Support for and resistance against large stadia: the role of lifestyle and other socio-economic factors

Book section

Support for and Resistance against large Stadia: The role of Lifestyle and other Socio-economic Factors

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1 Introduction

Local resistance against mega sport events may play a determining role for the probability of winning a bid (Baade and Sanderson in this book). In order to be able to treat the target audience efficiently, it is thus of utmost importance for the officials responsible for the bid to know about motives and socio-economic backgrounds of the resistant and the supporting milieus.

As noted in the so-called “death-of-class”-debate, a one-dimensional view on society along an income-ray falls short in accounting for the full diversity of personal tastes, attitudes and values, and consumption preferences. Therefore, new concepts have been developed to classify individuals not only by social class or strata, but on the basis of a broad range of values, attitudes or leisure patterns (Veal, 1993). As a case study which might lead to generalisations towards, other sport issues as mega events, we, investigate

at the voting-precinct level the 2001 stadium referendum on the Allianz-Arena in Munich where residents were asked about the public provision of a site and the accompanying subsidies for infrastructure for the new home-venue of the professional football teams FC Bayern Munich and 1860 Munich. Assuming rationality, the clear majority vote for the project indicates that at city level, public subsidies are overcompensated by a substantial increase in utility of the majority of residents. As there is hardly compelling evidence for positive economic im-

pact of stadium projects (Matheson, 2008), the literature has suggested civic pride, feel-good, happiness and consumption benefits as sources of utility increase (Coates & Humphreys, 2006; Groothuis, Johnson, & Whitehead, 2004; Cornelissen & Maennig, 2010, Hilgers et al, 2010, Kavetsos & Szymanski, 2010).

The existing empirical analyses of referendums on stadia (Agostini, Quigley, & Smolensky, 1997; Ahlfeldt & Maennig, 2009b; Coates & Humphreys, 2006) and cultural institutions (Rushton, 2005) provide evidence for the relevance of socio-economic and demographic attributes like age and economic wealth in sharpening residents' consumption preferences. Also, evidence indicates that the expected net-utility derived from such consumption amenities varies significantly with the distance to these facilities (Ahlfeldt, Maennig, & Scholz, 2010; Coates & Humphreys, 2006; Dehring, Depken, & Ward, 2008). We go beyond the scope of previous studies by employing indicators that capture residents' lifestyle in more detail. Using georeferenced data on probabilities of households belonging to different SINUS- Milieus, we show that neighborhoods' milieu composition is highly correlated with the share of yes-votes for the project and a quantitatively important determinant of voting decisions. This is an important extension as failure to account lifestyle specific preferences may result in biased estimates of proximity effects in the presence of residential sorting with respect to unobserved household characteristics.

2 Background and Data

2.1 The Project

Professional football in the Bavarian capital of Munich is shaped by the two sports clubs TSV 1860 München and FC Bayern München. While the latter was the first team playing at the modernOlympic stadium in the 1972/1973 season, the TSV 1860 had long stayed at the "Grünwalder Straße" and only partly switched to the Olympic stadium(N. N., 2007). By the mid 1990s, however, the Olympic stadium also became unpopular with the club directors and fans of FC Bayern München. The stadium no longer met the demands of a modern football stadium. To solve this problem, various plans to renovate the Olympic stadium or to build a completely new stadium for football were discussed (Pauli, 2001). However, the planned renovation of the

Olympic stadium felt through because the architect and copyright holder Behnisch withdrew his own renovation plans after numerous misgivings expressed by individuals engaged in the protection of historical monuments, architectural experts, and art historians (Dürr, 2000).Additionally, Germany's bid to host the 2006 football World Cup was accepted in 2000 and the city of Munich intended to apply to stage the opening game of the tournament.

