

THESIS ABSTRACTS FOR A DOCTORAL (PH.D.) THESIS

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**CRIMINAL GEOGRAPHICAL ANALYSIS OF THE URBAN
STRUCTURE AND CRIME PATTERNS OF BUDAPEST, WITH
SPECIAL REGARD TO THE 8TH DISTRICT OF THE CAPITAL**

Theses from a PhD dissertation

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Declaration

The undersigned Dr. László Bóí, author of the thesis entitled Criminal Geographical Investigation of the Settlement Structure and Crime Relations of Budapest, with Special Reference to the VIII. District of the Capital, declare that during the preparation of the thesis I acted in accordance with the current Code of Scientific Ethics of the Hungarian Academy of Sciences, and in full knowledge of and possession of the research standards and permits required in my subject area. Where my own thoughts and results do not appear in the thesis, I have indicated this clearly and in an identifiable manner in the thesis.

Doctoral Candidate

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1 BACKGROUND

Researchers of the Chicago School had already examined the relationship between urban structure and crime. Consequently, the study of the mutual impact between urban structure and crime looks back on a relatively long history. The field continues to hold potential and despite its practical significance, remains relatively underexplored. Both domestically and internationally, criminal geographical research on this specific topic is scarce. In the Hungarian context, this can be partly explained by a high degree of under-information regarding the importance of these points of connection.

During my practical work, I have had the opportunity to observe how sharp differences can be detected - even within a single district - in the development of crime, the structure of offenses and the urban structure. The reasons for these differences can be traced back to the varying socio-economic characteristics of those living in different urban structural zones. Urban structure influences crimes, as well as their qualitative and quantitative appearance. I had already published on the subject years before the dissertation was written; however, as time progressed, I increasingly directed my attention toward uncovering these correlations, discussing my insights and conclusions with my supervisor, while collecting Hungarian and foreign language professional materials for the dissertation.

The geographical location and precise delimitation of crime and specific criminal acts are also of paramount importance from an investigative perspective, as they are decisive in determining jurisdiction. As a general rule, the investigative authority in whose area of jurisdiction the crime was committed – or in the case of serial offenses, the majority of the crimes – is competent to conduct the investigation.

The investigative authority shall examine its jurisdiction and competence *ex officio*.¹ I believe that through my research, I have succeeded in proving that crime (its volume, structure, intensity, etc.) has profound geographical causes. In this dissertation, I intended to draw attention to these through their detailed presentation and analysis, formulating proposals on how to find solutions from a policing perspective to achieve a significant reduction in crime indicators. In addition to expounding theoretical knowledge, my work maintains a practical approach, the results of which can be easily adapted into everyday police work. I believe that with this dissertation, I have enriched the theory of crime geography, producing new, empirically verifiable results particularly in the field of hot-spot policing. In my research, I strove for a level of criminal geographical analysis that had not previously examined the relationship between urban structure and crime in such detail in Hungary.

¹ Ministry of Interior (BM) Decree No. 25/2013 (VI. 24.) on the Scope of Authority and Jurisdiction of the Investigative Authorities of the Police

The authors of several doctoral *dissertations*² and major works in the field of crime geography have partially addressed areas related to my research; however, they did not conduct the specific research detailed in my paper, as they placed their emphasis on a different spectrum through their analyzed choice of topics. My research fits naturally - alongside its sociological and socio-geographical orientation - into the research portfolio of the Doctoral School of Economic and Regional Sciences at the Hungarian University of Agriculture and Life Sciences, where several doctoral dissertations with a geographical aspect have already been produced.

² To date, the following doctoral dissertations have been produced in the field of crime geography: Antal Tóth: *Socio-geographical analysis of the spatial aspects of crime in Hajdú-Bihar County* (2007, University of Debrecen); Szabolcs Mátyás: *Criminal geographical analysis of the Debrecen Police Station* (2011, University of Debrecen); Zsuzsa Piskóti-Kovács: *Application possibilities of modern trends in crime geography at various territorial levels* (2014, University of Miskolc); Gábor Erdei: *Theoretical and practical correlations of crime geography* (2014, National University of Public Service); Zalán Zachar: *Criminal geographical analysis of crimes against the environment and nature* (2022, Hungarian University of Agriculture and Life Sciences) (Frigyer 2024).

2 OBJECTIVES, RESEARCH QUESTIONS, AND HYPOTHESES

- **In analyzing the relationship between the urban structure of Budapest and crime, I have set the following objectives:**

- To present the various stages of urban development and their criminological consequences in the case of the capital,
- To present the current stages and trends of urban development in Budapest and their impact on crime,
- To demonstrate the crime-reducing effects of reurbanization through specific examples in the 8th District.

- **I analyze the characteristics of urban development in Józsefváros and demonstrate their criminological relevance.**

- **In the study of Crime Prevention Through Environmental Design (CPTED), I have set the following objectives:**

- To present the main international and domestic research results of CPTED,
- To identify the areas most at risk in the 8th District of the capital,
- To develop specific, street-level recommendations from a law enforcement perspective regarding the applicability of architectural crime prevention.

- **To point out the spatial and temporal differences in crimes in Budapest and their law enforcement relevance.**

- **To illustrate the sensitive areas from a law enforcement perspective using crime maps, during which:**

- I map several crimes using hot-spot crime maps, then analyze the criminally sensitive areas of the capital.
- I map several crimes using hot-spot crime maps, then analyze the criminally sensitive areas of the 8th District.
- I delimit the hotspots in the capital and the district that require more effective police intervention.
- For the hot spots, I update Ratcliffe's matrix and adapt it to Hungarian conditions.

2.1 Hypotheses and Questions established during the research

I have established five hypotheses during the research, which are as follows:

H1: The structure of crime differs across different urban structural zones in certain districts of Budapest.

My assumption is based on the observation that people of different social statuses live in different spatial structural zones, who commit different types of crimes; furthermore, different urban structural zones induce the offender to commit different types of offenses.

H2: Reurbanization processes can exert a statistically significant positive effect locally on the rehabilitated areas of Józsefváros, an effect manifested both in the reduction of the number of crimes and in favorable changes in the crime structure. My second hypothesis is based on the assumption that the population replaced as a result of reurbanization mostly comes from younger, wealthier, and better-educated strata, who possess a lower propensity for crime.

H3: The frequency of offenses against property will be significantly higher in the downtown districts of the capital than in the outer districts. I base my hypothesis on the fact that due to higher population density, far more people frequent the downtown than the outer districts, which favors the commission of numerous property crimes (e.g., pickpocketing, car break-ins). Most tourist destinations are also located in Districts V–VII, further increasing the risk of certain crimes being committed.

H4: The number of residential burglaries does not necessarily reach particularly high level in areas of higher social prestige, but rather in locations where transport geography factors provide good escape routes for offenders. Among the well-known theories of criminology is "Rational Choice Theory," which assumes that offenders also deliberate before making decisions (prior to committing a crime), assess the circumstances, and as a result of this mental consideration, will commit crimes in places where the risk of being caught is lower. A key element of this deliberation is taking potential escape routes into account; therefore, areas located near motorways, expressways, or main roads providing a quick escape have a higher potential for residential burglaries. This contrasts with areas where, although significant loot might be expected, the danger of being caught is higher and routes enabling a quick escape lie far from the scene of the crime.

H5: Due to the installation of surveillance systems, the number and geographical distribution of acts of vandalism do not necessarily show the highest case numbers around downtown entertainment venues; instead, as a result of crime displacement, vandalism offenses and infractions are primarily realized along public transport routes. The presence of surveillance cameras acts as a deterrent; therefore, offenders typically do not commit their illegal acts in downtown areas with good camera coverage, but rather with greater frequency in the outer districts around public transport vehicles, which are less controlled in both personal and material terms.

In the course of this research, I formulated research questions regarding the correlations between urban structure and crime, as well as the issues of urban regeneration and crime prevention:

Q1: To what extent can the location of crime hotspots in Budapest - and particularly within Józsefváros - be explained by the urban functional spatial structure and the density of transportation hubs?

Q2: How have the urban regeneration programs implemented in Józsefváros affected the spatial distribution and structure of registered crimes within the rehabilitated areas and their surroundings?"

3 MATERIAL AND METHOD

The research commenced several years before the start of my doctoral studies. The foundation of the research was the synthesis and analysis of secondary data, during which I explored the significance of the topic and the justification for the choice of location and research methods. Certain results of the investigations have previously appeared in the scientific publications indicated in the thesis booklet. I consider the exact delimitation of the studied area to be important, as the precise boundaries of the research cannot be designated without it. The territory of the research extends to the area of Hungary. I first conducted an analysis at the national and county levels. I did not consider the analysis of international (cross-country) data relevant to the present research. This is partly because the 8th District I examined is an area with specific social, economic, architectural, etc., characteristics, making it significantly difficult to meaningfully compare it with another (foreign) geographical unit; on the other hand, comparing the crime values of different countries can often be misleading. [As Zsuzsa Piskóti-Kovács (2014) and Szabolcs Mátyás (2023) mentioned in their works, comparing the crime values of different countries with a small margin of error is only possible for two offenses: homicide and fatal traffic accidents. Regarding other crimes, one must be familiar with the other country's legal system, statistical reporting system, the existence or absence of administrative infractions, etc. (Mátyás 2023)].

Following the analysis of the national context, I analyzed the county level. The county-level analysis was conducted at two identical tiers. First, I examined the jurisdiction of the Pest County Police Headquarters from a criminal geographical perspective, followed by an analysis of the jurisdiction of the Budapest Police Headquarters (hereinafter: BRFK). On one hand, these two territorial levels are at the same rank in the domestic hierarchy; however, since the capital is located within Pest County, I did not wish to omit the analysis of this territorial level.

On the other hand, the areas of the BRFK and Pest County are closely linked, and one cannot be interpreted without the other; thus, the criminal geographical analysis of Pest County could not be excluded.

The jurisdiction of the BRFK coincides with the city limits of Budapest, so this did not pose a problem. In the case of most settlements, the jurisdiction of a municipal police station is larger than the area of the namesake city, as several smaller settlements belong to it. I did not encounter such a problem during this research, which is definitely favorable, since separate crime statistics are typically not available for the respective settlements within the same jurisdiction. Within the Budapest Police Headquarters, I selected the 8th District as the smallest territorial unit (settlement level), as in my opinion, this is the district of the capital where the most interesting research results can be achieved.

This is partly due to the notoriously high criminality of the area, and partly because significant development has been observed in the district in recent years, resulting in a statistically perceptible decrease in crime in certain areas. Therefore, I believe it is worth researching and investigating the process of reurbanization here. Within certain parts of the district, I also analyzed narrower settlement levels in Józsefváros. On these occasions, I primarily examined the street and neighborhood levels.

It should be mentioned that, in addition to the scientific arguments mentioned above, personal motivations also played a role in the selection of the research area. The choice fell on this area partly because I work in this district and teach here at the Faculty of Law Enforcement of the Ludovika University of Public Service. Previously, as an investigator, I participated in numerous operations in the district; while leading the Operational Sub-unit of the neighboring 9th District, I repeatedly cooperated in performing police duties; and as a senior duty officer at the BRFK, Józsefváros was also among my coordinated areas.

- Before and during the research, I collected an abundance of literature, which contained numerous data and information used during the study. I primarily visited the libraries of the National Széchényi Library, the Ludovika University of Public Service (NKE), the National Institute of Criminology, Eötvös Loránd University (ELTE), and the Hungarian Institute for Forensic Sciences (NSZKK). I also gathered material from several researcher databases subscribed to by LUPS.

Thanks to my supervisor's international connections, I received data from the libraries of the Academy of the Police Force in Bratislava, the University of Oradea, and the Serbian University of Criminal Investigation and Police Studies.

