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To move or not to move? The housing preferences of a post-socialist city in the suburbanisation stage

Abstract: Researchers of urban mobility patterns and residential preferences of urban dwellers increasingly inquire whether these processes are universal or place-specific. It is also interesting in the context of processes taking place in post-industrial and post-socialist cities, considering their rapid demographic and spatial transformations (e.g. the process of shrinkage, which is simultaneous with the process of suburbanization). In turn, in the context of housing mechanisms, it is interesting how much the urban life cycle coincides with the life cycle of its households. To address this question, we conducted a study based on an extensive stated preferences survey (N = 1113) from Poland's third-largest city - Lodz. It allowed us to statistically elaborate on the determinants of the preference to move from an existing home to a new location and to what extent the physical and social environment of the properties, defined through the lenses of urban amenities, affects such decisions. We found that 56% of respondents declared that they would prefer to live in a different neighbourhood than the ones they currently live. In line with the household's life cycle model, age was the main driving factor, while urban amenities played a minor role in determining location preferences. The youngest age group preferred to live in the city centre, while late-middle age groups preferred to move to the suburbs. Also, people living in single-family houses strongly preferred to stay in their current location, compared to those inhabiting all other types of buildings.

Key words: urban amenities, housing preferences, urban life cycle, life course, preference modelling

Introduction

A choice in the housing context is strongly affected by budgetary restrictions, life cycle, possession's type (e.g., ownership vs renting), but also the sensitivity to local amenities, and behavioural conditions affecting psychological conditions of mobility. Clark and Onaka (1983) point out that typical reasons for household



relocation can be structured as: 1. Forced, 2. Voluntary; 2a: Housing characteristics (cost, space, quality, tenure). 2b: Neighbourhood quality (amenities), 2c. Accessibility. Voluntary factors also depend on employment possibilities and life cycle or life course, and are diversified by institutional and historical conditions.

The situation was different in Central and Eastern European (CEE) cities. In the second half of the 20th century, political, ideological, social and military factors took priority over economic concerns (Kostinskiy 2001). In socialist cities, the size, spatial structure and urban form were state-owned and controlled. Their populations were less segregated and stratified (Hirt et al. 2016), but they lacked functional diversity in the commercial and service sectors (Em, Ward 2021). Post-socialist cities' inherited spatial and functional structure creates a rationale to explain today's housing preferences. Thus, we address the fit between the role of urban amenities in shaping the housing preferences of inhabitants living in a post-socialist city in the suburbanisation stage. Our study refers to the theory of externalities (mainly urban amenities) as well as urban life cycle theory (the city perspective) and life cycle theory, later superseded by life course theory (the individual perspective). For context, we chose Lodz, a post-industrial and post-socialist city and the third-largest in Poland.

In the following section, we present a brief literature review concerning the determinants, both spatial and individual, of housing and households' location preferences. In the next two sections, we present the data, model and methods, and discuss the results of the estimations. The last section concludes.

Review of the literature

Spatial determinants of housing preferences

Not only land rent and prices but also urban amenities affect people's residential preferences (Alonso 1964, Edwards 2007, p. 375-400, Lee et al. 2019, Bawardi et al. 2022). They are place-specific goods or services, contributing to the urban living experience and the quality of life of residents (Mathur, Stein 2005, Allen 2015, Das et al. 2021) and addressing the daily life needs of people (Gottlieb 1995). It may be a park, a public square or recreational facilities provided by the public sector, or private sector amenities like restaurants or shops. They generate externalities that affect firm profits and household satisfaction (Diamond, Tolley 1982, van Vuuren 2022). As such, urban amenities are part of agglomeration economies - externalities that derive from the concentration of enterprises and households in a relatively small area (Marshall 2013). While agglomeration economies are relatively well recognized in the production sphere (Glaeser et al. 1992, van der Panne 2004), little attention was paid to household behaviour, except for the diversification of the urban social structure as the source of externalities (Jacobs 1961, 1969). However, since Glaeser et al. (2001) study, no longer only production location factors but also consumption externalities have begun to be viewed as critical for urban development (Webster, Lai 2003, p. 79-80).

Brueckner et al. (1999) classified urban amenities into three categories. The first includes natural amenities, e.g., rivers, hills and coastline. The second category is historical amenities, e.g. monuments. These two categories of amenities are exogenous. A third category – modern amenities – are endogenous, and their level depends on current economic conditions in the neighbourhood, including, but not limited to, the mean local income level. These amenities include theatres, restaurants or public facilities like swimming pools.