Eventually, at the beginning of 2001, the two clubs FC Bayern München and TSV1860 München negotiated to construct a new stadium, designed exclusively for football, with about 66,000 seats, as soon as the city agreed on a suitable location (N. N., 2001a).The Munich city council finally opted for the district Fröttmaning In the north-eastern periphery in July 2001 (Dürr, 2001a). This was also the time when the architectural competition for the new stadium was opened, which, as a stated objective, put nothing less than the creation of a new landmark for the city of Munich on the agenda. A referendum entitled "Stadium construction in Fröttmaning-World Cup 2006 football in Munich" on the construction project was scheduled for October 21, 2001 (Hornberger, 2001).It comprised on the one hand the passing of the planning law requirements for the construction of a dedicated football stadium in the location of "Fröttmaning industrial estate" and the complete absorption of construction costs by the Munich football clubs. On the other hand, the city of Munich would commit itself to provide a municipal plot in the framework of a long term inheritance rights contract and to contribute to the usual extent to the necessary infrastructure measures (in particular the construction of underground train and road connections)(N. N., 2001c). It should be noted here that this "usual public contribution" amounted to as much as €210 million, of which the city of Munich provided €107 million (N. N., 2005). The plot itself was valued at about €85 million (170 million DM)(N. N., 2001b).

At the end a significant majority of 65.7% voted in favor of the construction of the new stadium. The result of the vote and the 37.5% voter turnout were the highest in a Munich public consultation since their introduction in 1996 (N. N., 2001d, 2001e).In February 2002 the two football clubs, among a range of spectacular drafts from very prominent architects, decided in favor of the model submitted by the architects Herzog & DeMeuron. As a key-feature the winning design is characterized by a completely lucent facade, which adopts the colors of the resident teams F.C. Bayern and 1860 München and supports the iconic charisma of the arena.

Ahlfeldt & Maennig(2010b)provide a detailed discussion on iconic stadia, including the Munich Allianz-Arena.

2 . 2 Lifestyle Groups and Proxy Variables

To describe the inequality of societies or populations various approaches such as class, social strata or lifestyle groups are discussed across nearly all social sciences. While the concept of social class is mainly based on observable/objective variables like income or education, the lifestyle approach includes tastes, behavior, attitudes or value sand accounts for different ways of life beyond the class-specific socio-structural variables(Mochmann & El-Menouar, 2005; Otte, 2008; Veal, 1993). .

On this background, the voting behavior on the public consultation on stadium construction in Fröttmaning is likely to have been influenced by lifestyle in two ways: Firstly, selected lifestyle groups can have strong preferences for football consumption. Individuals belonging to such groups spend their leisure time in playing or watching football. Their attitude towards the new stadium is influenced by their direct consumption preferences. Secondly, highbrow lifestyle groups without any particular football consumption preferences can favor the new construction because of its iconic architecture. Their attitude results from cultural interests and aesthetic sensibility.

In order to capture lifestyle groups, we employ two proxy variable sets based on political party affiliation and the MOSAIC milieu classification scheme. The MOSAIC milieus have been developed for direct marketing applications and correspond to the SINUS milieus by the market research institute Sinus Sociovision. Accordingly, groups of like-minded individuals are classified into ten milieus, which can be visualized in a two-dimensional diagram with strata affiliation at the vertical axis and value orientation at the horizontal axis. For this reason socio-economic factors as well as general view of life and attitudes to everyday life or consumption are included(Otte, 2008; Sinus-Sociovision, 2007a). These milieus are labeled:

- *Conservativ*e: Milieu with focus on tradition and values with humanistic sense of responsibility. Prevalently retired academics with high income(Fischer, 2002c).
- *Establishment*: Highbrow and high income milieu with focus on high-level, aesthetic and selected consumption patterns(Fischer, 2002a).

- *Post-Materialist:* Highbrow, cosmopolitan, self-conscious and tolerant milieu with individualistic attitudes and without striving for social status(Fischer, 2002e).
- *Modern Performer:* Modern, unconventional, performance-oriented milieu comprising young and intellectual people with high income(Fischer, 2002d).
- *Traditionalist*: Middle or lower class milieu consisting of mainly retired workers or employees with values like tidiness, decency, or acquittal(Allgayer, 2002c).
- *GDR-Nostalgic:* Older milieu focusing on socialistic values and refusing capitalism, globalization, and prestigious consumption(Allgayer, 2002a).
- *Middle-Class Mainstrea*m: Status-oriented milieu willing to perform and striving for comfortable, secure life with family and friends(Allgayer, 2003).
- *Consumer-Materialist:* Lowbrow milieu with low purchasing power but preference for status-oriented consumption(Allgayer, 2002b).
- *Experimentalist:* Stylish milieu with hedonistic attitudes including individuals with modern occupation and high education(Fischer, 2002b).
- *Hedonistic:* Modern, trend-oriented, fun-loving milieu consisting of young workers, employees or apprentices with little purchasing power(Fischer, 2002c).

