ECOCYCLES ISSN 2416-2140 OPEN ACCESS Scientific journal of the European Ecocycles Society



Ecocycles, Vol. 10, No. 1, pp. 49-57 (2024) DOI: <u>10.19040/ecocycles.v10i1.411</u>



Impacts of settlement structure and urban development on crime types and distribution

Szabolcs Mátyás¹, Krisztina Keller², László Bói¹

¹Ludovika University of Public Service, 2 Ludovika tér, H-1083 Budapest, Hungary ²Corvinus University of Budapest, 8 Fővám tér, H-1093 Budapest, Hungary Corresponding author: Mátyás, Sz. email: matyas.szabolcs@uni-nke.hu

Abstract – As far as the authors know, this study presents a topic that is the first time anyone has dealt with. Many people have examined the issues in the title individually but not the three concepts together, even though there is a close connection among the three concepts. A clear relationship can be shown between specific urban characteristics and the types of crime. Nowadays, several stages of urban development are present in many large cities in Europe, and the urban structure is changing, which affects both the number and structure of crimes. The study presents the main urban structural belts and their characteristics and compares them with the urban development stages. The authors examined and analyzed the settlement structure and crime characteristics of Central and Eastern European countries in the research. The results of the research can be used both in the field of law enforcement and urban development.

Keywords - Settlement structure; criminal geography; spatial crime; urbanization.

Received: March 7, 2024

Accepted: March 29

1. INTRODUCTION

Research on the relationship between settlement structure and crime goes back a relatively long. Chicago School researchers have already investigated the relationship between spatial structure and crime. Nevertheless, the area is among the under-researched topics.

The authors worked as policemen for almost a decade, during which they noticed that even within the same district, there are often sharp differences in crime, criminal structure, and settlement structure. The reason for this is clear: the different socio-economic characteristics of people living in different settlement zones. Geographical, sociological, and criminological research has proven that the settlement structure impacts crimes.

The study's motto could also be one of the eternal sayings of the British polymath Bertrand Russell, according to which "Sin is geographical." During the research, the authors proved that crime (structure, intensity, etc. of crime) also has geographical causes in this case.

The authors want to present and examine the geographical reasons in the study. Our work is based on theoretical

foundations and decades of police experience and is practical, the results of which can also be used in everyday police work.

The study primarily focuses on European cities, including Central European countries. The authors consider it necessary to emphasize this because there are significant differences between European and American cities. However, urban structure and development differences can also be observed between European cities. Most Central and Eastern European cities followed a different development path than Western ones (Bujdosó et al., 2016). For example, industrialization and suburbanization also started later. The Soviet occupation and forced industrialization also impacted the development of cities in former socialist countries.

The authors formulated a research question:

Q1: What could be the reason for that – out of the different city areas - most types of crime occur in the downtown area? The assumption is based on the fact that downtown areas have the most functions. The residential function is less dominant (although more and more people live in the city center due to re-urbanization). However, the commercial, tourist, and entertainment functions are vital, increasing the number and the types of crimes committed.

2. METHODS

To prepare the study, the authors studied previous literature in Hungarian and foreign languages and drew conclusions from it. The Google Scholar search engine and MTMT (Library of Hungarian Scientific Works) were used as databases. The keywords in the title were entered into the search engines. The search results showed no study on settlement structure, urban development, and crime. The three areas have not been examined in their relationships before.

The sources used come from many scientific fields. These fields are geography, sociology, criminology, settlement sociology, and law enforcement. When choosing the works used, the authors emphasized using the most recent resources so that the latest research results could be applied to the article. The authors tried to select those studies that were based on independent research and did not process the results of previous research.

The authors' previous observations and experiences helped them write the study. They worked as detectives for many years, during which time they experienced the connection between the settlement structure and crime in everyday life.

3. RESULTS

3.1. Literature review

A significant increase in the population first occurred in Western Europe (2nd population cycle), where people moved to the cities. At the beginning of the 19th century, there were no scientific studies yet, but it was recorded in London, Paris, and several big cities that the number of crimes increased significantly. Slums developed in the big cities (Jorgenson et al., 2010).

The problem was scientifically investigated for the first time in Chicago. The city's population grew by nearly 1 million in half a century. The researchers of the Chicago School showed that the settlement was made up of concentric circles and zones (zone theory). People of different social statuses inhabit different zones. The frequency of crime, the structure of crimes, and the settlement structure are also different. The main reason for the large-scale increase in crime was the significant increase in population. The emergence and advance of organized crime deserve special mention (Park et al., 1967). Researchers from the Department of Sociology at the University of Chicago began investigating the above anomalies, as the problems generated significant social conflicts between the peaceful majority and the minority. This research refrains from presenting the results of the Chicago school, as it is well known.

