Nicola Francesco DOTTI*, Bas VAN HEUR*, Colin C. WILLIAMS**

MAPPING THE SHADOW ECONOMY: SPATIAL VARIATIONS IN THE USE OF HIGH DENOMINATION BANK NOTES IN BRUSSELS

Abstract. The aim of this paper is to map the spatial variations in the size of the shadow economy within Brussels. Reporting data provided by the National Bank of Belgium on the deposit of high denomination banknotes across bank branches in the 19 municipalities of the Brussels-Capital Region, the finding is that the shadow economy is concentrated in wealthier populations and not in deprived or immigrant communities. The outcome is a call to transcend the association of the shadow economy with marginalized groups and the wider adoption of this indirect method when measuring spatial variations in the shadow economy.

Key words: informal economy, undeclared work, cash deposits, Brussels.

1. INTRODUCTION

Is the shadow economy concentrated in marginalized areas and populations, such as in immigrant populations, and as a result, reduces the spatial disparities produced by the formal economy? Or is it concentrated in more affluent populations and, as a consequence, reinforces the disparities produced by the formal economy? This paper seeks answers to these questions. For many

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THE QUALITY OF LIFE OF RESIDENTS OF A SATELLITE DEGRADED CITY DISTRICT AS PART OF URBAN DEVELOPMENT POLICY

Abstract. The purpose of this article is to assess the quality of life of the residents of a degraded satellite area of a city. It is considered in the context of urban development policy – as the result of decisions and as a challenge for long-term development. The research was based on a case study, which is the district of Opole referred to as Metalchem. It is characterized by an isolated location in the city structure as well as economic transformations. The study was based primarily on an analysis of source materials and results of a survey. The results show that the assessment of the quality of life is inconsistent. The living conditions are good, but satisfactory fulfilment of social needs is lacking. The residents of the studied area feel that their quality of life is lower than that of other residents of the city. This situation is the result of three main factors: insufficient access to public services, an ingrained negative image of the quarter, and a lack of coherence and continuity of the policy regarding this area. Research shows that the quality of life of the residents of degraded and satellite districts depends on the management and investments in the area, on the area’s perceived status within the city, but primarily on a consistent implementation of spatial and economic policies. Ensuring cohesion and integration between the satellite districts and the city center as well as other districts is also important.

Keywords: city, satellite city district, postindustrial areas, quality of life, urban politics.

1. INTRODUCTION

Urban development is a long-term and complex process. As pointed out by Karwińska (2007, pp. 42–43), the state of the city is the result of many variables, including the concept of spatial development, the characteristics of the economic and political system, and the culture of the society. These features are formed over a long period of time and are subject to transformations. Those changes mean that there are new elements that accompany the old ones in the social and spatial system. The

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city becomes multidimensional, which requires the use of management forms that will eliminate both existing and potential threats (Zrałek, 2015, p. 198). One of the aspects that urban development policy must take into account is the quality of life of the residents. It is a challenge for the urban policy currently pursued in the European Union as well as in Poland. This policy refers to the government representing the interests of the local community. It includes relations between the city council and all city users, and it should rely on the selection of goals that will suit the interests of the community members, regardless of their place of residence (Zrałek, 2015, p. 200). Under these assumptions, the objective of urban policy is to ensure proper quality of life for all inhabitants of the city. In this context, the spatial variation of the quality of life in the city is a problem that has to be dealt with. The question of building a friendly city in order to ensure good quality of life for all its inhabitants is addressed by Karwińska (2010). The author points out that the spatial or social shape of the city has been changing, but it has always been a reflection of the most important ideals, values and beliefs about truth, goodness and beauty. It responded to the need for implementation of other concepts of a good life. Ziobrowski (1996) explores in his research the question of the shape of a city structure that makes it possible to meet the needs of all residents. He points out the need for institutions providing social services in the city to be widely available. He also identifies indicators of good organization and use of urban space: distance of onerous industrial activities or roads from residential areas, convenient arrangement of open recreational space, and well-organised public transport (Ziobrowski, 1996, p. 4).

