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Market potential as an indicator for the size of a new relocated football arena: The case KAA Gent a Belgian professional football team

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Abstract

The place of Gent in the urban system is that of a regional city with high centrality. This means that consumer-oriented services with a high threshold, such as a professional football team, reach their threshold in the city. In the case of professional football a functional substitution has taken place and the top team is located in Brugge The service area of Bruges reaches almost up to Gent and the E40 highway reduces the time-distance. The new location of the stadium is near the main highway.. The question is of the market potential of the clubs is large enough to attract more attendances.

JEL Classification Codes: L83

Keywords: local identity, relocation, functional substitution, service area, market potential, consumer oriented service, spatial competition

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1. Introduction

A growing number of post-industrial cities are using sport as a brand(Smith,2005). These cities and regions want to present an attractive and progressive image to potential tourists, external capital providers and other businesses and consumers that are looking for a competitive location. The use of sport to further their reputation and to give a new image to a city is a recent process whereby a local government, either alone or in a Public Private Cooperation, deliberately exploits sport to modify its image. Places are nowadays commodities that are competing with one another for a share of the inward investment and many cities have attempted to present themselves as entertainment centres by providing a mix of spectacles and sport. In this article we will focus us on the sport related tendencies to build new stadiums located nearby the main roads as a new form of landmarks in the geomarketing of a region/city.

In our case the city of Gent with a population of approximately 233,000 in the province of Eastern Flanders with 1.4 million inhabitants has been using sport already for a long time as a vehicle for city marketing. Since 2000 it has been the location of the only indoors athletic hall in Belgium, a rowing track, an “old” traditional indoor cycling centre and a new one opened in 2006 near the

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indoor athletics hall , a house of sport, an elite sport school,… and probably in 2009, a new modern multifunctional football arena for the local professional football club KAA Gent as a landmark besides the main highways E40 and R4.

Figure 1: The location of Gent

Source: http://www.destoop.be/images/kaart_vlaanderen.gif

The place of Gent in the urban system is that of a regional city with a high centrality (Van Hecke,1998). This means that consumer-oriented services with a high threshold, such as a professional football team easily can easily survive in the Gent region. In the case of KAA Gent, the professional team in Gent, however a functional substitution has taken place and the top team, Club Brugge KV located in a nearby smaller and hierarchical lower centre Brugge (115.500 inhabitants), replaced KAA Gent in the professional football hierarchy. Nowadays KAA Gent plays in the "Jules Otten stadium" with 12,919 seats for an average attendance of 8,000-8,900 spectators. The club has decided to relocate to a new stadium with a capacity of 20,000 seats located nearby the main highways. In this paper we will use the social upgrading of professional football and the need of an accessible, modern infrastructure adapted to the needs of sport consumers and its market potential as the main reasons for the relocation. We will investigate the service area and the market potential of KAA Gent in its newly built and relocated facility of 20,000 seats. To do so, we will use the data of the season 2006/07 of all the professional football clubs in the first division that have a spatial interaction with KAA Gent. These data will be integrated in a theoretical framework of a location-allocation model to look for cities and communities in the service area of the club that can be "worked" on by the marketing and

management division of the club to attract higher attendances. The final result is an estimation of the average market potential of attendances in the future and can be used by consumer oriented professional sport clubs as an indicator for the necessary capacity of their stadium. The questions that will be answered are: Is the relocation of KAA Gent an example of the recent tendencies of relocation of sport stadiums? And Is the capacity of the new stadium sufficient to answer the potential demand of the sport consumers?

2. The new professional environment for football stadiums; from sport fans to sport consumers

At the moment Belgium has, with exception of the Cristal Alken Arena of KRC Genk, in comparison with our neighbouring countries England, Germany, France and the Netherlands an outdated football infrastructure insufficiently adapted to current consumer needs (Dejonghe,2007). Until the 90s the financial structure of professional football in Belgium was, as in most of the other European countries, what Andreff & Staudohar(2002) referred to as the traditional Spectator-Subsidies-Sponsors-Local or SSSL-model. The main sources of revenues of the clubs were ticketing, local subsidies and local sponsors. The changing structure and environment of European professional football forced the major clubs and leagues to change their structures to a more encompassing Media-Corporations-Merchandising-Markets model(MCMMG-model). The clubs and leagues became a broader economic product with broadcasting rights and sponsorship as the main sources of income. Professional football has, as stated in Dejonghe (2001), been transformed to a person-related immaterial consumer oriented service with an economic function. The central product is the sport game "an sich" but some other factors such as a crowded, modern, all seated stadium without fences or uncovered parts can have a positive contribution to the product as a whole (Dejonghe,2007). The absence of a demand oriented football infrastructure means a potential loss of revenues. Some examples of these losses are the limitation in increasing the ticket prices, a capacity constraint, lack of insufficient business seats and boxes, a repulsion of women and children and higher income sport consumers, a lack of branding the facility,…

Dejonghe (2004a) states that modernizing or building new sports facilities can change the reference price for the consumer and make it acceptable to buy the product. In most of the Dutch and English cases the stadium was sold out during the seasons previous to the relocation or renovation. This means that the demand for attending the club was higher than the supply of seats, in other words, the price of the tickets was lower than the equilibrium price in a free market system. The clubs can, if they have a notion of the surplus in demand, raise the prices in their new stadiums. In this case it is not a change in consumer behaviour but only an adjustment to the free market. It is in those cases that the "ghost" of local identity is emerging. A raise in prices can result in a crowding out of the original hardcore urban working class fan base (see the

Manchester United case after Glazer took over the club and raised the prices. Some 4,000 fans founded a new team FC United of Manchester and the club plays in the amateur league for a crowd of 3,000 (Porter, 2005)). Their sporting club give its members most of the time an inter-generational, sub-cultural marker of identity and gives them a form of what is called "Topophilia", the ties that combine emotion and place (Bale, 1991; Nielsen, 1995; Mac Clancy, 1996; Duke & Crolley,1996; Dejonghe 2004b). Not only may the ticket prices go up, all of this may also issue in an increase in revenue from catering, merchandising and possibly rent from other uses of the facility such as concerts, parties, hotels, ….