The book Introduction to the Science of Sociology, written by Park & Burgess, can be considered a milestone in this field and one of the foundational works of urban sociology.

After the Chicago researchers, there was no thorough research on the subject for a long time. It was Denis Szabo who wrote his thesis on the topic of settlement sociology. He studied the relationship between crime and settlement structure (Crimes et villes, 1960). He can be considered the founder of this topic. In his works published in the 1960s, the author states that in the Western world (Western Europe and America) around the 1950s, urbanization processes can be considered completed with suburbanization (Szabó, 1963, 1968). At that time, he could not have thought there would be two more stages of urban development.

In the case of developing countries, there is a large amount of literature on the impact of urban development on crime. The obvious reason for this is that these countries are where we encounter the second population cycle. The rural population is still moving to the cities in large numbers, but the cities need the necessary infrastructural conditions. Slums develop in cities. Pakistani authors note that the urbanization process can be considered positive, but its negative side is increased crime (Jalil & Muhammad, 2010). Rapid urbanization is also a problem in Nigeria. The influx of people into the big cities increased the number of crimes. In addition to traditional criminological research, spatial data and satellite images were used to understand the problem better (Adegbola & Oluwole, 2019). Andrew Burton talks about "demographic distortion" in his work regarding urbanization in Tanzania since the proportion of young men in the cities will be disproportionately high (Burton, 2005).

The impact of urbanization and crime has been studied in many developed countries. Philip J. Levchak examined the relationship between urbanization and homicide. During the research, the author examined the homicide data series of 57 countries (between 1993 and 2005) and used mathematical statistical methods in the correlation study. Levchak found a strong positive correlation between the degree of urbanization and the number of homicides (Levchak, 2016).

The trend of the past decade and a half is that research mainly examines networks and not specifically the urban structure. During data processing (Big Data), they mostly try to identify spatial patterns, not the traditional settlement structure (White et al., 2015; Quick et al., 2018).

Kim and his co-authors analyzed street network configurations to understand the spatial pattern of crime. They found that the impact of the street's structure was moderated by the social and economic characteristics of the people living there. The physical environment and crime are closely related (Kim et al., 2020).

The relationship between urbanization and victimization was investigated in a sample of 9,000 households in Stockholm and Gavleborg counties. The research established a direct correlation between the degree of urbanization and becoming a victim. In other words, the more significant the proportion of urbanization is, the greater the number of victims. The authors explain this by the magnitude of social cohesion. In less urbanized areas, the relationship between people is closer, they pay more attention to each other, etc. These factors reduce the magnitude of victimization (Wikstrom & Dolmen, 2001).

The above sources show that the relationship between the settlement structure in the classical sense and crime has yet to be researched anywhere.

3.2. The city structure and crime types

Settlements are not homogeneous but made up of sharply separated parts (settlement structural belts). The Chicago School researchers highlighted this more than a hundred years ago. The individual settlement structural belts can be more loosely or more closely connected to each other. The more significant difference is primarily observed in cities, where people of different social statuses are sharply separated from each other (Burdick & Will, 2013).

The first figure shows the number of different structural zones within a city. People of different social statuses live in each zone, meaning the number, structure, and dynamics of crimes will also differ. Hoyt's model is an idealized model; in reality, the structure of a city is much more complex.

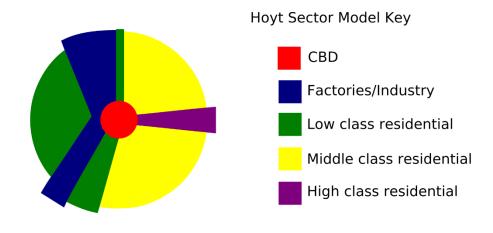


Figure 1. Hoyt Sector Model.

Each urban structure belt has several names, which only sometimes match those in sociology, criminology, and geography literature. Naming individual belts is complicated because their function constantly changes, so a name used a few decades ago cannot be used in all cases today. This study uses the name convention used in the geographical literature.

Table 1 contains the names of individual urban structural zones. In the column next to them, crime is the most characteristic of the zone. Of course, other crimes may occur in a given zone, but these are the most typical ones. It is also worth mentioning that the crimes committed may change due to the stages of urban development and social changes. The individual urban structural belts changed function. For example, we can cite that thirty years ago, different crimes were committed in a slum city center than today. The city center was renewed in many places; people of low social status who lived there moved out, and young families moved in to replace them.

