*, identifies all the exhibition with a total attendance of less than 50,000; the middle group, *medium*, comprises the exhibitions whose attendance lies in the interval 50,000-100,000; the latter group, *large*, refers to those with attendance greater than 100,000. Unsurprisingly, the small exhibitions share drop from 53.7 per cent in the original sample to 41.1 per cent in the selected sample, whereas medium size and large size exhibitions raise from 20.1 to 26.4 per cent and from 26.3 to 32.5 per cent, respectively.

Dummy variables were also introduced to distinguish among different types of temporary exhibition: *old,* for Ancient, Middle Age, Renaissance, and Classicism paintings; *mod*, for modern (e.g. impressionist) paintings; *cont*, for contemporary paintings; *soc*, for exhibitions with sociological contents; *photo*, for photography; *ethno,* for ethnographic arts; *hist*, for exhibitions with historical contents. Photo, Ethno enter in the initial general model but are excluded from the final specification. The distribution is roughly similar for both samples. In the selected sample, Old painting shows represent the 29.9 per cent of the cases, Modern painting shows represent the 33.0 per cent of the cases, whereas Contemporary paintings is a mere 15.7 per cent. Photography, ethnography, history, society cover do not reach the 10 per cent.

The per capita real regional income, *gdp*; the percentage of regional graduated people, *grad*, and the number of inhabitants in the region of the exhibition location and *pop*, indicating the size of the domestic market of the show, were also introduced as further controls. Both samples display roughly similar averages of these variables.

As the goal of the paper is to shed some light on the structure of the exhibition market, it is useful to focus on the differences between (unsuccessful) non prolonged (79 per cent of the sample) and (successful) prolonged temporary exhibitions (21 per cent of the sample). Table 2 summarizes the descriptive statistics for the non prolonged and the prolonged groups, respectively.

[TABLE 2 ABOUT HERE]

On average, there are 81,344 admissions per show for the non prolonged group and 131,470 for the prolonged group. This difference can be explained in terms of different characteristics of the exhibition, as it will be shown in the following. The number of days of opening for the non prolonged shows (96.2 days) is lower than for the prolonged ones (121.9 days), as well as the number of daily admissions (846 for the non prolonged shows and 1,078 for the prolonged subsample).

Prolonged exhibitions are more frequent in winter and less likely in summer than non prolonged exhibitions. Prolonged exhibitions are also more likely to be located in the South and Centre of Italy, in capital regions, and often concern old master paintings. By contrast, they are slightly less frequent in the case of low attendance shows. Income and the graduate share are not significantly different in the two sub-samples.

4. The empirical evidence

Survival analysis evaluates the relationship between time to failure and a series of covariates. To estimate such effects, we proceed by estimating the AFT model introduced in Section 2. The survival times are usually assumed to follow a specific distributional form in the AFT framework. Using the Akaike information criterion[6], the Weibull distribution has been adopted. Table 3 displays the results of the estimation for the selected sample.[7]

[TABLE 3 ABOUT HERE]

A number of specifications have been tested, starting from quite general ones. In what follows, we consider the specification comprising the variables which are statistically significant at the usual confidence levels. Duration is influenced, unsurprisingly, by the emergence of a (possibly unplanned) prolongation of the show. Exhibitions with an expected large attendance are characterized by a longer duration. The survival of the exhibition is influenced also by the location: temporary shows located in the North and, even more neatly, in the Centre, have longer duration.

The duration of painting exhibitions is lower than other exhibitions, independently of the specific period (ancient and old, modern or contemporary painting). The same effect emerges for shows with sociological content, whereas photography and ethnography exert no significant effect.

It is well known that education exerts a major influence on cultural consumption. For such a reason the negative sign of the share of graduates on the regional population is partially unexpected. However, it might happen that more educated people substitute

[6] The Akaike information criterion is defined as $AIC = -2(\log \text{likelihood}) + 2(c + p + 1)$, where c is the number of model covariates and p is the number of model-specific ancillary parameters.

[7] Variables not statistically significant have been excluded.

temporary shows with visits to permanent collection; moreover, if more educated visitors react quickly to the opening of a temporary show, a higher share of graduates is associated to shorter duration of the exhibition.

Finally, per capita regional income is not statistically significant, possibly because the share of expenditure on temporary exhibitions is likely to be low and difficult to detect empirically. Moreover, income-driven domestic demand might be relatively unimportant with respect to the flow of tourists' income.