In spatial economy an explanation of location behaviour of an economic activity is a central theme. The location and competition in space and visibility become a central issue in consumer oriented services. Professional football became a service that had to sell itself in space. Like all consumer-oriented services is time-distance an important determinant of demand besides issues such as comfort, visibility and market potential. Long term success in professional football is, according to Dejonghe(2001), a principle of cumulative causation with service area and potential consumers with their purchasing power as a central topic in the system. Sponsors are looking for clubs with a long term success and a great amount of potential consumers and/or large service areas. King(1998)[2] argued that as Fordism was replaced by post-Fordism a new style of consumption of football was stimulated. A shift from football "fandom" to football "consumption" took place. Viewers are consuming the game as a total product and want to have a pleasant experience. The result was a mixed composition of the visitors of a football game in a modern environment and an increase in the average number of attendances. This transformation is partly confirmed by research about the demand for league football. Bird(1982) noticed a negative price elasticity between football consumption and the price of the tickets for the period 1950-1977 and Szymanski & Smith(1997) came to the same conclusions for the period 1974-1989. Bird(1982) also found a negative income elasticity. The latter means that football was in that period an inferior good. As income increases , consumers tended to give up attending football and consumed perhaps more socially upgraded leisure activities. After the Hillsborough disaster in England the Taylor Report was published in 1990 and recommended that all stadiums had to be converted into all-seating grounds and alcohol, barriers and fences within the stadium have to be removed. This conversion improved the image of the game and the attendances in the highest division, now called "Premier League", increased from 8 million in 1991/92 to 13.8 million in 2007/08. In the period 1992-97 Dobson e.a.(2001) noticed a positive price elasticity after the implementation of the Taylor Report recommendations in English football. Feehan e.a.(2003) compared social class of the football fan with the social composition of the area surrounding the football grounds and concluded that on average a higher number of the higher income groups came to the stadium. This means that football was, because of the modern infrastructure, transformed from an inferior

[2] In Horne (2006)

good to a normal good and became an acceptable leisure activity for people with higher incomes. The increasing commercialization of football made a widening of the potential group of consumers necessary. This means an orientation towards families as a whole because women and children are very important to sponsors and potential sponsors, because they exert an important influence over consumer spending patterns in families. Recently we notice that traditional English teams are leaving their "holy home grounds" and refocus on a new modern multifunctional sometimes branded stadium with a higher capacity.

In Germany the organisation of the World Cup 2006 was the engine which set into motion the building of new or the renovation of older stadiums. Feddersen e.a.(2006) noticed a novelty effect, an increase in attendances in those facilities but an existing " capacity restraint" in the old or not renovated grounds was an additional advantage. In The Netherlands all stadiums of the clubs in the Eredivisie have been newly built or renovated after 1993. The average attendances rose from 10,000 in 1993/94 to 18,700 in 2007/08. One of the main topics was the market potential of the club in its region. In some cases there is even a, what Clapp & Hakes(2005) and Coates & Humpreys(2005) called a "honeymoon effect" which means that if there is a new stadium, people will come in larger groups and frequent it more the first three years after its opening than for the rest of the stadium's lifetime. This was the case in Portugal were Boavista Porto, Lieria, Beira Mar Aveiro and Coimbra got a new stadium with capacities around 30,000 but they managed to draw in between 2,500 and 6,000 spectators only. The result is that, with exception of Braga which has an average attendance of 11,000, all other teams have already noticed a drop in their attendances to their former levels.

3. The case of KAA Gent: a relocation from a historical Otten stadium to a multifunctional Artevelde stadium

The European Championship of national teams – which Belgium organized together with the Netherlands in 2000 (Euro 2000) – was not used in Belgium as a leverage for modernising football facilities. The building of the "Artevelde stadium" in Gent can be seen as a first attempt. Recent demands by ClubBruggeKV, RSC Anderlecht and Standard Luik, who have potential losses because of capacity and other constraints, and the demand for modern multifunctional stadium in other cities such as Antwerp, Waregem and Mechelen to mention some, makes scientific research of the viability necessary.

One of the main reasons to relocate KAA Gent was that the "Ottenstadium" generates, like in most cases that have been investigated (Bale,1980;1990;1993;1994;Black & Lloyd,1992; Mason & Moncrieff,1993;Van Dam 1996,1998; Ghomley,1998;Termont,2004), negative externalities on the surrounding area and the stadium became as Van Dam (1998:28) put it a "*Locally Unwanted Land Use*". Van Dam (2000) explains these externalities by the simple fact that the local base of

clubs became diluted and supporters were, as a result of suburbanisation and rising car ownership, recruited from further and further away. The Otten stadium, built in 1920 and renewed in the 1980s, is a typical example of a stadium that was once located outside the city. Today the stadium is located in a residential area with a lack of parking places. On match days people living in the vicinity of the stadium experience nuisances from parked cars, traffic, noise, vandalism, pubs, litter and other forms of anti-social behaviour

The Otten stadium itself has some drawbacks as well. The facility consists of four separated stands which results in less contact between the supporters after the game and the catering facility is too small so that the club loses extra revenue. Another negative characteristic is the stadium's location. The stadium is surrounded by houses and located away from the main road so that branding the facility or using it as a landmark is impossible. Only the pubs in the vicinity of the football ground will have a disadvantage in case the relocation takes place. The move of the club will result in a loss of income on match days and maybe force some of them into closure. Finally, relocation may weaken the link between the club and the local community.

The feasibility of football stadiums is most of the time utopian and a good coordination with the local, regional or national government is necessary. The total investment is bigger than the amount of income that can be generated through exploitation. This means that just like in the cultural world, the infrastructure has an unremunerative top and should be built and sustained in cooperation with and support of the public sector or a private financier (Vander Veen & Van Wijhe,2002; Mosterman,2004; Van Mierlo,2005). Eckstein & Delaney(2002) noticed that after calculation of the economic benefits of stadiums most of the time little economic advantages for the local communities could be proved. The supporters of a new stadium modified their tactics. They insist on the more intangible social benefits such as community "self esteem" or collective conscience. This means that, like in most of the cases, KAA Gent looked for support in the private and public sector. The main stakeholders in the decision-making process for the relocation to a new stadium were the club and the city of Gent. The fans of the team had no impact on the decision and the argument of capacity constraints was, as we will show later on, not an issue. Financial problems of the club were at the beginning the main arguments for selling their home grounds to the city. In November 2000 KAA Gent sold its stadium and the surrounding territory with a total area of 7 ha to the city of Gent for €3.68m and the club agreed to rent the facility for another nine years (see figure 2). The city of Gent was very interested in the site because in the "Spatial Structure Plan of Flanders[3]", the area is defined as a residential zone (RUP,2005). The selling prices of the grounds on the private property market were estimated at €150-175/m² (De Clerck,2005). This means that the city can sell the area to building companies and regain its investment. The selling of the stadium can be defined as a win-win situation. The club used the

[3] This plan was introduced in 1997 and gives a scientific based framework on which Flanders has to deal with his open space. The result should result in an improvement of the quality of land use.

cash flow to pay off some of its debts and the local government made a lucrative investment. In the agreement between the city of Gent and the club was a clause that the city would help the club to find a new more consumer-oriented location. The result was the creation of a public-private partnership for the relocation of the professional football club KAA Gent to a new stadium located on a site owned by the city. The "Groothandelsmarkt (Wholesale Market)" was chosen as the best option of the proposed site and the construction will be built according to the Spatial Structure Plans of Gent and a forthcoming project Environmental Analysis Study Project. The new location, indicated by an arrow on figure 2, will be a suburban or edge-of-town stadium with fewer negative externality effects.