Urban structure belt	Crime type
City	Pickpocketing, car break-in, robbery, armed robbery, bank robbery, vandalism, bike stealing, drug crime, graffiti, prostitution
Inner residential zone	Car break-in, theft, robbery, vandalism, hawker cheating, prostitution, drug crime
Garden city zone	Burglary, cheating with deceive (logs, roof renovation, garden work, etc.)
Housing estate	Car and bicycle theft, celler break-in, burglary, vandalism, robbery, drug crime
Holiday houses/farm zone	Burglary, animal, and crop theft
Agglomeration zone	Burglary, animal theft, hawker cheating

Table 1. Urban structure belt and crime.

3.3. Downtown

The urban structure zones in the downtown areas are the ones most affected by crime. The reasons for this do not need any particular explanation since the city center is the area with the highest population density, where most people visit. The number of crimes and their diversity characterize this urban structural belt (Ditton, 2000).

Downtowns are home to entertainment venues and major tourist attractions with a high crime-generating effect. Drugs and alcohol are present in entertainment venues. Alcohol increases aggressiveness, which increases the number of riotous acts in and around the entertainment venue (Bromley & Nelson, 2002). Unfortunately, it can be observed that nowadays, fewer and fewer people are tolerant, especially the younger generation. Arguments develop more quickly, which, in many cases, escalate into actions. This may be due to different skin colors, languages, etc. (Speer et al., 1998). Many physical assaults occur as a result of these disputes. As a result of disorderly conduct, vandalism is also a crime (broken shop windows, breaking into public transport waiting

rooms and glass parts of phone booths, damaging parked cars /e.g., breaking rear-view mirrors and windshield wipers/).

Graffiti occurs in relatively large numbers in downtown areas. This is because "graffiti artists" place their creations where many people can see them. For them, the challenge is to paint their "works" in the most risky areas (Ley & Cybriwsky, 2018).

Unfortunately, the use of drugs has become common, but inner-city places are very overrepresented. Drug users can be found in the majority of entertainment venues. Especially in the case of new types of drugs (designer drugs), it can be observed that the aggressiveness of drug users has increased significantly. This increases the number of violent crimes committed in and around downtown entertainment venues (Lawton et al., 2017).

In many cases, the consumption of alcohol and drugs makes the consumer vulnerable. He falls asleep on the street, lies helpless, is in a defenseless state, or does not perceive the processes taking place around him. These persons are "ideal" victims of the crime of robbery, as they can control the environment less and cannot protect themselves. Due to the above reasons, robbery is also higher in downtown areas; these two crimes are the ones that most worsen people's subjective sense of security. From the point of view of law enforcement, the prevention of these acts is, therefore, essential.

It is also due to the large number of tourists that prostitution is present in many places (Graburn, 1983). Thermal tourism is significant in many Hungarian cities. In the case of Budapest, for example, the most visited thermal spas are located in areas close to the city center, where tourists are also significantly victimized. As a result of the spa improvements, it is expected that the capacity of the spas will continue to increase, and with it, the number of victims is expected to increase, too (Benkő et al., 2022; Hojcska & Szabó, 2021).

The downtown mainly functions as the financial and economic center of the settlements, which is why most bank branches, post offices, travel agencies, currency exchange, jewelry stores, etc., are located here. Therefore, these financial companies handle large amounts of money and are potential targets. It is a positive fact that the number of armed robberies has significantly decreased over the past decade. Several factors contributed to the decrease in the number of armed robberies. On the one hand, it can be observed that the general trend is that the number of violent crimes is decreasing (Cundiff, 2024). On the other hand, the number of surveillance cameras in downtown areas has increased significantly, and bank security has greatly improved.

The number of various thefts is also the highest in this area. Let us first mention pickpocketing. It can occur in any place where there is a large crowd, such as a place of entertainment, public transport, or at its stop. Downtown stops and public transport are usually the most crowded. We can also think about the hesitant and staring tourists, who can also be potential victims (Ozascilar & Mawby, 2023).

The number of thefts is increased by car break-ins and shoplifting (thefts committed in expensive stores) in downtown areas.

In many cases, foreign tourists become victims of fraud, but in their case, we can count on significant latency, as many do not file a report. Possible places of fraud in the city center are, for example, taxis (overbilling, long journeys), restaurants (overbilling), night clubs (wiping up unrealistically expensive drinks), money changers (primarily illegal, street money changers).

3.4. Inner residential zone

The inner residential area wraps around downtown, which is closely connected. One consequence of this is that the population of the inner residential area also affects crime in the downtown.

What is the main difference between the two areas? There are primarily functional differences. As seen from the belt's name, the residential function dominates. However, the ground floor areas and some parts of the courtyard of inner cities also have commercial functions (e.g., small restaurants, repair shops, hairdressers, tattoo and beauty salons, pubs, and solariums).