2 . 3 Data

The area examined in this work refers to the autonomous administrative city of Munich, the capital of the Free State of Bavaria. At the time of the assessment, October21, 2001, some 1,259,730 inhabitants were living in Munich, in an area of 310.41 km^2. The municipal area of Munich, within the boundaries of October 2001, was subdivided into various spatial units: 25 municipal districts, 106 constituent districts, and 455subdistricts. Besides the spatial structuring of the municipal districts, the municipal area could be further fundamentally subdivided into 656 voting precincts or electoral wardsat the time of the assessment. However, in the event of smaller ballots, such as a public consultation, a different division of the voting precinct was made for reasons of cost and a lower than expected turnout. Accordingly, for the public consultation concerning the building of the new stadium, the municipal area was divided into only 311 voting precincts.

On the occasion of the public consultation on the new stadium in Fröttmaning, 902,061 citizens entitled to vote were called upon to make a final decision. Those eligible to vote were all German nationals or nationals of other EU member states, who had reached the age of 18 on polling day and who had been registered as predominantly resident in Munich for at least three months. Of the338,225 citizens who took part in the vote, a significant majority of 65.7% voted in favor of the construction of the new stadium. This result and the 37.5% voter turnout were the highest in a Munich public consultation since their introduction in 1996(N. N., 2001d, 2001e). The absolute “yes” and “no” votes for each voting precinct have been made available by the Munich district administration department. Among the total 311 votin gprecincts, there were 50 postal vote districts, which cannot be further considered in this assessment because of a lack of spatial classification by the Munich electoral office. The postal vote districts accounted for 60,054 of the total 338,225 votes cast. After the postal vote districts are subtracted, 261 constituencies or polling stations remain in the actual assessment, in which 278,171 Munich voters cast their votes on polling day. All of the data used in this assessment were obtained from the Munich statistics office (München, 2007; N. N., 2001e).

The proxy variable set for lifestyle groups are the MOSAIC Milieus which are based on the SINUS milieus. To ascertain these milieus, 250 persons were classified into ten milieus by qualitative aspects. After that, these persons had to complete a questionnaire with 112 standardized lifestyle-questions. These 112 items were reduced by discriminant analyses to a quantitative milieu indicator comprising 46 items. The detailed allocation algorithm and the lifestyle-questions are not published (Otte, 2008). The firm microm Mirkomarketing Systeme links the SINUS milieus with its own microgeographic dataset on the structure of consumers. Therefore, certain milieu probabilities are determined (Sinus-Sociovision, 2007b). Detailed information about this process is not provided. In this analysis the milieu probabilities for the 455 Munich subdistricts in 2005 are utilized, which were provided by the local statistical office.

Additional to the lifestyle indicators, data on the demographic structure of the population, such as their age, sex, and the proportion of foreigners to Germany and to the EU, were available and represent the status on September 30, 2001. These data were available at the level of the 656 voting precincts and aggregated to the 261 precincts according to the official register. Furthermore, data of the distribution of purchasing power obtained from the Munich statistics office (München, 2007). The record of purchasing power was derived originally from a progno-

sis of the consumer research society Gesellschaft für Konsumforschung (GfK), for the year 2004. Here, "purchasing power" means the income of a household available for consumer purposes, adjusted for taxes and social security contributions.

The data on purchasing power, party affiliation, and milieu probabilities have been adjusted to the level of the 261 voting precincts using GIS and standard area interpolation techniques (Ahlfeldt & Maennig, 2009b; Arntz & Wilke, 2007; Goodchild & Lam, 1980).Our empirical analyses are based on the observation of grouped data on precinct level since individual data on residents' preferences is not available. Applying the methodology of "ecological inference" similar to SCHULZE&URSPRUNG(2000) and RUSHTON(2005), we infer about the probability of a voter supporting the project, who with respect to the considered characteristics is representative for a precinct. An extensive discussion of the underlying assumptions of ecological inference can be found in SHIVELY(1969), KING(1997), or KING, ROSEN&TANNER(2004).