- I participated in numerous scientific and police conferences as a speaker or attendee, gaining background information integrated into the dissertation. I would specifically highlight conferences organized by the police; although these were not criminal geographical in theme, I gained indispensable background information for better understanding crime trends and professional exchange. Regarding police meetings, I primarily mention the annual evaluation meetings. While not criminal geographical in theme, they provide extremely useful information regarding a specific criminal year. The police chiefs' annual evaluation reports to the municipal representative bodies are public events. In recent years, I have attended several such events in the 8th District and other capital districts. These events allow for personal professional networking with police chiefs. From a professional standpoint, I gained the most from conferences organized by the International Criminal Geographical Association and the Hungarian Association of Police Science (MRTT), where I also participated as an organizer in recent years.
- I held professional discussions on numerous occasions with police leaders and members of the executive staff, mostly from the BRFK, who provided information on the crime conditions of specific districts.
- I utilized online sources and databases, including the journals *Belügyi Szemle* and *Magyar Rendészet*. For finding relevant articles, I used the MATARKA database, Google Scholar, and the MTMT database. Among domestic law enforcement databases, I used the PRE-STAT system, the Criminal Statistical System (BSR) operated by the Ministry of the Interior, as well as the www.police.hu and www.ksh.hu websites. For creating crime maps, I used publicly available data from the www.police.hu website. In cases of interpretation issues, I consulted the National Police Headquarters, Crime Directorate, Evaluation and Analysis Department.

3.1 Methods used during processing

I used several research methods during the preparation of the dissertation:

- I conducted quantitative content analysis of textbooks, professional articles, and websites.
- I analyzed statistical data from numerous databases (e.g., KSH, Eurostat, PRE-STAT). The analysis of secondary data was vital for answering research questions and proving hypotheses.

- Maps in the dissertation were created using QGIS software. These are hot-spot maps showing the aggregate annual crime values of Budapest and the 8th District, with monthly breakdowns also prepared for the 8th District regarding certain crimes.
- Model Adaptation: I supplemented Ratcliffe's hot-spot matrix for better adaptation to Hungarian conditions.
- Conducted at various police and scientific meetings and conferences.
- Performed for the capital and the 8th District. This method is considered a spatial statistical analysis.
- The empirical part of my dissertation, found in the chapter containing architectural crime prevention proposals, involved field surveys based on direct observation.

4 RESULTS

I believe this is one of the most interesting and, at the same time, most valuable chapters of my doctoral dissertation, in which I draw the crime maps of the capital and Józsefváros. This is because it is the chapter that is most applicable for practical professionals, and also because of its map-based presentation, which is understandable even for those less familiar with the subject but interested in security (the wider public). I have provided extensive explanations for each map, so interpretation should not pose a problem for anyone.

I do not wish to stop my research related to cartography. Partly because I have grown fond of crime mapping, and partly because I see its practical utility; therefore, in the future, I intend to produce the maps presented in the dissertation projected specifically for the 8th District. By placing these side by side, the criminal trend will become even clearer. According to my plans, I intend to produce the maps annually and publish them in law enforcement journals, as well as deliver them to the local police and municipal law enforcement to assist chronological traceability and practical application.

My research fundamentally focuses on the eighth district of the capital, but the district data (in this case, the maps) cannot be properly interpreted without the representation and analysis of crime in the capital; therefore, I have also drafted the crime maps of the capital for several crimes, albeit in outline. The capital and the individual districts still do not form a seamless whole (primarily those districts /formerly independent settlements/ that were annexed to Budapest in 1950), whereas Józsefváros has been an integral part of Budapest for centuries, which is clearly visible in the spatial characteristics of crime. Although the district boundaries bisect the studied area, it is clear in the case of many hotspots that one part of the sensitive area still belongs to the 8th District, while the other part already belongs to another district. This also shows that crime does not know district boundaries; therefore, it must and should be analyzed globally (in this case, projected onto the capital as a whole).

During the research, I examined and analyzed the following crimes:

- crimes committed in public areas
- violence against the person
- theft
- burglary
- residential burglary
- car theft
- car break-ins
- vandalism / criminal damage
- robbery, plundering
- disorderly conduct, rioting
- infractions against property

4.1 The crime map of Budapest

It can be said of all the examined crimes that their highest frequency of occurrence is in the city center. The reason for this is well-known: this is where the population density is the highest (this is where the most people live and frequent), this is where the main tourist attractions are located, this is where the business and financial district and numerous shopping centers are found, and this is where the major public transport hubs are located, through which tens of thousands of people pass daily³ (Baji–Csizmady 2019) (Figure 1).

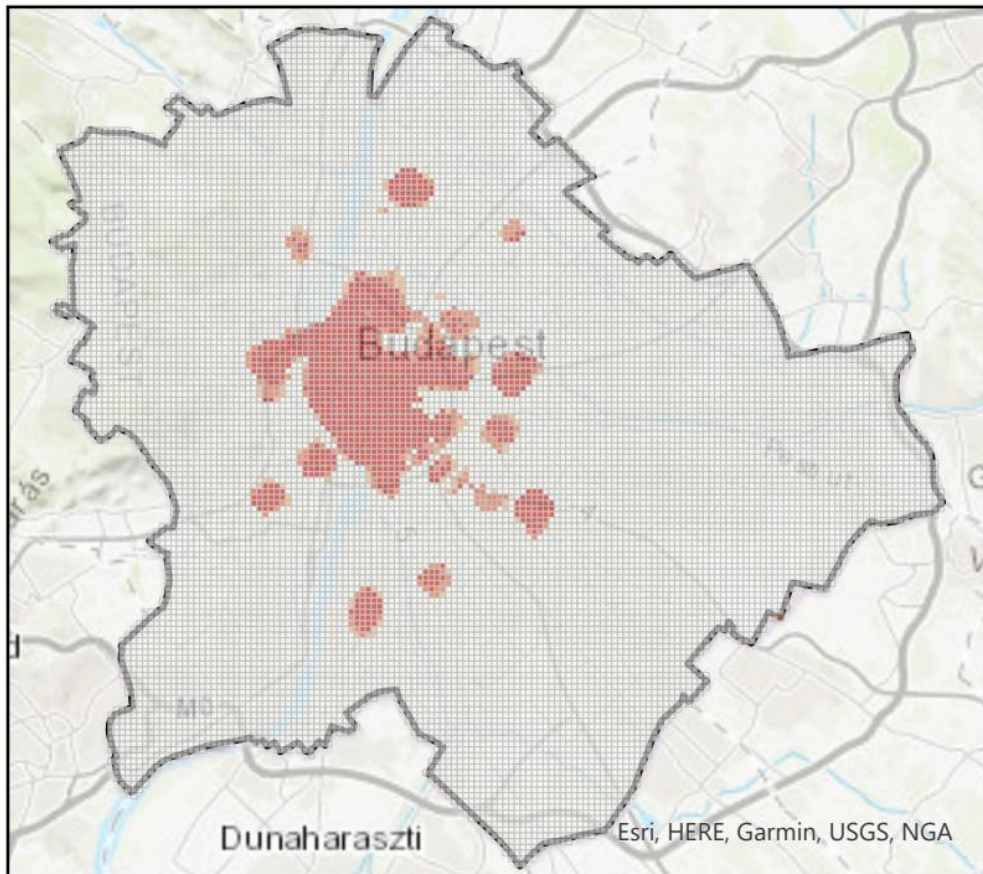


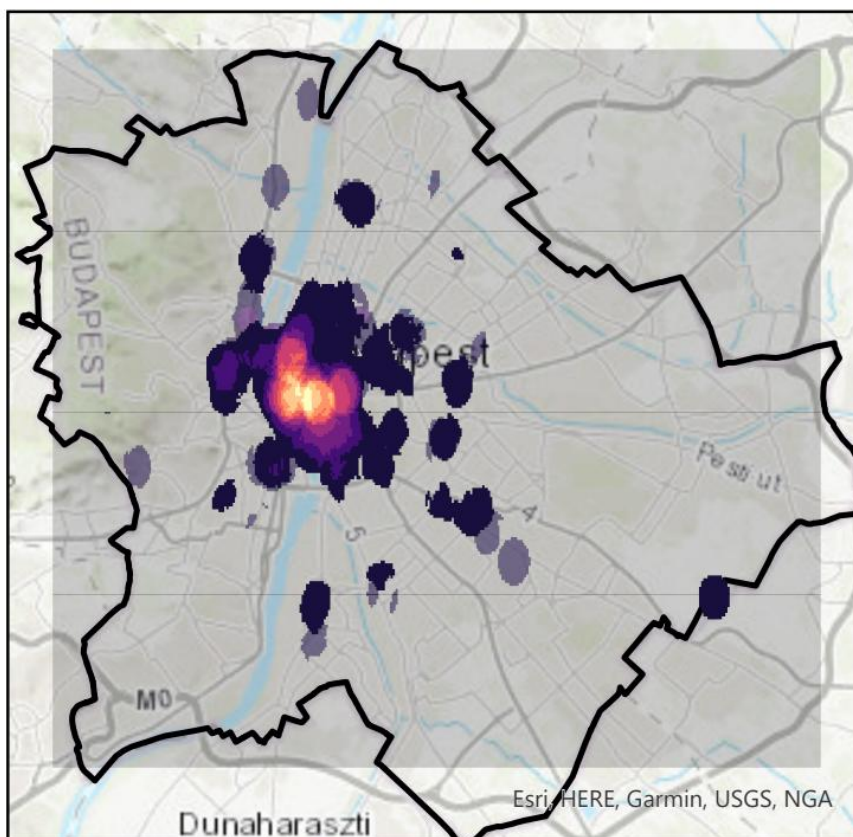
Figure 1. Budapest's areas most infected by crime (2024) (Author's own work)

³ Not only the transport hubs, but also the linear transport infrastructure carrying the largest crowds (e.g., tram and bus lines, metro lines).

The subjective sense of security of the population is most impaired by **crimes committed in public areas**.⁴ These are the offenses that, in principle, anyone can encounter on the street and that could even be committed to their detriment.

This category of crime is a summary classification encompassing several offenses; therefore, no such specific statutory definition exists in the Penal Code. Examples of crimes belonging to this category include theft, robbery, plundering, car break-ins, car theft, pickpocketing, disorderly conduct, and assault. Since these crimes are mostly committed on the street, they greatly impair the subjective sense of security. Their prevention is therefore of paramount importance, as is clearly evident from annual evaluation reports. Reducing the number of crimes committed in public areas is among the prioritized tasks of every county and municipal police station.

If we analyze the offenses belonging to this criminal category, we can conclude that they are relatively evenly distributed across the territory of Budapest and its individual districts. While the overrepresentation of the city center can be established, it is not to the same extent as in the case of other crimes (Figure 2).



