

Interdependency of sport supply and demand in metropolitan and small municipalities

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Aim of paper and research questions

The interdependency between sport supply and demand represents a focal task for municipalities. Therefore it is necessary to be aware of influencing factors on sport demand, respectively sport participation. These can be found firstly on the individual level and secondly on an aggregated level of infrastructure. The supply side is twofold: it comprises sport facilities and sport offerings. The aim of this paper is to analyse whether there are differences pertaining to the impact of sport infrastructure on sport participation in metropolitan and small municipalities. The key question is what infrastructure is needed to meet the resident's demand. Besides, the question arises what sport offerings are appropriate regarding the sport infrastructure and the demand.

Literature review

It can be determined that the influence of individual factors on sport participation has been researched well whilst the impact of infrastructural factors has been neglected. Socio-demographic factors such as gender, age, migration background as well as economic aspects like work hours, income or socio-economic status, and educational level do influence sport participation (Biddle, Whitehead, O'Donovan, & Nevill, 2005; Downward, 2005; 2007; Taks & Scheerder, 2006; Wicker, Breuer & Pawlowski, 2009). With regard to infrastructure it was found out that the availability of it affects sport participation positively (Haug et al., 2008). Furthermore it can be noted that the availability of a certain sport infrastructure is vital for different age groups. That means that swimming pools are essential for children and seniors whereas the supply of commercial facilities and sport fields is more important for young adolescents (Chad et al., 2005).

Research design and data analysis

The supply and demand in the metropolitan city of Munich and two medium-sized towns (Pulheim and Würselen) and a district (Waldeck-Frankenberg) were investigated within sport development projects in 2008/2009. Firstly, the inhabitants were questioned by means of a Computer Assisted Telephone Interview (CATI). The selection of the sample was carried out using the Gabler-Häder approach as to include also persons that cannot be found in the telephone book (Gabler & Häder, 1999) and the last-birthday method. A total of n=5,527 interviews was conducted in the smaller towns (Pulheim n=2,006; Würselen n=1,514; Waldeck-Frankenberg n=2,007). In Munich, 10,007 persons were included in the sample. The data on the supply side was provided by the municipalities on sport facilities (e. g. type, size) and sport offerings (e.g. type, target group, duration). The data was analysed using SPSS V17 and HLM6 – the urban district served as ID variable. Several models were calculated for the metropolis and the smaller towns separately.

Results

The results for the metropolis indicate that the models for sport participation are significant and explain 33% respectively 35% of the variation of individual sport activity. In the two models income, human capital, working time, age, and migration background influence sport activity significantly, whereas age and migration background have a negative effect on it. Time for upbringing children respectively care of relatives and gender do not determine individual sport participation significantly. On the macro-level, the supply of swimming and (in one of the models) and the supply of parks in the respective urban district have a significant positive effect on sport activity. Surprisingly, the effects of gymnasiums and sport fields are not significant and even negative. A comparison of sport supply and demand based on regression analyses was carried out and revealed an excess of sport fields and playgrounds in the metropolis. The results for the small and medium-size towns show significant differences on the macro level. For instance the effect of parks is much smaller. This might result from smaller travel costs between urban districts in those towns.

Discussion and conclusion

Summing up the individual effects it is possible to state that for young German people with high income, good educational level, and high working time the probability of going in for sport is high. Independent of effects at the micro level there is a strong impact of different kinds of sports facilities on sport participation. If local governments want to enhance the number of physically active people, especially investments in the construction of swimming pools and parks are needed. Another recommendation is to change the existing surplus of sport fields in for example special playgrounds for senior citizens as the society is ageing and there is obviously a need for such new sport rooms.

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