This article aims to assess the quality of life of the inhabitants of a degraded (post-industrial) satellite district, and the effect that local development policies have on that quality. It is also considered in the context of identifying challenges for long-term development. As a case study, one of the districts of Opole was selected. It is an example of an area that has undergone a functional and spatial transformation and today is characterized by a high proportion of post-industrial sites, including degraded ones. They are located in the immediate vicinity of residential areas. This example was chosen because, as stressed by Hall (2002), city environment and especially industrial cities are seen negatively and considered detrimental to quality of life, especially to human health. These are the regions that require consistent and deliberate policies, both spatial and socio-economic.

The research question was explored on the basis of two groups of information sources: source materials obtained from institutions holding numerical data on population and social policies, and the results of surveys and interviews. The article uses data from studies conducted under the grant Economic and spatial analysis with elements of social analysis of parts of the registration precincts in Groszowice and Grotowice, including the industrial park Metalchem.1

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1 Research conducted on behalf of the City of Opole under the programme Scientific Grant of the Mayor of the City of Opole in the period between September and December 2014 by the following
The main research objective was to diagnose the residents’ assessment of their quality of life. It comprised two components. The first one was the residents’ opinions on selected aspects of the quality of life in their place of residence, and the second one was their assessment of the same aspects of the quality of life in relation to the situation in the city. The respondents were asked to assess those aspects on a 5-point scale (very good, good, average, bad, very bad), and then to assess them in relation to the city – if the situation in question is perceived as better, similar or worse.

The categories used in the study can be divided into two groups. There were questions about the scope and availability of the social services offered (education, health care, trade, culture and entertainment, sports and recreation, and social security) and about their quality. In addition, there was an assessment of the level of life of the residents and their situation in the labour market.

2. THE QUALITY OF LIFE IN URBAN DEVELOPMENT POLICY

Development of territorial units represents the structural changes and improvements in society and the economy, which foster the rise in the standards of living, as well as development and modernization of the economy (Secomski, 1987). Local development is based mainly in cities and municipalities. Local self-government runs a development policy and is responsible for the organization, functioning and development of the city environment, as well as its competitiveness (Gilowska, 1998). Taking this interpretation into account, it needs to be stated that it is the duty of the self-government to improve the living conditions of all inhabitants of a city.

Quality of life is a category commonly used in scientific research and development policies of territorial units. However, it is a concept that does not have an established, unambiguous definition that would be universal with regard to different research disciplines (see Borys, 2001; Jaracz, 2001; Wnuk and Marcinkowski, 2012; Zborowski, 2005). As indicated by Wnuk and Marcinkowski (2012, p. 25) it is a term most often used in social sciences, where numerous research concepts are coined, conditioned by a paradigm characteristic of the field. The quality of life is therefore perceived and evaluated differently by economists, sociologists, psychologists and representatives of medicine (Wnuk et al., 2013). However, through long trials a uniformed methodology has been established, and is used in many European countries to gather comparable results (Watson et al., 2010).

team: Dr. Edyta Szafranek (chief scientist), Dr. Monika Paradowska, Dr. Agnieszka Dembicka-Niemiec, M. Sc. Arch. Renata Klimek.
It assumes that measuring the quality of life must take into account the level of satisfaction of intangible needs of individuals, the quality of family and social relations, and personal development.

According to Liszewski (2004), the level and quality of life are measures which determine living conditions. Quality of life is the degree of a person’s satisfaction with the conditions of their life, i.e. their state of life. Other definitions suggest that quality of life comprises not only physical but also social needs, connected with functioning in society, and spiritual needs, related to self-realization and development of personality (Ostasiewicz, 2002; Słaby, 1990; Eiser and Morse, 2001). Organisations such as OECD (Better...), WHO (WHO definition...), and researchers like Dienner and Seligman (2004), or Campbell, Converse and Rodgers (1976) point out the necessity of including other factors and measures besides economic ones when measuring the quality of life. An important component of the quality of life assessment by city inhabitants is the image of the area they inhabit. Areas which are considered prestigious and having high socioeconomic status by their populations, also show a higher quality of life evaluation (Kavanagh et al., 2005). To minimise the disproportion in conditions and quality of life in various city areas, it is therefore important to treat the space and the population as one, integrated organism (Parysek, 2015).

In this article, the study on the quality of life is associated with the perception of this category in the context of urban development, in particular the economic and social development, because these are the basic categories of the local development policy. Socio-economic development, and within it the quality of life, is an important element of strategic planning and programming. In the mainstream of research and development policy, the category of quality of life refers to a sense of social welfare. It is conditioned by the availability of goods and services for the fulfilment of people’s needs. However, it is also connected with the sociological recognition of the quality of life that prioritises the possibility of fulfilling social needs (Kaleta, 1998).

