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Project Title: London house prices and Crime rates.

London House Prices and Crime Rates

This project will assess average house prices in London and crime rates within the same area. Research into the link between house prices and crime rates is limited (Ceccato & Wilhelmsson, 2020). In criminological theory, it has been documented that certain geographical areas exhibit higher levels of crime than others (Andresen & Malleson, 2011). Drawing from this, similarities can be seen in house prices across the London area, to wit particular locations have higher prices or lower prices depending on the area. This paper aims to draw an analysis on the range of average prices of houses within each borough of London as well as the rate of crime within each borough. The view of this project is to consider any dichotomies between average house prices and crime, whilst also observing any connections between the two. This paper is broken into sections discussing the history of house prices in London, the history of crime rates in London, and finally an analysis of data from 2017 of house prices and crime rates.

House Prices in London

House prices in London have been historically volatile, this stems from many factors within the economy as well as issues with supply and demand (Marsden, 2015). The nature of house prices in London presents as cyclical, following a boom - bust pattern where approximately every 10 years the cycle repeats (Hamnett, 2009). This boom - bust phase can be seen throughout Great Britain and derives from rising price inflation within central London, particularly in London boroughs where prices are high, and the supply of houses is low (ibid., p303). Growing inflation in London, as well as increasing salaries in certain sectors, indicate that central London boroughs (areas such as Kensington, Chelsea, and Westminster) remain the most expensive areas to buy housing. According to the land registry in the United Kingdom, the average property (detached houses, semi-detached houses, terraced houses and flats, and maisonettes) price has risen from £12,397 in 1977 to £479,931 in 2018 (UK House Price Index, n.d.). The inflation rate in the United Kingdom between 1977 and 2018 was 443.09%, which translates into a total increase of £54,930.19. This means that £12,397 in 1977 is equivalent to £67,327.19 in 2018. The average annual inflation rate between these periods was 4.21% (GBP Inflation Calculator - British Pound (1956-2021), 2021). In other words, a house that was worth on average £12,397 in 1977 should be worth £67,327.19 in 2018 but is now being sold on average for around seven times its value. This demonstrates that whilst inflation has caused house prices to increase it does not constitute fully why prices have increased so dramatically throughout the years, there are other factors at play. Within urban area’s such as London city and its surrounding regions, there is a set of distinct and competitive governments that influences the price of housing in terms of tax systems, school numbers, social demographics, socioeconomic factors, and external features such as crime rates, pollution, and other environmental factors (Stadelmann, 2009).

These potential influences affect house prices in a variety of ways, for example, Taylor (1995) mentions that high neighbourhood crime rates have historically reduced property prices within urban areas such as Baltimore in the United States. In the case of London, it has been shown that increased house prices at the upper end of the market for the most expensive and desirable properties influence the price of surrounding areas. There is a significant proportion of high-income buyers who purchase housing in areas that are traditionally expensive, causing a disparity in supply and demand. This drives prices up in surrounding areas to such a level that even many higher-income buyers are unable to afford such properties (Hamnet, 2009; National Economic and Social Council, 2004). Whilst external factors that influence the price of housing have been mentioned, it is worth noting that house pricing also has a direct connection to demographic dynamics within certain locations. Housing markets play a role in rising inequality, in terms of living standards, income, health, education, public services, and transport to name a few (Muellbauer & Murphy 2008).

The interplay between house prices and demography thus entrenches imbalance depending on the geographical area. There is evidence to suggest that areas with high house prices also have access to what are considered good schools, amenities, employment, transport, and other needs required for the community (Gibbons & Machin, 2008). On the other hand, the opposite of that is true in areas with low house prices, these areas show higher deprivation levels and higher poverty rates (Dewilde, 2021). Property prices are also likely to keep increasing, statistics show that since 2009, London’s house prices have had a 7.9 percent increase year-on-year (Marsden, 2015). This phenomenon is not just isolated to London, more recently the western world has seen property prices increase substantially even during a global pandemic (Cherney & Kowsmann, 2021). Rising house prices create a barrier to low - income earners, this contributes to housing wealth inequality across generations and restricts social mobility (Marsden, 2015). This embeds poverty and concentrates it on specific locations, those who live in poverty tend to live in areas of deprivation where services are inferior to their needs, schools are under-funded and unemployment levels are high (Lupton, 2004). Those living in areas with high poverty are more likely to live in overcrowded and unsuitable housing, this particularly affects a child’s development. In the UK children who grow up in poverty have cognitive development scores on average 20 percent below those of children who have never experienced poverty (The effects of poverty, 2021). As housing wealth inequality becomes generational, moreover generational poverty, locations across London with these factors tend to exhibit higher crime levels (Newburn, 2016). For this project the focus on crime levels in London boroughs will be assessed through the lens of house prices in the same areas. The next section will discuss crime in London whilst also considering the dynamic of crime in certain areas.