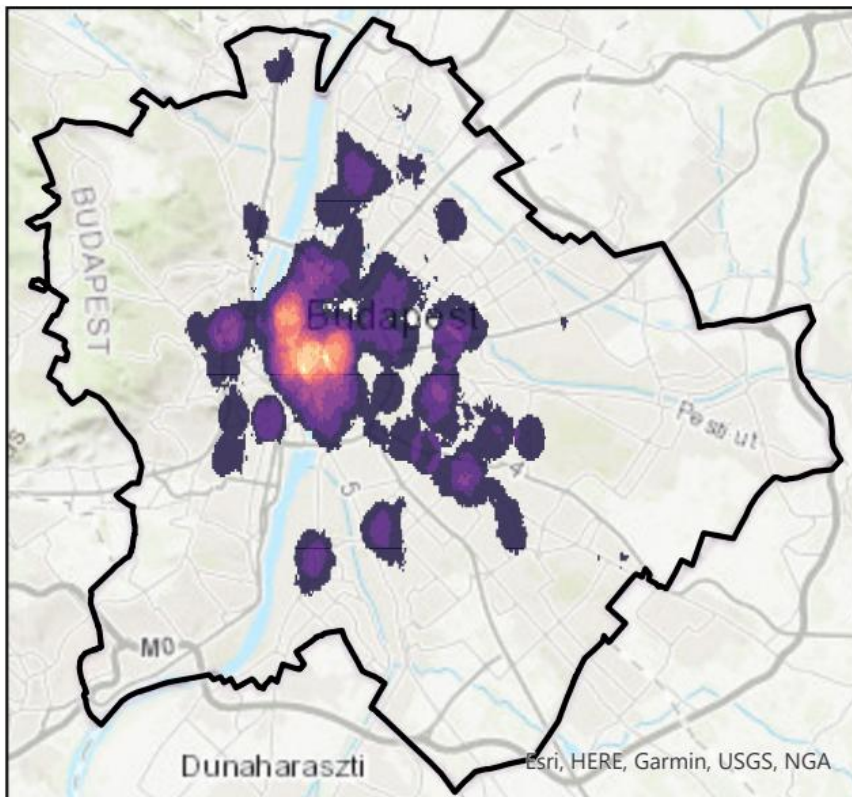
*Figure 2. Distribution of crimes committed in public areas in Budapest (2024)
(Author's own work)*

⁴ This category of crime is referred to in English as "street crime."

With regard to **violence against the person**, the city center is overrepresented; the reasons for this have already been mentioned above (above-average population density, and the concentration of commercial, financial, tourist, and transport services in the downtown districts). However, besides the city center, the Pest periphery can also be considered infected (Districts X, XIV, and XIX). In my view, this may have several causes.

On one hand, numerous main roads (e.g., Üllői út) and major hubs are located in the outer districts (e.g., Örs vezér square). High-traffic areas carry the potential for conflict, resulting in violence against the person. On the other hand, pubs in the outer districts also increase the number of crimes. Fights, disorderly conduct, and assaults occur.

In the case of Districts X and XIX, as a factor increasing the number of acts of violence against the person, we can mention the Kőbánya-Kispest railway station and its surroundings located on the district border. It is one of the busiest railway stations in the country; however, even during the day, the number of homeless people, intoxicated individuals, and – last but not least – drug users is significant at the station and its immediate vicinity. It can be noted of all three districts that the larger part of them is suburban, sometimes rural in character, where people tend to be of a more heated temperament due to the rural lifestyle, which is partly reflected in the higher number of crimes against the person (Figure 3).



*Figure 3: Distribution of violence against the person in Budapest (2024)
(Author's own work)*

The location of the offense is even more identifiable in the case of vandalism. The route of tram lines 4 and 6 is outlined on the map (the entertainment venues attracting the largest crowds in the capital, such as Gozsdu, Morrison's 2, Remix, and numerous pubs, are located in their vicinity).

The most infected section is between Margaret Bridge and Corvin-negyed, as well as the stops in the downtown 6th and 7th Districts. This section roughly encompasses the downtown entertainment venues; therefore, the bulk of vandalism here is mostly committed by young people under the influence of alcohol or drugs.

In the case of Széll Kálmán square (located on the line of trams 4 and 6 and next to a metro station), as well as Allee and Örs vezér square, the unmotivated vandalism of disorderly youth is likewise outlined on the map. It should be noted with the distinction that the number of entertainment venues at these hubs is significantly lower; thus, it is rather the young people heading home from the city center in the early hours who commit the crime. Public transport vehicles are already equipped with surveillance cameras, so relatively few crimes occur there. The offenses (e.g., smashing shop windows, setting fire to or overturning bins, graffiti) are typically committed when the youth heading home disembark (Figure 4).

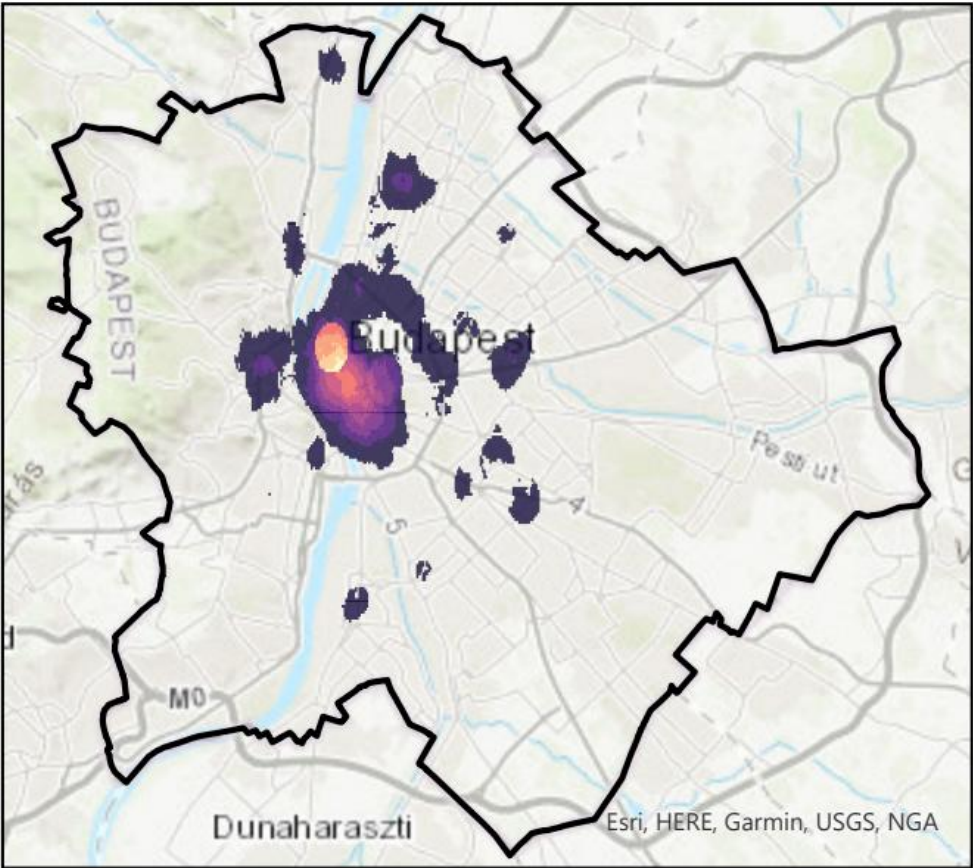


Figure 4. Distribution of vandalism in Budapest (2024) (Author's own work)

It is an extremely positive trend that the number of **vehicle thefts** and **car break-ins** in our country has significantly decreased since the change of regime. Nevertheless, in certain areas, the crime still appears as a problem, even if not a major one.

It can be observed that the number of these offenses rises during certain time intervals, especially during economic crises, when the number of other crimes belonging to the main group of offenses against property also increases (e.g., residential burglary, vehicle theft, pickpocketing).

Car break-ins primarily appear as a criminal problem in densely populated areas with poor surveillance camera coverage. This can be observed on both the Pest and Buda sides, especially in the areas of large housing estates where large-scale parking lots are located (Békásmegyer, Káposztásmegyer, Havana housing estate). These housing estates are among those in the capital with lower real estate prices (and thus lower status), where the rate of certain crimes is higher.

Although not visible on the map, some P+R parking lots are also affected by the offense, albeit with low infection rates (Figure 5).

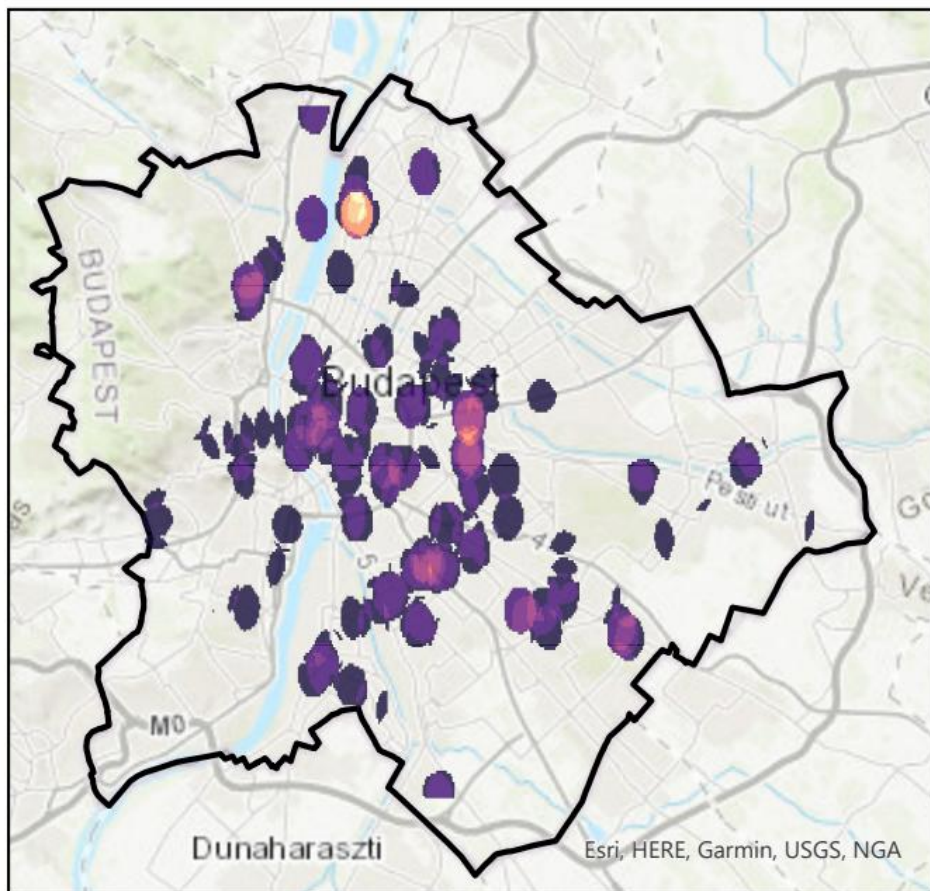


Figure 5. Distribution of car break-ins in Budapest (2024) (Author's own work)

I will not engage in a detailed analysis regarding **other crimes committed in public areas**, as I would mostly be reiterating the facts mentioned above. It is worth noting, however, that the major transport and commercial (shopping center) hubs, as well as the HÉV line up to Flórián square, possess an above-average frequency of crime.

The number of **burglaries** also shows a strong correlation with general living conditions. Poorer economic circumstances yield higher case numbers. In Budapest, the areas most affected by burglary are as follows: the downtown areas (Districts V–VIII) can be considered infected in the case of most large cities, and Budapest is no exception. For the remaining areas, it is difficult to specify exact geographical locations; rather, there is an opportunity to highlight cause-and-effect relationships.

For perpetrators, the designation of escape routes is an important consideration when selecting the location of the offense. Professional offenders plan their escape in advance, sometimes seeking out multiple routes (Rózsa – Barabás 2020, Mátyás 2024). I believe this is also detectable in the geographical distribution of burglaries in Budapest. The high case numbers observed around the HÉV line are justified by its proximity to Main Road 11. Meanwhile, the large number of burglaries around the introductory section of the M3 motorway and Róbert Károly boulevard is induced by the escape opportunities provided by the aforementioned motorway.

The area of the capital known as “Kőbánya alsó” has an industrial function, containing numerous warehouses and industrial plants. Here, the number of crimes is increased by burglaries committed in warehouse buildings (Figure 6).