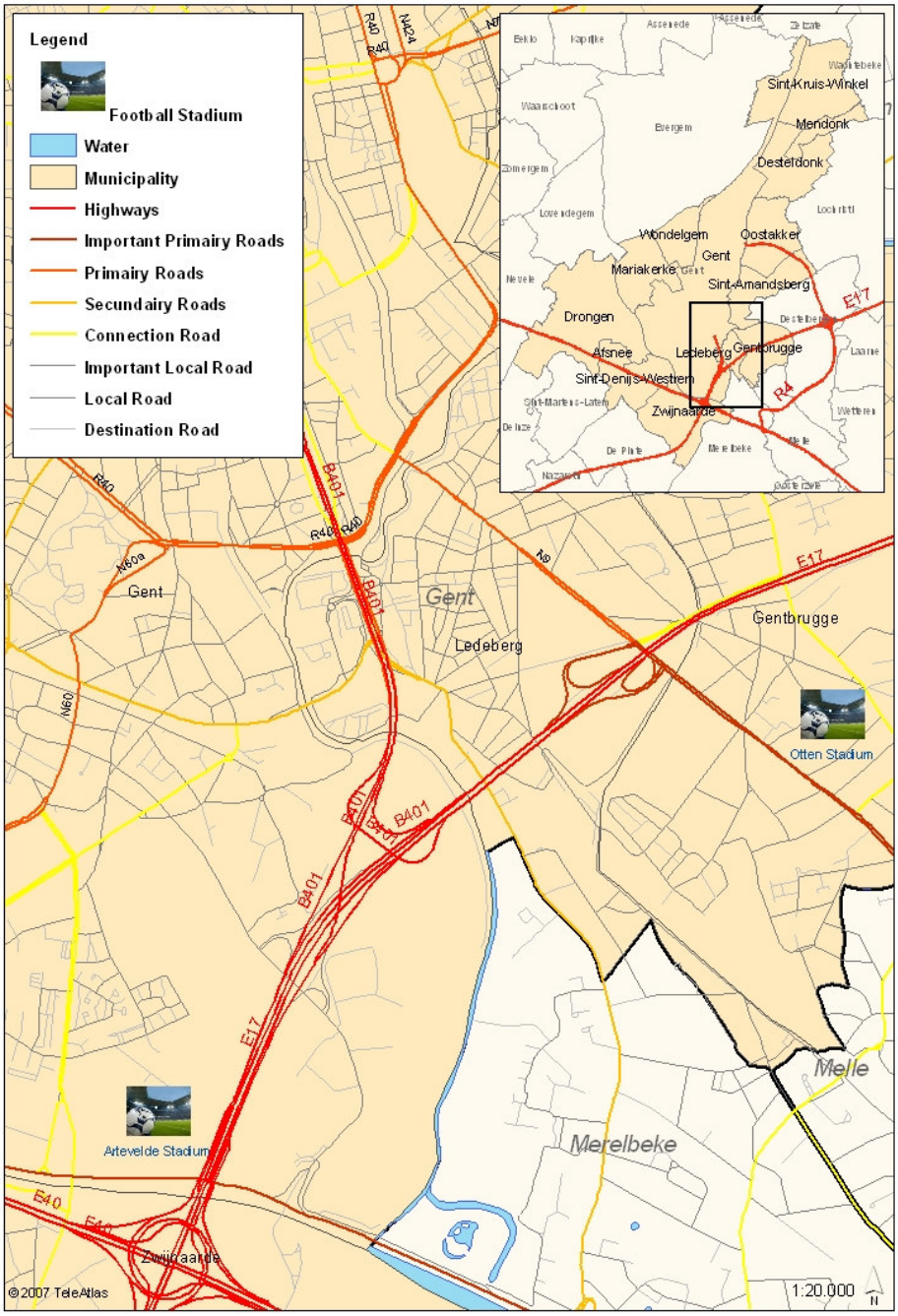

Figure 2: The location of the old en new stadium of KAA Gent
Source Map: NGI(2007)

The new stadium will have a capacity of 20,000 seats and will be located on a plot near the main highways. The area is 14 ha large and replaces old infrastructure that in the long run would lose its commercial function. The nuisance field of the Artevelde stadium will comprise a non-residential area nearby the crossing of the main highways E40 (Brussels- Oostende) and E17(Antwerpen-Kortrijk) and the main city ring (R4). The area has a lot of car-parking spaces. The accessibility with public transport (tram and buses) has to been improved. “De Lijn”, the local public transport company already, engaged itself to offer shuttle services to the stadium, the

parking lots and the main train station. The plan is to build offices, shops and other facilities next to the football stadium. The location beside the main highways will be an expression of the sport image of the city and will (probably) attract additional attendances. On June 14, 2002 the city council of Gent decided that KAA Gent would be allowed to buy the territory for €1 but they have to participate in the construction of a new "wholesale market" on the other side of the city in Evergem. The city will not invest in a new stadium but offers logistic support to the total project that will be finished in 2009 and the club has to pay a rent of €1,000,000 a year. The management of the club calculated that the maximum return of a sold-out Otten stadium would be €8.5m (budget today €6.5m). The club hopes to increase his budget by 45% in the Artevelde Stadium. A new stadium becomes part of the marketing mix of the club. It will in most cases attract more people on match days and is a money generator with a multiplication effect. The chairman and businessman Ivan De Witte (De Witte & Morel, a Hudson global resources company) stated that a stadium that would only be used for football can never become profitable. The alternatives are financing through the building of offices, hotels and commercial infrastructure on the area nearby the stadium.

An argument that Gent could not use was capacity restraints of the old stadium. Feddersen e.a.(2006) determined capacity restraints as an average use of 90% of the home attendances part of the stadium. In the case of KAA Gent the Otten stadium has a total capacity of 12,919 seats but because of safety rules only 12,500 can be used. These 12,500 have to be divided between 10,645 seats for home attendances and 1,855 for fans of the away team. The averages of the last five seasons shows us that on average use of the home seats capacity fluctuates between 69.6% and 76.9%. In the case of fans of the away team we notice a maximum value of 39.5%. These figures shows that on average the argument of capacity constraints is not an option for KAA Gent.