Glaeser et al. (2001) propose a different classification and argue that four critical types of urban amenities exist. First and most obvious is the presence of various consumer goods and services. Goods like restaurants, theatres or an attractive mix of the social atmosphere are difficult to relocate, making them local goods. The second kind of amenity is aesthetics and physical setting, including architectural beauty and weather conditions. The third amenity is good public services, such as high-quality schools or a low crime rate (Cullen, Levitt 1999, Bawardi et al. 2022). The last kind of amenity is connectivity to the urban transport systems.

The abovementioned amenities constitute elements of what could be termed a neighbourhood – a limited territory within a larger urban space where people live and interact socially (Hallman 1984). Amenities that are parts of a neighbourhood are: 1. infrastructure like roads, streetscapes or sidewalks, 2. environmental characteristics like topographical features, the degree of land, air, water and noise pollution, but also 3. proximity characteristics that affect the ability to have access to destinations of employment, entertainment or shopping (Galster 2001). A neighbourhood also consists of intangible elements. Lancaster (1966) enumerated amenities like: 1. demographic characteristics of the resident population (age distribution, family composition, ethnic, racial, and religious groups), 2. class status characteristics of the population (income, education and occupation composition), 3. social-interactive characteristics (local friend networks, type and quality of interpersonal associations and degree of inter-household familiarity), 4. political characteristics and also 5. sentimental characteristics, like people's attachment to the place. All these elements of a neighbourhood - tangible and intangible – influence residents' quality of life (Galster 2003).

Urban amenities may be a driver to change the place of living. People decide to move if the overall utility they may gain in the other location is higher than the utility they would gain in their current location. Generally, analysis in this field has focused on factors like the situation on the labour market and wage levels in a particular place (Greenwood 1997, Halfacree et al. 1998, Gordon 2013). However, the increasingly important factor affecting people's propensity to move are also amenities (Clark et al. 2003, Naylor, Florida 2003, Couture, Handbury 2017). As Partridge (2010) concluded, based on an analysis of US cities, amenity-led population growth outperforms standard production externalities. This seems to be a consequence of a shift from a growth-oriented to a development-and quality-oriented vision of societies which, according to Inglehart (1977), has been taking place since the second half of the 20th century.

Within the city, the relocation of residents between the centre and the suburbs depends on the urban life cycle (Hall 1971, Klaassen et al. 1981, Roberts 1991. Champion 2001. Redding 2022). The main factor of suburbanisation lies in the income level, which affects the ability to relocate outside the city's core. Historically, to avoid urban disamenities such as traffic, noise, crime or pollution, high-income households moved out as they could handle the transportation costs (Burgess 1925). Due to the competition between various social groups wanting to live in socially similar neighbourhoods, housing mobility created internally homogeneous urban districts (Hoyt 1939). Also, as filtering models explained, when higher-income households abandon urban districts for better locations, they are replaced by lower-income households, for which a given district becomes affordable (Grigsby et al. 1987). Despite certain inaccuracies, the sectoral approach still explains the spatial differences in urban housing well and, importantly, proves to be sustainable over time (Knox, Pinch 2010, p. 267). Clark and Blue (2004) observed that people with higher incomes and more education tend to move to the suburbs. Many low and middle-income people, especially the young, prefer to live close to the city centre, while a similar percentage of low- and middle-income people want to live in the suburbs.

Interestingly, the 20th century suburbanisation trends appeared on both sides of the Iron Curtain. Although socialist housing estates were comprised mainly of modernist high-rise towers (Pobłocki 2012, p. 82–83), while single-family detached houses dominated western suburbanisation, this process greatly dominated urban growth processes in both systems. In Eastern Europe, suburbanisation started later, after the 1970s and accelerated after the political transformations after the 1990s. However, it lasts this day and concerns American and European cities, as well as newly emerged metropolises in Asia, Africa and South America. Lefebvre described this as the world's "complete urbanisation" process (Lefebvre 2003, p. 1), which leads to a phenomenon that Keil (2018, p. 67–70) called "planetary suburbanization" (see also: Pobłocki 2020, p. 5). The latter, of course, undermines the relative attractiveness of housing functionalities in city centres. In order to test the relevance of urban amenities in shaping location preferences, we included the following hypotheses:

H1: A subjective assessment of the current dwelling in terms of its size, cost, standard, quality of surrounding, noise, traffic, cleanliness, neighbours and safety, plays a paramount role in shaping the preferences to move to a different location.

H2: The type of building impacts the preference to move, with "pre-fab" blocks being the least preferred type of building to live in.

Individual determinants of housing preferences

Apart from the spatial characteristics, people's personal characteristics also affect their residential preferences. Clark and van Lierop (1987) argued that it is even more critical than economic motives. In this regard, personal decisions depend on the life course (Michaelson 1977, Rossi 1980, van Ham 2012a, b, de Groot et al.