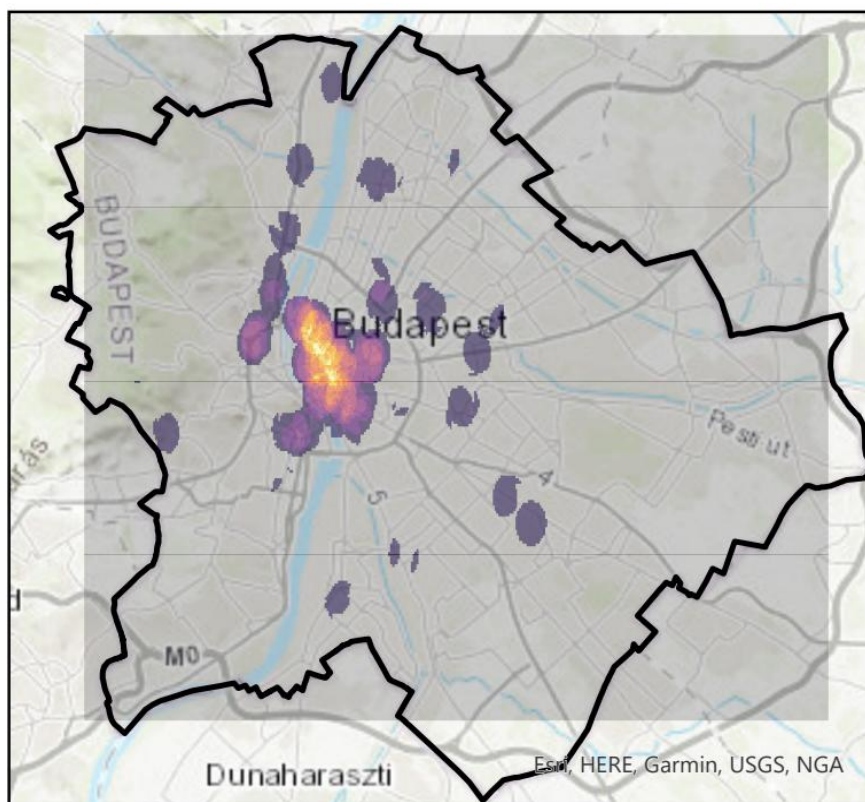


Figure 6. Distribution of burglaries in Budapest (2024) (Author's own work)

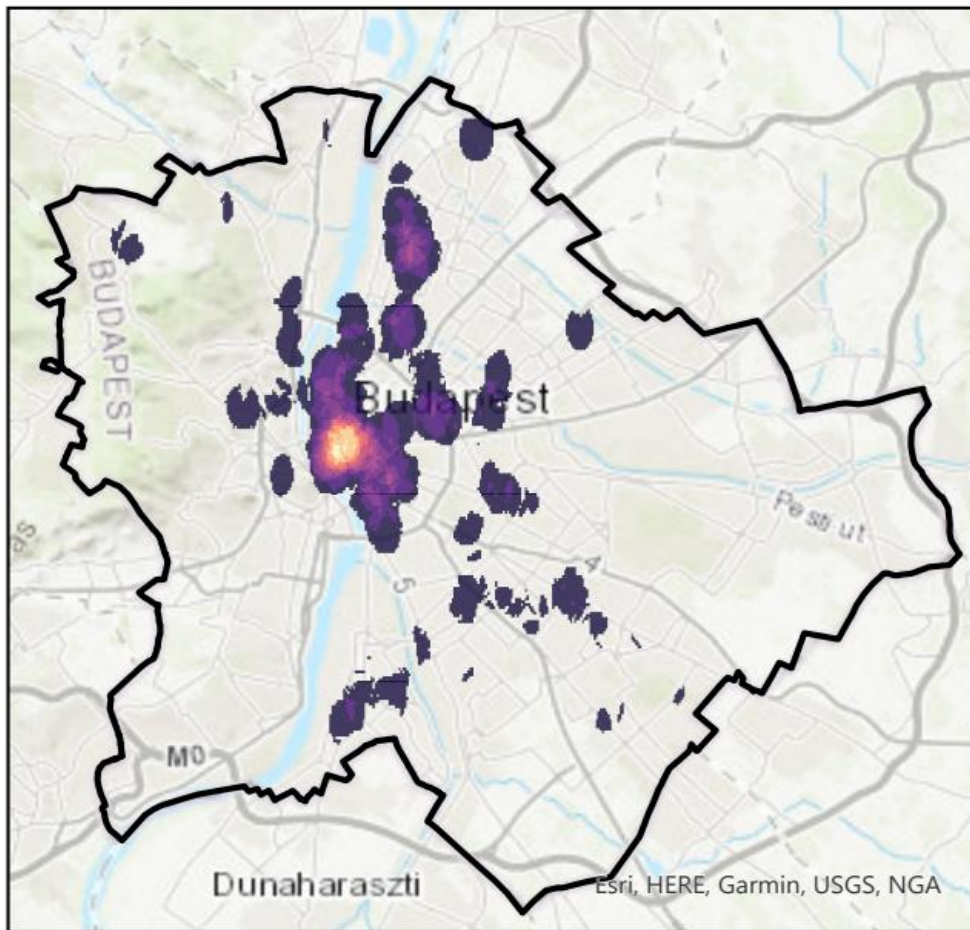
The distribution of residential **burglaries** in the capital draws attention to several interesting criminological, criminalistic, and socio-geographical patterns. It is well known that perpetrators think rationally, and the selection of a crime scene mostly operates according to economic principles: "is it worth it or not" (Rózsa – Barabás 2020). In the case of the Buda districts, the number of residential burglaries is clearly higher in those areas where a larger proportion of wealthier families live. Hűvösvölgy and the Buda end of Main Road 10 demonstrate this well. In the case of the Mammut shopping center (Lövőház street) and its surroundings, favorable escape routes (e.g., tram lines 4 and 6, metro entrance), the possibility of blending in quickly, and the expected size of the loot are the factors that increase the area's involvement.

On the Pest side of the capital, the involvement of the city center is high; I will not elaborate on the reasons for this, as I have already done so for other offenses. Interestingly, "Kőbánya also" is also overrepresented regarding this offense, despite residential properties being present in extremely small numbers. In this connection, I suspect that the crime is misregistered, and the burglary (theft by breaking and entering) was recorded as a residential burglary in the RobotZsaru Neo system.

The suburban part of Zugló is also affected by residential burglaries. This can be considered an elite neighborhood even by capital standards; therefore, based on the criminological theories mentioned above, it is "worth" carrying out a residential burglary, as the perpetrators expect to leave with significant loot. Housing estates have been prime targets for residential burglaries for decades.⁵ In the capital's housing estates characterized by higher prices per square meter, orderly environments, and higher-status populations, the number of residential burglaries is above average. This is clearly visible on the map: the housing estates in Districts XIII and IV (e.g., Káposztásmegyer and Újpest housing estates, as well as the Csángó and Gyöngyösi street estates), and the areas bordered by Üllői street and Nagykőrösi street (e.g., the József Attila housing estate) also show above-average involvement. In my opinion, the above-average infection rate in the northern part of the capital is caused by transport geography characteristics. The M0 motorway provides a quick escape route for perpetrators (Figure 7).⁶

⁵ In the past, several factors significantly increased the number of residential burglaries in housing estates: 1. When housing estates were first built, they were mostly inhabited by a younger demographic who worked during the day; therefore, these apartments promised to be easy prey (see the Routine Activities Theory developed by Lawrence E. Cohen and Marcus Felson /1979/). 2. The doors of apartments in housing estates were equipped with simple locking mechanisms that were easy to pick. Due to the high number of residential burglaries, cross-bar locks (*hevederzár*) appeared from the nineties onwards, making entry into the apartments more difficult 3. Hundreds of people lived in a single high-rise stairwell who did not know each other, and as a result of metropolitan impersonality, they did not pay sufficient attention to their neighbors' property or apartments.

⁶Slightly contradicting myself, while motorways serve as good escape routes, they also provide a strong basis for investigation. In recent years, the number of VÉDA gates (intelligent road camera network) has increased significantly, allowing for nearly real-time tracking of vehicles traveling on the motorway. Similarly to VÉDA, recordings from NÚSZ (National Toll Payment Services) and speed cameras can also be utilized for assistance.



*Figure 7. Distribution of residential burglaries in Budapest (2024)
(Author's own work)*

In the case of **theft**, the points mentioned above can mostly be repeated, so I will omit a detailed repetition. However, I would note that the offense of theft is primarily realized in high-traffic areas with high population density. The majority of these violations are shoplifting, while a smaller portion consists of pickpocketing. The latter offense is favored by large crowds and people's inattentiveness (Rózsa – Barabás 2020).

The major hubs are clearly outlined: Kőbánya-Kispest Railway Station / Shopping Mall, the ALLE shopping center, Westend (where Nyugati Railway Station also inflates the figures), Örs vezér square (Árkád, IKEA, public transport stops), Széll Kálmán square (public transport stops), and Kelenföld (railway station). These locations handle tens of thousands of people daily. Pickpockets primarily target individuals waiting at public transport stops or those traveling on crowded vehicles. In the latter case, victims often only realize they have been victimized after disembarking from the vehicle – which, in many cases, happens at the large hubs mentioned above (Figure 8).