The inner residential area has lower houses with fewer floors. Their height usually depends on the buildings in the city center. However, the buildings here are usually two or three floors lower. Sometimes, there are one-story, attached houses in the inner residential area. Some of the houses in terrible condition were demolished, and multi-story apartment buildings were built in their place, which usually did not fit into the streetscape but contributed to changing the area's population (Mátyás, 2023).

In the case of settlements where these parts have not become slums, the number of crimes is significantly lower than in the inner city areas. On the other hand, where many people live below the social average, crime rates are typical of those in the city center.

The inner residential area has a residential function, but many people take advantage of lower real estate prices to set up some business here. In other words, vulnerable values are present here in a relatively high proportion (although obviously in a much smaller proportion than in downtown areas). One of the consequences is that certain crimes (e.g., theft and car break-ins) occur in relatively higher numbers here as well. On the other hand, downtown areas are mostly covered by surveillance cameras. This is a positive fact, but criminals also know this, so they go from the city center to the surrounding streets to commit crimes (this is called "water bed effect"). This increases the number of crimes committed in the inner residential area (Os & Schneider, 2020). Residents' cars parked on the street are considered easy "prey," so in some infected areas, the number of car breakins, burglaries, and house burglaries during the day may be higher.

Among drug-related crimes, illegal acts related to consumption are particularly typical. Street prostitution can also be present in some segregated areas. One form of fraud is the so-called hawker cheating. Hawker cheaters try to sell certain products (e.g., dishes, blankets, bed linen), but these products are of poor quality and often fakes of well-known brands.

Graffiti is a common crime in the urban structure belt. In segregated areas, unmotivated vandalism and graffiti are common means of self-expression for young people who are idle, aimless, and unable to follow social norms.

3.5. Garden city zone

Moving out of the downtown area and leaving the inner residential area, a more relaxed residential area can be found. The residential properties have one or two floors and do not form a continuous street front. Previously, these areas were considered suburban areas. Less wealthy people moved here. They could not afford to buy real estate in the city center or surrounding inner residential areas. The ratio of industrial workers and people who moved in from the countryside was high in the past. The settlement structure and the sociodemographic characteristics of the population are different in this area, so crime will also be different than in the two areas mentioned above.

The proportion of older people is still relatively high in the garden city residential area. Due to their age, they are much more vulnerable to crime. Compared to other settlement structural zones, frauds committed by deception are more common here. The proportion of those who still heat with firewood is high, so fraudsters take advantage of this to deceive elderly victims. Furthermore, fraudsters defraud older people by trying to sell services such as repairing shutters and roofs, doing garden work, cutting trees, etc. (Mátyás, 2023; Sóvágó, 2007). In the past, animal husbandry was typical in these parts, but nowadays, most people have given up on it. So, the related crimes only occur in small numbers. However, in some Central European cities, the theft of tools related to agriculture and housework occurs (e.g., theft of machines, lawnmowers, and pumps).

The changes in the settlement structure of the past two or three decades did not leave these areas unchanged. More and more young people are moving in to replace the elderly and are building new houses to replace the old ones. To their detriment, it is already more difficult to commit various crimes, partly due to their age and due to the use of property protection devices (e.g., alarms, security doors, sensors).

These areas used to be located in the peripheral areas of the cities, but nowadays (since the beginning of the 90s), they belong to the increasingly appreciated areas of the settlements

and are not considered to be marginally located. They have mostly preserved the milieu of a loosely built, village-style atmosphere.

However, another area with similar characteristics can be classified in the "category" of the garden city residential area. These parts are located where construction started mainly in the 1980s. At the time of the construction, these areas were also mostly in marginal places; families moving out of the city center, inner residential areas, and housing estates settled down here. These families were affluent primarily and young. The newly built houses had a larger floor area than the city average and a more modern layout. Still, they had more miniature gardens than the houses in the "other" garden city residential area. Here, agricultural production was no longer relevant (there were no farm animals, and there are none now), and the garden served almost exclusively recreational purposes. Thanks to the development of the past decades, these areas are now also an integral part of the city, and similar areas and districts are being developed.

Significant differences between the "older" and "younger" garden city zones can be observed. On the one hand, the differences between the ages of the residents make the two areas different. The residents of newly built housing estates are mostly younger, and it is more challenging to defraud them (e.g., sell firewood, dishes, and bed linen).

A sharp difference can also be observed in stolen objects. As a result of the more modest financial circumstances of the residents, less value can be stolen from the houses of the previously built garden city zones. Furthermore, the inhabitants of the previously built garden city zones spend less on asset security (e.g., cameras, alarms, sensors). On the other hand, in the yards of the houses in the newer garden city zones, there are objects of greater value (e.g., garden tools and furniture, valuable dogs). On the other hand, the inhabitants of the newer garden city zones are more difficult to steal from due to the security equipment. However, during construction, mechanical equipment theft (water heating boilers, radiators, heat, faucets) is high (Sóvágó, 2007).