We evaluate the overall fit of the model by using the Cox-Snell residuals. The model fits the data well as the true cumulative hazard function conditional on the covariate vector has an exponential distribution with a hazard rate of one.

In order to examine the structure of the non prolonged versus prolonged exhibitions we compute the Kaplan-Meier survival estimator of the survivor function for the two groups. The two processes are plotted in Figure 1.

[FIGURE 1 ABOUT HERE]

Dropout occurs more quickly in the non prolonged sub-sample, suggesting the existence of two different survival processes. Moreover, a log rank test for the equality of the two survival functions strongly rejects the null hypothesis, with a log rank test $\chi^2(1)=31.28$ (Pr>chi2=0.000). This result suggests the need of a thoughtful investigation of the factors affecting non prolonged and prolonged exhibitions by estimating separate Weibull AFT models for the two sub-samples, as reported in Table 4.

[TABLE 4 ABOUT HERE]

The goodness of fit is higher in the case of the non prolonged sample. Taking into account the different size of the samples, both models fits the data well and there is no evidence of misspecification. When the link test was used on the two sub-samples, the quadratic term was not significant (*P*-value = 0.245 and *P*-value = 0.596 for the non prolonged and prolonged sub-sample respectively), providing no evidence of model misspecification.

As in the overall sample, longer exhibitions are more frequent in the Centre and the North of Italy. Large attendance shows survive longer, but only if they are not prolonged; in the case of prolonged exhibitions, such an effect disappears: in this sense successful exhibitions are not always mass exhibitions. The temporary shows with multiple locations and multiple ticket last longer only in the prolonged sub-sample.

A contemporary paintings exhibition, if prolonged, survive longer, differently from the old and modern paintings shows. The empirical evidence differs for the non prolonged sub-sample, in which all paintings' exhibitions have a longer duration than average. Sociological exhibitions last longer in the prolonged sub-sample, while for the non prolonged case no statistically significant effect emerges.

The share of graduates negatively affects the survival rate of an exhibition, as in Table 3. As previously suggested, such an effect is complex to analyze. In fact, the demand for culture might depend also on variables other than the average level of education, but correlated with it, such as the case for income. When this occurs we cannot isolate with confidence education impact on consumption.

We evaluate the fit of the model by using the Cox-Snell residuals. If the model fits the data well then the true cumulative hazard function conditional on the covariate vector has an exponential distribution with a hazard rate of one. Figure 2 displays the Cox-Snell residuals for both sub-samples.

[FIGURE 2 ABOUT HERE]

Although some wiggling at large values of time, quite common for models with censored data, the hazard functions of the final specifications follow the 45 degree line closely, confirming a good data fit for both sub-samples.

5. Conclusions

This paper has provided some preliminary empirical evidence about the relationship between the survival time and the structural characteristics of temporary exhibitions. The survival time is determined by the subject of the exhibition, the geographical location and the size and the type of the local market. The length differs widely from case to case, i.e. there is no one size that fits for all shows, a results that supports the idea of flexibility of the market for temporary shows. The empirical evidence confirms the overall picture emerging from similar cultural industries analyzed using different techniques. The survival of a temporary exhibition crucially depends upon the cultural content (ancient, modern, or contemporary paintings, etc.) and on the cultural milieu of the location rather than upon price strategies like multiple tickets.[8]

Moreover, in the group of prolonged and non prolonged exhibitions, significant differences emerge in the effect of the conditioning variables.

Whereas survival techniques can be a useful instrument in analysing the market for temporary exhibitions from a specific perspective, we are aware of the limitations of the evidence provided. In particular, the description of the exhibition should be augmented with additional control variables, such as advertising expenditures and quality indexes, which are likely to be the key factor to success. Moreover, robustness of the empirical results might be strengthened through international comparisons, and by using different partitions of the data set (for example, disentangling between exhibitions with low or high number of admissions).

[8] This point is clearly raised by Colbert 2003: "[T]he experience of museums that impose no entrance fee yet have difficulty expanding their audience beyond the well educated. If visiting a museum is not part of a person's preferred set of activities, it makes no difference whether admission is free or not.