2015). For instance, an increase in age causes an increase in immobility (Speare et al. 1974, Lu 1998). Life course also affects the household size and, consequently, the preferred size of the housing. Families with children prefer larger dwellings (Chevan 1971), while spacious housing is less important for people in the later stages of life (Foote et al. 1960). People with children prefer living close to nature and recreational opportunities. In contrast, people without children are primarily interested in access to (Kim et al. 2005), while senior households seek proximity to green spaces (Gidlöf-Gunnarsson, Öhrström 2007). Younger people seek the proximity of education facilities and employment prospects (Mulder, van Ham 2005), whereas older people focus on the cost of living and environmental concerns (Rogerson 1999). Life cycle stages also help explain how far people prefer to live from the city centre. The elderly and the young – especially singles – prefer to live in the centre, while people with children usually prefer living in the suburbs (Niedomysl 2008). Hence, we decided to include the following hypotheses in our study:

H3: Younger individuals are likely to choose a central part of the city as their preferred destination

H4: The middle age groups are likely to move to the urban suburbs

H5: The oldest age groups are less likely to change their location.

In today's urban areas, the social complexity of household types increases. Thus, the family life cycle studies gave way to the family life course notion (Elder 1985, Clark 2012). The latter assumes the growing complication of economic, sociocultural, political, and housing market circumstances that influence individuals' choices (van Ham 2012a, p. 43). Despite this increasing complexity, the age of the household remains an essential determinant of housing preferences.

The connection between household characteristics and housing choices translates into the phenomenon of socio-spatial segregation. Such studies are developing due to the growing complexity of urban processes, where urbanized regions grow as a patchwork rather than as models compatible with simple schemes (Keil 2018, p. 133).

Data and methods

The spatial subject of our research is Lodz, a post-industrial and post-socialist city and the third-largest in Poland. This shrinking post-socialist city may strengthen the debate on urban transformation, as "the analysis of urban decline under conditions of fundamental and rapid transformation can say something about 'blind spots' of complex urban change" (Haase et al. 2016, p. 311). A bustling textile industry centre in the 19th and 20th centuries, it was still largely dominated by this single branch of the economy. However, the economic transformation which started in the 1990s led to the industrial collapse and the economic crisis, resulting in a shortage of workplaces, a population decrease and downtown decay (Zasina et al. 2020). In Lodz, a former mono-industrial city, many urban neighbourhoods deteriorated. After the economic collapse in the

1990s, they experienced middle- and higher-income class suburbanisation and total population loss. This crisis in the inner-city neighbourhoods coincided with the crisis of commercial functions and services, which worsened the quality of urban amenities, creating a vicious circle.

From the socio-spatial segregation perspective, the economic transformation process resulted in a moderate but visible breakdown into internally homogeneous housing areas. At the beginning of the 21st century, Marcińczak and Sagan (Marcińczak, Sagan 2011, p. 1797–1801) distinguished the five following social areas of Lodz: 1. The central zone, 2. Zones in transition, 3. Peripheral zones, 4. Sectors of high-rise blocks and 5. Industrial areas with a "trapped" residential function. However, this level of segregation is still arguably lower than in Western European urban regions, and improving the housing quality in Lodz has a "pocket" character (Marcińczak, Sagan 2011, p. 1801), i.e., limited to emerging "island-like" spots in the city's space. This suggests there is a problem with the quality of housing amenities in Lodz in terms of the ubiquity of their services to the neighbourhood. This provides the rationale for testing spatial behaviour and housing mobility today – a few years after the previous study – taking into account the declared "to move or not to move" preferences in the near future.

Referring to the above research output, we propose a study that primarily uses the stated preferences methods, based on an original dataset from a survey carried out for diagnostic purposes of revitalisation activities in Lodz (Eu-Consult 2015). As part of the large city revitalisation project, a number of studies were carried out in order to obtain primary data (including inventory and technical expertise), identify vacancy rates, analyse rents in commercial premises and analyse housing. For the last aspect, a set of analyses was developed to ascertain: 1. The housing mobility factors of the inhabitants of Lodz, 2. The factors that determine the choice of place of residence, and 3. The housing biographies of the inhabitants of Lodz. The second of these elements was based on the stated preference methods technique. The study was conducted among 1500 interviewees, and the sample was selected to reflect the structure of the population of the city in terms of age, place of residence (according to the urban neighbourhoods) and gender. Interviews used the CAPI (computer-assisted personal interviewing) method. The questions concerned factors determining the attractiveness of the current location and those that could induce a move (sense of security, neighbourhoods, air cleanliness, traffic volume, noise level, housing surroundings, urban location, standard of housing fit-out, maintenance costs, and size of the apartment). The surveys were part of the 2014–2020 Lodz urban area revitalisation project.

