

Regional Economic Impacts of Large Cultural Events

Does public funding of large cultural events make sense
from a regional economic point of view?

Peter Schmidt¹

Bremen University of Applied Sciences (Hochschule Bremen) / Germany

April 2008

PRELIMINARY VERSION – please do not quote

market.research.culture
(markt.forschung.kultur)



Research team at

Werderstrasse 73
D-28199 Bremen / Germany
Phone: +49+ (0) 421 5905-4691
Fax: +49+ (0) 421 5905-4692
email: info@markt-forschung-kultur.de
<http://www.markt-forschung-kultur.de>

¹ Prof. Dr. Peter Schmidt (Peter.Schmidt@hs-bremen.de), *Bremer Institut für empirische Handels- und Regionalstrukturforschung der Hochschule Bremen* (Bremen Institut of Empirical Research in Trade and Regional Structur at Bremen University of Applied Sciences) and University of North Carolina Wilmington. The help and co-operation of Astrid Kurzeja-Christinck and Jutta Schmidt from GIS.direkt is gratefully acknowledged. Of course all remaining errors are mine. Some of the results are based on earlier joint work with Aldona Kucharczuk.

Abstract

This paper analyzes the impacts of cultural events from a regional economic perspective. The research question is whether it is worthwhile for a region or a city to fund large cultural events like arts exhibitions. The basic idea is that there are indirect effects for the regional economy if visitors travel long distances to attend the event and also spend time and money in the region. This way of indirect re-financing of public funding (as an investment) is called indirect impact (or to translate the German expression literally: '*detour return on investment*')

One question is whether such an indirect effect can be measured for large exhibitions at the Kunsthalle Bremen (Arts museum) in northern Germany. The exhibition *Van Gogh: The Fields* (2002/03) that was visited by more than 300,000 people is analyzed mainly but altogether there seven surveys have been conducted in the last 8 years and the estimations are also conducted for the other exhibitions. In this paper the indirect impact of arts exhibitions is estimated in three steps. First the expenditures of out-of-town visitors are estimated, secondly the resulting regional value added. In the third step, a preliminary estimate of fiscal impacts is conducted and some further (non-monetary) aspects are discussed.

The analysis shows that for the Van Gogh exhibition around 200,000 people came to Bremen primarily to visit the exhibition and travelled at least 100 km. The estimated expenditures by out-of-town visitors for this exhibition range between € 10 and 12.6 million, leading to an estimated regional value added of between € 14 and 17.6 million. A preliminary estimate of a potential additional tax revenue due to the exhibition amounts to between € 1.6 and 2 million.

So the research question can be answered with: Yes, in fact the public funding turns out to be a good 'investment' for the city.

Contents

1. Introduction: Arts and Economics – Contradiction or Complements?	4
2. The Visitors – describing the target group.....	5
2.1 Socio-demographic characteristics.....	6
2.2 Origin of the visitors	7
2.3 Motives, Activities and Overnight Stays of Out-of-Town Visitors	9
2.3.1 Special Exhibition as (main) Reason to visit the City / Region	9
2.3.2 Duration and Type of Overnight Stay	10
2.3.3 Further Activities of the Visitors.....	11
3. Regional Economic Impacts of the Arts Exhibitions	13
3.1 Estimation of the Expenditures of Out-of-Town Visitors.....	13
3.2 Regional Value Added: Direct and Indirect Impacts, Regional Multiplier	17
3.3 Fiscal Impacts.....	19
3.4 Additional effects: Expenditures of Other Out-of-Town and Local Visitors (Import Substitution).....	21
4. References	22

Figures

Figure 1 (Event) Exhibitions and visitors' surveys at Kunsthalle Bremen.....	5
Figure 2 Age group and Gender at the Van Gogh exhibition.....	6
Figure 3 Average Age of visitors at different exhibitions.....	6
Figure 4 Origin of the Visitors (Van Gogh exhibition).....	7
Figure 5 Origin of visitors from Germany	8
Figure 6 Out-of-town Visitors with Exhibition as the Reason to Travel to Bremen, Van Gogh.....	9
Figure 7 Out-of-town Visitors with Exhibition as the Reason to Travel to Bremen, all Exhibitions ..	10
Figure 8 Average duration of stay (Van Gogh Exhibition).....	10
Figure 9 Type of Accommodation of out-of-town visitors.....	11
Figure 10 Average duration - overnight stay of out-of-town visitors explicitly coming for the event ..	11
Figure 11 Further activities of out-of-town visitors	12
Figure 12 Further activities of out-of-town visitors	12
Figure 13 Estimation of average daily expenditures of out-of-town visitors.....	14
Figure 14 Estimation of expenditures of out-of-town visitors staying in hotels	14
Figure 15 Estimation of expenditures of out-of-town visitors staying with friends/family.....	15
Figure 16 Estimation of expenditures by out-of-town one day visitors	15
Figure 17 Estimation total expenditures of out-of-town visitors	16
Figure 18 Projected Expenditures of Out-of-Town Visitors during event exhibitions (estimated direct impacts - in 1 000 000 €).....	16
Figure 19 Total direct and indirect impacts estimated in the multiplier	18
Figure 20 Regional Value Added of Out-of-Town Visitors during event exhibitions (estimated direct plus indirect impacts - in 1 000 000 €)	19
Figure 21 Preliminary Estimate of Possible Tax Revenues	20

1. Introduction: Arts and Economics – Contradiction or Complements?

The financing of arts institutions in Germany is traditionally (and also established in the German constitution) a task of the government – on all levels: national, states and cities. With increasing financial problems of public households, the public funding has been substantially reduced over the last years. This paper analyzes from an economic and finance point of view whether the public “investment” in arts institutions and here especially in large events can turn out to have a positive “return on investment”. This argumentation is relatively new in the public debate in Germany as traditionally public funding of arts was primarily discussed as a part of the government’s (educational) mission. Visitors’ surveys performed professionally on basis of statistically reliable data bases, also as a means of evaluation of the own performance, are rarely performed by German museums.

In a traditional discussion the question occurs whether the Arts on the one hand and economic / business aspects on the other can go together as complements or whether the two concepts are a contradiction in itself. The independence of arts has a high value in public opinion and the question whether this is endangered by private financial engagement in (public) arts institutions exceeds the scope of this paper.

An interesting aspect of this discussion has been highlighted by authors like Richard Florida who published his book ‘The rise of the creative class ... and how it’s transforming work, leisure, community & every day life’ in 2002. His argument is that regions that want to improve their economic performance are well advised to open up to creative people. These do not only include artists in the narrower definition but all creative people. The more a region encourages creative activity the more likely is a positive economic development.