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TABLE 1 - Descriptive statistics (original and selected sample)

	Original sample (N=257)			Selected sample (N=197)		
Variable	**Mean**	**Min**	**Max**	**Mean**	**Min**	**Max**
adm	76,347.11	711	619,478	93,557.35	10,063	602,415
days	96.311	19	297	102.4873	51	191
prolonged	.210	0	1	.244	0	1
season1	.249	0	1	.264	0	1
season2	.195	0	1	.178	0	1
season3	.202	0	1	.198	0	1
season4	.355	0	1	.360	0	1
2001	.127	0	1	.117	0	1
2002	.255	0	1	269	0	1
2003	.347	0	1	.320	0	1
2004	.262	0	1	.294	0	1
north	.576	0	1	.614	0	1
centre	.331	0	1	.294	0	1
south	.093	0	1	.091	0	1
cap	.292	0	1	.294	0	1
mult	.175	0	1	.178	0	1
small	.537	0	1	.411	0	1
medium	.201	0	1	.264	0	1
large	.263	0	1	.325	0	1
old	.272	0	1	.299	0	1
mod	.300	0	1	.330	0	1
cont	.163	0	1	.157	0	1
photo	.039	0	1	.015	0	1
ethno	.070	0	1	.071	0	1
hist	.086	0	1	.071	0	1
soc	.082	0	1	.056	0	1
gdp (,000 Euros)	23,213.29	12,052.58	30,021.72	23,263	12,649	30,022
Grad	8.166	6.4	10.8	8.037	6.4	10.8
pop (,000,000)	5.212	.824	9.004	5.255	.824	9.004

TABLE 2. Descriptive statistics (non prolonged and prolonged sub-samples)

	Non prolonged exhibitions (N=149)			Prolonged exhibitions (N=48)		
Variable	**Mean**	**Min**	**Max**	**Mean**	**Min**	**Max**
adm	81343.7	10063	458981	131470.5	10707	602415
days	96.22819	51	186	121.9167	77	191
prolonged	0	0	0	1	1	1
season1	.2483221	0	1	.3125	0	1
season2	.1812081	0	1	.1666667	0	1
season3	.2147651	0	1	.1458333	0	1
season4	.3557047	0	1	.375	0	1
2001	.1208054	0	1	.1041667	0	1
2002	.2483221	0	1	.3333333	0	1
2003	.3221477	0	1	.3125	0	1
2004	.3087248	0	1	.25	0	1
north	.6308725	0	1	.5625	0	1
centre	.2885906	0	1	.3125	0	1
south	.0805369	0	1	.125	0	1
small	.4630872	0	1	.4375	0	1
medium	.2550336	0	1	.25	0	1
large	.2818792	0	1	.2916667	0	1
cap	.2730404	0	1	.4583333	0	1
mult	.1946309	0	1	.125	0	1
old	.2550336	0	1	.4375	0	1
mod	.3489933	0	1	.2708333	0	1
cont	.1812081	0	1	.0833333	0	1
photo	.0201342	0	1	0	0	0
ethno	.0671141	0	1	0833333	0	1
hist	.0671141	0	1	.0833333	0	1
soc	.0604027	0	1	.0416667	0	1
gdp (,000 Euros)	23,539	12,650	30,022	22403.32	12649.5	30021.72
grad	8.037584	6.4	10.8	8.035417	6.4	10.8
pop (,000,000)	5.218488	.93541	9.004084	5.366421	.824187	9.004084

TABLE 3. The Weibull AFT results for temporary exhibitions (selected sample)

Variables	Selected sample	
	Haz. Ratios	**Coeffs.**
prolonged	1.245***	.219***
	[0.000]	[0.000]
north	1.235***	.210***
	[0.002]	[0.000]
centre	1.411***	.345***
	[0.000]	[0.000]
large	1.221***	.200***
	[0.000]	[0.000]
mult	1.089*	.086*
	[0.093]	[0.093]
old	.883**	-.124**
	[0.016]	[0.016]
mod	.864***	-.151***
	[0.003]	[0.003]
cont	.860**	-.151**
	[0.007]	[0.007]
soc	.909*	-.096*
	[0.178]	[0.178]
grad	.933***	-.072***
	[0.000]	[0.000]
pop	1.010*	.010*
	[0.179]	[0.179]
cons		4.954
		[0.000]
Ln P	1.699 [0.000]	
N. obs (clusters)	197	
Log pseudo-likelihood	31.821	
Wald χ^2 test	chi2(14) = 171.75 [0.0000]	