Considering that the population of these housing estates is younger, the proportion of the working-age population is high, so practically few people are only at home during the day. This provides favorable conditions for committing house burglaries.

3.6. Housing estates

After the Second World War, European countries had a significant population increase (Dekker and Van Kempen, 2004). The problem of population growth in the former socialist countries culminated in the problem that, as a result of forced collectivization and industrialization, hundreds of thousands of people chose urban life out of necessity (Sezneva, 2016). A place to live had to be provided for them. So, at least four-story factory apartments were constructed for them. In the 1970s, much taller, 10-12-story houses were built

in the housing estates. Tens of thousands of people lived in each of the larger housing estates.

In the largest European cities, housing estates have struggled and are still struggling with several sociological (and, therefore, law enforcement) problems. Deprived of their "roots," rural people lived in a new environment. In many cases, this caused problems, especially for the children of newly moving families (Sezneva, 2016).

Primarily, larger housing estates served as subcultural environments that had a negative impact on young people. The often aimless and wandering children often became victims of each other. To conform to peers and fit in, shared alcohol consumption and, from the 1980s, shared drug consumption appeared in some areas (Dekker & Van Kempen, 2004). For some, living together resulted in the commission of minor crimes (e.g., theft, vandalism).

At the time of the construction of the housing estates, the population moved here from two directions:

- 1. people moving from the city center,
- 2. people moving from the countryside to the city.

Those who wanted better living conditions and were unsatisfied with the increasingly run-down living environment moved out of the city center. Those who moved away were primarily young people who wished for better living conditions. Significant crowds also flowed in from the settlements surrounding the big cities (in terms of proportions, this was the most significant). They were the ones who moved to the town in the hope of better job opportunities, higher salaries, a more comfortable life, and better education opportunities for their children.

In the initial period, housing estates were less sensitive places from a criminal point of view. However, especially for the rural population, the radically different living environment caused problems (e.g., immediate neighbors and the problem of spending free time). In many cases, this caused conflict between the residents.

Comparing the impact of the urban development phases on crime in the housing estates, it can be concluded that the impact of the urban development phases had a negative effect on crime. Families wealthier than the housing estate average moved to residential parks on the city's edge, outside the city, or to agglomeration settlements. Less affluent groups took their place with higher criminality. The real "disaster" to the housing estates in the former communist countries was the regime change. Many people lost their jobs and needed help maintaining even the low-maintenance panel apartments. Those in trouble vegetated for a while and moved into houses with low comfort.

However, based on the past decade or two, we can see that the prestige of housing estates has increased in many European countries (mainly Central European countries). Despite the improvement, we cannot say that the safest areas of cities are housing estates. A significant difference can be observed between the individual housing estates regarding the financial situation, education, attitude, etc., of the people living there.

Among the forms of vandalism, graffiti is present in all housing estates, and its detection faces many difficulties, as there are few surveillance cameras in housing estates. Among crimes against persons, robbery and assault also occur in higher numbers in housing estates, although their number has decreased significantly nationally in recent years.

Among the crimes against property, cellar break-ins, apartment burglaries, and bicycle thefts are typical, although following the trend of recent years, these are also increasingly being repressed. Drug use is also an existing problem. In the 1960s and 1970s, smoking and taking drugs (alone or with alcohol) were common among young people involved in gangs (Mátyás, 2020). Today, designer drugs and classic drugs are present both on the distributor and consumer side.

3.7. Holiday houses/farm zone

Farms were created primarily in flat areas, which has historical reasons. Farms, even tens of kilometers away, were also part of some cities (administratively). These isolated settlements are far from each other and are now inhabited mainly by older people.

As a result of the above, the inhabitants of the farms are defenseless. Farmers can only rely on themselves against external attacks. Crimes against property and theft (e.g., animals and tools) are mostly committed against them.

It can also be interesting to examine what illegal acts they commit. As far as the authors are aware, there has yet to be any such research; however, it can be assumed that in the absence of regular waste transport, the waste is burned or buried in the ground, which is a crime. However, these do not come to the attention of the authorities but remain dormant. It can be assumed that the crime of animal cruelty can occur in a relatively large number of cases, which is partly due to ignorance of the law and the fact that the people living on the farm live according to traditional animal husbandry (e.g., the dog is kept on a chain, and unnecessary breeding animals are beaten to death).