The study identified both the key factors that determine the attractiveness of the current place of residence, as well as factors that may induce its change (Sokołowicz 2017, p. 136). As the main spatial unit of our study, we used 36 urban neighbourhoods (osiedle) that constitute the second tier of territorial division of Lodz, after five districts (dzielnice) that create the first tier. We view neighbourhoods as the optimal spatial unit of analysis since they are relatively homogenous in terms of housing type, share of industry and sociodemographic structure. They are also easily identifiable by the interviewees, so they were

aware of which neighbourhood they live in, as well as where they would potentially like to move to.

One of the questions in the survey concerned the preferred neighbourhood in which the interviewee would like to live. Together with a question concerning the current neighbourhood, this allowed us to construct the main dependent variable that takes a value of 1 if the preferred neighbourhood is different than the current one, and 0 otherwise. In order to quantitatively model the behaviour of this variable, we used a logit model with a number of regressors representing the interviewee's assessment of urban amenities at his/her current location, characteristics of the current living place in terms of area and monetary costs, the type of building, as well as several control variables, such as age, gender, family size and income. Table 1 presents a detailed description of each variable and how it is related to the questions in the survey.

In order to further explore the spatial preferences of the interviewees, we estimated parameters of another two models, explaining specific spatial preferences in terms of the preferred destination. In one logit model, the dependent variable took the value of 1 for those interviewees who preferred to live in a different neighbourhood than their current one, and that the desired location is a neighbourhood located in the central part of the city, and 0 otherwise. In the last model, the dependent variable was constructed analogously, but it took the value of 1 for those who declared that their preferred neighbourhood was located in the green suburbs of the city, predominantly populated by detached, semi-detached and terraced houses. The results of the estimation of all four models are presented in Table 2.

While making it possible to directly test the hypotheses concerning the role of amenities and individual characteristics in shaping spatial preferences, logit econometric models may lack flexibility in terms of the ability to observe and model interactions. For example, it is possible that some amenities play a special role in certain age groups, but not in others, while the presence of some amenities may moderate the influence of others. In order to further explore this possibility, in our empirical analysis, we amended the results from the logit models with a highly flexible decision tree-based Chi-squared Automatic Interaction Detection (CHAID) method (Kass 1980, Biggs et al. 1991). This allowed us to observe non-obvious interaction patterns between variables and model their moderating impact. It should be noted, however, that due to its considerable flexibility, this approach precludes formal statistical testing and should be treated as an exploratory technique rather than a full-fledged tool to verify hypotheses. The results of this approach to analysing the interviewees' spatial preferences are presented in Figure 1.

Results and discussion

Columns (1) and (2) in Table 2 show the results of the estimation of the main model designed to explain the drivers that are conducive to the eagerness to leave

Table 1. Variables and their operationalization

Variable		Operationalization	
Current location:	 Size Costs Standard Location Surrounding Noise Traffic Cleanliness Neighbours Safety 	Question asked: How do you assess your current place of living in terms of (size, costs, standard etc.)? 1 – very bad 2 – bad 3 – not so bad, not so good 4 – good 5 – very good	
Type of building	 Building completed before 1918 Interwar-period building Block of flats from the 1950s "Pre-fab" block Block built after 1990 Single-family house 	Question asked: What type of building do you currently live in? Set of dummy variables 1 – for the selected type of building 0 – otherwise	
Gender		Dummy variable 0 – female 1 – male	
Age	- 18-29 - 30-39 - 40-49 - 50-59 - 60-69 - 70-79 - 80+	Question asked: <i>What is your year of birth?</i> Set of dummy variables 1 – for the age group that the interviewee belongs to 0 – otherwise	
Total members of household		Question asked: How many people live in your household in total?	
Working a	dults in household	Question asked: How many working adults live in your household in total?	
Household with children		Question asked: <i>How many children live in your household in total?</i> Dummy variable 1 – if there is at least one child in the househo 0 – otherwise	
Net income		Question asked: What is your typical monthly net income?	
Education	 primary lower-secondary secondary higher not specified 	Question asked: <i>What is your educational level?</i> Set of dummy variables 1 – for the educational level declared by the interviewee 0 – otherwise	

Source: Authors.