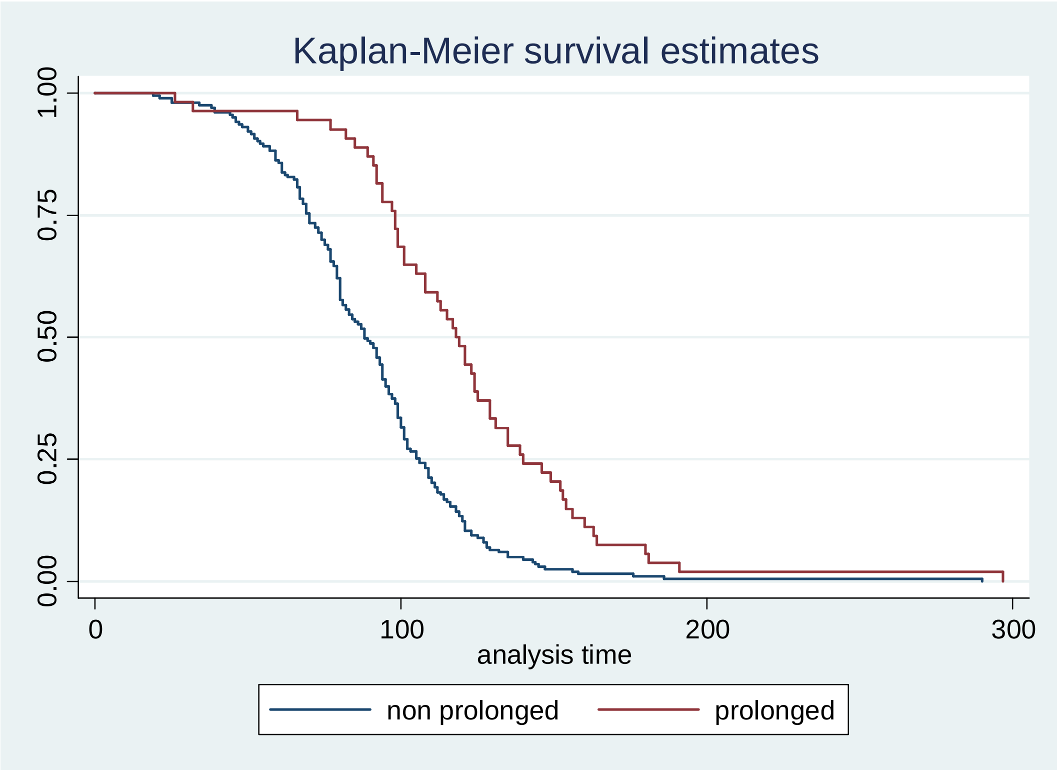
Note: ***/**/* significance at .01,0.05 and .10 respectively. Std. Err. adjusted for clusters; P values in brackets

TABLE 4 - The Weibull AFT results for temporary exhibitions (non prolonged and prolonged sub-samples)

Variables	Non prolonged exhibitions		Prolonged exhibitions	
	Haz. Ratios	**Coeffs.**	**Haz. Ratio**	**Coeffs.**
north	1.234**	.210	1.185*	.169
	[0.001]	[0.001]	[0.023]	[0.023]
centre	1.546***	.436	1.533***	.428
	[0.000]	[0.000]	[0.000]	[0.000]
large	1.256***	.227	1.073	.071
	[0.000]	[0.000]	[0.213]	[0.213]
mult	1.003	.003	1.343***	.296
	[0.941]	[0.941]	[0.000]	[0.000]
old	.886**	-.121	.912	-.092
	[0.044]	[0.044]	[0.140]	[0.140]
mod	.864***	-.146	.944	-.058
	[0.008]	[0.008]	[0.364]	[0.364]
cont	.897*	-.108	.613***	-.489
	[0.067]	[0.067]	[0.000]	[0.000]
soc	.954	-.047	.700***	-.356
	[0.578]	[0.578]	[0.000]	[0.000]
grad	.907***	-.097	.940***	-.062
	[0.000]	[0.000]	[0.015]	[0.015]
pop	1.013	.013	1.014*	.013
	[0.114]	[0.114]	[0.126]	[0.126]
cons		5.128		5.101
		[0.000]		[0.000]
Ln P	1.741 (0.000)		1.919 (0.000)	
N. obs (clusters)	149		48	
Log pseudo-likelihood	28.591		16.997	
Wald χ^2 test	chi2(12) = 115.91 (0.000)		chi2(12) = 159.15 (0.000)	