Season	Average home attendance	Average visitors	Total average
2002/03	8,035	702	8,737
2003/04	7,696	655	8,351
2004/05	8,158	543	8,701
2005/06	7,411	619	8,030
2006/07	8,181	730	8,911

Table 1; the average home and away attendances of KAA Gent 2002/03-2006/07

In a second phase we determine potential capacity restraints on some match days. The results in figure 3 shows us that in the seasons 2002/03 until 2005/06 at most of the match days home capacity is less than 80% and that in three to four occasions (games against SC Anderlecht and FC Brugge and sometimes RC Genk or Standard Luik) the use is more than 90% and in two occasion KAA Gent used some of the seats that are normally not allowed to be sold because of safety measurements. In the seasons 2006/07 and the nine games of 2007/08 played in the first

round of the competition, we notice an increase in the use of the stadium and more games have an attendance rate higher than 90%.

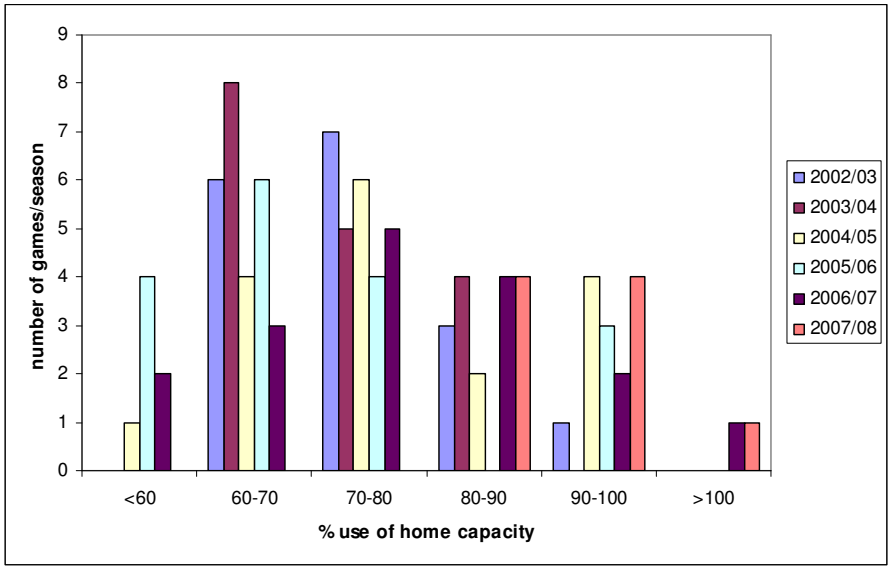

Figure 3: The relative use of home capacity by home attendances of KAA Gent
Source data: KAA Gent
* 2007/08 data of only 9 games

The conclusion is that capacity restraint is not the main determinant for an enlargement of the stadium. In some cases capacity restraints against the major clubs can result in an increase in the average attendances but to have a significant upgrade of attendances KAA Gent the novelty effect and in the short term the honeymoon effect will have an important role. If capacity restraints is not the main reason for the enlargement. In the case of the club is, as we will notice in part 4, a potential enlargement of the service area or a deepening of the existing service area an argument to build a bigger stadium.

4. The service area of KAA Gent: a location-allocation question

a) Theoretical framework

The season ticket-holders are the consumers through which the consumption of the service –in this case, professional-football-- is assured, they can be considered as the "loyal" or "hard-core"-supporters. On the other hand is the nominal number of season ticket-holders not a reflection of the real consumption. The nominal values have to be corrected to values that indicates the real home attendances. Otherwise, a club with a relatively high number of season ticket-holders and a relatively minor number of floating attendances should have a larger potential market than a club with not as many season ticket-holders but a large amount of floating attendance. The correction is based on the real number of home attendances for each club and is called the transformation-index. More formally,

S_j^n = the nominal number of season ticket-holders for club j,

W_j^n = the nominal number of home attendances for club j,

T_j = transformation index for club j

The empirical determination of the service areas implied the formulation of a model through which all communities in a certain defined area can possibly be assigned to one or more clubs. To do so, a reference index is introduced to analyse the coverage of these communities. The endogenous reference index, Ri is the average corrected number of home attendances for every 10,000 inhabitants in the total market,

$$\frac{W_t^n}{B_t} x10.000 = R_i$$

W_t^n = total number of home attendances for all clubs,

B_t = total population of the total market,

R_i = endogenous reference-index

The model assigns the communities to one of the selected clubs and is based on the consumption indexes of the communities, Ci, the club specific consumption index, Cij and the club specific penetration index Pij of " professional football" in those communities. The community consumption index**,** Ci measures the rate of consumption of the service professional football in the communities, and is calculated as follows:

$$C_i = \frac{\sum W_{ij}^c}{B_i} \text{ x } 10{,}000$$

The club specific consumption index, Cij is:

$$C_{ij} = \frac{W_{ij}^c}{B_i} \text{ x } 10{,}000$$

C_i = consumption index in location i

C_{ij} = consumption index of club j in location i

W_{ij}^c = corrected number of home attendances of club j in location i

B_i = total population in location i

The club specific penetration index, Pij measures the relative orientation of a community to one or more clubs. More formally:

$$P_{ij} = \frac{W_{ij}^c}{\sum W_{ij}^c} \text{ x } 100$$

To allocate the communities and to determine the different service areas and potential consumers of the clubs we introduce a classification model. Pij divides the service areas of the clubs in different areas. The service area of the clubs is a The level of Cij results, as shown in the model, in a further subdivision in an a or b . This is an indication for the rate of the consumption of club j in location i. The subdivision b indicates that the community is not well covered and clubs can attract a relative important number of people out of them if they improve the quality of their services.

	Pij	Cij	Potential consumers
MONOPOLY AREA Aa Ab	Pij >80% and no other club has Pij > 1/3Ri	 >Ri Ri - 1/3Ri	100% or % share significant clubs in relation to their Cij
INDIFFERENTION AREA Ba Bb	50-80%	 >Ri Ri – 1/3 Ri	or % share significant clubs in relation to their Cij
REST AREA Ca	25-50% >50% with	>1/5Ri(bij 25-50%) 1/5Ri-1/3Ri (> 50%)	or % share significant clubs in relation to their Cij 25%
REST AREA Cb	10-25% with >25% with	>1/7Ri 1/7Ri-1/5Ri	or % share significant clubs in relation to their Cij 10%

The allocation model (based on Dejonghe,2001)

b) The situation of KAA Gent

KAA Gent hopes to attract an average of 13,000-14,000 spectators in their new facility. They already try to attract young people through cheap season tickets. The focus on the youth is inspired by the idea that the potential consumers of 30 to 50 years old in the region of Gent are more difficult to convince. , The reason is that the club played in the period (1971-1979 and 1988) in the lower divisions, and some of them are for a considerable part fan of ClubBruggeKV. The result is that most members of the small fan base are urban people living in the surroundings of the old stadium and the nearby municipalities. The disadvantage of KAA Gent is the location on the main highway E40 from Brussel to Oostende. ClubBruggeKV and RSC Anderlecht(Brussel) are two of the major teams in Belgium with high attendances and a high drawing power of centrality. They are in a lot of ways an obstacle to the extension of other clubs. Their real range extends, to a large degree, the threshold of professional football in Belgium. They dominate their regions and determine endogenously their spatial service areas. The service area of ClubBruggeKV and RSC Anderlecht reaches almost up to Gent and the E40 highway is, because of the reduction in time-distance, a corridor to them. The new location of the Artevelde stadium is near the main highway and indicates that the club wants to compete against them in some of the rest areas of the service areas of the two major clubs.