Crime in London

Several factors measure crime rates in London. The Crime Survey gathers statistics for England & Wales and crime data is also recorded by three police forces - The Metropolitan police, the City of London Police, and the British Transport Police. Between 2016 and 2020 the Office for National Statistics reported an 18% rise in crime related to persons (Crime in England and Wales: Police Force Area data tables - Office for National Statistics, 2021). Throughout the years London has seen fluctuations of crime which solely depend on the type of crime recorded as well as the area the crime occurs (Langton, et al, 2021). Within the Metropolitan Police data, offences are listed as Homicide, Firearm offences, Violence against the person, Sexual offences, Robbery, Burglary (residential), and Theft of and from motor vehicles. Data from police forces within the London municipal area including the City of London Police also include offences including anti-social behaviour, bicycle theft, burglary, criminal damage and arson, other crime, other theft, possession of a weapon, public order, robbery, shoplifting, theft from the person, vehicle crime and violence and sexual offences.

Of the offences listed the highest rates of these crimes per 1000 people within the population occur within the city of London (London Borough Overview, 2021). This shows that there are indeed areas where more crimes occur, these are known as crime hot spots. Crime hot spots are places characterized by high crime frequency, and although the boundaries of these spots may not be visible, their extent and presence tend to be stable over time (Weisburd & Amram, 2014., p102). Central London exhibits some of the highest occurrences of crime, for example, the city of London borough traditionally has the highest crime rate followed by Westminster. It is also worth noting that these areas inhabit populations of affluence and high-income earners, which as mentioned above influence the high price of housing in the area. Furthermore, within these areas there is a high level of deprivation, in Westminster pay inequality is the highest in London, there is ten times the number of rough sleepers compared to any other borough and it is 6th in the top 25 local authorities with the highest levels of child poverty across the UK with 41.29% of children in poverty in 2017 (Deprivation in Westminster, 2021). By this analysis it may be said that deprivation in certain locations may be causal of crime and vice versa, London City Hall published analysis confirming a strong link between serious youth violence and Londoners affected by deprivation, poor mental health, and poverty (Revealed: full links between poverty and violent crime in London, 2019).

This does not suggest that those who live in areas of high deprivation commit crime, many other factors that influence an individual’s choice to participate in criminal activity (Webster & Kingston, 2014). Those who experience poverty and reside in areas where crime rates are high, deprivation levels are above average and house prices are far outside the range of affordability tend to be the victims of crime. This correlates to the statistics in Westminster, where there are high occurrences of crimes and high victimisation rates (Greater London Authority, 2018). To conclude, it is clear that rising house prices in London affect the greater community in terms of social deprivation and further poverty development. There is a dichotomy between areas with high house prices and areas with high crime rates - the same areas that exhibit populations with high salaries additionally have elevated populations of deprived individuals. The next section will assess the geography of London boroughs applying house price statistics and crime rate statistics. Analysis of types of crime within each borough will be considered.

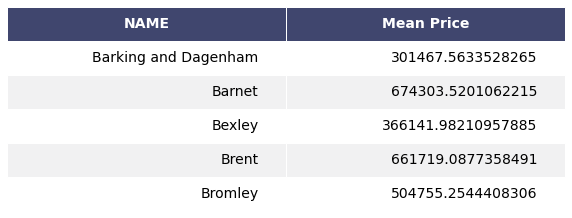
Data Analysis of London house prices and crime rates