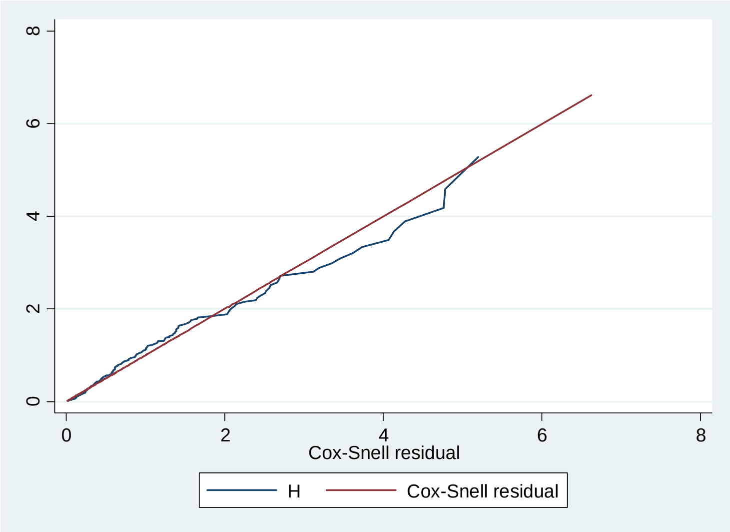
Note: ***/**/* significance at .01,0.05 and .10 respectively. Std. Err. adjusted for clusters. P-values in brackets.

FIGURE 1. Kaplan-Meier survival estimates

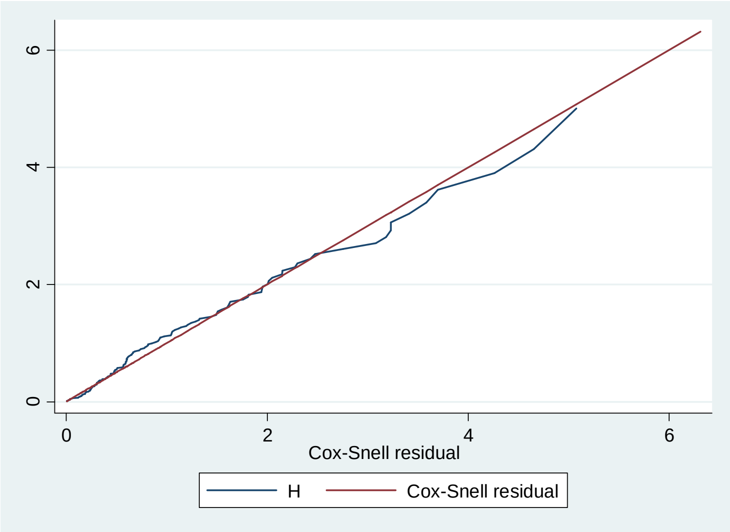


Note: prolonged = 0 if exhibitions are not prolonged; prolonged = 1 if exhibitions are prolonged.

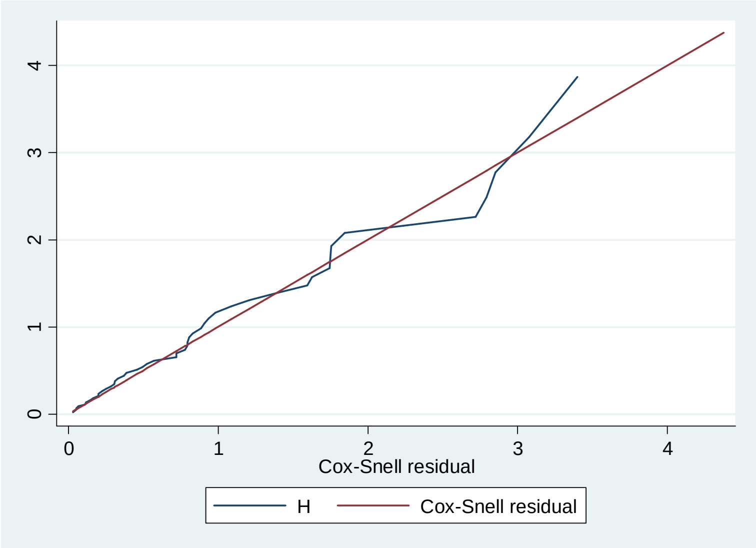
FIGURE 2. Cox-Snell residuals (total sample, non-prolonged and prolonged sub-samples)



Total sample



Non prolonged sub-sample



Prolonged sub-sample