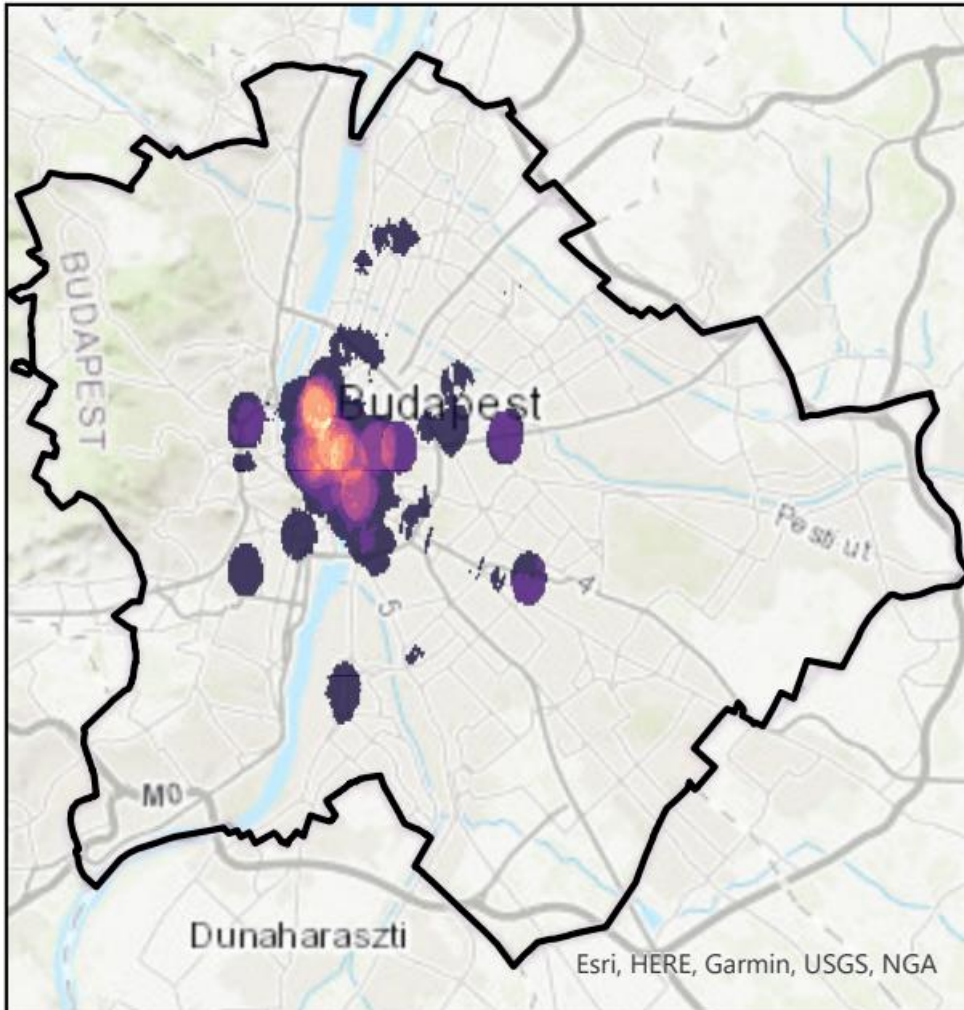
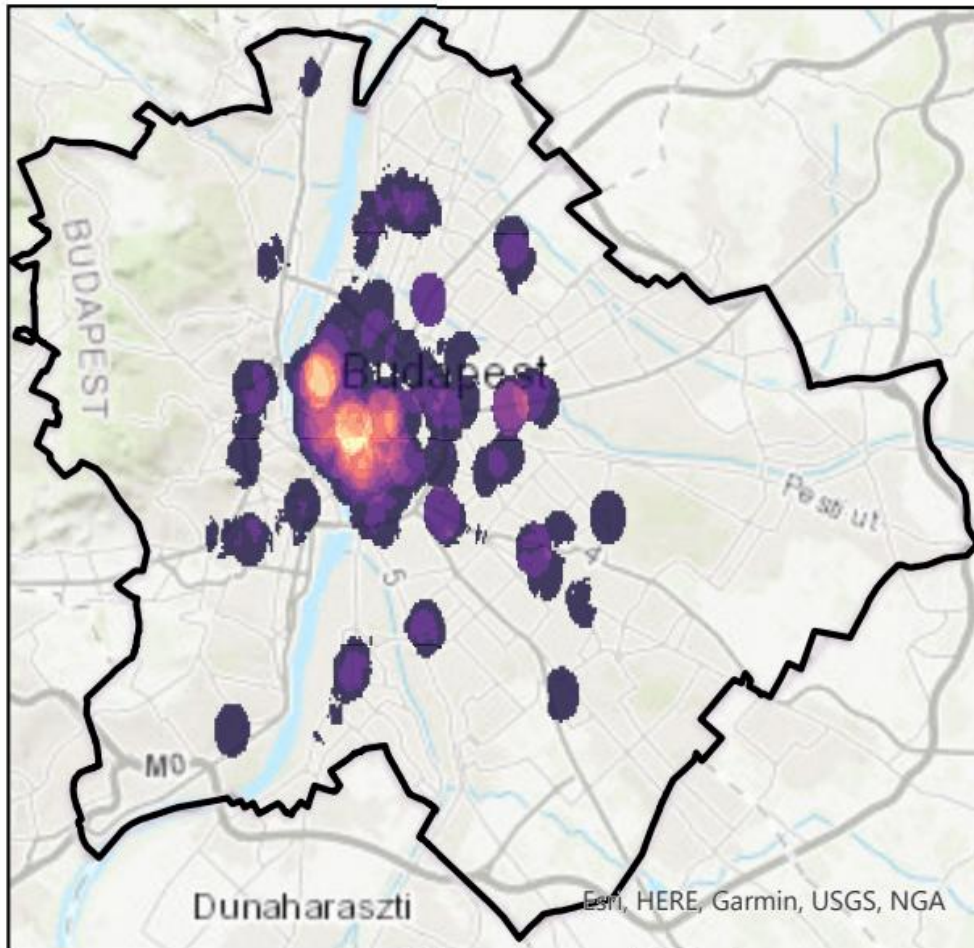


Figure 8. Distribution of thefts in Budapest (2024) (Author's own work)

Offenses against property primarily cover low-value property violations (mostly shoplifting). This generally refers to thefts under HUF 50,000. In this regard, large shopping centers stand out on the map; the Campona shopping mall and the IKEA in Soroksár are clearly identifiable.

Regarding this violation, we must account for massive latency, as victims often opt not to file a report due to the subsequent lengthy police procedures. If their damages are recovered (e.g., in a case of shoplifting, the security guard catches the perpetrator and retrieves the stolen item), the chance of a formal authority proceeding starting is even lower, or the act remains in latency (Figure 9).⁷

⁷ A multi-country international survey found that more than half of theft crimes are not reported to the authorities. According to a survey in the USA, only one in three offenses came to the attention of the authorities. The reasons cited for the low willingness to report included the negligible value of the damage, a low level of confidence in the police's investigative abilities, or



*Figure 9. Distribution of offenses against property in Budapest (2024)
(Author's own work)*

4.2 Crime map of Józsefváros

In relation to the eighth district of the capital, I examined and analyzed the same crimes as in the case of Budapest. I considered this important so that the various crimes and major spatial processes could be easily compared in a part-to-whole relationship. In the case of Józsefváros, the analysis will be more detailed than what was observed for the capital as a whole; on one hand, because I am exceptionally familiar with this area myself – having spent about a third of my career here – and on the other hand, because this is the specific research area of my dissertation.

the delayed discovery of the crime. Another American study established that owners notice only one out of 49 shoplifting incidents, and the authorities are notified in only every second case (Rózsa – Barabás 2020).

I will begin the analysis with the crime of **theft**, which is the offense with the highest number of cases in the district as well. The locations generating the most thefts are linked to commercial shops found in shopping centers visited by the masses. Generally, it can be stated that within shopping centers, the vast majority of crimes are committed to the detriment of stores selling clothing and drugstore products. This fact also holds true for the commercial units located in the district. In relation to Józsefváros, mention must be made of the Corvin Plaza (Futó street 37) in the Corvin Quarter, the Europeum shopping center (Blaha Lujza square 3) on the border of the Népszínház and Palace Quarters, and the Corvin Department Store (Blaha Lujza square 1-2) also located there. Although the latter department store has undergone rehabilitation in recent years, its re-opening has taken place and the shops have been opened again. This is reflected in the increase in the number of theft crimes.⁸

The largest mall in the district is located in Kerepesdűlő, which is the Arena Mall; it can be stated that this mall is one of the largest not only at the district level but also on a national scale.⁹

In the mentioned malls, the thefts are not necessarily committed by local residents, as these are locations open to everyone and are easily accessible by both private vehicles and public transport.

Within the malls and their surroundings, perpetrators typically commit thefts against victims via pickpocketing, or by taking bags, phones, etc., that have been set down during shopping. Regarding shopping centers, the large number of installed CCTV cameras assists investigations. If the official request to preserve the footage is received within the legal retention period, it can greatly aid the investigation.¹⁰

⁸ A perceptible decrease in the number of crimes was observed during the renovation period. The dismantling of the aluminum frame covering the building began in 2018, and the renovated store – on all levels – reopened in 2023. This was reflected in the criminal statistics as well.

⁹ The shopping center's former name was Arena Plaza. It is the largest shopping center by floor area not only in Hungary but in Central Europe, built on the site of the old Trotter (Horse Racing) Track in 2007. The shopping center has a floor area of 66,000 square meters and contains more than 200 shops, a Tesco hypermarket, a cinema, a fantasy park, and a 2,800-space parking lot (<https://www.arenamall.hu/>, https://hu.wikipedia.org/wiki/Arena_Mall).

¹⁰ The legally mandated maximum period for retaining camera footage is 72 hours, which can be extended in justified cases (e.g., police proceedings).

Regarding vehicles, it is necessary to mention that casual theft from motor vehicles left open – presumably due to haste or rushing – is the most significant factor (for example, bags, mobile phones, laptops, tablets, or any easily sellable items left visible in the passenger compartment). Theft involving violence against property (vehicle break-ins), signal jamming, or other methods occurs only sporadically in these parking lots. This is partly because license plate recognition camera systems operate at the exits, which allow for the precise identification of the time of the crime and, consequently, the perpetrator at a later stage (as the vehicle's path can be accurately tracked).

In the immediate outdoor vicinity of the malls, the most frequently stolen items are the locked or unlocked bicycles and scooters of those arriving.

Looking at the map on a broader spectrum, the arrival and departure routes leading to and from the malls and their surroundings are decisive regarding theft. If we take the theft of common phones, laptops, and other electronic devices as a baseline, there are countless shops dealing in the buying and selling of electronic goods lined up in the attraction zones of the malls. Criminals today do not hold onto stolen items; they attempt to dispose of them as quickly as possible. This is partly due to the fear of getting caught, and partly because this is the fastest way to sell stolen goods, albeit at a profit below market value.¹¹

In almost all the condominiums in the streets of the Palace–Corvin and Csarnok–Corvin quarters closer to József körút, there are "Airbnb" apartments for short-term rent. The keys to these apartments are typically kept in small lockboxes located inside the buildings or on the main entrance gates. Traditional residential burglaries are increasingly being replaced by a method where perpetrators obtain the key by damaging these "Airbnb" lockboxes and, after gaining entry, steal easily portable belongings.¹²

Finally, on the point map, Keleti Railway Station and its surroundings is a location where theft occurs in numerous cases.

¹¹ Cromwell and colleagues conducted interviews with burglars and fences, identifying six types of fences: 1. professional, 2. occasional, 3. associational, 4. neighborhood hustler, 5. drug dealer, and 6. amateur (Cromwell et al 1993, cited in Rózsa – Barabás 2020). A significant portion of items stolen in shopping centers and malls ends up with fences. In the present case, I believe that the stolen items often end up with professional fences.

¹² This form of residential burglary has appeared not only in Budapest but also in other Central and Eastern European capitals (e.g., Bratislava). The first reports (media and police warnings, as well as police annual evaluation reports) about this new modus operandi appeared in 2023. Burglars primarily steal electronic devices and other items that can be easily and quickly sold to fences. In Budapest, such crimes are committed primarily in Districts VII and VIII, which correlates with the fact that the highest number of short-term rental apartments is located here. There are two methods of burglary: one is when the guests (mostly foreigners) have not yet arrived. In this case, only the apartment's furnishings can be taken (e.g., television, hi-fi, bedding, coffee maker, toaster, etc.). In the other case, they watch those arriving at the apartment and enter the property after they leave. In this scenario, they mainly plunder the luggage left behind (e.g., cash, jewelry, laptops, tablets, branded clothing, etc.) (MH 2023, Ma7 2024).

The reasons do not require much explanation: there is a high volume of transit pedestrian traffic, it is one of the country's busiest railway stations, it houses a metro station, and surface bus traffic is significant. A segment of the criminal class specializing in opportunistic theft waits at and around the station to scout for potential victims. The number of thefts committed via pickpocketing is significant (exploiting inattentiveness and crowds), but in many cases, the "magpies" of Keleti Railway Station misappropriate smaller bags and other valuables left unattended, taking advantage of the negligence of passengers and tourists. From a criminological perspective, the Orczy Quarter and its surroundings can be considered interesting, as the rate of this crime category is surprisingly low. We may assume that the successful block rehabilitation works are responsible for this below-average involvement, as well as the presence of the Faculty of Law Enforcement at the Ludovika University of Public Service. The sight of instructors and students in police uniform working there is certainly a deterrent for potential perpetrators (Figures 10-11).