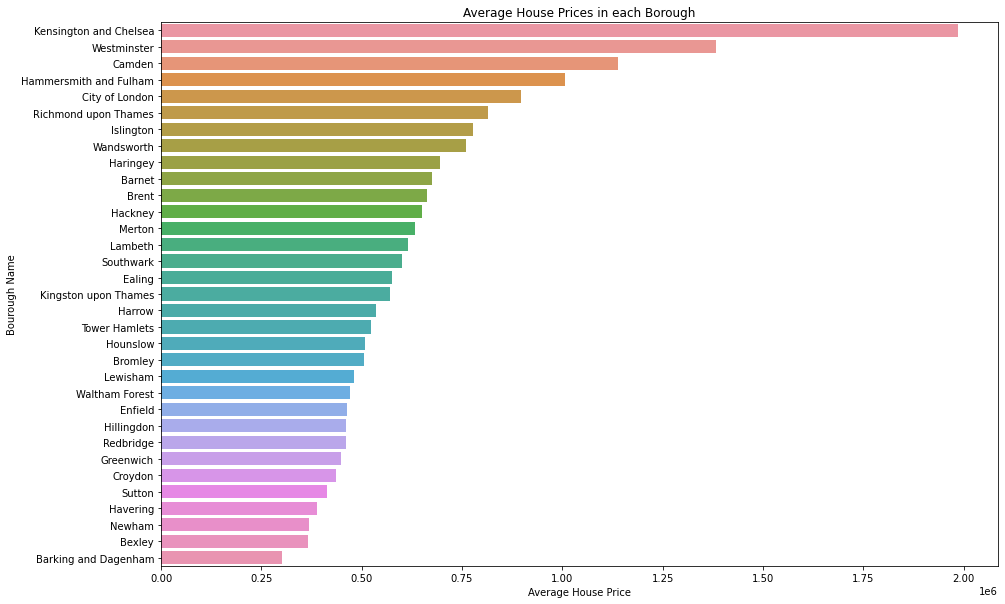
To assess crime occurrences and house prices in London, an analysis will be provided through mappings of 33 London Boroughs (locations of London governed by a distinct Local Authority). Data sets used will include London house prices, London crime rates by borough sourced from data.police.uk, data listed as ‘major category offences’ from data.london.gov.uk and spatial data including a geometry column with coordinates associated with specific London Boroughs. The data sets being utilized are filtered to the year 2017, this specific year was chosen as the data sets are full, accurate and from reputable government sources.

House Price Data

House price data in this analysis includes columns for price, year, number of rooms, geometry and other aspects related to housing, here is the top of the data set used for this analysis:

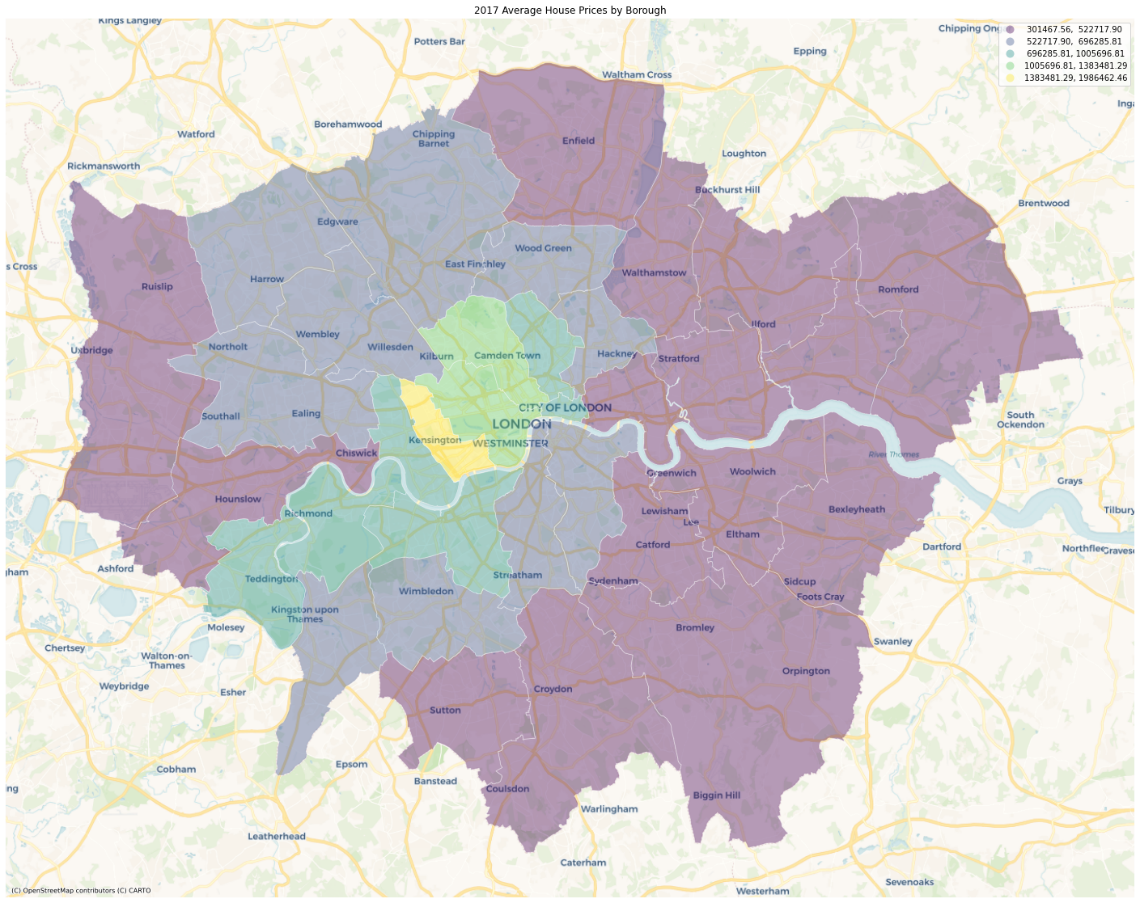
Reducing the dataset to the year 2017 required a filtering method, the produced data set was then aggregated into average house prices for each borough in London, this was also joined to the crime rates for each borough. The resulting data set is displayed.





A bar chart of the areas and the average price is displayed.

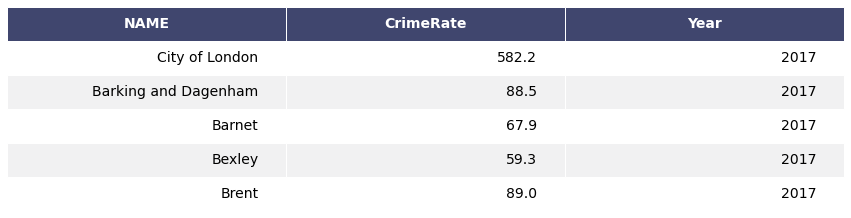
The bar chart shows that the highest house prices are in central London Kensington & Chelsea have an average house price of £1,986,462.46, followed by Westminster with an average of £1,383,481.29.

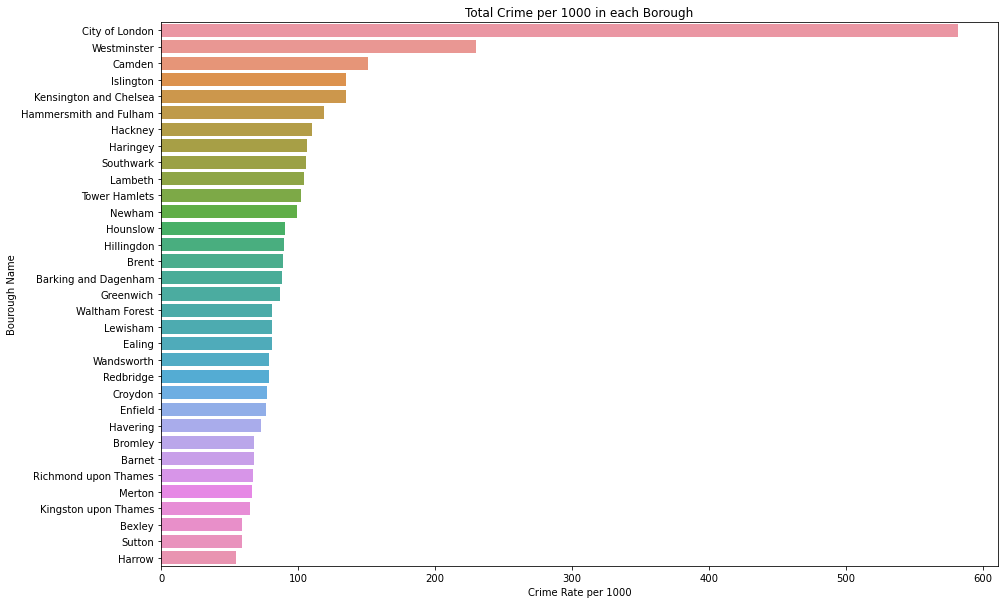
To ensure the averages were spread into boroughs the data was joined to geojson file of London boroughs – this process allowed for geospatial analysis, i.e., average house prices could then be displayed through a map of London. The map displayed shows a choropleth map of the average house prices in London.