The data used to measure the market potential of KAA Gent are the season ticket holders in 2006/07 of the clubs in the Jupiler League, the first division of Belgium. From this database we

selected the clubs which have some spatial competition in the service area of KAA Gent. These are besides ClubBruggeKV and RSC Anderlecht the clubs SV Zulte Waregem and SK Lokeren. The data of the average attendances in the season 2006/07 are given by the Belgian FA. In the case of KAA Gent, the club provided detailed information of the attendances on the different match days. The used population data on January 1, 2006 of the communities and cities are these given by the official statistical institution of Belgian, the "Nationaal Instituut voor de Statistiek(NIS)", (NIS, 2007) This dataset was used in the location-allocation model.

The transformation index Ti of the different clubs in spatial competition with KAA Gent are given in table 2. In the case of ClubBruggeKV showed research[4] that attendances without a season ticket are in most cases located in West and Eastern Flanders. This implies that we used the 16,211 season ticket holders located in those parts of Belgium as a reference.

Club	Average attendances	Average home attendances	Season tickets Fan cards(SC Anderlecht SK Lokeren)	Ti
KAA Gent	8,911	8,181	4,814	1.70
FC Brugge	25,421	24,641	16,211	1.34
SV Zulte Waregem	6,178	5,600	4,224	1.33
SC Anderlecht	24,268	23,609	19,622	1.20
SC Lokeren	4,314	3,900	2,739	1.42

Table 2; The transformation indexes of the main teams in the service area of Gent

Saey & Lietaer(1980) determined that the theoretical range of a regional service area in Flanders or the accessibility class was set to 15km. According to the "traffic principle" 15km was the regional impact zone of a regional centre. A football club playing in the Jupiler League can be seen as a hierarchical marginal good that is, because of the exogenous limit of 18 clubs, an indicator of an urban hierarchical level[5]. The combination of the number of first division clubs, the Belgian urban hierarchical centre and a professional football club as a hierarchical marginal good lead us to a theoretical range of a regional club of at least 15km. This theoretical framework implies that KAA Gent would have a major spatial competition with Lokeren and some spatial competition in the outer range of his service area of SV Zulte Waregem. The empirical data shows that most of the clubs have a local service area that in some cases have a composition that was theoretically predicted. ClubBrugge, RSC Anderlecht and Standard Luik, the three major teams in Belgium have a service area that extend beyond the 15 km range. Dejonghe(2001) defined them as monoliths because the spatial impact of these teams are a strong limitation for the service areas of the other teams. KAA Gent has the disadvantage to be located between two of those major teams. The result is a strong spatial interaction with both of them.

[4] A rapport of KPMG in order to justify the need of a new football arena for FC Brugge. We compared the season ticket holders with 60.167 registered fans of the club and noticed that fans from further away had a season ticket in most of the cases .

[5] The urban centres in Belgium are, according to their centrality, classified in a hierarchical urban system. There is one urban centre in level 0, the capital city, 3 in level 1, the major cities and 17 centres in level 2, the regional cities. (Van Der Haeghen et all., 1982: p.281)

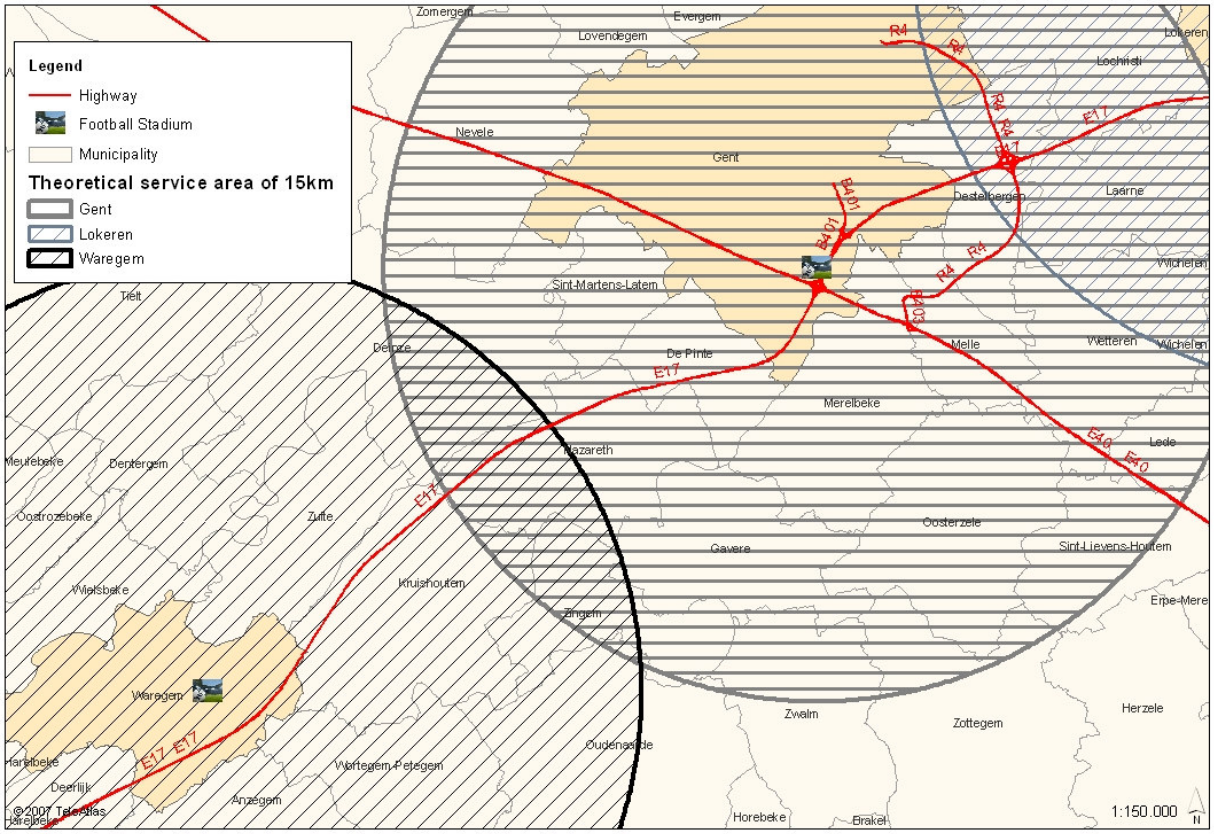

Figure 4: The theoretical range of KAA Gent and the theoretical spatial competition with SC Lokeren and SV Zulte-Waregem