3. STUDY AREA – THE STATE AND CHANGES IN THE FUNCTIONAL AND SPATIAL STRUCTURE

The study area covers two cadastral districts in Opole, situated in the districts called Groszowice and Grotowice (figure 1). In local terminology this area is referred to as ‘Metalchem’, which is associated with the history of industrialization of the area. In 1973, it was decided to locate a chemical equipment plant called ‘Metalchem’ in that area, and in the years 1977 to 1985 more factories started to operate there. The creation of the plant was an important moment in the develop-
The Quality of Life of Residents of a Satellite Degraded City District...

The establishment of this plant entailed an inflow into the area of people from outside of Opole (Heffner and Kreft, 2011). However, the industrial plant ‘Metalchem’ did not survive the economic transformation, and in 2001 it formally announced bankruptcy (Upadek…, 2001). The process of collapse began in the 1990s, which resulted in the increasing depreciation of fixed assets and degradation of space. It also resulted in unfavourable demographic and social changes, particularly among the population inhabiting the so-called ‘Metalchem’ settlements (I and II) built during the start of the plant’s industrial activities. Favourable changes in economic and social spheres in the studied area began to take place in 2005, when new businesses started to operate in the production halls formerly occupied by the plant.

This case study is a typical example of a city district created under the influence of a political doctrine. It had an impact both upon the formation of a new functional and spatial structure in that district and upon the whole city. First and foremost, the system of quantitative and spatial allocation of production and
housing resources changed, and then the frontline services. This led to the creation of an almost self-sufficient part of town. As Węcławowicz (2000) states, these processes resulted in a disintegration of the tight-knit social and spatial structures of the city, which was observed among others in Cracow, Poznań, Wrocław, Łódź, Radom and other places. Research into the functional and spatial structure of the transformation period cities reveals considerable social and spatial differences in Polish cities (Węcławowicz, 2000). They are still visible in many cities (Kotus, 2011). This case study is an example of an area where social problems increased after the fall of an industrial enterprise. The district acquired low social status and became spatially isolated. The area was abandoned by economically mobile inhabitants and resettled by social groups with economic problems.

Currently, the area is inhabited by 3011 people, who represent approximately 2.5% of the population of Opole. A significant proportion of the population settled in the area because of the possibility of working in industrial plants, and represents the ‘working class’, but in the area of former villages there still live ‘indigenous’ people, not linked economically with the industrial function and who, despite the district’s degradation, still exhibit a high degree of local identity. From the point of view of demographic research the area is varied.

The quality of life of the residents of the studied area is influenced, aside from its economic history, by its location in the spatial structure of the city and its communication with the city centre.

The study area is located within the administrative borders of Opole, in the southern part. Its eastern, southern and western border is also the border of the city, through which it is adjacent to the suburban municipalities (Tarnów Opolski and Prószków). The location of the studied area in the spatial structure of the city, as well as the level of its communication with the city centre allows us to classify it as a satellite area in the spatial structure of the city.

The basic road system of the researched area is based on one main road – Oświęcimska Street. It has the status of provincial road and is the only one to ensure transport connection between the studied area and the centre of Opole, as well as other important centres in the region. This situation applies to passenger traffic generated by residents and businesses operating there, as well as cargo traffic resulting from the activities of the companies located in the Industrial Park Metalchem.

In the current functional and spatial structure of the district there are areas of multifamily housing, but also historic villages with detached houses, and industrial and post-industrial areas, including post-mining disused sites of the cement plants Groszowice and Bolko. There also is a small percentage of farmland as well as service and transport areas (including railroad). Among the characteristic elements of the spatial structure is the Odra river, whose riverbed forms the eastern boundary of the studied area, and forests stretching along the western border.
As a result of economic transformations in the district under study, there are areas varying in socio-economic functions and the level of spatial development. Their qualitative differentiation is also significant – there are both well-invested and degraded spaces. Degradation and decapitalization occur mainly in the service areas and public spaces. It is a result of incoherent policy pursued in the district. In its history, there were periods of intense investment and periods of its marginalization in the spatial and social structure of the city. After 2000, contradictory decisions have affected the area. Conditions were created for the development of an industrial park and at the same time there was established a detoxification centre, night shelters for the homeless, social housing for the socially excluded, and a landfill. None of the decisions considered the quality of life of the inhabitants of the area.