The map shows that the highest house prices are concentrated towards the centre, with lower prices on the outskirts of the London area.

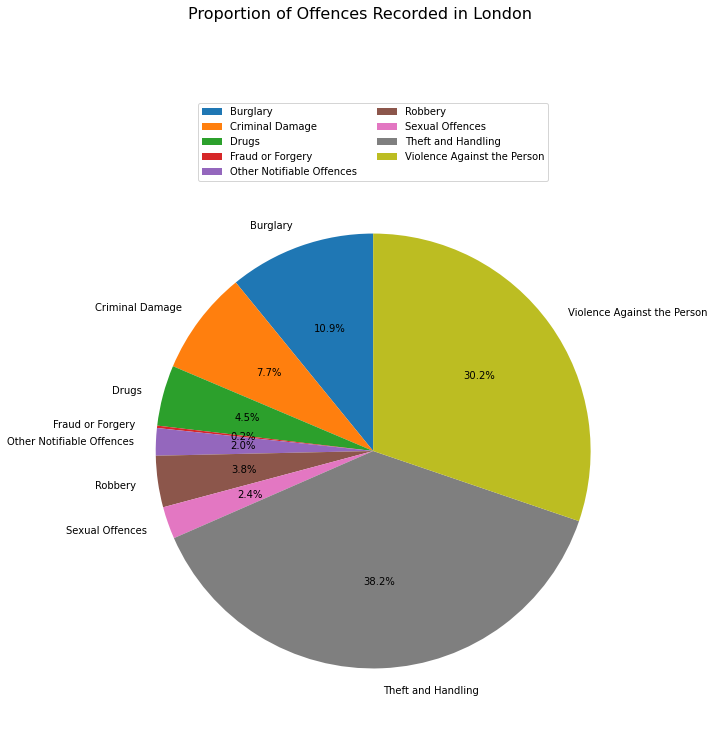
Crime Rates Data

Crime rates used for this analysis are sourced from data.police.uk, the data set provides rates for each London borough that have been gathered annually in a monthly format. For this project to make the data more readable and to perform analysis, monthly figures have been summed into annual figures, in this case the year 2017. Rates are calculated per 1000 population for each borough. Displayed is the top of the crime rates data set:

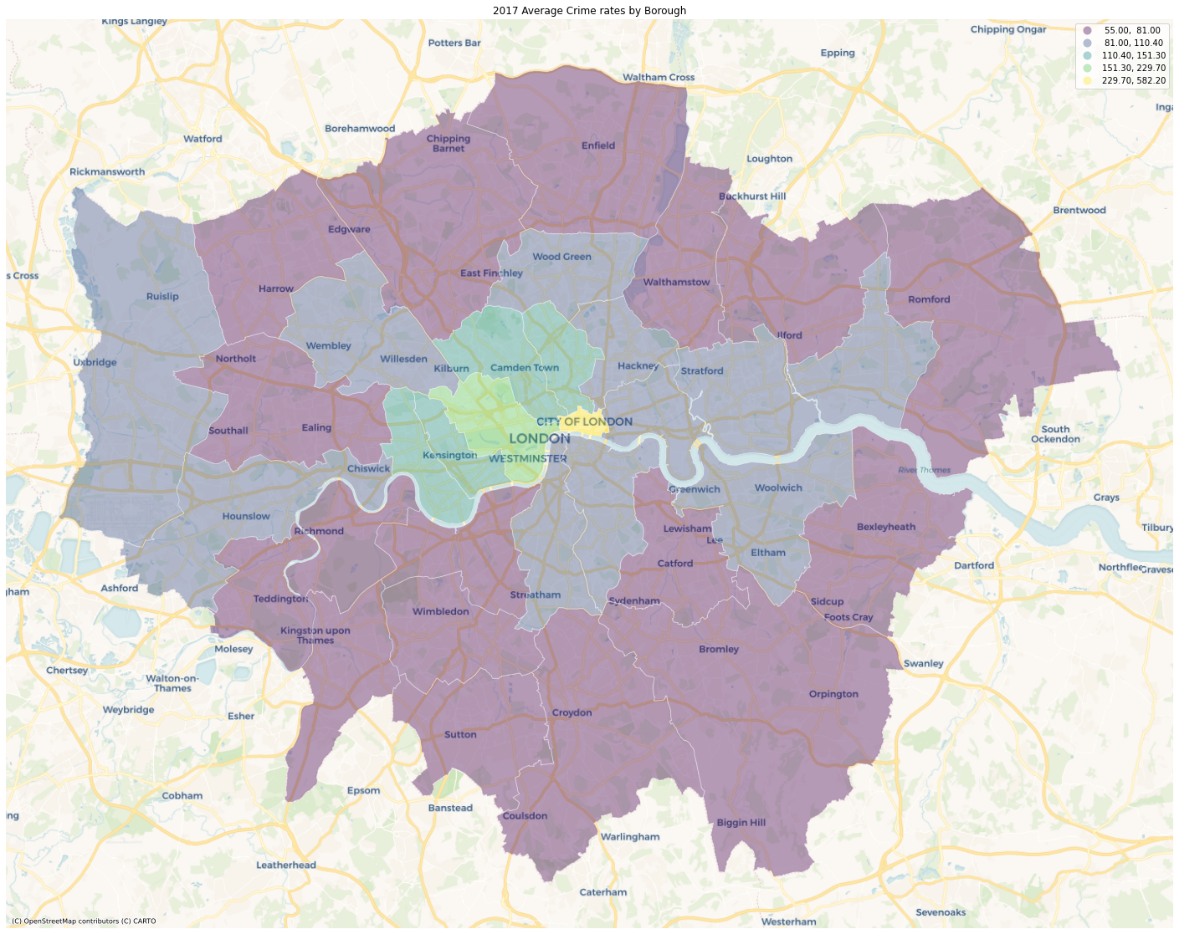
To assess where the most/least crime rates in each borough are a bar plot is shown here:



The most crime occurs in the City of London with 582.2 per 1000 of the population followed by Westminster with 229.7 per 1000 of the population. Crime data that has been collected here include offences, burglary, criminal damage, drugs, fraud and forgery, other notifiable offences, robbery, sexual offences, theft and handling and violence against the person. A pie chart displaying the proportion of these crimes is included here (this is a breakdown of offences that occur in the London boroughs included in the crime rate statistics):



Like the house price data, crime rates for each borough in London have been geographically merged with the geojson file of London boroughs, the resulting map is displayed.