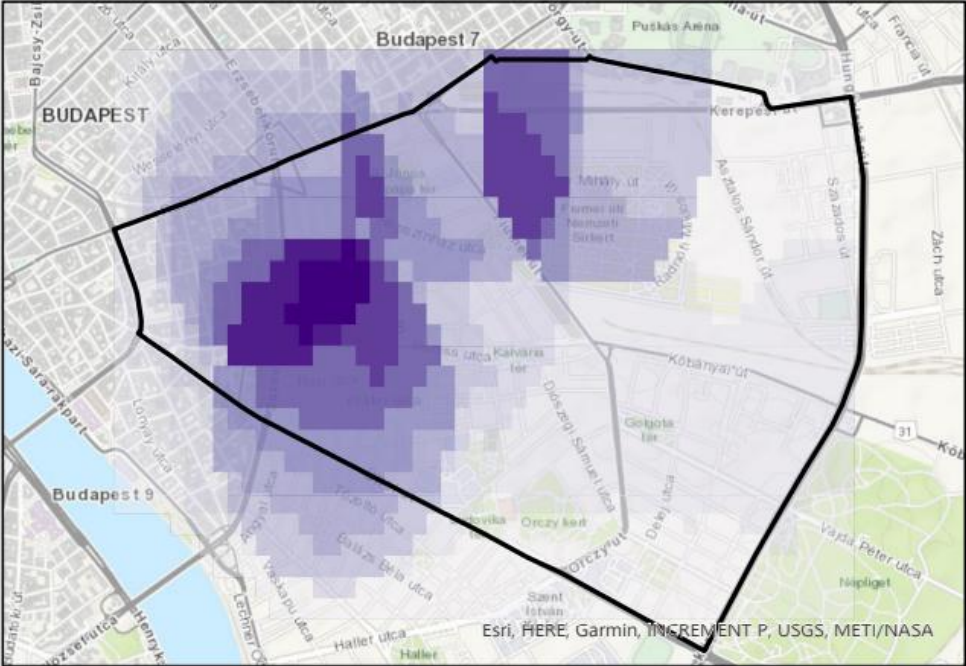


Figure 10. Distribution of thefts in Józsefváros (2024) (Author's own work)

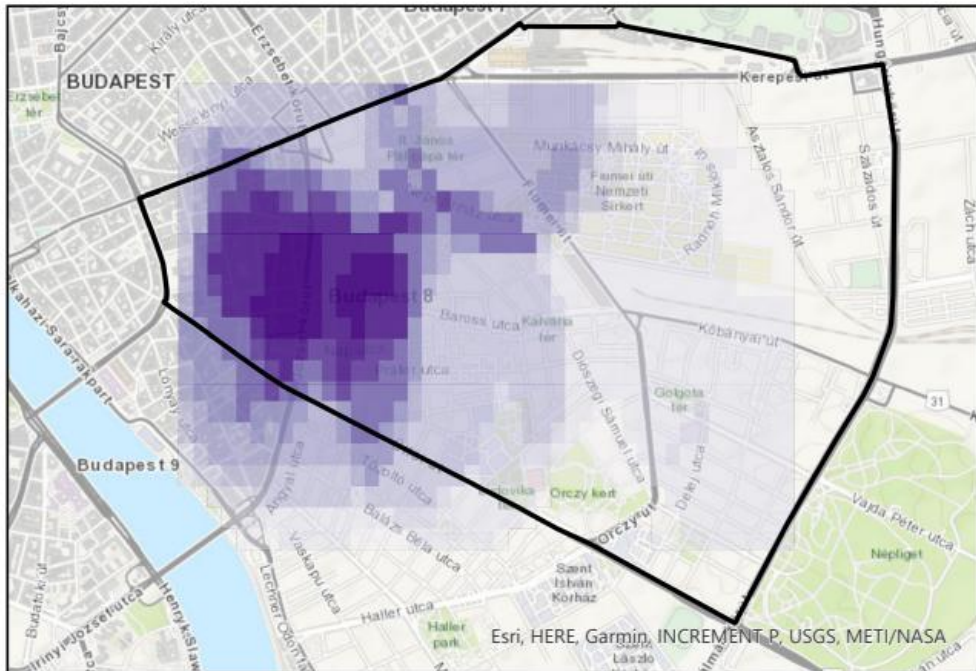
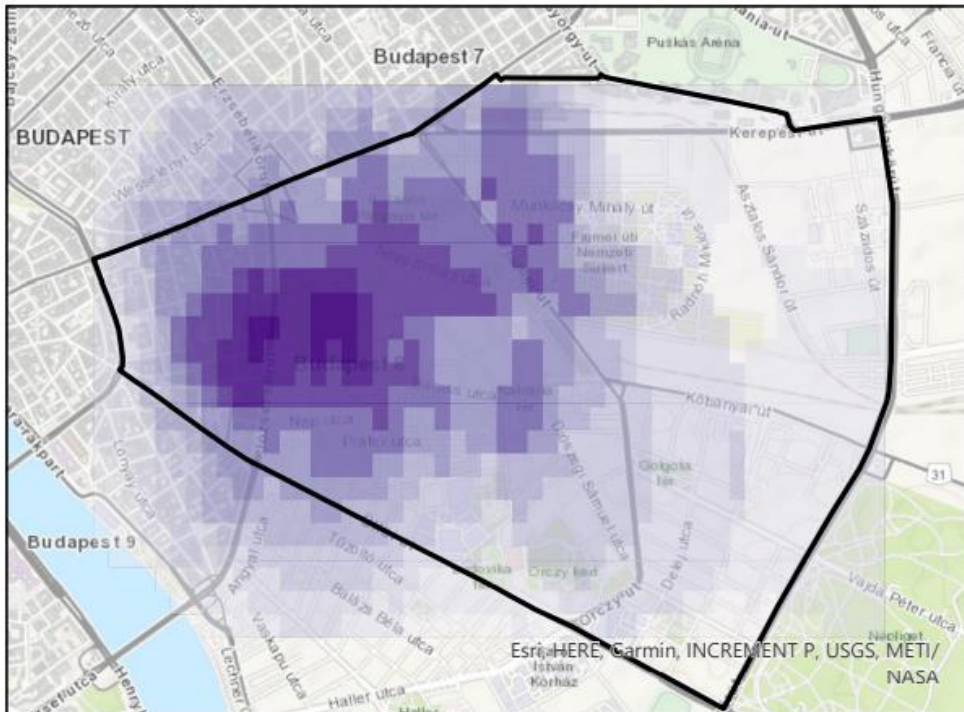


Figure 11. Distribution of burglaries in Budapest (2024) (Author's own work)

In the case of **petty offenses against property**, almost everything mentioned regarding theft applies here as well, though I would add a few specific points. At the district level, a high number of food thefts committed within the petty offense value limit is characteristic. This can certainly be considered a specific feature of Józsefváros. I attribute the reason for this to the fact that, in a district context, the proportion of individuals with below-average income levels is significantly higher than the national average. Many dislike the term "subsistence crime" because it is morally difficult to tolerate anyone committing a crime on these grounds. However, if we seek a justification for this expression within the crime geography of Budapest, it is interpreted in Józsefváros as survival crime from a criminological perspective.

Regarding vandalism (criminal damage), the circle of perpetrators often includes users of alcohol, drugs, or new psychoactive substances. This is due to the fact that substance use within condominiums has resurfaced, and their entry into stairwells and garbage storage rooms often occurs by destroying the magnetic locks of the entrance gates (Figure 12)



*Figure 12. Distribution of offenses against property in Józsefváros (2024)
(Author's own work)*

In the category of "**crimes committed in other public spaces**," the most affected areas are the major transport hubs: Blaha Lujza square, Rákóczi square, and the line of József boulevard. Where more people congregate, the probability of a crime being committed is characteristically higher.

In Józsefváros, the range of drug-related crimes must be highlighted; these are present in outstandingly high numbers in the areas indicated on the map. At Blaha Lujza square and its surroundings, for every street "dealer" apprehended, a new one takes their place because it is profitable to be there, as consumers look for them at these locations.

Furthermore, disorderly conduct and assault are prominent among crimes committed in other public spaces due to their frequency of occurrence. These two offenses are often committed in concurrence; that is, if one occurs, the other often follows. The majority of perpetrators are young adults or juveniles. Due to tensions experienced in society, the aggressiveness of young people is increasing, which also raises the number of disorderly conduct cases and assaults (Németh 2020). Regarding these two delicts, I should mention – as several researchers, including Máté Sivadó, have pointed out – that drug use increases aggressiveness, which in turn drives up the number of disorderly conduct cases and assaults (Sivadó 2020).

It should be noted that the DELTA Program (Total Anti-Drug Action Plan)¹³, as well as Act XIX of 2025¹⁴, introduced numerous amendments to the effective Criminal Code. Among other things, these updated the statutory definitions for both offenses against property and disorderly conduct, imposing stricter sanctions on links to narcotics. As mentioned above regarding the anomalies related to drug use in District VIII, the correlation between substance use and the number of violent crimes is clearly evident (Figure 13).

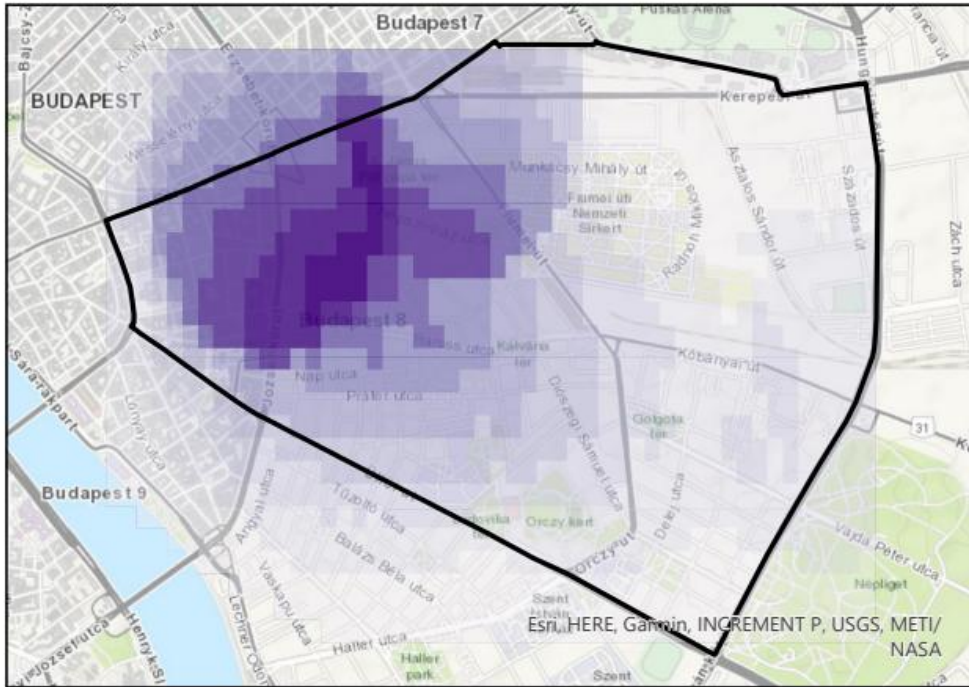


Figure 13. Distribution of crimes committed in other public spaces in Józsefváros (2024) (Author's own work)

The high number of classic **vehicle break-ins** is no longer detectable, yet they can still be observed sporadically. Tisztviselőtelep is a more suburban, garden-city-like part of Józsefváros. Based on the data received, it is evident that the highest number of vehicle break-ins occurred there.

¹³ A comprehensive Hungarian police and social strategy launched in March 2025 to suppress drug-related crime. Its objectives are the elimination of drug trafficking, the reduction of supply, and the strengthening of prevention.