3 Empirical Results

3.1 Milieu Preferences and Neighborhood Composition

While at city level little evidence is available for direct economic effects arising from stadia or stadium construction, the literature provides compelling evidence for significant neighborhood spillovers within a range of 3-5 km. Positive effects are found in real estate prices (Ahlfeldt & Kavetsos, 2010; Ahlfeldt & Maennig, 2009a, 2010a; Carlino & Coulson, 2004; Tu, 2005) or voting pattern (Coates & Humphreys, 2006). The expected net proximity cost revealed in the Munich stadium referendum (Ahlfeldt & Maennig, 2009b) is a notable exception. Coates & Humphreys (2006) argue that, among other reasons, proximity effects of stadia may arise from residents with different preferences sorting in distinct neighborhoods, which naturally reflects in the spatial pattern of the election outcome. This rationale leads us to beginning our empirical investigations by comparing the residential composition in the neighborhoods of the proposed (Allianz-Arena) and the existing(Olympic Stadium) stadia to the rest of the city. We conduct a series of simple separate regressions of the log of probability of a household belonging to milieu *J* at precinct *i* ($PMil^{J}_{i}$) on a constant as well as a dummy variable (IM^{J}_{i}) denoting all voting precincts within 3 km in the case of the Olympic Stadium (Olympiastadion) and 4 km in the case of the Allianz-Arena (Fröttmaning). Within these areas, significant proximity effects are revealed in the voting pattern (Ahlfeldt & Maennig, 2009b).

$$\log(PMil^J{}_i) = \alpha_0 + \alpha_1 IM^J{}_i + \varepsilon_i, \quad (1)$$

where α_0 and α_1 are the coefficients to be estimated and ε_i is the error term. The percentage difference (*PD*) between the probabilities of belonging to a certain milieu group within a respective impact area and the rest of the city are inferred from the coefficient $\alpha_1$according to the standard interpretation in semi-log models.[1]

Also, we provide a first descriptive assessment of heterogeneity in residents' preferences by exploring the (spatial) correlation between the proportion of yes-votes and MOSAIC milieu probabilities. Table 1 shows the respective differentials in milieu probabilities as well as the correlation coefficients between the share of yes-votes and the probabilities of belonging to certain MOSAIC milieus (Corr.) for the proposed stadium locations

Tab. 1 Residential Composition and Stadium Attitude (MOSAIC milieus)

	PD		Corr.
	Olympic Stadium	Allianz-Arena	
Conservative	-12.20***	.37	.266***
Establishment	4.34***	-10.00***	-.384***
Post-Materialist	4.36	-17.50***	-.525***
Modern Performer	3.00**	-.09	-.294***
Traditionalist	-2.19	5.32	.536***
GDR-Nostalgic	-2.48	17.83***	.452***
Middle-Class Mainstream	-10.20***	19.44**	.432***
Consumer-Materialist	-2.87**	8.88**	.338***
Experimentalist	10.05***	1.53	-.131**
Hedonistic	1.97***	1.85	.008

Notes: PD is denotes the percentage difference between the probability a household belonging to a certain milieu within a 3 km (4 km) radius around the Olympic Stadium (Allianz-Arena). Corr. is the correlation coefficient between the share of yes-votes in the Allianz-Arena referendum and the milieu probability across voting precincts.***/**/* denote significance at the 1/5/10% level.

From the results of Tables 1it is evident that the composition of the neighborhooddiffers considerably relative to each other as well as relative to the rest of the city. At the same time there are significant correlations between proportion of yes-votes and lifestyle proxies, pointing to significantly different attitudes towards the project. E.g., across precincts the proportion of yes-votes decreases with increasing probability of belonging to a societal leading milieu

[1] *PD* = (exp(α_1)-1)*100 (Halvorsen & Palmquist, 1980).