The weekend-house zone is similar to the farm zone but differs in many cases in its characteristics. This is mainly typical of former communist countries. This development can be primarily linked to people who move to the big city but want to spend their free time in nature and usefully. From the 1950s and 1960s, people who moved from the countryside to the city bought land near the towns. Here, they built a small house. They mostly went out on weekends, as they worked in the town during the week. However, this age group began to age in the eighties (Csordás, 2021; Mátyás, 2023).

The change of regime also affected this process. The collapse of socialism in the former socialist countries caused unemployment to rise from zero to ten percent in a few years. Many people lost their jobs, became insecure, and could not even pay their apartment's utilities, rent, or loan repayments (Csordás, 2022).

At that time, many people got rid of their apartments in the housing estates and moved to weekend house zones around the cities. These properties were much cheaper, but their comfort and social environment were much lower than their previous apartment. This foreshadowed social decline for many people, which, if associated with unemployment, also had a criminogenic effect. This unlucky situation was coupled with the population displaced from the inner-city and innerresidential areas. They also moved to smaller settlements around the city with low real estate prices and the weekend houses zone. As a result, the physical rehabilitation of the inner cities was mainly achieved, but the problem was not solved. The socially disadvantaged population, in many cases, gypsy people, were moved to places already inhabited by people considered to be underprivileged. According to the authors, it would have been necessary for the social rehabilitation of the evicted persons and their follow-up and after-care. This did not happen, so crime in the receiving area increased significantly.

In the weekend houses zones, due to the two-way increase in the residential population mentioned above, property security deteriorated significantly (Mátyás, 2023). Comparing the magnitude and structure of crime with the farm environment, it can be concluded that there are differences. As a result of the larger population, the number of crimes is also significant in absolute terms. The number of crimes against property and persons is substantial. The most typical crimes are theft and burglary (theft of animals and crops, theft of beehives), assault, and rowdyism.

3.8. Suburbanization zone

Suburbanization zones began to form around some big cities more than a hundred years ago. They were formed in the former socialist countries from the 1980s. This process accelerated after the system change and continues today (Hesse & Siedentop, 2018).

Generally, this zone is 10-20 km long, and in the case of larger cities, 40-50 km. It can be observed as a trend that the extent of the suburbanization zone is increasing. The reason for this is the development of linear infrastructure and transport (better quality and multi-lane roads, more and more families owning a car, the development of public transport), the spread of remote work, and the affordability of real estate prices. The further away someone moves from big cities, the cheaper they can buy real estate; an inverse correlation can be observed between the distance from cities and real estate prices.

According to the authors, the suburbanization zone should be divided into two parts. Some areas exist as independent housing estates, although administratively, they belong to a settlement. They live quasi-independent lives; the residents have no daily contact with the "mother settlement." To work, study, and use the services, the residents go to the "emitting" settlement. Only newly built houses are in the residential area, and the residents belong to a similar social class.

However, during the suburbanization process, many people moved not into separated residential parks but into settlements in the agglomeration zone (although it is evident that the former category is also part of the settlement). In this case, an older house is renovated, a new one is built in place of an old one, or a new one is built on a vacant lot. At that time, the person moving out of the big city has a more direct and lively connection with the settlement.

Mostly, families with low criminality decided to move out from the cities, which would positively influence the area's crime conditions. However, large-scale moving out has a criminogenic effect. In the first case (when people move out of the city to residential parks), the residential area mostly has a sleeping function (the English name, sleeping town, is no coincidence). Most of those moving out are of working age, living their active years, and going to work regularly. Most residents go to work in the morning and only return home in the afternoon. The negative criminogenic aspect of this can be found in the fact that the proportion of people staying in residential areas during the day is low, so this fact is favorable for burglars.

In the second case, the population is more mixed regarding age. As a result, there is a greater chance that someone is at home on the street, which means there is a greater risk of being caught during a burglary. In addition to home burglaries, high-value dogs are also stolen.

The creation of the suburbanization zone also brought large shopping centers to life along the roads leading out of the city. Most people shop here in the late afternoon when the parking lots are full of cars. These provide "ideal" conditions for vehicle break-ins and for committing tricky thefts by taking advantage of customers' lack of attention (they have bags in both hands, pushing a shopping cart, etc.). On these occasions, the attention of the future victim is distracted by some kind of legend (e.g., they are asked for help, money, or directions). At the same time, another person steals some of the valuables left behind from the open car or shopping cart.

4. CONCLUSIONS

The research examined the types of crimes committed in the urban structural zones. The research presented the history of the formation of urban structural zones and the flow of the population. It found differences between Western and Eastern Europe in the case of some belts. The suburbanization zone was formed earlier in Western countries, as the conditions appeared earlier. In the former socialist countries, these urbanization processes started only with a delay of a few decades. A similar process can be observed concerning inner cities' rehabilitation (re-urbanization). The inner-city areas also began to be renovated earlier in Western Europe. The criminal structure, however, is almost identical. The weekend house area can be considered as unique. This area is typical of former socialist countries, which developed around cities.