Currently, the district under study must be regarded as a problem area. The key problem in its development, resulting from its location and socio-economic conditions, is the spatial conflict taking place at the interface of the industrial and the housing functions. This situation affects the assessment by the residents of the quality of life in the district, also in relation to the situation in the city.

4. CHARACTERISTICS OF THE SURVEY PARTICIPANTS

The survey was conducted in a group of 256 persons, using a questionnaire containing 65 questions. The respondents were persons of full legal age, permanently residing in the studied area. The group constituted 10% of the population aged over 18. Women constituted 54.8%. Due to the age category, the largest group of the respondents was aged 26–35 (24.3%) and 56–65 (23.9%). Other significant groups of respondents were persons aged 46–55 (19.9%), 36–45 (14.3%) and 18–25 (13.5%). The least numerous groups of people who participated in the study comprised the oldest residents: aged 66–75 (3.6%) and over 75 (0.4%). As regards the marital status, most of the respondents were married (65.9%). More than half of the respondents declared secondary education (52.4%), and a large part (38.9%) declared higher education. In the category of professional activity, employed persons (working and/or employed) were the most numerous group (64.1%). Retired residents accounted for 11.3%, and along with the pensioners they constituted 14% of the population. The group of economically inactive people also includes the unemployed (9%), and school and university students (7%). Entrepreneurs who are also residents of the researched area constituted 5.9% of the studied population.

The structure of the respondents correlates to the structure of the entire population, therefore it can be assumed that the respondents are representative of the local community.
5. THE RESIDENTS’ LIVING STANDARD AND THEIR SITUATION IN THE LABOUR MARKET

In respect of material conditions, the situation is relatively favourable. The respondents were asked about the economic situation in their household. The questions were designed to illustrate the scale of difficulty in functioning in everyday life. The answers given by the respondents are presented in table 1.

Table 1. Economic situation of households in the studied area in the opinion of its inhabitants

<table>
<thead>
<tr>
<th>Categories of assessment of economic situation of households</th>
<th>Responses (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>We are poor, we don’t have enough to meet our basic needs</td>
<td>3.54</td>
</tr>
<tr>
<td>We live modestly, we have to make careful financial decisions every day</td>
<td>15.75</td>
</tr>
<tr>
<td>We live on an average level, we have enough money for our everyday needs, but we need to save for major purchases</td>
<td>28.27</td>
</tr>
<tr>
<td>We live well enough even without special savings</td>
<td>19.29</td>
</tr>
<tr>
<td>We live very well, we can afford some luxuries</td>
<td>3.15</td>
</tr>
</tbody>
</table>

Source: own study based on surveys.

As regards the economic situation of households, the respondents fell into three groups. The vast majority (58.27%) indicated an average standard of living, choosing the statement, ‘we live on an average level, we have enough money for our everyday needs, but we need to save for major purchases.’ Such a statement signals safe financial conditions in everyday life, though not sufficient to satisfy any extra needs. The remaining two groups had similar proportions, since 19.29% of the respondents pointed to the economic difficulties in their households, and a little more, i.e. 22.44%, believed that the situation in their households was good and very good. It should be emphasized that the demographic variables which were most important in determining the situation of households were age and economic activity. The perceived living standard decreased with age. As regards economic activity, good situation was reported by business people, average – by working and/or employed people and students, and the worst situation – by the unemployed and pensioners.

An additional question diagnosing the economic situation of households concerned the use of social assistance. The vast majority of the respondents (87.5%) declared that they did not use any form of material assistance. The most common source of gaining support among the residents of the studied area was from informal sources – from family, friends or acquaintances. 10.8% of the respondents (from different economic backgrounds, of different ages) declared receiving financial aid from such sources.
Equipment of the housing with basic elements of municipal infrastructure and additional networks is an indication of a relatively good quality of life of the residents of the area. All apartments have hot and cold running water, and about 99% have a bathroom and a toilet in the house. Gas and central heating are in 93.3% and 95.4% of households respectively. Some of the households still lack access to the internet, as well as digital TV and/or cable. However, the ownership of these media at 70% is a good indicator of the level of the household equipment. The most difficult situation concerns the possibility of using garages or parking spaces. More than 55% of the surveyed residents, having at least one car, do not have access to parking spaces, and only 27% of the respondents have their own garage, most of them being owners of single-family houses.