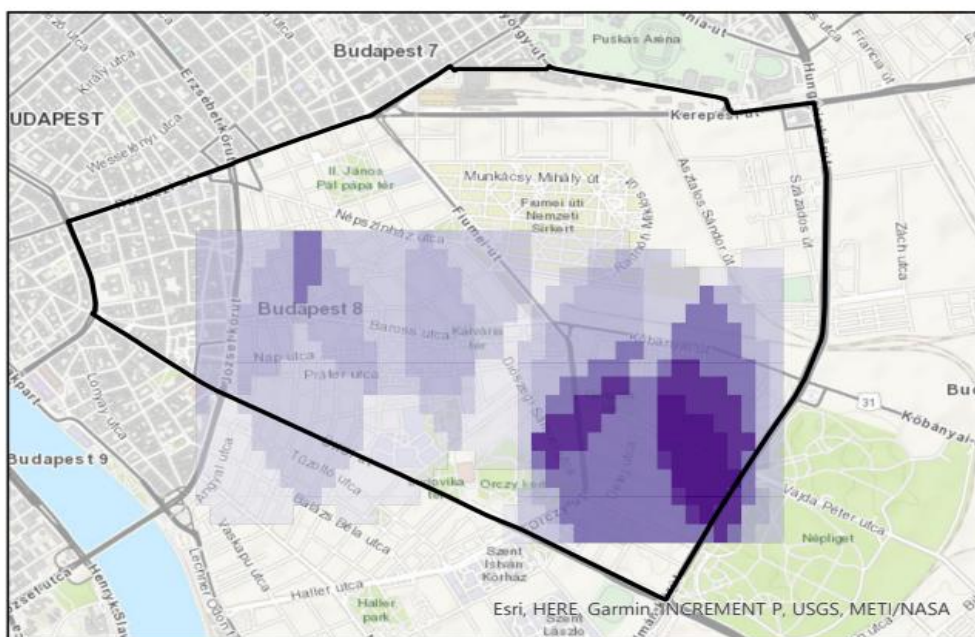
¹⁴ On legislative amendments related to the prohibition of the production, use, distribution, and promotion of narcotics.

Although surveillance cameras are installed in Tisztviselőtelep, they do not cover every corner due to the great distance between individual devices; furthermore, the coverage and angles of vision are adversely affected by trees.¹⁵

Pedestrian and motor vehicle traffic in Tisztviselőtelep is negligible. These circumstances greatly assist and favor the perpetrator in committing the crime "quietly."

It should be mentioned that the successor to the Józsefváros Market is located in the Ganz Quarter, where almost everyone – from merchants to ordinary shoppers – arrives by vehicle. Consequently, perpetrators "skilled" in vehicle break-ins are present there as well; it only takes a bag left in a visible place inside the car to attract the attention of peering eyes.

This phenomenon is generally true for the rest of the district as well. Typically, if the perpetrator feels the situation is "guaranteed" after a preliminary reconnaissance (lack of cameras, valuables placed in plain sight, low traffic), they proceed with the vehicle break-in (Figure 14).



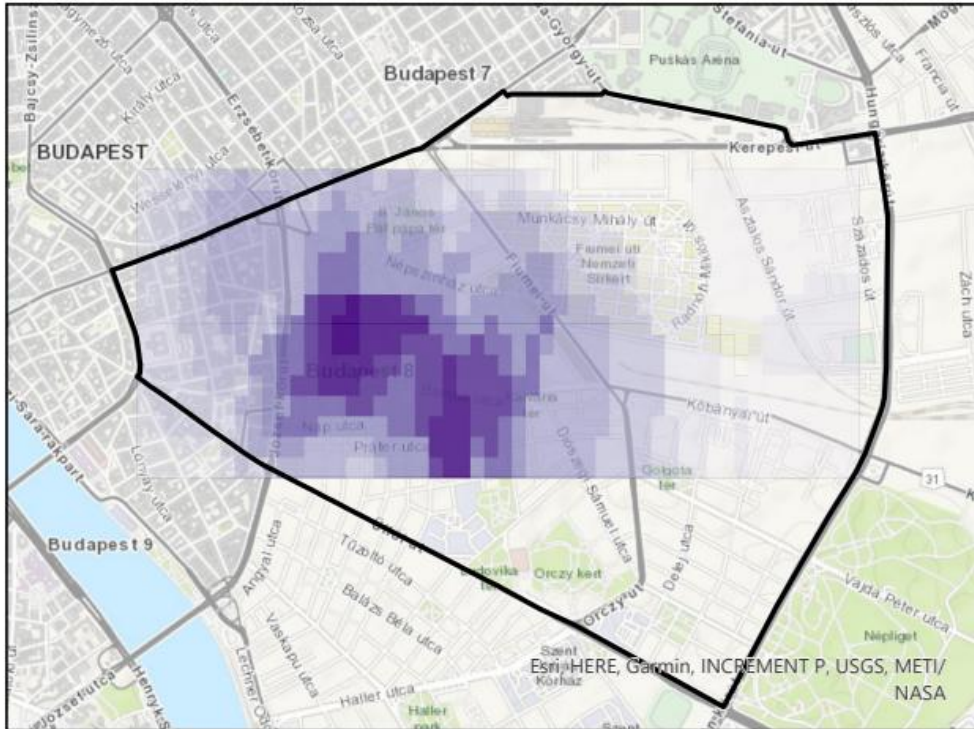
*Figure 14. Distribution of vehicle break-ins in Józsefváros (2024)
(Author's own work)*

Based on the map, residential **burglaries** primarily affect the Csarnok and Corvin quarters, as well as the line of József körút.

¹⁵ Surveillance cameras are present in increasing numbers in public spaces in Hungary as well. However, as several authors point out, there are both qualitative and quantitative deficiencies in this field. On one hand, more cameras would be necessary in terms of raw numbers; on the other hand, the quality of the existing ones is not perfect. Due to an insufficient number of cameras, users (municipalities) often resort to setting cameras to scan a larger area, which comes at the expense of quality (Mátyás 2020). This is also experienced in certain parts of District VIII, such as Tisztviselőtelep.

Perpetrators typically select locations based on ease of access, ensuring that entering and exiting the condominium is as simple as possible (e.g., by knowing the entrance codes¹⁶).

Burglaries generally occur in older-style buildings with open corridors. Based on the points mentioned above, it can be assumed that this segment of perpetrators has shifted from classic residential burglaries to the lower-risk method of stealing from "Airbnb" apartments, as described earlier (Figure 15).



*Figure 15. Distribution of residential burglaries in Józsefváros (2024)
(Author's own work)*

In the case of **vandalism**, identifying logical patterns is often difficult. Regarding the crime map of the capital, I have already written in detail about this offense and its various forms of commission. Many of those points could be repeated for Józsefváros as well. The motivation in this district is similar (motivated and unmotivated vandalism). Perhaps one local specialty of District VIII that can be highlighted is the occurrence – though not in vast numbers – of the previously mentioned stairwell vandalism resulting from drug use. The majority of these perpetrators are local residents who are under the influence of some new psychoactive substance or alcohol.

¹⁶ Perpetrators obtain entrance codes either through surveillance or by purchasing them from, for example, mail carriers. This caused many problems in District VII as well, where pimps bought the entrance codes for numerous downtown buildings, and prostitutes would handle their "appointments" in the basements of old buildings or in the landings of little-used service stairs.

Graffiti-style vandalism also appears here as a specific form of self-expression. It occurs in a diffuse manner across many areas of the district. Numerous "artists" perform this type of vandalism in highly visible public spaces throughout the district (Figure 16).

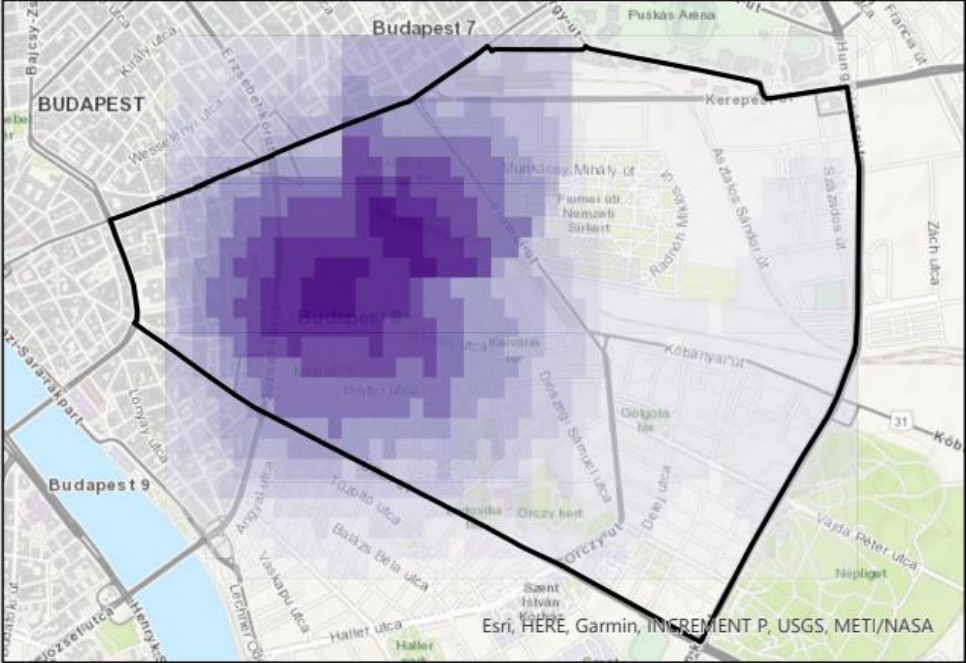
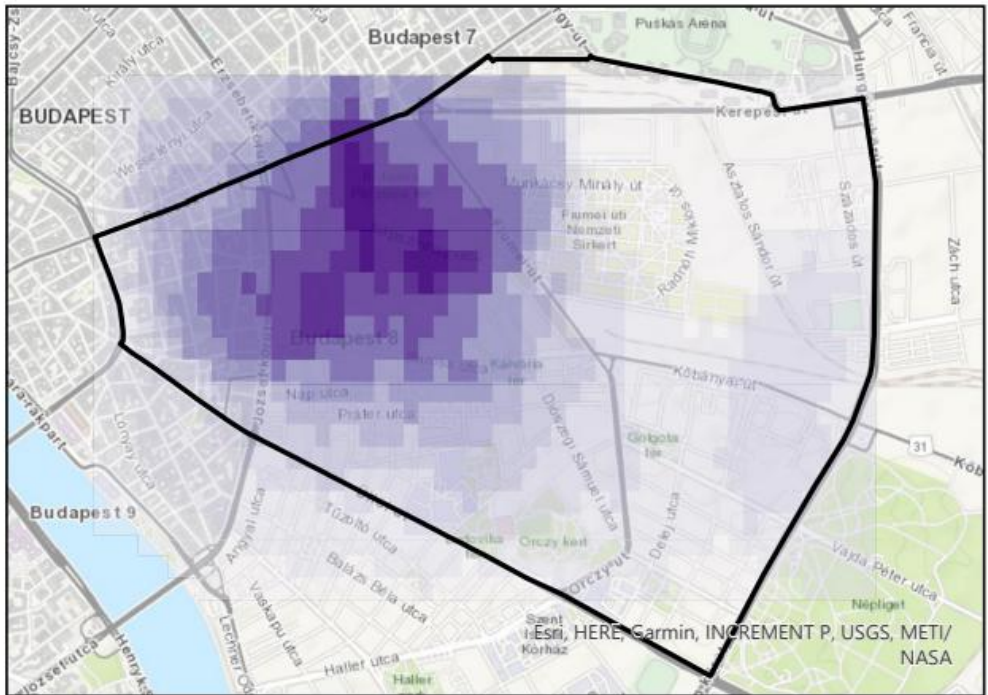


Figure 16. Distribution of vandalism in Józsefváros (2024) (Author's own work)

Violent Crimes Against the Person: Within this crime category, robbery and plundering occur most frequently. The locations are typically public transport routes, where perpetrators go on "patrol." Plundering is most common against individuals sleeping at stops or on transport vehicles – often those under the influence of some substance – but perpetrators also exploit people with physical disabilities or defenseless minors.

Among those committing robbery in public spaces and other areas open to the public, the department stores and shops mentioned under the section on theft should be highlighted. This occurs when a thief caught in the act uses violence or a direct threat against life or physical integrity in order to retain the stolen property [Criminal Code, Section 365 (2)]. This includes one of Budapest's busiest tram lines, the 4-6 tram, which passes through the district and sees countless pickpocketing incidents daily, as well as the previously mentioned shopping centers and their surroundings (Figure 17).