Table 2. Estimation results of the logit model

	(1)	(2)	(3)	(4)
	Baseline model	Neighbour- hood dummy variables	Centrality preference	Greenery preference
Current flat: Size	-0.0213	0.00331	0.00955	0.161
	(0.103)	(0.110)	(0.132)	(0.140)
Current flat: Costs	0.0521	-0.0787	-0.119	-0.0712
	(0.0998)	(0.109)	(0.136)	(0.139)
Current flat: Standard	0.183	0.119	-0.0123	0.121
	(0.114)	(0.121)	(0.145)	(0.151)
Current flat: Location	-0.148	-0.167	-0.0516	-0.125
	(0.116)	(0.125)	(0.145)	(0.154)
Current flat: Surrounding	-0.0917	-0.0797	0.279*	-0.209
	(0.115)	(0.124)	(0.151)	(0.163)
Current flat: Noise	-0.223**	-0.239**	0.0715	0.304**
	(0.111)	(0.119)	(0.146)	(0.155)
Current flat: Traffic	-0.0256	-0.0244	-0.0184	-0.0989
	(0.113)	(0.122)	(0.159)	(0.166)
Current flat: Cleanliness	-0.0143	0.0831	0.0111	-0.0986
	(0.0995)	(0.112)	(0.130)	(0.134)
Current flat: Neighbours	0.00924	-0.0538	-0.113	0.0695
-	(0.0965)	(0.106)	(0.124)	(0.126)
Current flat: Safety	-0.194**	-0.128	0.0930	0.0136
	(0.0985)	(0.110)	(0.134)	(0.132)
Interwar-period building	0.0944	0.382	-0.503	0.300
	(0.322)	(0.384)	(0.391)	(0.488)
Block of flats from the 1950s	0.183	0.287	-0.245	-0.0830
	(0.283)	(0.353)	(0.359)	(0.452)
"Pre-fab" block	-0.136	0.175	-0.408	0.0256
	(0.280)	(0.358)	(0.369)	(0.460)
Block built after 1990	-0.0531	0.0766	0.0332	1.136
	(0.499)	(0.547)	(0.581)	(0.724)
Single-family house	-1.258***	-1.153**	-0.807	0.949
,	(0.404)	(0.525)	(0.691)	(0.691)
Type of building: unspecified	1.545**	1.646**	0.198	-1.142*
	(0.601)	(0.675)	(0.514)	(0.641)
Gender	-0.00358	0.0208	-0.0910	0.0933
	(0.132)	(0.141)	(0.168)	(0.178)
Age: 30-39	0.242	0.307	-1.140***	0.451
-	(0.250)	(0.268)	(0.309)	(0.308)
Age: 40-49	0.218	0.278	-0.962***	0.430
	(0.258)	(0.273)	(0.315)	(0.320)
Age: 50-59	-0.144	-0.121	-0.928***	0.619**
-	(0.225)	(0.241)	(0.284)	(0.295)

	(1)	(2)	(3)	(4)
	Baseline model	Neighbour- hood dummy variables	Centrality preference	Greenery preference
Age: 60–69	-0.218	-0.368	-1.075***	0.846***
	(0.239)	(0.260)	(0.313)	(0.328)
Age: 70–79	-0.730***	-0.737**	-0.523	1.334***
	(0.266)	(0.290)	(0.349)	(0.392)
Age: 80+	-0.932***	-1.145***	-0.313	1.182**
	(0.357)	(0.376)	(0.429)	(0.554)
Total members of household	0.0259	0.0286	0.199*	-0.316**
	(0.0922)	(0.102)	(0.117)	(0.125)
Working adults in household	0.155	0.253**	-0.0865	0.441***
	(0.113)	(0.124)	(0.145)	(0.157)
Household with children	-0.0374	-0.166	-0.0282	0.522*
	(0.214)	(0.233)	(0.272)	(0.283)
Net income	6.00e-05	3.23e-05	-8.64e-05	2.46e-05
	(6.68e-05)	(7.42e-05)	(8.73e-05)	(8.86e-05)
Education: lower-secondary	-0.0850	-0.288	-0.110	-0.107
	(0.524)	(0.541)	(0.691)	(0.754)
Education: secondary	0.165	0.0471	-0.135	0.208
	(0.215)	(0.231)	(0.283)	(0.324)
Education: higher	0.468*	0.315	0.0427	-0.0587
	(0.255)	(0.275)	(0.332)	(0.371)
Education: not specified	-0.270	-0.659	-0.312	1.779***
	(0.381)	(0.428)	(0.603)	(0.654)
Constant	1.535***	1.039	1.030	-0.408
	(0.592)	(0.983)	(1.314)	(1.117)
Observations	1,113	1,087	771	687

Source: Authors.

the current neighbourhood. The difference between the two models is the inclusion in (2) of a set of dummy variables that represent the interviewee's current neighbourhood. Asymptotically, this model has better statistical properties since it potentially captures unobserved characteristics of the neighbourhood that may influence the spatial preferences, thus diminishing the omitted variable bias. However, including a large number of additional variables (33) runs the risk of multicollinearity, which may increase the standard errors of the estimators. This risk is further increased by the fact that in some neighbourhoods, we have as few as ten observations, which renders the respective estimates unreliable. Hence, we decided to present both estimations and interpret their results jointly, bearing in mind the aforementioned limitations.