The authors encountered many problems during the research, which can be considered a research limitation. The urban environment is a dynamically changing area, so it isn't very easy to analyze and investigate. Above, we also mentioned that it is impossible to generalize, as the individual countries are not uniform. Time is also an essential factor. Even on a human scale, cities' structure, population, and function are changing rapidly. If we only think about the 30 years following the change of the regime (starting in 1989), this also shows how fast changes can be observed. A further problem is that cities have different functions, and the other functions result in different urban development in many cases.

During the research, the authors formulate proposals for reducing the number of crimes in each zone. In the case of downtown and the inner residential zone, wider use of CCTVs and predictive software are recommended. In the garden city zone and the suburbanization zone with a lower population, it is recommended that the population's attention be drawn to the broader use of alarm systems. Neighbours watching each other's values can also play a role in crime prevention. The basic condition for this is that the people living in the street know and trust each other enough to ask each other to keep an eye on their houses. To achieve this goal, community programs must be organized where residents can get to know each other. Similar proposals can be formulated in the areas of housing estates. The community approach needs to be revived here as well. Regarding holiday houses/farm zones, the resident population is very low. Alarm systems, cameras, and large dogs are recommended here to create personal safety. It is also necessary to organize a police service that regularly checks the area. This has a crime prevention effect.

The following answer can be given to the research question. The city center has the most crime. This is because downtown areas have business, entertainment, and commercial functions in addition to residential ones. As a result, they provide "space" for several crimes that could not develop without them (e.g., pub fights and bank robberies).

REFERENCES

Bromley, R. D., & Nelson, A. L. (2002). Alcohol-related crime and disorder across urban space and time: evidence from a British city. *Geoforum*, 33(2), 239–254. DOI: 10.1016/S0016-7185(01)00038-0

Benkő, B., Dávid, L., & Farkas, T. (2022). Opportunities for the development of innovation among hotels in Northern Hungary. *GeoJournal of Tourism and Geosites*, 40(1), 267– 273.

DOI: https://doi.org/10.30892/gtg.40132-828

Bujdosó, Z., Kovács, T., Szűcs, Cs., & Brambauer, Zs. (2016). "New" direction of urban development from a Central European perspective. *Theoretical and Empirical Researches in Urban Management*, 11(2), 55–64.

Burdick-Will, J. (2013). School violent crime and academic achievement in Chicago. *Sociology of Education*, 86(4), 343–361.

DOI: <u>10.1177/0038040713494225</u>

Burgess, E. W., & Park, R. E. (2009). Introduction to the Science of Sociology. Project Gutenberg.

Burton, A. (2005). African Underclass: Urbanisation, crime and colonial order in Dar es Salaam. James Currey.

Cundiff, K. (2024). City-Level Violent Crime Trends and Racial-Ethnic Income Inequality. *Journal of Contemporary Criminal Justice*, 40(1), 48–64. DOI: <u>10.1177/10439862231189986</u>

Csordás, L. (2021). Development of the Hungarian resort stock from 1960 to 2019 (in Hungarian). *GRADUS*, 8(3), 111–117. DOI: <u>10.47833/2021.3.ECO.004</u>

Csordás, L. (2022). The Closed Garden Planning and Its Impact on Holiday Construction in Hungary (in Hungarian). *GRADUS*, 9(2). DOI: <u>10.47833/2022.2.ECO.008</u>

Dekker, K., & Van Kempen, R. (2004). Large housing estates in Europe: current situation and developments. *Tijdschrift voor economische en sociale geografie*, 95(5), 570–577. DOI: <u>10.1111/j.0040-747X.2004.00340.x</u>

Ditton, J. (2000). Crime and the City. *British Journal of Criminology*, 40(4), 692–709. <u>https://popcenter.asu.edu/sites/default/files/61-ditton-</u> <u>crime and the city public attitudes towards open-.pdf</u>

Graburn, N. H. (1983). Tourism and prostitution. *Annals of Tourism Research*, 10(3), 437–443. DOI: <u>10.1016/0160-7383(83)90068-3</u>

Hesse, M., & Siedentop, S. (2018). Suburbanisation and suburbanisms – Making sense of continental European developments. *Raumforschung und Raumordnung*| *Spatial Research and Planning*, 76(2), 97–108. DOI: 10.1007/s13147-018-0526-3

Hojcska, Á., & Szabó, Z. (2021). Investigating natural treatment factors and inequalities of medicinal water institutions in the aspect of tourism in Hungary. *Geojournal of Tourism and Geosites*, 36(2), 555–562. DOI: 10.30892/gtg.362spl01-683