An important aspect of the quality of life is participation of the residents in the labour market. Analysis of the information provided by the District Labour Office\(^2\) shows that the problem of unemployment in the studied area is not significant. The unemployed from that area represent 2.84% of all the unemployed in the city, and the unemployed per 1000 residents ratio is 4.7%. The structure of the unemployed is dominated by women (57%). This points to the need to increase the number of jobs targeted at women.

An important measure of assessing the situation in regard to the level of unemployment is the structure of the unemployed according to the duration of unemployment. Among the entire group, the long-term unemployed constitute the largest percentage. In total, persons who have been jobless longer than a year constitute 38.9% of all the unemployed. This group includes people who have been out of work between a year and two years (25%) and over 2 years (13.9%). The least numerous group of the unemployed (10.4%) are people that have experienced unemployment for the shortest period, up to one month without a job. The rest of the unemployed have been jobless for at least a month and at most one year. This situation indicates that the problem of unemployment in the studied community is permanent, and the largest group of the unemployed consists of people who, for various reasons, are unable to find or start work. This is confirmed by the structure of the unemployed according to the entitlement to benefits. The vast majority of the unemployed, i.e. 84.7%, are persons without the entitlement to benefits. The most common cause for the lack of entitlement to benefits is refusal or failure to undertake employment, participate in placements, internships, retrainings, and other forms of work or training without a justifiable reason. The main reasons for the loss of benefits indicate that some of the unemployed are not determined to start work. Only 15.2% of the unemployed possess the entitlement to unemployment benefits.

Assessing the situation in the labour market, the respondents pointed out that the studied area faces similar problems as other areas (32%). However, the high

\(^2\) Data from the District Labour Office, ZM-41-20/WW/2014, dated 10.10.2014.
proportion of respondents described the situation in the area in question as difficult (26%) or very difficult (22.8%) in regard to finding a job. In total, this group consists of almost half of the total number of respondents. These are mainly women, who account for 80% of the respondents claiming that it is very difficult to find a job, and 53% of those claiming that it is difficult. The belief that it is very difficult to find a job is reported by 80% of the population above 36 years of age, while the largest group are people aged 46–55 (36%). In case of the option ‘it is difficult to find a job,’ the largest group of respondents who chose it were those aged 26–35 (33%) and 46–55 (28%).

In summary, the standard of living of the area residents is good. This is confirmed by the financial situation of the households, housing conditions and economic activity of the residents. The study area does not stand out negatively when assessing the standard of living in spite of the changes taking place in its functional and spatial structure.

6. FULFILMENT OF SOCIAL NEEDS IN THE RESIDENTS’ OPINION

In evaluating the quality of life, an important aspect is the ability to satisfy social needs, such as availability of high-quality public services: education, health, culture, recreation and leisure activities.

Leisure activities offer is among the factors determining the attractiveness of living conditions. Of all the respondents, only 22.4% said that their children spend their free time in an organized manner. However, only 23% of them indicated that this is done in their area of residence. It indicates low attractiveness of the neighbourhood in terms of satisfaction of this category of social needs. This assessment is confirmed by a very high proportion of the respondents (77%) whose children do not benefit from any form of leisure activities. The main reason for this is the lack of an adequate offer of activities in the area of residence (78.6%), while only 18% of the respondents gave the lack of money as the reason for such a state of affairs.

Another factor of the quality of life is the availability of selected social services. The results are presented in table 2.

The assessment of the availability of selected services to meet the needs of the residents shows that in most cases the indicated rating was on the level of ‘average’ and ‘good’ (table 2). This means that the residents generally accept the state of their access to services. Positive indications pertained to the availability of kindergartens and primary schools, health institutions and grocery stores. These aspects, evaluated positively, are among the services that meet the basic needs of the residents. These are non-market activities, and their location is largely related to the regionalization of services. It is therefore the duty of the city authorities to
provide residents with access to such services. The only market activity evaluated positively in terms of availability is trade in foodstuffs. It is due to the location of a supermarket (Biedronka) and several local shops. It should be noted that this was pointed out by respondents from different age groups, with different professional backgrounds and economic status. Kindergarten accessibility, evaluated positively, affects the attractiveness of living conditions for families with small children or those planning to have children in the future. The availability of elementary school was also assessed relatively highly, which is another desirable asset for families with children. This assessment, however, is not unequivocal, because some of the children must be driven to school. The argument which improves the assessment of the availability is the existence of a bus that transports children to and from school. Less favourable was the assessment of accessibility of post-elementary education: secondary school and high school. It is due to the lack of such units in the studied area. The need to commute to secondary school