Among the analysed urban amenities and characteristics of current locations, only two appear to have a significant impact on the preferences to move (or not

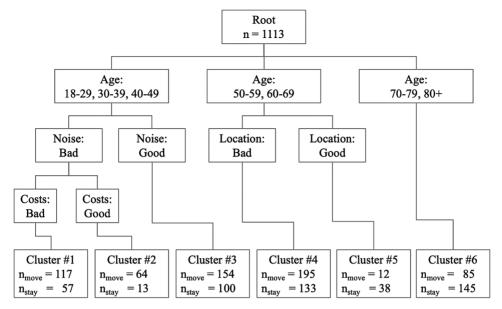


Fig. 1. Results of the CHAID classification algorithm Source: Authors.

to move). Interviewees who assessed their current location highly in terms of noise and safety are unlikely to choose another location as their preferred one. It is interesting to note that none of the other characteristics of the current location had a significant impact on spatial preferences (hence, H1 has been predominantly falsified).

In terms of the type of building (hypothesis H2), there is one group that uniformly (and strongly) prefers to stay in the current neighbourhood: people who currently live in a detached house. This result is strong and holds, irrespective of whether we include the neighbourhood-specific dummy (model 2) or not (model 1). The opposite holds for those households where the type of building was not specified. When interpreting this result, we face obvious problems; we believe that individuals who had difficulty choosing their housing type did not live in high-standard buildings, whose type was easy to choose from the set of presented possibilities, but rather they currently live in a variety of poor-quality housing. This was the group that strongly preferred to move to a different location.

A surprising result was that the range of age in which mobility remained high prove to be relatively broad and spread from 20 (the minimum age in the survey) to 69. Only individuals in the two oldest age groups (70–79 and 80+) were highly reluctant to choose a neighbourhood different from the one they currently live in as their desired living location (hypothesis H5). In order to further explore whether our modelling choices blurred the role of some factors in certain groups, we used the CHAID classification algorithm that flexibly allows for many possible interactions that would be otherwise be explicitly ruled out by standard econometric models. This algorithm was built to find variables (both quantita-

tive and categorical) that provide the strongest differentiation of the dependent variable (to move or not to move). The algorithm selected age as the variable that plays the strongest role in differentiating between individuals that prefer to move from those who opted to stay. The interviewees from the two oldest age groups (70–79 and 80+) preferred their current neighbourhoods, and no other discriminatory variables proved to have a strong impact on their decisions. In the two middle-age groups (50–59 and 60–69), their overall assessment of the current location was important: a bad location encouraged people to move, while a good one meant they preferred the current place.

In the youngest age group, covering ages from 20 to 49 years, most inhabitants preferred to move to a different location (hypothesis H1), while the strength of this preference varied by cluster. Those who assessed their neighbourhood as quiet had a weaker preference to move in comparison to those who declared that their area was noisy. The last differentiating variable was the cost of living, but its role remains unclear. While the results concerning the decisive role of age and the subjective assessment of noise are consistent with those obtained using the classical logit method, the classification tree approach indicated two more factors that play a role, but only in the youngest age groups. Since machine learning-based methods generally preclude testing, we must leave these conclusions merely as hypotheses and a possible avenue for further research. Among the demographic characteristics of households, the number of working adults (but not its total size or whether there were children) was conducive to the idea of moving to a different location. According to our interpretation, more working members of a household increase the resources (financial, time and physical), hence making the idea of moving more attainable, which in turn shapes the revealed preferences.

Introducing a set of dummy variables yielded yet another interesting result. Among the neighbourhood-specific variables, five were positive and statistically significant, thus indicating areas where people clearly do not want to live, and this effect extends beyond the set of theory-based explanatory variables used in the equation. Interestingly, these neighbourhoods are geographically adjacent and cover the southern area of the city, between the very centre of the city and the green suburbs. The fact that these neighbourhoods are not scattered over the area of the city, but form a geographically consistent cluster, suggests that this result is not merely a statistical artifact but a regularity. While it is difficult to draw firm conclusions based on just this observation, it is interesting to observe such a consistent cluster of neighbourhoods that, at this point, we can describe as "unwelcoming" (Figure 2).