Kunsthalle Bremen

The “Kunsthalle Bremen”, founded in 1849, is the traditional arts museum in the city of Bremen in Northern Germany. Bremen is the tenth largest city in Germany with around 550 000 inhabitants. Since the year 2000 the Kunsthalle has been organizing several big exhibitions events, all accompanied by intense and creative marketing. In this period, market.research.culture has been performing seven large visitors surveys: the five large exhibition events (the current is still ongoing up to end of February 2008) und two surveys in “quiet times” (without event) in order to compare the visitors and impacts of big special exhibitions with those visiting “only” the perma-

ment exhibition of the Kunsthalle Bremen. Altogether more than 11 000 visitors took part in these seven surveys as shown in Figure 1.

Figure 1 (Event) Exhibitions and visitors' surveys at Kunsthalle Bremen

Exhibition	Topic	Duration	Total Visitors	Respondents (% of all visitors)
Der Blaue Reiter	'The Blue Rider', group of expressionist artists. (Wassily Kandinsky, Franz Marc, August Macke, et. al., also Paul Klee)	25/03/00 - 18/06/00	149 000	811 (0.5 %)
Van Gogh	'The Fields', landscapes in France	19/10/02 - 26/01/03	296 879	3 019 (1.02 %)
Klee im Norden	'Paul Klee in Northern Germany', joint exhibitions in Hamburg, Hannover and Bremen ('Teacher at the Bauhaus')	30/11/03 - 29/02/04	68 900	673 (1 %)
(summer 2005)	(permanent exhibition)	June - August 05	14 943	700 (4.7 %)
Monet & Camille	'Fashion and Portraits of Women in Impressionism' with focus on the early works of Monet comparisons to his contemporaries as Renoir, Manet and other	15/10/05- 26/02/06	207 687	2 975 (1.4 %)
(summer 2006)	(permanent exhibition)	June - August 06	9 182	950 (10.3 %)
Paula in Paris	Paula Modersohn-Becker in Paris and the French avant-garde. The common grounds of her works and those of artists such as Cézanne, Gauguin, and Van Gogh as well as Maillol and Picasso in direct comparison.	13/10/07 - 24/02/08	208 824	2 086 (1.0 %)

Source: market.research.culture, Bremen 2008 ('net'-visitors = student groups subtracted)

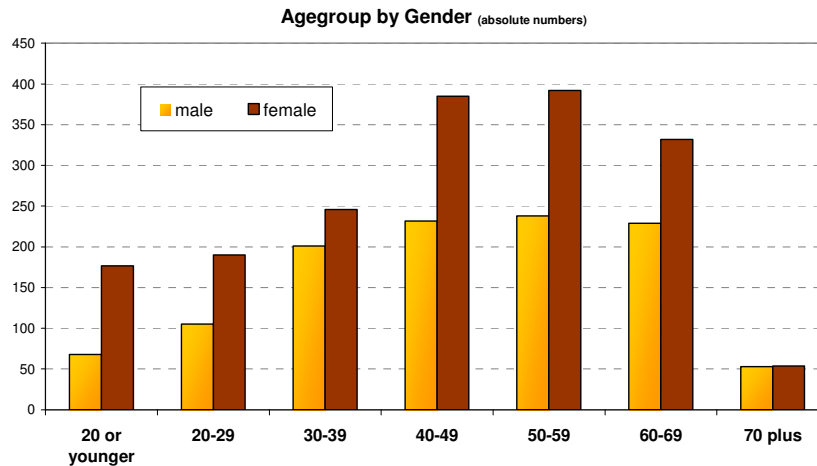
2. The Visitors – describing the target group

The term 'target group' can have different meanings. From a theoretical (marketing) point of view, a target group has to be defined in advance and the marketing strategy has to be oriented towards that group. On the other hand in empirical analyses often the target group is defined describing the customers actually interviewed. The latter makes sense also for this study as the current visitors described by the survey are also the potential customers of future events, so it is important to know them for future strategy.

2.1 Socio-demographic characteristics

The findings in our studies are typical for comparable research in the arts / museum segment: visitors of arts museums are mostly of age 45 and above, especially there are few young visitors. Normally there are more female visitors, both shown in Figure 2.

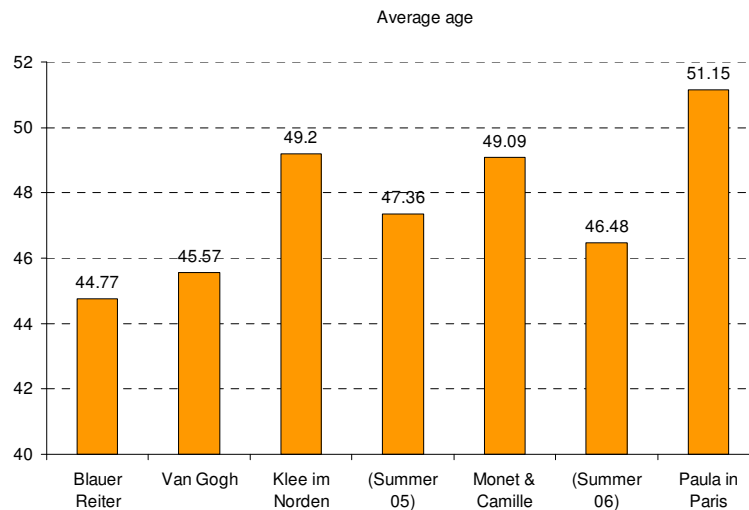
Figure 2 Age group and Gender at the Van Gogh exhibition



Source: market.research.culture, Bremen 2008: Van Gogh visitors, n = 3 019.

It is interesting to see that the average age of the visitors steadily increases in the subsequent exhibitions. One possible explanation might be that many visitors return for the next exhibition - around two years older.

Figure 3 Average Age of visitors at different exhibitions



Source: market.research.culture, Bremen 2008

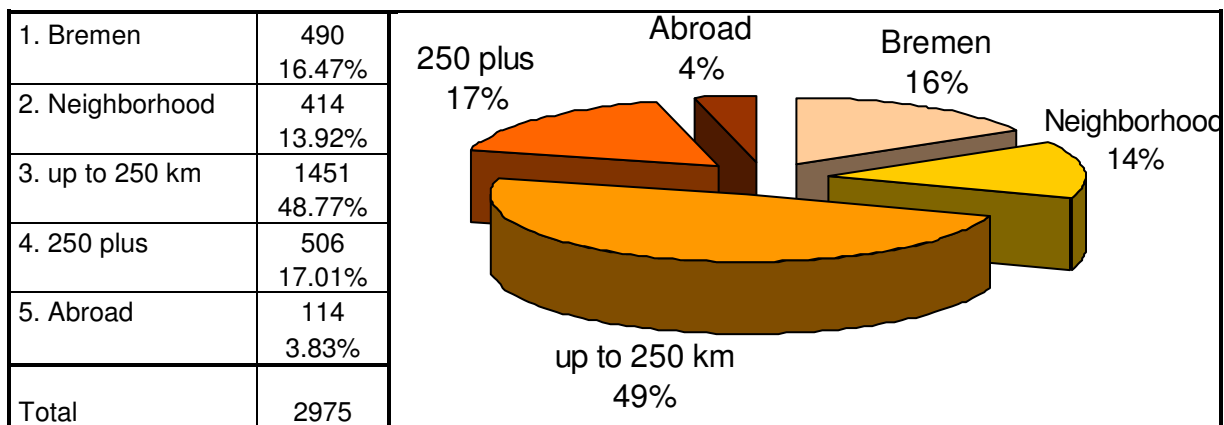
So one result is that the most important target group consists of (female) visitors aged 45 and above. In addition all surveys show that the majority of visitors has a high level of education, in all studies around 50% of all visitors had a university degree, another quarter a college education.