<table>
<thead>
<tr>
<th>Availability of institutions/services</th>
<th>Very good</th>
<th>Good</th>
<th>Average</th>
<th>Bad</th>
<th>Very bad</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kindergarten</td>
<td>9</td>
<td>47</td>
<td>35</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Primary school</td>
<td>6</td>
<td>42</td>
<td>42</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Secondary school</td>
<td>3</td>
<td>19</td>
<td>46</td>
<td>24</td>
<td>8</td>
</tr>
<tr>
<td>High school</td>
<td>2</td>
<td>15</td>
<td>45</td>
<td>28</td>
<td>10</td>
</tr>
<tr>
<td>Health institutions</td>
<td>6</td>
<td>42</td>
<td>37</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>Social care institutions</td>
<td>2</td>
<td>11</td>
<td>40</td>
<td>34</td>
<td>13</td>
</tr>
<tr>
<td>Cultural and entertainment institutions</td>
<td>2</td>
<td>11</td>
<td>31</td>
<td>42</td>
<td>18</td>
</tr>
<tr>
<td>Sports and recreation services</td>
<td>4</td>
<td>15</td>
<td>28</td>
<td>34</td>
<td>19</td>
</tr>
<tr>
<td>Basic services</td>
<td>3</td>
<td>20</td>
<td>38</td>
<td>31</td>
<td>8</td>
</tr>
<tr>
<td>Grocery stores</td>
<td>16</td>
<td>47</td>
<td>29</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Non-food stores</td>
<td>1</td>
<td>8</td>
<td>26</td>
<td>45</td>
<td>20</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quality/state of provided services</th>
<th>responses (%)</th>
<th>Very good</th>
<th>Good</th>
<th>Average</th>
<th>Bad</th>
<th>Very bad</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of education</td>
<td></td>
<td>2</td>
<td>26</td>
<td>55</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>State of educational infrastructure</td>
<td></td>
<td>2</td>
<td>17</td>
<td>53</td>
<td>23</td>
<td>5</td>
</tr>
<tr>
<td>State of sports and recreation</td>
<td></td>
<td></td>
<td>5</td>
<td>18</td>
<td>24</td>
<td>34</td>
</tr>
<tr>
<td>Quality of cultural and entertainment offer</td>
<td></td>
<td>2</td>
<td>9</td>
<td>25</td>
<td>43</td>
<td>21</td>
</tr>
<tr>
<td>Quality of health care</td>
<td></td>
<td>4</td>
<td>36</td>
<td>38</td>
<td>18</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: own study based on surveys.
negatively affects the assessment of this category, especially because, as in the case of primary schools, regionalisation of school also applies here. According to the respondents, at least one secondary school should be located in their area of residence. It would improve the safety of children attending classes, and the organization of their learning and leisure time. There is an additional problem, and it is the length of time needed to reach the nearest secondary school located in Opole. Due to the low traffic capacity between the studied area and the city center, some secondary school students attend a school located in the neighboring municipality. The residents also assessed negatively the availability of high school. However, in this case, commuting to schools relates to older youth and, above all, students have the right to choose the school which they want to attend. Therefore, it seems that there is no necessity to locate another secondary school in the studied area.

The residents evaluated the accessibility of health care institutions relatively positively. It is due to the existence of both, a public health facility as well as several private health centres in the district. However, this category received the lowest ratings from respondents aged 55 or older. This means that for elderly people whose mobility is low and who get ill most often, the accessibility is not satisfactory.

The respondents gave a definitely negative evaluation of the accessibility of shops other than food stores, as well as cultural facilities and entertainment institutions. In the first case, the residents pointed out the need to increase the number of shops in the studied area. There is no non-food-store in the neighbourhood, which makes it necessary for the residents to go on shopping trips elsewhere. Another, equally important problem, in the opinion of the residents of the studied area is very poor availability of services in the entertainment and cultural sphere. 60% of respondents gave negative ratings in this category (bad and very bad). Those were people from different age groups and education levels, which confirms the low fulfilment of social needs in this area. The quality of the cultural and entertainment offer in the area received an equally low rating. This applies both to offers for children, adolescents and adults. Research shows that the sphere of culture and entertainment is marginalized in the studied area, both in terms of the quantity and quality of such services. Negative opinions were given by young and middle-aged (below 45), professionally active people.