KAA Gent can be defined as a regional club with 7,793 (95.3%) of the home attendances located in Eastern Flanders and 6,191(75.7%) located in Gent and the bordering communities. This means that the club has, as we expected, a small spatial impact and it does not fulfil the central functionality associated with a regional city such as Gent. The data showed that the fans of KAA Gent are living in the urban working fringe and some communities in the morphologic agglomeration. The club is an expression of the local identity, the urban culture with their own language and behaviour

The average attendances of all clubs in the Jupiler League 2006/07 was 10,466 with a total of 188,388 for all 18 teams. The average number of visiting fans was given and is 659 or a total of 11.870. W_t^n is therefore 176,518. This means that the total population of Belgium , B_t , of 10,511,382 is Ri is 167.93. The service area and other nearby communities, of KAA Gent and will be analysed in relation with the location of those communities to the central place Gent. Dejonghe(2001) for Belgium and Dejonghe, Van Hoof and Kemmeren(2006) for the Netherlands noticed that some variables such as time distance instead of real distance, historical orientation, language borders (Flanders), religious borders (the Netherlands), historical isolation (rivers, island or lack of important routes) could

explain these fluctuations. In the case of KAA Gent it is the corridors that are created by the main highways E40/E17 towards Brugge and Brussels and the historical political border between the industrial city of Gent and its rural surrounding that constitute the main determinants of fluctuations in relative consumption of KAA Gent(Dejonghe,2001).

The contemporary location of the football field is a suburban residential area. In the proximity of the stadium we find some areas with a relatively high number of fans for the team. Gent was and is an industrial town with its own vernacular, local culture, and urban mentality. The cultural difference between Gent and the nearby rural villages is/was very strong and still influences the recruiting area of the local club. The combination of these cultural differences, the lack of good performances in the 70s and 80s and the relatively low time distances to Brussels and Bruges resulted in a low or non-consumption attitude in the nearby rural areas. We notice even in the agglomeration of Gent strong consumption differences between the rural areas, the areas near the E40 and the older industrial or urban parts of the city. The impact of the main teams in the different parts of Gent is shown in table 3.

City part	population	Gent	CiGent	Brugge	Lokeren	Ander	Pi Gent
Gent (centre)	117,134	1,264	107.9	237	29	117	76.7
Gentbrugge/Ledeberg	28,257	1,124	397.8	40	10	33	93.1
Oostakker	12,513	181	144.7	44	42	27	61.6
St Amandsberg	22,549	365	161.9	35	22	31	80.6
Zwijnaarde	6,858	145	211.4	29	2	12	77.1
Mariakerke	11,678	193	165.3	36	3	8	80.4
Wondelgem	12,339	262	212.4	51	7	14	78.4
Drongen	12,277	184	149.9	60	3	24	67.9
St Denijs Westrem/ Afsnee	6,609	101	152.8	20	2	12	74.8
St Kruis Winkel/ Mendonk							
Desteldonk/Ter Donk	2,906	31	106.7	4	28	2	47.7
GENT	**233,120**	**3,850**	165.2	**556**	**148**	**280**	**79.6**

Table 3: The number of fans (per 10,000 population) of KAA Gent, FC Bruges, SC Anderlecht and SC Lokeren in Gent.

The total consumption of professional football in Gent is relatively low with a Ci of 207.4. KAA Gent has only a Cij of 165.2 in its own location. This means that the value is situated below Ri and potential growth of attendances from the core city is possible. In comparison with the other teams in de Jupiler League in 2006/07, as shown in table 4, this is a very low value.

Club	Home attendances	Population	CiCLUB
RC Genk	5,805	63,787	908.8
VC Westerlo	1,734	22,896	757.3
STVV	2,756	38,247	720.6
SV Zulte Waregem	3,419	50,643	675.1
SC Lokeren	2,398	37,850	633.6
KSV Roeselare	3,183	53,611	593.7

FC Bruges/SV Bruges	6,167	117,224	526.1
Exc Moeskroen	2.712	52,825	513.4
SK Lierse	1,691	33,272	508.2
SK Beveren	2,047	45,705	447.9
FC Brussels*	1,809	44,767	404.1
AEC Mons	2,803	91,221	307.3
SC Charleroi	4,186	201,300	207.9
KAA Gent	3,850	233,120	165.2
SC Anderlecht	1,449	96,011	150.9
Standard Luik	2,695	187,086	144.1
GBAntwerp	5,048	461,496	109.4

Table 4: Ci of the clubs in their own location

*FC Brussels is located in Sint Jans Molenbeek (part of Brussels)

The low value in the centre city of Gent is typical for cities that offer a lot of other leisure activities. We notice far the highest Ci of KAA Gent in Gentbrugge/Ledeberg, Zwijnaarde and Wondelgem. These are the parts of the agglomeration nearby the old stadium and are --with exception of Zwijnaarde-- located in the older urban and industrial area. In St Amandsberg and Mariakerke is Pi KAAG higher than 80% but the Ci rather low. These parts are already located some distance away from the E40 highway so that the time distance to Brussel and Brugge increases. Both of these areas are a part of the market potential of KAA Gent when they move to their new location. In Oostakker and the rural towns in the north we notice already the influence of Sp Lokeren. St Denijs Westrem/Afsnee and the more rural and in some parts residential village Drongen are located nearby the E40 highway. The time distance to ClubBruggeKV and RSC Anderlecht is smaller so that the cost to consume the product offered by the top teams is declining. These residential and rural areas with a lot of commuters and immigrants from other parts of Flanders have fewer industrial, urban and cultural connections with the local identity associated with KAA Gent. The relocation of KAA Gent to the new facility is a move to that part of the agglomeration. The question that we can ask is "Will the club attract new fans from the more blank spots in the agglomeration?" Furthermore the parts of the city near the Artevelde stadium have fewer inhabitants so that an absolute gain of attendances from that region will be poor. The club needs a combination of a changing identity and success on the playing field to reach the targeted average attendances of 13,000-14,000.