Columns (3) and (4) in Table 2 present the results of two auxiliary regressions used to explain the patterns of spatial preferences in Lodz. Column (3) shows the results of the logit regression where the dependent variable is a dummy variable that takes a value of 1 for individuals who would like to move to the very centre of the city, and 0 otherwise. Among the tested determinants, only age turned out to play a significant role. The youngest age group (20–29) strongly preferred living in the city centre, while interviewees in the 30–69 age range emphatically rejected



Fig. 2. Unwelcoming neighbourhoods in light of housing preferences in Lodz Source: Authors.

the possibility of living in this area (thereby directly supporting hypothesis H1). In turn, the results in column (4) indicate that individuals in the 50+age groups strongly preferred moving to the green suburbs of the city (hypothesis H2). The same preference to move outside the city centre applied to smaller households, but with two or more working adults. These results consistently indicate that the main driver of location preferences in Lodz are related to the household life cycle rather than the external characteristics of the location.

This study presented a pondering picture of the housing landscape transformation in a post-socialist city during a period of dynamic socioeconomic change. The results showed that, from the perspective of housing preferences, the elements that make up the urban life cycle and the household characteristics that make up the life course influence decisions on whether to move or not. However, in the case of the first theoretical framework, the strength of urban amenities as a factor inducing people to leave central urban areas turns out to be less than the theory would assume. The subjective aggregate perception of factors such as

a sense of security, the aesthetics of the surroundings, social neighbourhoods, or noise is not crucial in Lodz. This perception may be an effect of the survey's failure to include urban greenery around apartments explicitly. Other studies show that straightforward asking respondents about urban greenery induce stronger awareness of its importance as an urban amenity and part of the urban ecosystem. It also causes a discussion about the role of greenery in mitigating climate change and housing quality. However, in Polish cities, such public discussion has already erupted, but after our survey's execution. This change is a rationale for including the urban greenery factor in future studies.

Urban life course, on the other hand, has a more significant impact on housing preferences in light of our survey. Particular age has a decisive impact on these preferences. In the case of Lodz, it may be an effect of relatively low regard for urban planning as a paramount social matter. The wider public, including investors, residents and, to some extent, local policymakers, perceive spatial planning as more of a constraint for individuals (Niedziałkowski, Beunen 2019, Nowak et al. 2022). As a result, individualistic factors (cf. life course) are more decisive on housing preferences than factors related to spatial planning and order (cf. urban amenities). It also prompts discussion on balancing individualistic and collectivistic values in shaping residential choices (Bawardi et al. 2022). Finally, a research challenge for the future is the discontinuity and fragmentation of research on housing preferences. Our insights add an element of interpretation based on a study conducted only once and for a single project. Other such studies are similar. It leads us to think about postulating a broader research program on urban research preferences based on an agreed, structured methodology.

Conclusions

In this study, we attempted to offer insights into the impact of urban amenities and people's individual characteristics on their spatial preferences and housing mobility in a post-socialist city. Data was collected through a survey carried out in Lodz, a post-socialist and a post-industrial city. The market-oriented transformation of the Polish economy led to the collapse of many industries and, as a result, in the 1990s, industrial cities like Lodz experienced a large economic crisis, which resulted in industrial collapse and the emergence of high unemployment. In Lodz, the economic collapse also led to the deterioration of centrally located residential buildings as well as urban amenities, and it was accompanied by the process of middle- and upper-class suburbanisation and a decrease in the overall population of the city. As a side result of the political and economic transformation, the role of housing policy was marginalized. On the other hand, since the beginning of the 1990s, people were free to make decisions concerning the residential location, and they were much more affected by market-based incentives, which changed the urban landscape and demographic profile of different areas of the city.

We were able to identify factors that affect people's perceptions of their current place of living, as well as those that impact people's propensity to change

their location. Surprisingly, age was the main factor that influences location preferences, while mobility remained high in a relatively wide age range, between 20 and 69. The ageing process does not decrease people's propensity to move until they are 70, and only people older than 70 expressed a strong reluctance to change their living location. The results suggest that only the youngest age group prefers to live in the strict city centre, and this preference diminishes after people turn 30, which is in line with the conclusions presented by Garvill et al. (1992). However, in their study, the preferences of the youngest and the oldest groups were similar in this field: both groups preferred to live close to the city centre, while people with children mainly preferred the suburbs. In our study, the youngest age group preferred the city centre, but people in their 50s and older consistently preferred moving to the greener suburbs and, surprisingly, this effect spread to the oldest age groups as well.