The survey participants were also asked to rate the same categories in relation to the situation in the city. They had to indicate whether the availability of specific services in their neighbourhood is similar, better or worse than in other parts of the city. The respondents’ evaluation has a degree of subjectivity, because they do not live in areas to which they compare their own situation. However, the majority of the respondents work in other parts of the city, so they may be familiar with the availability of the services in question in those districts. It can be therefore concluded that a comparative analysis is fairly reliable. The results of the ratings are presented in table 3.
Table 3. Evaluation of availability and quality of public services in the studied area in relation to the situation in the city

<table>
<thead>
<tr>
<th>Availability of institutions/services</th>
<th>Better</th>
<th>Similar</th>
<th>Worse</th>
<th>I have no opinion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>responses (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kindergarten</td>
<td>9</td>
<td>48</td>
<td>19</td>
<td>24</td>
</tr>
<tr>
<td>Primary school</td>
<td>7</td>
<td>45</td>
<td>23</td>
<td>25</td>
</tr>
<tr>
<td>Secondary school</td>
<td>5</td>
<td>30</td>
<td>41</td>
<td>24</td>
</tr>
<tr>
<td>High school</td>
<td>5</td>
<td>26</td>
<td>44</td>
<td>25</td>
</tr>
<tr>
<td>Health institutions</td>
<td>6</td>
<td>54</td>
<td>28</td>
<td>12</td>
</tr>
<tr>
<td>Social care institutions</td>
<td>5</td>
<td>30</td>
<td>37</td>
<td>28</td>
</tr>
<tr>
<td>Cultural and entertainment institutions</td>
<td>7</td>
<td>14</td>
<td>63</td>
<td>16</td>
</tr>
<tr>
<td>Sports and recreation services</td>
<td>12</td>
<td>21</td>
<td>53</td>
<td>14</td>
</tr>
<tr>
<td>Basic services</td>
<td>9</td>
<td>36</td>
<td>42</td>
<td>13</td>
</tr>
<tr>
<td>Grocery stores</td>
<td>11</td>
<td>52</td>
<td>29</td>
<td>8</td>
</tr>
<tr>
<td>Non-food stores</td>
<td>11</td>
<td>17</td>
<td>62</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quality/state of provided services</th>
<th>responses (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of education</td>
<td>4</td>
</tr>
<tr>
<td>State of educational infrastructure</td>
<td>4</td>
</tr>
<tr>
<td>State of sports and recreation infrastructure</td>
<td>11</td>
</tr>
<tr>
<td>Quality of cultural and entertainment offer</td>
<td>8</td>
</tr>
<tr>
<td>Quality of health care</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: own study based on surveys.

The analysis of the results indicates that in most of the categories the availability and quality of the services in the district were perceived as worse than in the case of other citizens of Opole (table 3). The accessibility of kindergarten and primary school, grocery stores and health institutions were assessed by the residents as being at a similar level to that in the city. In these categories, they do not have the feeling of being in a worse situation than other citizens of Opole. Similar opinions were expressed about the quality of education and health services, indicating that both these categories are at a similar level as in the city. In other aspects of the quality of life, the residents have a sense of lower availability and/or quality of the services than in the city. It pertains especially to the institutions of culture and entertainment, non-food stores, and sports and recreation services. In relation to the situation in the city, the least favourable opinions concern the sphere of culture and entertainment. Very low availability of such institutions, which, according to 63% of respondents, is much lower than in other districts of the city, is correlated with a very low quality of cultural events and leisure activities offered (65% of
respondents). This appears to be the key problem in meeting social needs of the residents of the studied area.

The availability of social services has proved to be an important aspect, since when asked to indicate the best development plan for their area, 29% of respondents said that it should be a convenient place for families with children, 20% opted for development of sport, leisure and recreation, and the third biggest ‘vote’ was for a space convenient for the elderly residents.

The study indicates that the subjectively perceived quality of life for residents in the studied area in many aspects is at an average and below-average level. Many residents believe that their quality of life is lower than in other parts of Opole, at least in the aspects covered by the research. It is consistent with the answers to the question about the factors that could prompt the respondents to change their place of residence. One of the most important problems is the lack of opportunities for self-development and leisure activities (12% of responses) as well as poor accessibility of public services (10% of responses).