The typical visitor of an arts exhibition is a woman between 45 and 50 years of age with a university degree. This is worth noting for the estimation of the expenditures, as these target groups are wealthier and so are likely to spend more than average tourists of a city / region.

2.2 Origin of the visitors

The visitors were asked for their city and German zip code. From this we developed a classification based on the distance from their place of residence to the Kunsthalle Bremen. Figure 4 shows the categories and their frequencies for the Van Gogh exhibition. The figure shows that 84% of all respondents came from out-of-town.

Figure 4 Origin of the Visitors (Van Gogh exhibition)

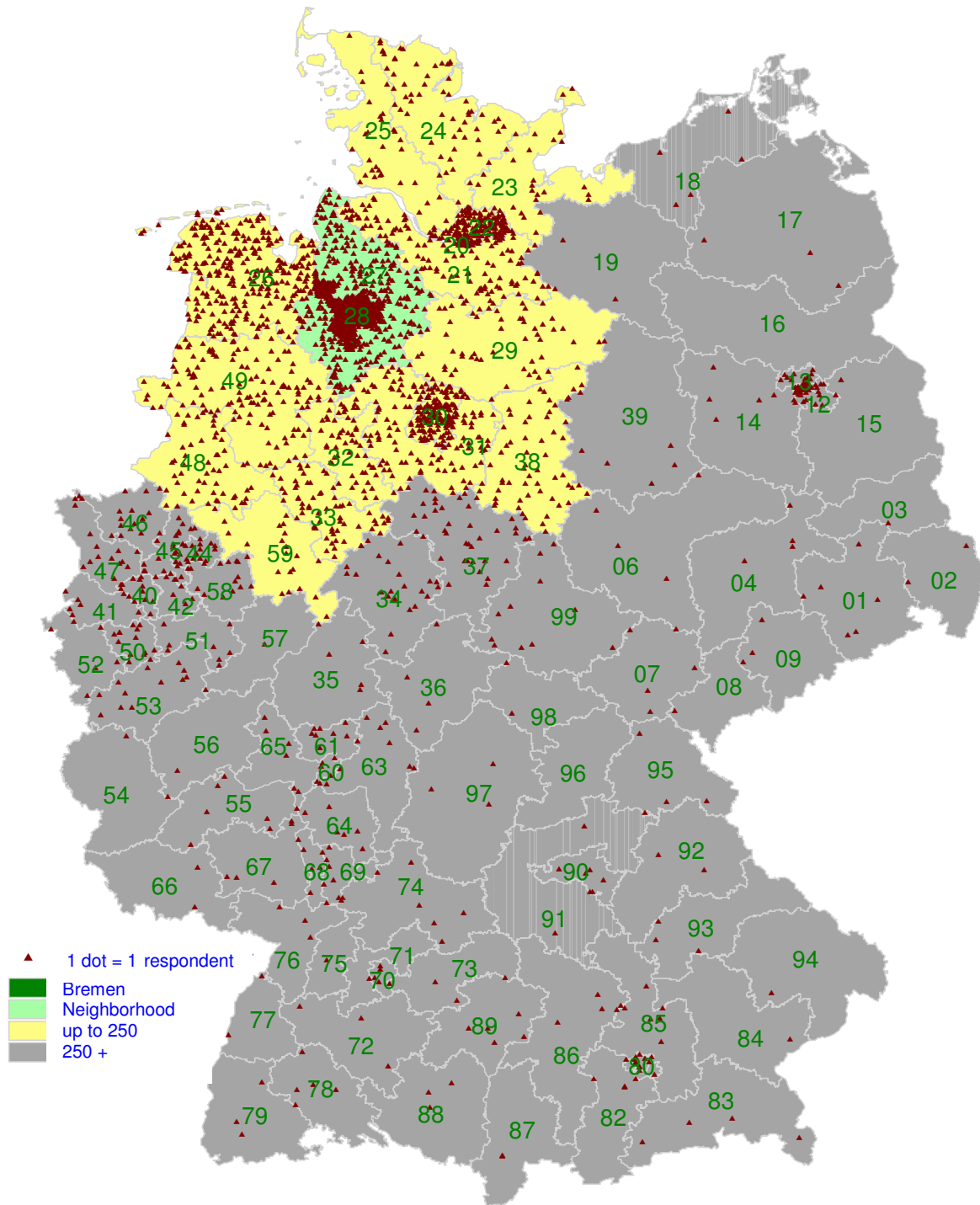


Source: market.research.culture, Bremen 2008: Van Gogh visitors, n = 2 975.

This emphasizes the huge success of the exhibition as this corresponds to a projected number of more than 250 000 out-of-town visitors. More than 83 % of these visitors travelled more than 100 km to Bremen. This can also be seen on a map depicting the German two-digit zip codes in Figure 5, which also visualizes the categories of origin. Here the larger cities in a neighborhood of 120 km, Hamburg and Hannover as well as Berlin and the Ruhr (Ruhrgebiet) in Western Germany can be identified.

114 visitors from abroad took part in the survey, which is around 4% of the respondents, corresponding to a projection of around 11 000 visitors.

Figure 5 Origin of visitors from Germany



Source: GIS.direkt, data: market.research.culture, Bremen 2008: Van Gogh visitors' origin (2 digit zip codes)

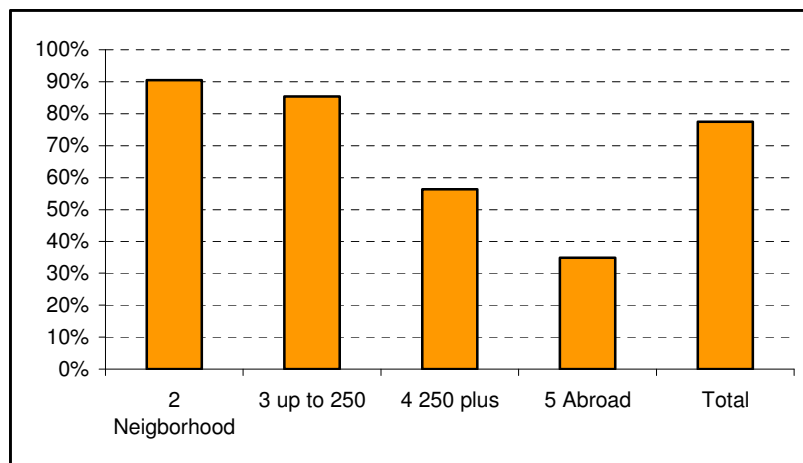
2.3 Motives, Activities and Overnight Stays of Out-of-Town Visitors

The next important question is whether the out-of-town visitors explicitly came to see the exhibition. If this is the case, they can be taken into account for the estimation of the economic impacts.