The picture of people wanting to get out of the city and move to more peaceful suburbs is complemented by the preferences concerning the type of building: it does not play any role unless it is a single-family house. Only inhabitants of this type of building are reluctant to move out, while there is no statistically significant difference between all other types of buildings. Although people do not like to live in blocks of flats, they highly rate districts where this type of building is dominant. This apparent inconsistency suggests that people implicitly recognize the value of neighbourhoods for housing choices (though perhaps not always consciously). A possible explanation is that people attach importance to the proximity of some urban amenities, which is a characteristic feature of districts where such buildings dominate.

Regarding urban amenities and the characteristics of where people live, the interviewees highly rated quiet and safe locations, as they lowered their propensity to move. Other kinds of urban amenities had a relatively small impact on people's assessments of their current living locations and their eagerness to move away. We can assume that the role of urban amenities in assessing urban residents' quality of life is growing, although slowly, and thus, we can expect that researchers will become increasingly interested in this issue.

These results have certain implications for practice. There is a need to realise that the standard of public spaces and other amenities affects the quality of living in the city. In terms of the implications for theory, it is interesting to note that although there is a strong relationship between the household life cycle and the urban life cycle (especially the propensity for suburbanisation), the direction of this relationship is ambiguous and context-dependent. The classical interpretation of the city life cycle model (developed as a result of research in the West) assumes a greater probability of post-working-age citizens eager to return to the city centre. In Lodz, as a post-industrial and post-socialist city, the opposite tendency was observed (the revealed preferences of the respondents indicate a desire to live in green suburbs despite their advanced age). Of course, the example of one city is not sufficient for further generalisations, but it provides a basis for continuing such research in other similar CEE cities.

The survey was conducted among the inhabitants of the main city within the agglomeration. Lodz, like other large Polish cities, has experienced the phenomenon of suburbanisation beyond its administrative borders. However, it is particularly difficult to carry out research not only in the core city, but within the whole urban area, due to the unavailability of analogous data in neighbouring communes. Moreover, the demographics of Lodz mean that unlike in other large Polish cities, the scale of population outflow from the core city to suburban municipalities is relatively small. While in other places, the decrease in the city's population is compensated for by population growth in areas around the core, in Lodz, the population does not grow at a sufficient pace (Gontarek 2020). However, this does not change the rationale for extending the study to areas outside the core city. Therefore, we consider the development of this study into more peripheral territorial units within the whole agglomeration a potentially interesting direction for future research.

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Wyprowadzić się czy zostać? Preferencje mieszkaniowe z mieście postsocjalistycznym w fazie suburbanizacji

Zarys treści: Badacze wzorców mobilności miejskiej i preferencji mieszkaniowych mieszkańców miast zadają często pytanie, czy procesy te mają charakter uniwersalny, czy też są specyficzne dla konkretnych lokalizacji. Jest to interesujące szczególnie w miastach postindustrialnych i postsocjalistycznych w kontekście dynamicznie zachodzących w nich przemian demograficznych i przestrzennych (w tym ich jednoczesnego kurczenia się demograficznego i suburbanizacji). Natomiast w kontekście mieszkalnictwa interesujące jest, na ile cykl życia takich miast jest zbieżny z cyklem życia jego gospodarstw domowych. Aby odpowiedzieć na te pytania, na próbie 1113 osób przeprowadzono badanie deklarowanych preferencji mieszkaniowych trzeciego co do wielkości miasta w Polsce -Łodzi. Pozwoliło ono zidentyfikować czynniki decydujące o chęci wyprowadzenia się lub pozostania w obecnym miejscu zamieszkania, w tym to, w jakim stopniu na preferencje te wpływa otoczenie fizyczne i społeczne nieruchomości, czyli tzw. udogodnienia miejskie. Ponad połowa (56%) respondentów zadeklarowała, że wolałaby mieszkać w innej okolicy niż obecna. Zgodnie z modelem cyklu życia gospodarstwa domowego, głównym czynnikiem oddziałującym na preferencje mieszkaniowe w Łodzi jest wiek, podczas gdy udogodnienia miejskie odgrywają mniej istotną rolę. Najmłodsza grupa wiekowa deklaruje przy tym chęć mieszkania w centrum miasta, natomiast osoby ze średnich i najstarszych grup wiekowych preferują zamieszkiwanie przedmieść. Ponadto mieszkający w domach jednorodzinnych wolą pozostać w obecnej lokalizacji, w przeciwieństwie do osób zamieszkujących inne typy budynków.

Słowa kluczowe: udogodnienia miejskie, preferencje mieszkaniowe, cykl życia miasta, cykl życia miasta gospodarstwa domowego, modelowanie preferencji