This state of affairs requires certain actions which would contribute to greater attractiveness of living conditions in the district. The scope of such activities includes providing the residents with recreational facilities through construction of sports and recreation facilities in the studied area, as well as attractive arrangement of green areas and other public spaces. It is also necessary to improve the leisure activities offer and to provide cultural and entertainment centres, as well as organise extra-curricular activities for children and youth in the district. Currently, it seems problematic to provide the residents of the studied area with a more diverse offer of stores or dining options. These services are delivered by private enterprises, and demand is the primary determinant of profitability or the level of diversification of the offer. A small offer or lack thereof in this area can be mainly attributed to insufficient demand. On the other hand, the city government could give economic entities from the retail and gastronomy sectors preferential conditions for their business (e.g. tax-related incentives), which would probably increase the profitability of retail outlets or services.

7. RESEARCH RESULTS AND CONCLUSIONS

The quality of life observed in the study area results largely from processes of spatial disintegration and the decline of the industrial function. This phenomenon is typical of many Polish cities which transformed their functional-spatial structure (Gasidło, 1998; Domański, 2001; Kaczmarek, 2004; Litwińska, 2010). Processes similar to those influencing the quality of life in the region under study occurred in Wałbrzych (Dołzbłasz and Mucha, 2015), Wrocław (Sikorski, 2012),
Łódź (Stawasz and Banachowicz, 2011; Tobiasz-Lis and Wójcik, 2013), Cracow (Przybyła, 2013), Poznań (Staszewska and Marcinowicz, 2006) or Katowice (Szajnowska-Wysocka and Mandal, 2013). The economic transformation processes in industrial areas of cities are rather sustained and characterized by a regression of socio-economic status. This can be compared to the concept of a ‘dual city’ which describes the division of changes in urban job markets and in the sectoral cross-section of the city (Mollenkopf and Castells, 1991). It indicates a connection between the accepted paths of a city’s and its districts’ functional development with processes of spatial segregation and changes in social behaviours and lifestyles.

The image of the quality of life of the inhabitants of the area is inconsistent. Research shows that the level and living conditions are good – not worse than in other quarters of the city. However, the residents feel they are unable to meet the needs that go beyond their basic needs. They also have a sense of a less satisfactory fulfilment of these needs in relation to other residents of the city. Research shows that evaluating one’s own quality of life is tied not only to the actual extent to which social needs are fulfilled, but also to being aware of the existing potential in that field. This in turn is influenced by living in a quarter that lacks a consistent local policy, and that has an ingrained negative image among the city’s residents. Research results in this aspect confirm the theses of Kavanagh, et al. (2005) and Hall (2002) on the influence of status and image of place upon the perceived quality of life.

Another determinant of the quality of life in various city areas is the accessibility of public services. It is mainly the insufficient and poor quality of public services provided in the area of residence that caused a lower estimation of the quality of life among the respondents.

City development policy should therefore strive to eliminate the disproportions in access to education, healthcare, culture and entertainment, sports and leisure, and public security services. Investing in socially functional infrastructure is an important measure in this field, but so is ensuring satisfactory inner transport connections. Improving the quality of life, even at the level of a city quarter, requires a coherent system of roads, bicycle tracks and pedestrian lanes, as well as a public transport network. Effective transport connections between city centres and the other quarters is also important.

The research results also confirm that evaluating the quality of life in an urbanised area is related to its socioeconomic status as perceived by its residents and other inhabitants of the city. A negative image of the post-industrial, satellite district, ingrained in the minds of the population, not only determined the quality of life as perceived by its residents, but also influenced the decisions of the local authority. The inconsistent strategy of the city authorities, either including or isolating the area from the city infrastructure, investing into or marginalising its resources, further entrenched the spatial conflicts. A consistent development policy based on a strategic plan of action is necessary to improve the quality of life of the residents. It is necessary to decide which functions will be located in the area and then to adopt
appropriate management and planning instruments to pursue the chosen objectives. The residents’ quality of life should therefore be determined by long-term goals and development plans, which will serve as a basis for strategic decisions. Cooperation between the city authorities and representatives of business and local community in the process of long-term development planning is also an important factor.

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