(Establishment, Post-Materialist and Modern Performers). These milieus in average seem to oppose to the project. In contrast, the two Mainstream-Milieus, Middle-Class Mainstream and Consumer-Materialist, as well as the milieus with traditional values (Conservative, GDR-Nostalgic and Traditionalist) seem to support the project. The correlation between yes-votes and the modern milieus, Hedonistic and Experimentalist, is insignificant or has a small value, respectively. Notably, there is quite a high concentration of residents belonging to milieus that have a particularly positive attitude towards to project in the vicinity of the Allianz-Arena. To the contrary, within the impact area of the Olympic Stadium we find higher proportions of milieu groups that in average were in relative opposition to the project. The chosen site, hence, indeed potentially minimizes local opposition as intended by authorities, particularly when compared to the considered alternative close to the Olympic Park. These results, however, do not support the hypothesis of residential sorting with respect to preferences for professional football in the neighbourhood of the Olympic Stadium, nor can the opposition to the new stadium be explained by the residential composition in proximity to the Allianz-Arena.

3 . 2 Econometric Analysis

Milieu specific preferences are investigated in more detail using spatial econometrics in order to reveal lifestyle specific correlations with proportion of yes-votes, conditional on socio-economic characteristics. All models control for proximity effects using two neighborhood dummy variables denoting precincts within the impact areas of Allianz-Arena and Olympic Stadium. By, in addition, introducing interaction terms with continuous distance measures, proximity effects are allowed to diminish with distance. This specification proved to be efficient after careful evaluation on the basis of parametric and non-parametric estimates(Ahlfeldt & Maennig, 2009b). The OLS method was used in the studies of COATES&HUMPHREYS(2006) AND AGOSTINI, QUIGLEY&SMOLENSKY(1997) for the empirical analysis of the voting behavior in the consultations concerning American stadium projects. Accordingly, the dependent variable, $pcvy_i$, represents the percentage of “yes” votes in the respective constituencies *i* in the Munich public consultation. The explanatory variables are, besides geographic variables capturing proximity effects, the economic and demographic characteristics of the voters in constituency *i* including the milieu proxy variables. The regression equation is thus:

$$pcvy_i = \alpha + \beta X_i + \varepsilon_i \quad (2)$$

where X_i is the vector of the explanatory variables (including a constant), βdenotes the vector of the unknown parameter to be assessed, and $\varepsilon_i$is the error term.[2]

For almost all estimated models, the standard Lagrange multiplier (LM) test for spatial dependency suggests the appropriateness of a spatial error correction model(Anselin & Bera, 1996; Anselin & Florax, 1996), which indicates spatial autocorrelation of error terms possibly due to omitted variables that are correlated across space(Anselin, 2003).[3]The SAR model corrects for the spatial structure in the error term $\boldsymbol{\varepsilon_i}$ as follows:

$$\varepsilon = \lambda W\varepsilon + \mu, \tag{3}$$

Parameter λcorrects for the spatial correlation in the error term (ε);$W$is a rook contiguity weights matrix; and μ is an independent and identically distributed vector of error terms.

Our baseline specification results excluding milieu proxy variables are presented in Table 2. Table 3 shows coefficient estimates for milieu variables that are individually introduced into the basic model specifications in separate regressions to avoid collinearity problems. We restrict the presentation of estimation results to the coefficients and standard errors of interest, accompanied by the respective coefficients of determination. Since milieus are defined, among other factors, on the basis of households' economic wealth, we exclude unemployment and purchasing power in order to avoid collinearity.[4]Except the coefficient estimate for Modern Performers in the SAR model, the coefficients are highly significant in all models. In comparison to the unconditional correlation coefficients presented in Table 1, however, there are some changes. The leading milieus Establishment and Post-Materialists as well as the traditional milieu of Traditionalists still oppose the project, but Conservatives, Experimentalists and the Hedonistic milieu turn out to have generally supported to project. The positive attitude of

2 We address heteroscedasticity using the standard Whilte/Huber "sandwich" correction.

3 Another form of spatial dependency emerges from the dependent variable being endogenous to neighboring observations. This dependency can be dealt with by the application of a spatial lag model. Methodological aspects of spatial error and spatial lag models are covered by Anselin(1988) and Anselin & Bera(1998).