2.3.1 Special Exhibition as (main) Reason to visit the City / Region

All out-of-town visitors were asked 'Is the exhibition the reason for your visit to Bremen?' to which 77 % gave an affirmative answer. This percentage differed with the origin of the respondents, see Figure 6. Towards the end of the exhibition the percentage of out-of-town visitors coming explicitly to see the exhibition increased, presumably reflecting the success of the word-of-mouth recommendations, but also marketing and reports.

Figure 6 Out-of-town Visitors with Exhibition as the Reason to Travel to Bremen, Van Gogh



Source: market.research.culture, Bremen 2008

Figure 7 illustrates that percentages of out-of-town visitors vary across the exhibitions as does the percentage of the out-of-town visitors stating that they came because of exhibition. The most successful event exhibitions Van Gogh, Monet & Camille and currently Paula in Paris obviously attract many out-of-town visitors. This indicates that the large scale and creative marketing for these events is an important key to its success. These numbers are an important basis for the estimation of economic impacts.

Figure 7 Out-of-town Visitors with Exhibition as the Reason to Travel to Bremen, all Exhibitions

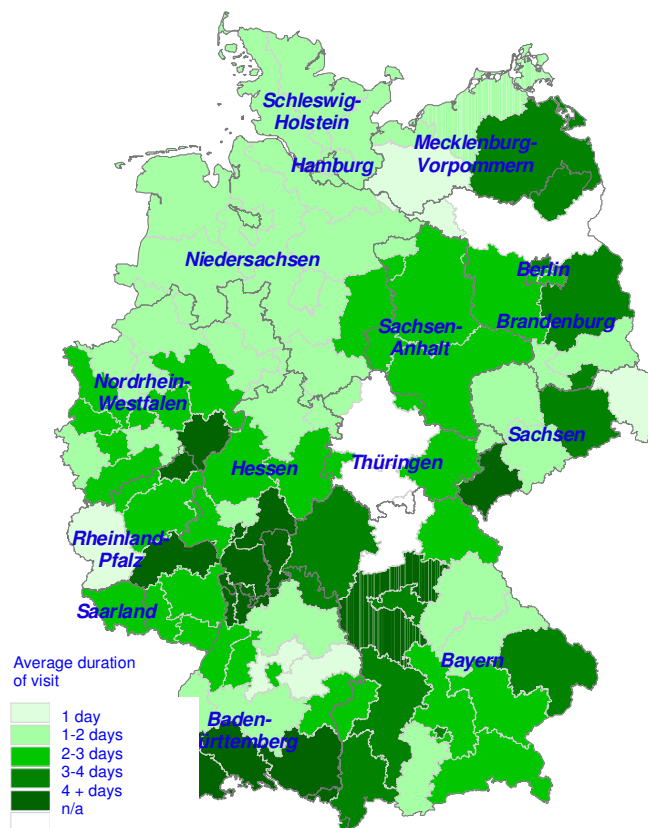
	Blauer Reiter	Van Gogh	Klee im Norden	(Summer 05)	Monet & Camille	(Summer 06)	Paula in Paris
Percentage out-of-town	71%	84%	75%	61%	80%	66%	(81%)
Percentage out-of-town, coming because of exhibition	n/a	77%	73%	31%	71%	24%	78%

Source: market.research.culture, Bremen 2008

2.3.2 Duration and Type of Overnight Stay

Out-of-town visitors on average stayed in Bremen for 1.5 days. Those out-of-town visitors who came explicitly to visit the exhibition only spent an average time of 1.2 days in the city. Figure 8 shows the average length of stay by origin of the visitors – this length increases with the travel distance of the visitors.

Figure 8 Average duration of stay (Van Gogh Exhibition)



Source: GIS.direkt, data: market.research.culture, Bremen 2008: Van Gogh visitors' origin

During the Van Gogh exhibition most of the out-of-town visitors (85%) only spent one day in Bremen without staying overnight. Of those spending the night in the city 52 % lodged in a hotel, 43 % stayed with friends. Figure 9 shows how these percentages vary between the exhibitions

Figure 9 Type of Accommodation of out-of-town visitors

	Blauer Reiter	Van Gogh	Klee im Norden	(Summer 05)	Monet & Camille	(Summer 06)	Paula in Paris
Hotel	60%	52%	62%	25%	32%	18%	61%
Friends/family	31%	43%	18%	53%	63%	75%	34%
other	9%	5%	21%	22%	5%	7%	5%

Source: market.research.culture, Bremen 2008

For the estimation of out-of-town visitors' expenditures, a differentiation of duration is necessary between those staying in a hotel and those staying with friends, as shown in Figure 10.

Figure 10 Average duration - overnight stay of out-of-town visitors explicitly coming for the event

	Blauer Reiter	Van Gogh	Klee im Norden	(Summer 05)	Monet & Camille	(Summer 06)	Paula in Paris
All types of accommodation	n/a	2.2	1.88	1.7	1.59	1.94	n/a
In hotels	n/a	2.32	1.50	2.95	2.31	2.16	2.72
With friends / family	n/a	2.02	1.67	1.30	1.90	2.40	2.81

Source: market.research.culture, Bremen 2008

2.3.3 Further Activities of the Visitors

Another aspect of out-of-town visitors' expenditures is the question whether they combine their visit with other activities in Bremen. The answer to this question is shown in Figure 11.