*Figure 17. Distribution of crimes against the person in Józsefváros (2024)
(Author's own work)*

5 CONCLUSIONS AND RECOMMENDATIONS

Hypothesis 1: The structure of crime varies across different urban structural zones in certain districts of Budapest.

My assumption was based on the premise that people of different socio-economic statuses live in different spatial structural zones, committing different types of crimes. Furthermore, I hypothesized that the varying urban fabric induces perpetrators to commit different types of delicts. This first hypothesis was only partially confirmed. This is partly because urban structural zones in large cities have become "mosaic-like" today; in many cases, it is difficult to isolate individual functional areas. However, downtown areas remain more "profile-pure," where the delicts characteristic of metropolitan crime can be more clearly distinguished. Nowadays, urban structure does not represent sharply delimited zones; instead, from a criminological perspective, it results in a structure of varying hotspots where function is the determining factor, rather than historically established zonation.

Hypothesis 2: Reurbanization processes can exert a statistically significant positive effect locally on the rehabilitated areas of Józsefváros, manifested both in a decrease in the number of crimes and in favorable changes within the crime structure.

My second hypothesis was based on the assumption that the population replaced due to reurbanization primarily consists of a younger, wealthier, and more qualified stratum with a lower propensity for crime.

According to my research, this hypothesis was confirmed. In several areas of Józsefváros where rehabilitation works took place (e.g., Corvin-quarter, Orczykert, and the vicinity of Diószegi street), the number of registered crimes decreased significantly. What is noteworthy is that not only the crime figures but also the structure of crime changed. The proportion of offenses categorized as violent or "subsistence" crime is lower. I believe this further substantiates the importance of architectural crime prevention (CPTED).

Hypothesis 3: The frequency of offenses against property will be significantly higher in the downtown districts of the capital than in the outer districts.

I based this hypothesis on the fact that, due to higher population density, far more people frequent the city center than the outer districts, which favors the commission of numerous property crimes (e.g., pickpocketing, vehicle break-ins). Furthermore, the majority of tourist destinations are located in Districts V–VII, which further increases the risk of certain offenses.

The third hypothesis was fully confirmed. Metropolitan crime is most prevalent in the inner districts (V, VI, VII). The city center is not only a hub for the resident population but also for the flow of commuters (local residents) and tourists.

This increases the risk of opportunistic crimes, as the number of vulnerable targets rises due to the significant concentration of people. This is primarily manifested in the emergence of higher property crime rates.

Hypothesis 4: The number of residential burglaries does not necessarily show peak values in areas of higher social prestige, but rather in locations where transport geography factors provide excellent escape routes for perpetrators.

I primarily based this hypothesis on "Rational Choice Theory," assuming that logical thinking and rational decision-making manifest in both the number and spatial distribution of residential burglaries, as burglars take escape routes into account during their deliberation. My research supported the above hypothesis. I confirmed that the proximity of escape routes – such as expressways and motorways – can, in many cases, be considered the most important factor in selecting the location for a burglary. This is clearly demonstrated by the locations shown on the map, the majority of which are situated relatively close to linear infrastructure that ensures a quick and efficient escape.

Hypothesis 5: Due to the expansion of video surveillance systems, the number and spatial distribution of vandalism incidents do not necessarily show the highest figures around downtown entertainment venues; instead, as a result of crime displacement, acts of vandalism and petty offenses primarily manifest along public transport routes.

In my fifth hypothesis, I assumed that the deployment of surveillance systems would cause the number and geographical distribution of vandalism to shift from the vicinity of downtown entertainment venues – which have higher camera coverage – toward areas near public transport routes. The hypothesis proved to be supported, confirming the phenomenon of crime displacement (the "waterbed effect"). Surveillance cameras successfully push criminal activities out of monitored downtown hotspots. Simultaneously, these offenses are detected in higher numbers in locations where camera coverage is not as extensive as in central areas. Furthermore, I concluded that while public transport vehicles and stops can still be considered quasi-protected, the areas *surrounding* public transport stops generally are not, as there are significantly fewer surveillance cameras in those immediate vicinities.

Q1: Regarding the correlations between settlement structure and crime, I have established that the location of crime hotspots in Budapest – and particularly in Józsefváros – shows a close correlation with the city's functional spatial structure and the density of transportation hubs. The study revealed that the concentration of crime is highest where transit traffic (metro stations, junctions) and commercial/service functions intersect, as these spaces provide the highest "victim density." Thus, transportation hubs do not merely provide accessibility but also function as criminogenic points of attraction within the urban structure.

Q2: In the case of urban regeneration and crime prevention, the urban regeneration programs implemented in Józsefváros have significantly influenced the spatial distribution of crime: in the rehabilitated areas, the number of registered crimes decreased substantially, and their structure changed in a more favorable direction. At the same time, the results indicate that alongside the renewal of the physical environment, the change in land use (e.g., Corvin Quarter) successfully displaced traditional forms of street crime. However, a certain degree of spatial displacement can be observed in the surrounding, non-rehabilitated streets, meaning that crime is "pushed out" toward more peripheral spaces in poorer condition.

Recommendations for the Police, Civil Guard, and Municipal Law Enforcement

1. Introduction

I believe that research should not be an end in itself; it is only meaningful if it yields tangible and integrable practical benefits. Fundamentally, I consider myself a person with a practical mindset; therefore, throughout my research, I have been guided by the goal of achieving scientific and pragmatic results that serve the public good.

I have grouped my research findings around three specific organizations. I intend to formulate recommendations for the Police, the Civil Guard, and Municipal Law Enforcement.

2. Recommendations for the Police

2.1. Targeted Patrolling Strategy

The application of the hotspot policing principle means that police resources are not distributed evenly across the city; instead, they are concentrated primarily on the areas most affected by crime. I have identified the major hotspots in Budapest and Józsefváros, which can assist in police work and service organization.

Recommendations:

- **Ensuring increased police presence** at designated hotspots (e.g., Blaha Lujza Square, Nyugati Railway Station, Keleti Railway Station) during specific time periods identified through crime maps and statistical analysis.
- **Implementation of a flexible patrolling system** that allows patrol units to adjust their routes dynamically based on real-time criminal incidents and data.
- **Preventive instead of reactive presence:** police units should not only arrive at the scene after a crime has been committed but should maintain a proactive presence in areas where the statistical probability of crime is higher.

2.2. Development and More Efficient Utilization of Video Surveillance Systems

As demonstrated in my hypothesis, surveillance systems can significantly contribute to crime prevention, especially in areas where property crimes and violent offenses are frequent.

Recommendations:

- **Increasing the number of surveillance cameras** at major transport hubs such as Örs vezér tere, Kőbánya-Kispest station, and Corvin-negyed.
- **Implementation of AI-supported systems** capable of automatically recognizing suspicious movements or events (e.g., physical altercations, the drawing of a weapon).
- **Expansion of License Plate Recognition (LPR) systems**, particularly around large parking lots and P+R facilities where vehicle break-ins are common.

2.3. Rapid Response and Cooperation

The efficiency of the police can be enhanced by establishing closer cooperation with the Civil Guard and Municipal Law Enforcement.

Recommendations:

- **Creation of joint mobile units** with the participation of the police, the Civil Guard, and Municipal Law Enforcement.
- **Sharing of law enforcement databases and information** to ensure faster intervention and response times.
- **Establishment of a complaint management and feedback system** for the public, which can assist in the early identification of emerging crime trends.

3. Recommendations for the Civil Guard

3.1. Public Involvement and Neighborhood Watch Programs

The Civil Guard can play a vital role in activating local communities and in crime prevention. One of the core principles of architectural crime prevention is reclaiming public spaces and making them safe, a process in which the Civil Guard can provide significant assistance.

Recommendations:

- **Expansion of Neighborhood Watch programs** ("SZEM" movement) to large housing estates, such as the Havanna estate and Káposztásmegyér.
- **Organizing crime prevention counseling and public forums**, where Civil Guard members can inform residents about local crime trends and safety measures.
- **Organization of voluntary patrol services** that can assist the police during problematic periods (e.g., weekend nights).

3.2. Increasing Presence in Public Spaces

- **Initiating joint Civil Guard–Police patrols**, especially in areas where the public's subjective sense of security is low.
- **Implementing night watch services** in locations where vandalism and disorderly conduct are frequent (e.g., the vicinity of downtown entertainment venues).

4. Recommendations for Municipal Law Enforcement

4.1. Improving Public Safety

Municipal Law Enforcement can play a key role in maintaining public order by monitoring high-traffic areas and public spaces. Crime maps serve as a vital starting point not only for the police but also for law enforcement agencies when organizing services.

Recommendations:

- **Increasing the presence of patrol pairs** in areas with high pedestrian traffic.
- **Regular public space inspections** to manage issues related to illegal vending, aggressive panhandling, and homelessness-related public order concerns.
- **Development and maintenance of the surveillance camera system** to ensure technical reliability and prevent system failures.

4.2. Utilizing Video Surveillance Analysis

- Municipal Law Enforcement should develop a system for the **more efficient analysis of camera footage**.
- **Implementation of automated alert systems** to ensure a rapid response based on reports from the public.

6 NEW SCIENTIFIC RESULTS

1. Identification of criminal geographical hotspots in Budapest and Józsefváros

I analyzed the crime data of the capital and identified locations exhibiting above-average crime frequency. To my knowledge, such comprehensive spatial analyses for the capital have not yet been conducted. Similarly, I analyzed the crime situation within Józsefváros and marked the specific areas where criminal infestation exceeds the average. Revealing these hotspots significantly aids operational crime-fighting efforts, thereby reducing the number of registered crimes.

2. Adaptation of the Ratcliffe Matrix to Hungarian conditions

I have revised the Ratcliffe Matrix, supplementing it with several elements that make it more suitable for application within the Hungarian context. The matrix required adjustment for two main reasons: first, the original author created it nearly two decades ago and could not account for recent changes in policing; second, Ratcliffe formulated his recommendations for American conditions, which are not always optimal for the domestic environment.

3. Exploring the relationship between urban development stages and crime trends

While geography, urban studies, and settlement development have long dealt with urban evolution, and legal and criminological sciences have addressed crime, the intersection of the two – crime geography – has not yet deeply explored the criminogenic consequences of specific urban development stages. To my knowledge, I am the first to examine this in detail, supported by practical examples.

4. Presentation of a new type of urban development stage and its criminal implications

Together with my supervisor, we have identified an emerging urban development stage in several Central and Eastern European countries: the neo-industrial stage. I have published a detailed theoretical framework of this phenomenon in my dissertation. In my view, the labor shortage resulting from this new type of industrialization brings in a predominantly male workforce from third-world countries, which carries potential criminal risks.

5. Exploration of crime prevention opportunities offered by CPTED in Józsefváros

I conducted qualitative data collection in District VIII, based on which I formulated CPTED-based (Crime Prevention Through Environmental Design) recommendations. These architectural solutions are designed to reduce the number of registered crimes in specific areas. No research of this nature had previously been conducted concerning Józsefváros.

6. Criminal Geographical profile of Józsefváros

Although various disciplines and criminogeographers have studied District VIII, a detailed, exploratory geographical analysis of this depth has not yet been performed. My research detailed the physical and social geographical characteristics of the area in parallel with its criminogeographical features. Throughout the identification of problems, I consistently sought prophylaxis, outlining potential solutions and crime prevention proposals.

7 THE AUTHOR'S PUBLICATIONS RELATED TO THE TOPIC OF THE DISSERTATION

Bói, László:

Az utazó bűnözés és a sorozatbűncselekmények összefüggései
In: Gaál, Gyula; Hautzinger, Zoltán (szerk.) Modernkori veszélyek
rendészeti aspektusai

Pécs, Magyarország: Magyar Hadtudományi Társaság Határőr
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