4 Coefficient estimates of control variables are only affected marginally by the altered specifications.

mainstream milieus (Middle-Class Mainstream and Consumer-Materialists) towards new stadium construction remains unchanged.[5]

Tab. 2 Basic Models

	OLS	SAR
Proportion Population 18-25 Years old [%]	.0088***	.0066***
	(.0025)	(.0011)
Proportion Population 25-35 Years old [%]	-.0038***	-.0027**
	(.0012)	(.0021)
Proportion Population 35-45 Years old [%]	.0060***	.0027*
	(.0020)	(.0016)
Proportion Population 60+ Years old [%]	.0054***	.0027**
	(.0012)	(.0011)
Proportion Population Male [%]	.0067***	.0023*
	(.0015)	(.0013)
Proportion Population EU-Foreigner [%]	.0011	-.00006
	(.0012)	(.0012)
Olympic 4k	.0662***	.0530*
	(.0169)	(.0318)
Olympic 4k x Dist. to Olympic Stadium [km]	.0206	-.0160*
	(.0065)	(.0088)
Fröttmaning 5k	-.3170***	-.3116***
	(.0320)	(.0528)
Fröttmaning 5k x Dist. to Fröttmaning [km]	.0770***	.0715***
	(.0093)	(.0123)
Constant	.0676	.4246***
	(.1240)	(.1096)
R-squared	.520	.630

Notes: Endogenous variable is share of yes votes in the OLS and SAR estimates. Olympic 4k (Fröttmaning 5k) denotes precincts within 4 km (5 km) of the Olympic Stadium (Allianz-Arena). Standard errors (in parenthesis) are robust for spatial autocorrelation in the SAR model.***/**/* denote significance at the 1/5/10% level.

[5] The milieu of GDR Nostalgics is not listed due to lacking relevance of this milieu in Western Germany.

Tab. 3 Support for the Allianz-Arena Project by MOSAIC Milieus

	OLS	SAR
Conservative [%]	-.01116**	-.01211***
	(-.00432)	(.00401)
	[.533]	[.642]
Establishment [%]	-.02214***	-.02150***
	(-.00345)	(.00387)
	[.584]	[.666]
Post-Materialist [%]	-.01313***	-.01411***
	(-.00108)	(.00120)
	[.696]	[.755]
Modern Performer [%]	.01608**	.00786
	(-.00646)	(.00513)
	[.534]	[.632]
Traditionalist [%]	.02424***	.02089***
	(-.00349)	(.00328)
	[.605]	[.676]
Middle-Class Mainstream [%]	.01164***	.01145***
	(-.00274)	(.00270)
	[.557]	[.652]
Consumer-Materialist [%]	.03327***	.03362***
	(-.00309)	(.00343)
	[.661]	[.726]
Experimentalist [%]	.01341***	.01243***
	(-.00320)	(.00302)
	[.559]	[.652]
Hedonistic [%]	.05064***	.04899***
	(-.00726)	(.00666)
	[.606]	[.693]

Notes: Baseline model is in Table A3 in the appendix. Standard errors (in parenthesis) are heteroscedasticity robust for OLS and adjusted for spatial dependency in SAR estimates. Estimations' coefficients of Determination are in brackets.***/**/* denote significance at the 1/5/10% level.

Our results point out that mainstream lifestyle groups and modern milieus tended to vote in favor of the Allianz-Arena. In contrast, highbrow lifestyle groups, which include the milieus of Conservatives, Post-Materialists, Establishment opposed the project.[6]In the case of MOSAIC

[6]It can be assumed, that political parties recruit their voters in certain milieus. For example, main parts of FDP voters are likely to belong to the Establishment. Voters of Die Grünen und Post-Materialists are likely to share similar values.

Milieus, all milieus voting in opposition are upper-middle or upper class milieus. Only the Modern Performers as highbrow upper-middle class milieu shows a weak tendency of supporting the project. And even this relationship becomes insignificant when accounting for spatial dependency. These results confirm the widely held assumption that the preference for professional football is characteristic for substrata or middle strata. Note however, that the traditional socio-economic indicators such as income and rate of unemployment are not statistically significant when accounting for spatial dependency. This is compelling evidence that lifestyle, preferences, tastes and attitudes are not linearly constituted along an income-ray.