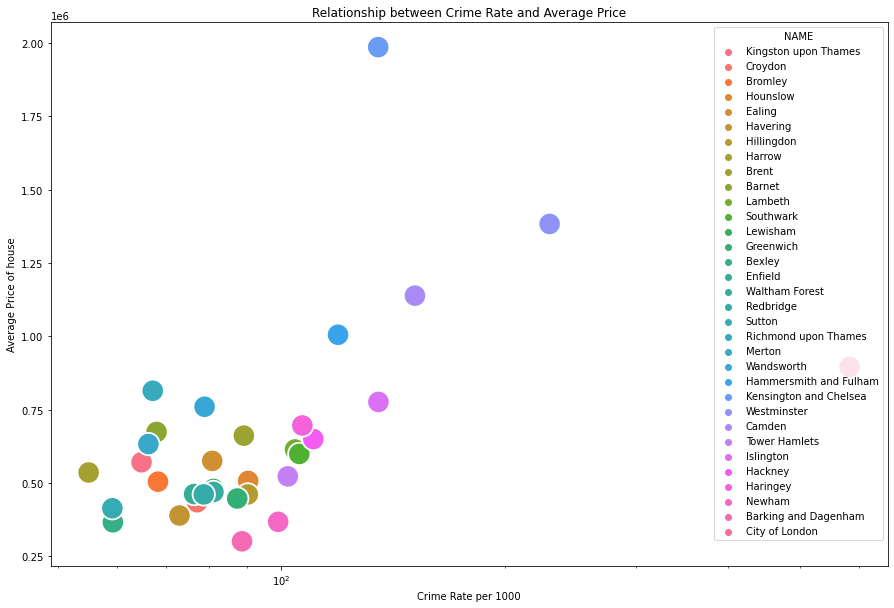


The map shows concentration of crime to the centre of London. Crime rates then reduce when looking at the outskirts of London.

Relationship between house prices and crime levels in London boroughs

The purpose of this paper is to analyse dichotomies between house pricing and crime levels. Further analysis may have been undertaken to assess whether crime level affects house prices i.e., whether low crime areas have low house prices or vice versa. The lack of suitable data and difficulty in establishing what exactly determines a house price in London impeded this type of analysis. Previous studies have completed investigation on this, namely Ceccato & Wilhelmsson (2020)’s paper ‘Do crime hot spots affect housing prices?’. The authors implemented a hedonic model of house prices vs crime rates in the metropolitan area of Stockholm in Sweden. Their analyses focused on a combination of property sales with locations of crime hot spots. The overall effect on house prices and crime rates was relatively small, however when measured by distance to a crime hot spot, the effect could be seen more clearly. Vandalism was found to have affected prices for both multi and single-family housing, with more expensive housing being located a far distance from this type of crime.

For analyses to be conducted this way in the London boroughs, obtaining data related to distance of crime in a specific area would have been paramount. As an alternative, an attempt to demonstrate a relationship between average prices and crime rates is shown here:



This scatter plot shows a cluster of data in areas with low house pricing. There are also some outliers here which show very high house prices and high crime rates in some areas.

Discussion

The analysis shown here reflects the dichotomy between house prices and crime rates. In central London both factors exhibit proportionally high levels of house pricing and crime levels. This illuminates the extremes that occur in central areas of London - where most high-priced houses are possessed by the wealthy elite, the majority of inhabitants experience severe deprivation and low house ownership. Statistics show that 50% of London's wealth is owned by the top 10% and the bottom 50% own only 5% (Trust for London, 2021). It has been identified in this paper that areas with high deprivation also exhibit high levels of crime, factors such as wealth inequality influence this reality. The high proportion of wealth in inner city London creates an imbalance of homeownership and ultimately drive house prices up, thus the dichotomy between high levels of crime and high house prices is realised.

Conclusion

Whilst wealth inequality has been seen as an influence on both house prices and crime rates, other factors must be taken into consideration. This paper has limited the scope in terms of other variables that may affect house prices. City centres traditionally have areas with high house prices due to their location to Central Business Districts, employment opportunities, essential services, transport, and other resources needed for the individual (Mills, 1967). In recent years house prices have also increased worldwide due to several factors including low interest rates and secular stagnation (Turner, 2018). Similarly, crime rates have traditionally been high in city centres due to higher population size and more opportunity to commit crime in these areas (Glaeser, & Sacerdote ,1999). Those who commit crime in city centres also know that the probability of getting caught is low and that security forces, equipment, and staff, fall short both in quality and in quantity (Aksoy, 2017).

London’s population is growing due to the attraction to amenities, access to employment and rise of income opportunities (Marsden, 2015). This creates a supply and demand issue where the population of a concentrated area battle for limited resources, effectively driving up house prices and increasing the cost of living. A domino effect of this is then observed with higher crime rates concentrated to these areas. The demand for housing has been fuelled by greater financial liberalisation and historically low costs of borrowing, this in turn causes housing to become commodified and transformed into a profit-making mechanism (Aalbers, 2016). The expansive growth of London’s population in recent years coincides with both high house prices and crime rates, this however does not accord with increased housing supply. Governments have been slow to deliver on the supply of housing and relied heavily on the private market which entrenches the idea of selling house for a profitable gain (Wilson & Barton, 2021). Tackling the supply problem of housing would create a fairer market for low-income earners and in turn would lead to less social problems such as crime and deprivation (Grotti et al, 2018).

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