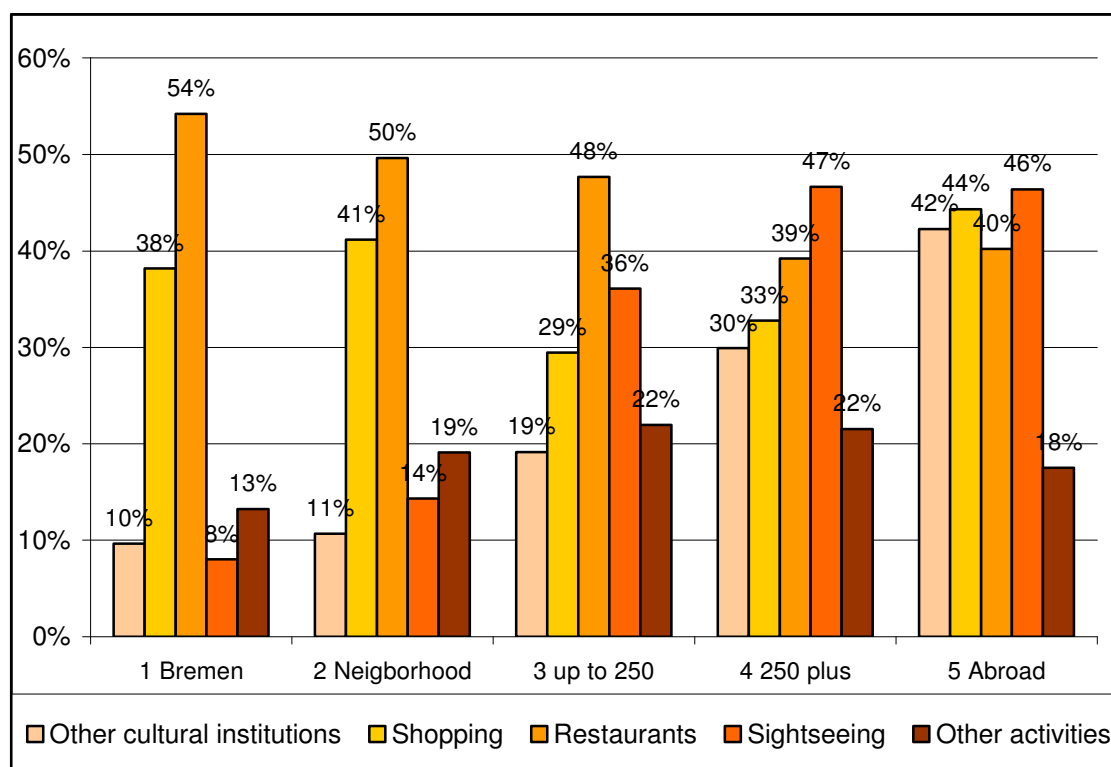
Figure 11 Further activities of out-of-town visitors – all exhibitions

	Blauer Reiter	Van Gogh	Klee im Norden	(Summer 05)	Monet & Camille	(Summer 06)	Paula in Paris
Visiting other museums	n/a	n/a	n/a	31%	12%	32%	32%
Other cultural activities	12%	20%	20%	21%	11%	24%	13%
Shopping	22%	33%	36%	30%	35%	34%	31%
Restaurant	24%	47%	49%	37%	47%	35%	39%
Sightseeing	16%	33%	29%	37%	31%	39%	22%

Source: market.research.culture, Bremen 2008

The answer to this question varies substantially by origin of the visitor. While around half of the visitors intended to eat out, the percentage of respondents visiting other cultural institutions and also of sightseeing increases by distance.

Figure 12 Further activities of out-of-town visitors (Van Gogh)



Source: market.research.culture, Bremen 2008: Van Gogh visitors

3. Regional Economic Impacts of the Arts Exhibitions

The impact of arts exhibitions is estimated in three steps. First the expenditures of out-of-town visitors are estimated, secondly the resulting regional value added. In the third step, a preliminary estimate of fiscal impacts is conducted and some further (non-monetary) aspects are discussed.

3.1 Estimation of the Expenditures of Out-of-Town Visitors

To estimate the expenditures of out-of-town visitors, only those visitors (respondents) are taken into account who reported that the visit of the expenditure was the reason to come to Bremen. Furthermore, different categories of visitors had to be differentiated. This was done with respect to the question, whether, how long, and where they stayed (over night) in the city/region.²

The expenditures of out-of-town visitors were estimated as follows:

$$\begin{aligned} \text{Exp} &= \sum PV_x \cdot AE_x \cdot DS_x \\ &= PV_{\text{day}} \cdot AE_{\text{day}} \cdot DS_{\text{day}} + PV_{\text{hot}} \cdot AE_{\text{hot}} \cdot DS_{\text{hot}} + PV_{\text{fam}} \cdot AE_{\text{fam}} \cdot DS_{\text{fam}} \end{aligned}$$

with: $PV_x = \text{Resp}_x \cdot EF$

and:

Exp Expenditures of out-of-town visitors

Resp_x Number of respondents in category x

EF Expansion factor (total visitors of the exhibition / respondents in the survey)
(reciprocal of '(% of all visitors)' in Figure 1)

PV_x Projected number of out-of-town visitors in category x

DS_x Duration of stay of the out-of-town visitors in category x

AE_x Average expenditures of out-of-town visitors (tourists) in category x

where x represents:

day one-day visitors

hot visitors staying in a hotel

fam visitors staying with friends/family

² Other possible differentiations could have been the further activities reported by the respondents (see 2.3.3), but the average expenditures in the literature sources used for this paper didn't contain this differentiation.

For AE the following estimates for Germany have been used:

Figure 13 Estimation of average daily expenditures of out-of-town visitors

source:	Estimated Expenditures of one-day visitors	Estimated Expenditures of visitors staying in hotels	Estimated Expenditures of visitors staying with friends/family
DWIF'93 HB	27.26 €		
DWIF'95	26.36 €	128.64 €	67.39 €
DWIF'00 HB		152.81 €	86.40 €
ITF'96 BHV	38.90 €	53.25 €	
BTZ'00 HB	45.69 €	126.26 €	59.85 €

Sources: DWIF 93/95 – Deutsches Wirtschaftswissenschaftliches Institut für Fremdenverkehr e.V. an der Uni München; B. Harrer, Dr. M. Zeiner, Dr. J. Maschke, S. Scherr; Tagesreisen der Deutschen; 1993 und 1995
 DWIF 02 – Deutsches Wirtschaftswissenschaftliches Institut für Fremdenverkehr e.V. an der Uni München; Dr. B. Harrer, S. Scherr; Ausgaben der Übernachtungsgäste in Deutschland; 2002
 DWIF05 – Deutsches Wirtschaftswissenschaftliches Institut für Fremdenverkehr e.V. an der Uni München; Dr. B. Harrer, S. Scherr; Ausgaben der Übernachtungsgäste in Deutschland; 2005
 BITF – Bremer Institut für Tourismuswirtschaft und Freizeitforschung; Gästebefragung Stadt Bremen – 2000 (im Auftrag der BTZ Bremen)
 ITF Research GmbH – Institut für Tourismus- und Freizeitforschung Bremerhaven, Besucherbefragung – 1996

In order to show the single aspects of the projected expenditures, the following three figures show the three categories separately. In Figure 14 through Figure 16 the estimations based on the different literature sources are shown. All projected expenditures are converted to 2007 €.