We notice in a further micro analysis of the spatial dimension of the club in the nearby communities that the impact of the club has been declining very fast. The service area of KAA Gent can by using the location-allocation model be divided in a monopoly, indifferent and rest area. The result is shown in figure 4

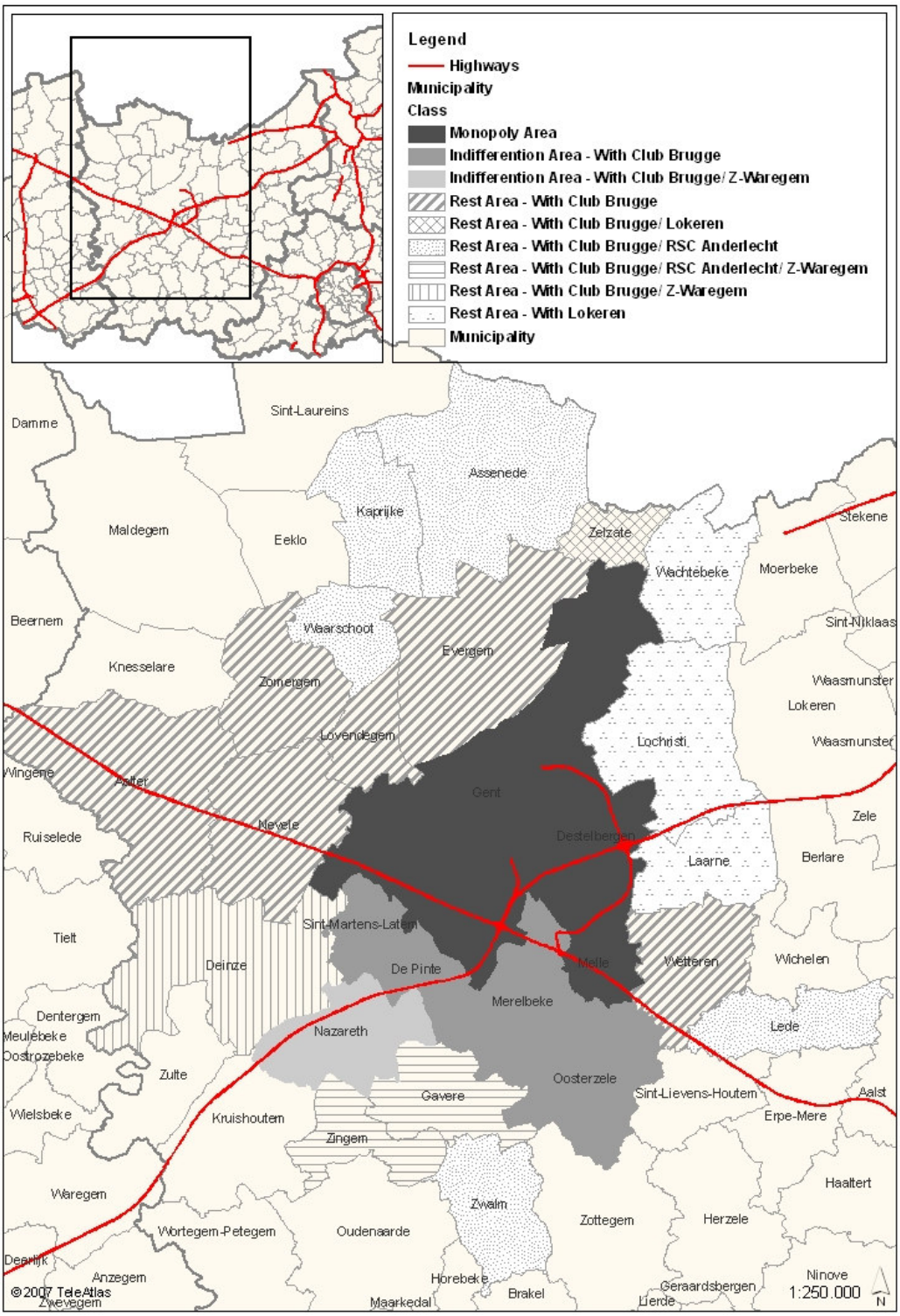

Figure 5: The service area of KAA Gent

Most of the fans of KAA Gent live in communities in the surroundings of the old stadium. Some of them, like parts of Destelbergen, Melle and Merelbeke have been part of the morphologic

agglomeration of Gent for a long time. The spatial impact on the locations in the surrounding of the E40 direction Brussel and Brugge show us a distance decaying function. This function is in the direction of Brugge very steep and the attraction power of KAA Gent declines very fast. In the direction of Brugge we notice a steep decline of the support for KAA Gent and already a rather high impact of ClubBruggeKV. The support for ClubBruggeKV is low in the communities nearby Gent but from Wetteren on the spatial competition with ClubBruggeKV returns as can be seen from gradual increase in the spatial impact of RSC Anderlecht.

The steep decline of the drawning power of KAA Gent in the direction of Lokeren can be explained by spatial competition with SC Lokeren. In the recent past there have been a lot of rumours about a merger with Sp Lokeren, a professional club located 28km away from Gent in a city of 37,850 inhabitants. The spatial competition between the two clubs occurs in Wachtebeke, Laarne, Lochristi, Zelzate, Oostakker and the rural parts of the agglomeration of Gent. The relocation of KAA Gent to a new facility is a move away from Lokeren and makes a potential merger less interesting. Dejonghe(2001) and Dejonghe, Van Hoof & Kemmeren(2006) noticed that crossing another city to visit a professional football team has, with an exception for the top teams, a psychological impact. The result is a steep decline in the willingness to consume the service. This means that in case of a merger of the teams a great number of Lokeren fans will not follow their former team to the new facility of KAA Gent.

The penetration index of KAA Gent is in the communities that are more closely located to the new facility lower than in those nearby the old stadium. Some of those communities such as De Pinte, Nazareth and Sint-Martens Latem are rural and/or more residential and to a lesser degree focused on Gent. Another important fact is that ClubBruggeKV has also a significant number of fans in these communities. Zwalm and Zingem are communities located in the theoretical and empirical verified spatial competition area with SV Zulte Waregem. Data shows us that this region is for consumption of professional football, focused on ClubBruggeKV, RSC Anderlecht and to a lesser degree on SV Zulte Waregem. The region is not well-connected with the rest of Flanders and the fans that want to attend football have to travel for a long time. The result is if people in a region without a professional football team leave their region to consume professional football, they consume the better product, in other words they attend top teams. The potential gain to be made from fans from this region is rather limited. The potential additional market in this sector of the service area is dichotomous. In the communities nearby the new stadium the impact of other teams is not so important and the potential gain is relatively higher.

5. The market potential of KAA Gent

The market potential of KAA Gent must be gradually analyzed. Spatial competition is a strong limitation on growth and a reorientation of the majority of a part of the inhabitants of a

community towards another team can take a long time. The recent good performances of KAA Gent (6th in 2004/05, 4th 2005/06 and 4th 2006/07) combined with a new facility could change the orientation of some of the new sport consumers in Gent and the nearby communities.