Furthermore, our results strongly indicate that estimated proximity effects at the projected and the existing stadium locations are not attributable to the composition of residents and their preferences. Proximity effects in the neighborhood of the Allianz-Arena project remain virtually unchanged if milieu characteristics are accounted for. Effectively, the neighborhood is dominated by lifestyle groups that in general supported the project. The location choice therefore seems well considered, confirming that the agenda setter chose an appropriate location in anticipation of lobbying pressure as predicted by theory.[7]Similarly, residential composition does not explain the support of Allianz Arena project in vicinity of the old stadium. In contrast, if lifestyle group composition is taken into account, there are significant localized effects in the neighborhood of the existing stadium even in the SAR models, which otherwise yield insignificant results. This finding reflects that the neighborhood's inhabitants generally belong to lifestyle groups that oppose to the stadium (see section 3.1).

4 Conclusion

The main findings of our analysis are twofold. First, our results indicate the existence of robust expected proximity cost associated to a professional football stadium, a finding they may well influence future bid concepts on the intergration of sport facilities into the urban structures. Note that the traditional socio-economic indicators such as income and rate of unemployment are not statistically significant when accounting for spatial dependency . Note also that proxim-

[7] The theoretical political economy literatureassumes that policy produces efficient outcomes, because politicians tend to base decisions on principles and function efficiently when subject to symmetrical pressures (Grossman & Helpman, 1994)

ity effects , even become somewhat more pronounced by inclusion of lifestyle proxies. Both observations do not come at a surprise. As noted in the so-called “death-of-class”-debate, a one-dimensional view on society along an income-ray falls short in accounting for the full diversity of personal tastes, attitudes and values, and consumption preferences. There is compelling evidence that lifestyle, preferences, tastes and attitudes are not linearly constituted along an income-ray. The lifestyle approach used in our empirical study includes tastes, behavior, attitudes or values and accounts for different ways of life beyond the class-specific socio-structural variables (Mochmann & El-Menouar, 2005; Otte, 2008; Veal, 1993).

We conclude that there is compelling evidence for lifestyle specific heterogeneity in expected net-benefits of the stadium project under investigation. We show that the proportion of opponents increases with the probability of belonging to a societal leading milieu (Establishment, Post-Materialist and Modern Performers). In contrast, the two Mainstream-Milieus, Middle-Class Mainstream and Consumer-Materialist, as well as the milieus with traditional values (Conservative, GDR-Nostalgic and Traditionalist) support the project. The correlation between yes-votes and the modern milieus, Hedonistic and Experimentalist, is insignificant or has a small value, respectively.

Our results point out that mainstream lifestyle groups and modern milieus tended to vote in favor of the Allianz-Arena. In contrast, highbrow lifestyle groups, which include the milieus of Conservatives, Post-Materialists, Establishment opposed the project. In the case of MOSAIC Milieus, all milieus voting in opposition are upper-middle or upper class milieus.

Possible explanations range from heterogeneous consumption preferences for professional football over a subjective perception of the value of the stadium architecture to distinctly perceived opportunity cost of the commitment of public funds. Lifestyle proxy variables contributed significantly to the explanation of the voting outcome, revealing significant relationships where coefficients on standard indicators of economic wealth such as household income or rate of unemployment are not statistically significant when accounting for spatial dependency.

From our results the clear recommendation emerges to attach more attention to lifestyle specific preferences, values and attitudes that potentially influence individual behavior and market outcomes. Our results are somewhat intersting when taking into account some of the dominant arguments brought forward against sport facilities or mega events, namely the displacement of low-income groups and the relocation of public funds in discrimination of disadvantaged persons. It seems that those groups are less opposed to sport facilities or mega events. They may have less information about the economic impact of the project or may be more susceptible to the media hype. It seems that the main opposition

is coming from highbrow lifestyle groups, which may of course think to speak on behalf of disadvantaged groups. Of course care should be taken where generalizing from this case study to all cities, stadia, and mega events.

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