Figure 14 Estimation of expenditures of out-of-town visitors staying in hotels

source:	144 overnight stays in hotels							Projected Expenditures of visitors staying in hotels
	Average Expenditure in year-of-study €	AE _{hot} Average Expenditures in 2007 €	EF Expansion Factor	Resp _{hot} Number of Respondents staying in hotels	PV _{hot}	PV * AE expenditures per day by visitors staying in hotels	DS _{hot} Duration of stay of visitors staying in hotels	
DWIF'95	107.37 €	128.64 €	98.34	144	14,161	1,821,582.06 €	2.3	4,189,638.74 €
ITF'96 BHV	45.11 €	53.25 €	98.34	144	14,161	754,069.38 €	2.3	1,734,359.58 €
DWIF'00 HB	135.83 €	152.81 €	98.34	144	14,161	2,163,849.65 €	2.3	4,976,854.19 €
BTZ'00 HB	112.23 €	126.26 €	98.34	144	14,161	1,787,888.14 €	2.3	4,112,142.72 €

Source: market.research.culture, Bremen 2008: Van Gogh visitors survey plus indicated sources.

Figure 15 Estimation of expenditures of out-of-town visitors staying with friends/family

source:	118 overnight stays with friends or family							Projected Expenditures of visitors staying with friends/family
	Average Expenditure in year-of-study €	AE _{fam} Average Expenditures in 2007 €	EF Expansion Factor	Resp _{fam} Number of Respondents staying with friends/family	PV _{fam}	PV * AE expenditures per day by visitors staying with friends/family	DS _{fam} Duration of stay of visitors staying with friends/family	
DWIF'95	56.25 €	67.39 €	98.34	132	12,980	874,735.17 €	2	1,749,470.35 €
DWIF'00 HB	76.80 €	86.40 €	98.34	132	12,980	1,121,512.30 €	2	2,243,024.59 €
BTZ'00 HB	53.20 €	59.85 €	98.34	132	12,980	776,880.91 €	2	1,553,761.83 €

Source: market.research.culture, Bremen 2008: Van Gogh visitors survey plus indicated sources.

Figure 16 Estimation of expenditures by out-of-town one-day visitors

source:	1550 one-day visitors					Projected Expenditures of one-day visitors
	Average Expenditure in year-of-study €	AE _{day} Average Expenditures in 2007 €	EF Expansion Factor	Resp _{day} Number of Respondents staying only one day	PV _{day}	
DWIF'93 HB	21.78 €	27.26 €	98.34	1,550	152,422	4,154,308.74 €
DWIF'95	22.00 €	26.36 €	98.34	1,550	152,422	4,017,516.55 €
ITF'96 BHV	32.95 €	38.90 €	98.34	1,550	152,422	5,928,749.55 €
BTZ'00 HB	40.61 €	45.69 €	98.34	1,550	152,422	6,963,596.13 €

Source: market.research.culture, Bremen 2008: Van Gogh visitors survey plus indicated sources.

Figure 17 delivers a summary of all estimated expenditures of out-of-town visitors. As not all sources include values for every category of visitors, the total expenditures were only computed for those sources containing all information. In addition, lowest and a highest projection estimation was conducted.

Figure 17 Estimation total expenditures of out-of-town visitors

	Projected Expenditures of one-day visitors	Projected Expenditures of visitors staying in hotels	Projected Expenditures of visitors staying with friends/family	Exp Projected Expenditures of all out-of-town visitors
source:				
DWIF'93 HB	4,154,309 €			--
DWIF'95	4,017,517 €	4,189,639 €	1,749,470 €	9,956,626 €
DWIF'00 HB		4,976,854 €	2,243,025 €	--
ITF'96 BHV	5,928,750 €	1,734,360 €		--
BTZ'00 HB	6,963,596 €	4,112,143 €	1,553,762 €	12,629,501 €
lowest projection	4,017,517 €	1,734,360 €	1,553,762 €	7,305,638 €
highest projection	6,963,596 €	4,976,854 €	2,243,025 €	14,183,475 €

Source: market.research.culture, Bremen 2008: Van Gogh visitors survey plus indicated sources.

This approach results in a very broad interval for the estimation of projected expenditures, so the lowest and highest projection values are not taken into further account. On average the estimation amounts to approximately 11 million €.

Similar estimations were conducted for the other surveys; the results are shown in Figure 18.

Figure 18 Projected Expenditures of Out-of-Town Visitors during event exhibitions (estimated direct impacts - in 1 000 000 €)

	Blauer Reiter	Van Gogh	Klee im Norden	(Summer 05)	Monet & Camille	(Summer 06)	Paula in Paris
Minimum estimation	6.287 ³	9.957	1.165	0.245	7.154	0.128	10.967
Maximum estimation		12.629	1.694	0.276	8.789	0.143	11.682

Source: market.research.culture, Bremen 2008

This results show huge differences between the projected expenditures of the different exhibitions. One clear result is that the economic impacts of the permanent exhibitions of an arts museum are negligible. Not only are the numbers of visitors very small as compared to the events although the time period of the survey is comparable, but also the percentage of people coming to Bremen in order to visit the arts museum as was shown in Figure 7. In addition it can be con-

³ The value shown for the 'Der Blaue Reiter' exhibition is not completely comparable as the visitors were not asked whether they came to Bremen because of the exhibition. So this percentage was estimated on basis of the other studies.

cluded from the fact that also the Klee exhibition did not result in a comparably high value of projected expenditures, that joint exhibitions with other large cities which are 'not far enough away' also do not pay off as high as events that are focused on and promoted in one city.

3.2 Regional Value Added: Direct and Indirect Impacts, Regional Multipliers

The second step in the analysis of economic impacts is to examine the contribution of these additional expenditures in the city / region to the local economy. To not only take into account the direct effects - the direct spending of those visitors who came from outside the town in order to visit the exhibition as described above - but also the economic transactions caused by these expenditures called indirect effects, regional multipliers are applied. They measure the additional regional economic value added. The multiplier analysis was introduced by John Maynard Keynes who designed this analysis for the macro economy of countries. Here the multiplier takes into account the marginal propensity of a leakage out of the economy (MPL):

$$\text{multiplier } k = 1 / \text{MPL}$$

with:

$$\text{MPL} = \text{MPS} + \text{MPM} + \text{MPT}$$

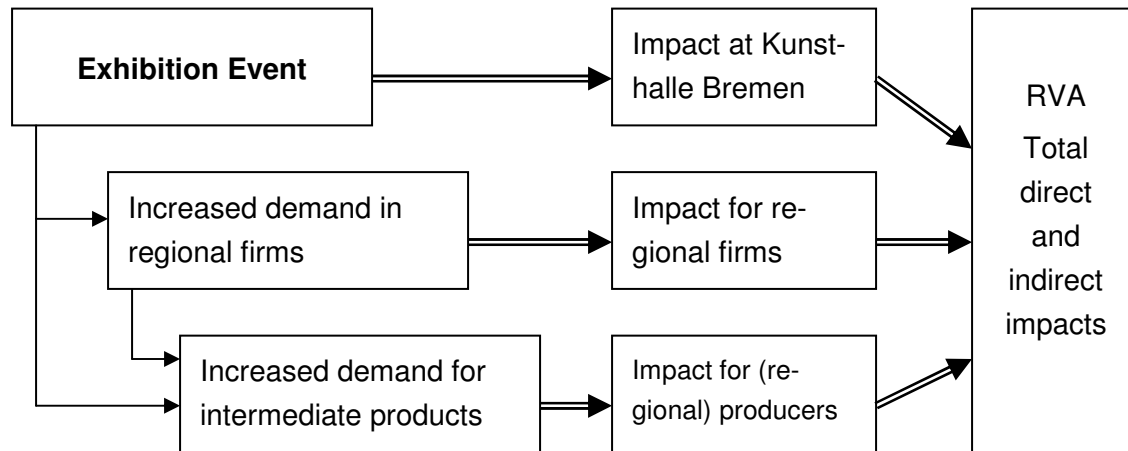
where MPS is the marginal propensity to save, MPM the marginal propensity to import and MPT to be taxed, all measuring the percentage of the additional income not increasing the total expenditure.⁴ On a national level the multiplier can take relatively high values.

Using a multiplier the Regional Value Added (RVA) can be estimated:

$$\begin{aligned} \text{RVA} &= \text{Exp} + \text{indirect Effects} \\ &= \text{Exp} \cdot (1 + k) \end{aligned}$$

⁴ Tribe, J. (2005), pages 266 to 271

Figure 19 Total direct and indirect impacts estimated in the multiplier



Source: Figure on the basis of Baum, H., Schneider, J., Esser, K., Kurte, J. (2004), page 10.

Looking at regional multipliers however, the effects are not so clear. ‘Leakages’ already occur, when some part of the additional expenditures are not spent within the city but in the surrounding area, belonging to another municipality. This is called the (regional) incidence (which percentage of the expenditures stays in the city / region?). Depending on the assumptions about the leakages and incidence the value of the multiplier to be applied varies substantially. Tribe quotes Tourism Income Multipliers for different countries for Canada (TIM = 2.5), UK (TIM = 1.8), Iceland (TIM = 0.6), and Edinburgh (TIM = 0.4).⁵ For cultural events for example Grozea-Helmenstein, Slavova and Treitler use a multiplier of 1.73⁶ in Austria, also RIMS II multipliers of the U.S. Department of Commerce, Bureau of Economic Analysis vary around 1.75⁷

As the leakages are subtracted they lead to a smaller multiplier. We can observe that on average the smaller the region to be analyzed, the smaller the multiplier.

Bremen is a city state - although it only has 550 000 inhabitants it is one of the 16 German states (Bundesländer)⁸ and thus has a certain fiscal autonomy. This also means that the regional incidence is very important in order to evaluate the economic and fiscal effectiveness of a public activity - and the ‘regional economy’ of Bremen is small. There have been several at-

⁵ Tribe, J. (2005), page 271

⁶ Grozea-Helmenstein, D., Slavova, T., Treitler, R. (2004), page 61

⁷ Chang, S (2002), page 14, using the Regional Input-Output Modeling System (RIMS II), cf. Regional Economic Accounts of the Bureau of Economic Analysis (<http://www.bea.gov/bea/regional/rims>)

⁸ The Bundesland Bremen consists of the cities Bremen and Bremerhaven, which add up to a population of around 660 000.

tempts to estimate a multiplier for Bremen. Taubmann and Behrens, one of the first and most quoted German studies about economic impacts of cultural institutions, used a multiplier of 1.5, Schönert and Wehling⁹, in a study about another Bremen museum use the value of 1.4 quoting Schaefer¹⁰ study from the year 2000. Heinemann and Kastin apply a multiplier of 1.3¹¹. So as a careful estimation a multiplier of 1.4 seems to be appropriate for this analysis.

Figure 20 shows the magnitude of the direct expenditures plus indirect effects induced by the exhibition events of Kunsthalle Bremen.

Figure 20 Regional Value Added of Out-of-Town Visitors during event exhibitions (estimated direct plus indirect impacts - in 1 000 000 €)

	Blauer Reiter	Van Gogh	Klee im Norden	(Summer 05)	Monet & Camille	(Summer 06)	Paula in Paris
Minimum estimation	8.802	13.940	1.631	0.343	10.016	0.179	15.353
Maximum estimation		17.681	2.372	0.386	12.305	0.200	16.654

Source: market.research.culture, Bremen 2008

3.3 Fiscal Impacts

An in-depth analysis of the fiscal implications of the estimated Regional Value Added would imply a detailed derivation of employment effects, computed on basis of the industry specific labor productivity which goes beyond the scope of this paper.

Based on an approach of Baum, H., Schneider, et al.¹² we assume an average effective tax rate (after redistribution) of 22.5%¹³ which is divided between the political subdivisions as shown in Figure 21, from which we derive a very preliminary and provisional estimate of possible tax revenues and their division.

⁹ Schönert and Wehling (2003), page 22

¹⁰ Schaefer, H. (2000)

¹¹ Heinemann, A., Kastin, S. (2007), page 21

¹² Baum, H., Schneider, J., Esser, K., Kurte, J. (2004), page 50 – 52.

¹³ Quoted from the German Statistical Office (Statistisches Bundesamt) Statistisches Jahrbuch 2003, page 663.

Figure 21 Preliminary Estimate of Possible Tax Revenues

		Blauer Reiter	Van Gogh	Klee im Norden	(Summer 05)	Monet & Camille	(Summer 06)	Paula in Paris
federal	(min)	0.863	1.367	0.160	0.034	0.983	0.018	1.506
(43.7%)	(max)		1.734	0.233	0.038	1.207	0.020	1.634
state	(min)	0.796	1.261	0.148	0.031	0.906	0.016	1.389
(40.2%)	(max)		1.599	0.215	0.035	1.113	0.018	1.506
city	(min)	0.238	0.376	0.044	0.009	0.270	0.005	0.415
(12.0%)	(max)		0.477	0.064	0.010	0.332	0.005	0.450
EU	(min)	0.079	0.125	0.015	0.003	0.090	0.002	0.138
(4.0%)	(max)		0.159	0.021	0.003	0.111	0.002	0.150
state plus	(min)		1.637	0.192	0.040	1.176	0.021	1.803
city	(max)	1.034	2.077	0.279	0.045	1.445	0.024	1.956

Source: market.research.culture, Bremen 2008

As Bremen is a city-state both the taxes of the state and the city level are relevant, which is why both values are added up in the last two rows of in Figure 21 providing an estimate of between € 1.6 and 2 million as fiscal impact of the Van Gogh exhibition in 2003/03 (converted into 2007 €).