Data in table 3 showed that the Ci of KAA Gent is rather low in Gent. A combination of good performances, novelty effect and reduction in time distance to potential consumers can result, as shown in the Netherlands, in an increase of attendances(Dejonghe, Van Hoof & Kemmeren,2006). The market potential in table 5 and 6 are prognoses based on data from other teams in the Belgian competition and they take into account the existing spatial competition with other teams and reduction in time distance. The enlargement of the service area and the deepening of the consumption in the existing service area occurs gradually from the location of the club towards the border or even across the border of its service area. Besides the novelty effect and a potential elimination of a capacity constraint, is a reduction in time distance one of the main issues in the decision mechanism of potential consumers to visit a consumer-oriented service such as professional football. In a homogenous space would the attraction power of a consumer-oriented service decline gradually with the distance. In reality we have a heterogeneous space with corridors and barriers which result in a fluctuation of the relative number of consumers that come from a certain physical distance towards that service.

At this moment KAA Gent attracts 3,850 fans from their own locations. A gradual upgrading or deepening of its own city means an potential additional average attendances of 2,839. The club needs herefore a marketing strategy to keep its supporters (more sport fans) from nearby the old location and to activate the centre of the city and the potential sport consumers nearby the new location. The relative low consumption of KAA Gent in its own community can be seen as an indicator for a potential growth in attendances. The figures in table 5 are projections of a potential raise and the Ci potential is kept rather low. In most of the multifunctional cities the relative consumption of football tends to be rather low. The supply of leisure activities in these cities is rather high and consumers have the probability of choice. Smaller communities and cities offer in a lot of cases only one consumer-oriented service with a threshold that is higher than the other services. In that case the local consumption will be high. This is shown in table 4 where the highest relative consumption is noticed in Genk, Westerlo or Sint-Truiden to mention some.

City part	population	CiKAAG	Ci pot	Additional fans
Gent (centre)	117,134	107.9	250	1,664
Gentbrugge/Ledeberg	28,257	397.8	500	289
Oostakker	12,513	144.7	250	132
St Amandsberg	22,549	161.9	250	199
Zwijnaarde	6,858	211.4	400	129
Mariakerke	11,678	165.3	250	99
Wondelgem	12,339	212.4	250	46
Drongen	12,277	149.9	300	184

St Denijs Westrem/ Afsnee	6,609	152.8	300	97
St Kruis Winkel/ Mendonk Desteldonk/Ter Donk	2,906	106.7	-	-
GENT	**233,120**	165.2		2,839

Table 5: Additional fans of KAA Gent in Gent

An upgrading of the market potential of the club has to be gradually started in the communities nearby Gent and on the middle long or long term in the outer ranges of the service area. In a first stage KAA Gent needs to raise its Ci in its monopoly area Melle, Destelbergen and its indifferent area Merelbeke, De Pinte, Oosterzele, Sint Martens Latem and Nazareth. KAA Gent attracts at this moment 1,752 fans from these communities and the deepening of the market could lead to, as shown in table 6, an increase of 1,138.

Community	population	CiKAAG	Ci pot	Additional fans
Melle	10,585	255.1	400	153
Destelbergen	17,172	230.0	300	120
Merelbeke	22,253	217.9	350	294
De Pinte	10,235	151.4	300	152
Oosterzele	13,172	143.5	250	140
Nazareth	10,947	141.6	300	173
St Martens Latem	8,280	122.0	250	106
GENT	**92,644**			1,138

Table 6: Additional of KAA Gent in the monopoly and B-zone

In the outer ranges of the service area, the rest area (C zone) and even beyond that zone, will the drawing power of KAA Gent be somewhat weaker in the beginning. A relocation away from Lokeren makes it less probable that a raise in the number of fans from the communities in spatial competition with Lokeren (table 7) will occur. In the direction towards Brussels, can a reduction in time distance result in an enlargement or deepening of the service area. At this moment KAA Gent pulls in 386 fans from this zone and Wetteren and St Lievens Houtem are the first communities in this part of the service area that can be upgraded. An increase in the Ci KAAGent by 50 in both of these communities means an additional 163 fans. The communities in the rest zone closer to the new stadium can be seen as the main potential enlargement zone of the service area. An upgrading of Ci KAAGent in Gavere, Zingem and Zwalm by 100 and in the other communities by 50 adds 550 fans. In the direction of Brugge spatial competition remains very though and only a combination of poor performances of FC Brugge with excellent performances of KAA Gent will reorient these communities in the long term. The reduction of the time distance towards Lovendegem and Evergem (both located near the R4 ring road) is the first step towards the deepening of the service area in that direction. An increase of CiKAA Gent by 100 could result in an additional 416 fans.

The final result is given in table 8. It shows us an average home attendance of 13,287 in the middle long or long term. Adding 700 visiting fans gives us an average attendance of 14,000 or 70% of the new capacity. Knowing that in some cases, such as FC Bruges and SC Anderlecht and to a lesser degree RC Genk and Standard Luik, the attendances are much higher than average means that in almost half of the games the stadium will only be half filled.

Location	Home attendances	Additional attendances	Market potential
Gent	3,850	2,839	6,689
Monopoly/B-zone	1,752	1,138	2,890
Restzone/outer range			
- direction Lokeren	351	-	351
- direction Brussels	386	163	549
- closer to new stadium	375	550	925
- direction Bruges	732	416	1,148
Other	735	-	735
TOTAL	8,181	5,106	13,287

Table 7: Market potential of KAA Gent

6. Conclusion

The relocation of the football grounds of Gent is a typical example of the recent movements of football stadiums. The old stadium was built in 1920 and despite the renewals in the 1980s it does not meet the new needs of modern professional football. The stadium is located in a residential neighbourhood and results in a lot of negative externalities to the surrounding area. The idea of locating the stadium out of the residential areas and near main highways is typical in the relocation trend but the main difference between this case and a lot of other cases in the Dutch, German or English competition is that the stadium does not have a capacity restraint on match days. This means that the demand for professional football is not higher than the supply of seats and novelty effect combined with a good marketing strategy and good performances will be necessary to enlarge or deepen the service area. Research based on the dataset of the season ticket holders made it clear that KAA Gent has a local impact and that most of the fans are living in the neighbourhood of the old stadium. KAA Gent never had the emanation of a top team and suffered spatial competition from FC Bruges and SC Anderlecht. The data showed that the fans of KAA Gent are living in the urban working fringe and some communities in the morphologic agglomeration. In the suburban parts of the city and in the rural towns and cities KAAG will become less accessible and the main highway E40 is a corridor for the two top teams. The novelty effect of the stadium is based on the potential market of the club. KAA Gent has a relatively low local consumption and has the possibility to deepen its existing service area and to have some spatial extension in the communities nearby the new location. The calculation of the market potential showed us that in the middle long term the average attendances can rise to 14,000 but

this is still only 70% of the new capacity. Only when the major teams will visit the club is there a probability of a sold-out stadium.

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