Jalil, H. H., & Iqbal, M. M. (2010). Urbanisation and Crime: A Case Study of Pakistan. *The Pakistan Development Review*, 49(4), 741–755. DOI:<u>10.2307/41428686</u> Jorgenson, A. K., Rice, J., & Clark, B. (2010). Cities, slums, and energy consumption in less developed countries, 1990 to 2005. *Organization & Environment*, 23(2), 189–204. DOI: <u>10.1177/1086026610368376</u>

Kim, Y. A., & Hipp, J. R. (2020). Pathways: Examining Street Network Configurations, Structural Characteristics and Spatial Crime Patterns in Street Segments. *Journal of Quantitative Criminology*, 36, 725–752. DOI: <u>10.1007/s10940-019-09428-7</u>

Lawton, B. A., Taylor, R. B., & Luongo, A. J. (2017). Police officers on drug corners in Philadelphia, drug crime, and violent crime: Intended, diffusion, and displacement impacts. Drug Abuse: Prevention and Treatment, pp. 63–87. Routledge. DOI: 10.1080/07418820500364619

Levchak, J. Philip (2016). The relationship between urbanization and cross-national homicide rates: robustness

urbanization and cross-national homicide rates: robustness across multiple estimation methods. *International Journal of Comparative and Applied Criminal Justice*, 40(3), 225–243. DOI: <u>10.1080/01924036.2016.1153492</u>

Ley, D., & Cybriwsky, R. (2018). Urban graffiti as territorial markers. In Johnson, N. C. (Ed.) *Culture and Society*, pp. 143–157. Routledge. DOI: <u>10.4324/9781351160360</u>

Mátyás, Sz. (2020). The fight against drug-related crime as a strategic challenge for Hungarian law enforcement (in Hungarian). Nemzeti Köszszolgálati Egyetem. ISBN 9789634981312

Mátyás, Sz. (2023). Crime Geography (in Hungarian). MRTT. ISBN 9786150196497

Ojo, A., & Ojewale, O. (2019). Urbanisation and Crime in Nigeria. Palgrave Macmillan Cham. DOI: 10.1007/978-3-030-19765-0

Ozascilar, M., & Mawby, R. I. (2023). The impact of crime on tourists and the need for greater support for tourist victims. *International Review of Victimology*, 29(1), 3–15. DOI: <u>10.1177/02697580221080006</u>

Park, R. E., Burgess, E. W., & McKenzie, R. D. (Eds.) (1967). The City, University of Chicago Press. ISBN 0226646114 Quick, M., Li, G., & Brunton-Smith, I. (2018). Crime-general and crime-specific spatial patterns: A multivariate spatial analysis of four crime types at the small-area scale. *Journal* of Criminal Justice, 58, 22–32. DOI: <u>10.1016/j.jcrimjus.2018.06.003</u>

Sezneva, O. (2016). Cities of socialism: migration, mass

housing, and political change in Eastern Europe and the Soviet Union after World War II. *Journal of Urban History*, 42(6), 1153–1157. DOI: 10.1177/0096144216676776

Sóvágó, S. (2007). Evaluation report on the activities of the Debrecen Police Department in 2006 (in Hungarian). Évértékelő jelentés, Debrecen.

Speer, P. W., Gorman, D. M., Labouvie, E. W., & Ontkush, M. J. (1998). Violent crime and alcohol availability: relationships in an urban community. *Journal of public health policy*, 19, 303–318. DOI: 10.2307/3343538

Szabo, D. (1960). Crimes et villes. Étude statistique de la criminalité urbaine et rurale en France et Belgique. Université catholique de Louvain.

Szabo, D. (1968). Vie urbaine et criminalité. Recherches sociographiques, L'urbanisation de la société canadienne-française.

Szabo, D. (1963). "Urbanisation et criminalité". In Szabo, D. & Normandeau, A. (Eds.) Librairie Armand Colin, pp. 37–52. Paris.

van Os, E., & Schneider, E. (2020). The cyber-security waterbed effect. *Atlantisch Perspectief*, 44(4), 31–35. https://www.jstor.org/stable/48600569

White, S., Yehle, T., Serrano, H., Oliveira, M., & Menezes, R. (2015). The spatial structure of crime in urban environments. *Lecture Notes in Computer Science*, 102–111. DOI: 10.1007/978-3-319-15168-7_14

Wikstrom, P.-O. H. & Dolmen, L. (2001). Urbanisation, Neighborhood Social Integration, Informal Social Control, Minor Social Disorder, Victimisation and Fear of Crime. *International Review of Victimology*, 8(2), 121–140. DOI: <u>10.1177/026975800100800202</u>



© 2024 by the author(s). This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/