From this point of view we can derive that the 'investment' of the city state of Bremen in events of the Kunsthalle Bremen pays off very well. As for the Van Gogh exhibition the public funding added up to around € 1 million, for the other exhibitions it was even lower.

So on the one hand these figures appear rather huge and this preliminary estimation of tax revenue has to be revised carefully.

Furthermore in the specific situation of the city state of Bremen there is a German specialty to be considered. Bremen is heavily overindebted with a huge budget deficit and the state budget can only be held up by a substantial support of the federal budget and the other states (Länder) by a system called 'Länderfinanzausgleich' (financial equalization scheme between the Federal Government and the Länder). This results in the fact that from every additional Euro earned by Bremen around 95 to 97 Cents are deducted from the Länderfinanzausgleich. From this angle there is hardly any incentive for Bremen to make any effort in raising additional tax revenue.

3.4 Additional effects: Expenditures of other Out-of-Town and Local Visitors (Import Substitution)

In addition to the estimated direct and indirect monetary impacts of large cultural events there are some more arguments which are either not included in the estimation above (and so subject to further research) or are not measurable in monetary terms.

- In only taking into account the out-of-town visitors we underestimate the effect that also the visitors from the city on Bremen themselves may spend more money during and around the visit of an exhibition (museum shop, restaurants, ...).
- This is especially true if the inhabitants of Bremen otherwise would have travelled to another city/region, visited an exhibition and also spent money there (an amount comparable to that we estimated the out-of-town visitors to spend in Bremen). As the visit of art events in another city from an economic point of view is regarded as an import of services this effect is called import substitution.
- But there are also non-monetary benefits from such events. First to mention is the educational success. In attracting new visitor for cultural arts a society develops a higher level of general education and by this the creative potential is increased – also in the sense of the creative class approach of Richard Florida mentioned above.
- Additionally the (repeated) presentation of nationally and internationally appreciated exhibitions improves the image of city or region. This may on the one hand lead to a higher identification of the citizens with their region, but can also be regarded as a location factor for future business decisions. This may lead –in an even more indirect way – to increased economic performance in the future.

4. References

- Baum, H., Schneider, J., Esser, K., Kurte, J. (2004), Die regionalwirtschaftlichen Auswirkungen des Low cost-Marktes im Raum Köln/Bonn
- BITF – Bremer Institut für Tourismuswirtschaft und Freizeitforschung (2000), Gästebefragung Stadt Bremen
- Bornemann, H., Kaiser, P., Netzer, U. (2002), Wirkungsanalyse des Investitionssonderprogramms (ISP) des Landes Bremen, Evaluierungsgutachten, Endbericht, Prognos AG, Bremen
- Bremer Touristik-Zentrale (BTZ) (2000), Touristisches Marketing Bremen: 1999/2000 und Vorschau 2001, Bremen
- Chang, Semoon (2002), Estimating the Economic Impact of Bay Fest 2001, CBER Report 50, Mobile, Alabama
- DWIF (1993, 1995), Deutsches Wirtschaftswissenschaftliches Institut für Fremdenverkehr e.V. an der Uni München; B. Harrer, Dr. M. Zeiner, Dr. J. Maschke, S. Scherr; Tagesreisen der Deutschen
- DWIF (2002), Deutsches Wirtschaftswissenschaftliches Institut für Fremdenverkehr e.V. an der Uni München; Dr. B. Harrer, S. Scherr; Ausgaben der Übernachtungsgäste in Deutschland
- DWIF (2005), Deutsches Wirtschaftswissenschaftliches Institut für Fremdenverkehr e.V. an der Uni München; Dr. B. Harrer, S. Scherr; Ausgaben der Übernachtungsgäste in Deutschland
- Florida, R (2004) The rise of the creative class ... and how it's transforming work, leisure, community & every day life, New York
- Grozea-Helmenstein, D., Slavova, T., Treitler, R. (2004), Umwegrentabilität der Bregenzer Festspiele
- Grabow, B., Henckel, D., Hollbach-Grömig, B. (1995), Weiche Standortfaktoren, Schriften des Deutschen Instituts für Urbanistik 89, Stuttgart
- Harrer, B., Zeiner, J., Maschke, S., Scherr, S. (1995), Tagesreisen der Deutschen; DWIF – Deutsches Wirtschaftswissenschaftliches Institut für Fremdenverkehr, München
- Heinemann, A., Kastin, S. (2007), Die Bedeutung der Universität für Bremen vor dem Hintergrund der extremen Haushaltsnotlage, Bremen
- Hummel, M. (2000), Die volkswirtschaftliche Bedeutung von Kunst, Kultur, und Medien in der Bundesrepublik Deutschland, Kurzfassung, ifo-Institut für Wirtschaftsforschung
- ITF Research GmbH – Institut für Tourismus- und Freizeitforschung Bremerhaven (1996), Besucherbefragung
- Kucharczuk, A. (2001), Kultur und Standort – Eine empirische Untersuchung zu der Sonderausstellung *Der Blaue Reiter* in Bremen (unpublished Diploma thesis)
- Kucharczuk, A., Schmidt, P. (2004), Regionalwirtschaftliche Implikationen von Kulturereignissen - am Beispiel der Kunstaussstellung Van Gogh: Felder; in: H. Bass (ed.), Facetten volkswirtschaftlicher Forschung, Münster / Hamburg / New York
- Kucharczuk, A., Schmidt, P. (2003 through 2007), diverse research reports
- Miller, J (1996) Nutzen-Kosten-Analyse - Der fiskalische Nutzen eines Arbeitsplatzes im Land Bremen, BAW-Arbeitspapier Nr. 11
- Pohl, M. (2001), Fiskalische Bedeutung von Arbeitsplätzen, BAW Diskussionsbeitrag 2, Bremen
- Pohl, M., Schönert, M. (2002), Regionalwirtschaftliche Bedeutung des Bremer Ratskellers, BAW Monatsbericht 11, Bremen
- Riebel, J. (1993), Imageanalyse: Was sind wesentliche Analyse- und Gestaltungsfelder für das Stadtimage? In: Töpfer, A., Stadtmarketing; FBO-Fachverlag für Büro- und Organisationstechnik GmbH, Baden-Baden
- Schaefer, H. (2000), Ermittlung regionaler Multiplikatoren für das Land Bremen, Anlageband IV, Teilgutachten externer Gutachter, Prognos AG, Bremen
- Schönert, M., Wehling, W. (2003), Regionalwirtschaftliche Bewertung des Überseemuseums Bremen, BAW Bremen
- Taubmann, W., Behrens, F. (1986), Wirtschaftliche Auswirkungen von Kulturangeboten in Bremen, Universität Bremen
- Tribe, J. (2005), The Economics of Recreation, Leisure & Tourism
- Wehling, W. (2001), Regionalbericht Bremen 2000, BAW Monatsbericht 11, Bremen