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Explaining the effect pattern of crimes in Tehran on the economic growth of neighboring provinces (based on the core-periphery approach)

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EXTENDED ABSTRACT

INTRODUCTION

Since the Islamic Revolution, population growth in the outskirts of large cities has increased significantly. Many studies have examined the relationship between migration and urban growth; however, few have considered the impact of urban crime patterns on the economic performance of surrounding regions. If urban crime affects a broader geographical area, it should not be regarded solely as an "inner-city" issue, but rather as a regional problem that can influence residents, businesses, and economic activities in neighboring areas.
In addition to the direct effects of crime within a specific geographical area, crime can also generate indirect spillover effects on nearby regions. These spillovers may manifest differently depending on the type of crime. The core–periphery model helps explain why some central urban areas experience significant prosperity while others exhibit signs of urban deprivation and poverty.

METHODOLOGY

Given this importance, an important question arises: To what extent can crime affect regional economic growth? What types of effects does it generate, and

which categories of crime have the greatest impact on economic growth? Moreover, can crime in one region influence economic growth in surrounding areas?

Accordingly, the main objective of this study is to investigate crimes occurring in the core region and their impacts on surrounding areas. For this purpose, Tehran province is considered as the core region, while the other 30 provinces of Iran represent the periphery. The study covers the period from 1998 to 2020.

FINDINGS

The estimation results indicate that the growth of gross domestic product (GDP) in Tehran province has a negative and statistically significant effect on the economic growth of other provinces. In addition, the results show that a one-percent increase in the poverty index of the provinces leads to an increase in economic growth. Similarly, a one-percent increase in the unemployment rate of the provinces is associated with higher economic growth. The population growth rate also has a positive and significant effect on provincial economic growth.

Furthermore, the results indicate that a one-percent increase in the number of unintentional murders in Tehran province, as well as assaults and injuries, leads to an increase in the economic growth of other provinces. However, changes in assaults and injuries have a negative and significant effect on the economic growth of the provinces.

The findings also show that an increase in the number of attempted stabbings and intentional poisonings in Tehran leads to higher economic growth in other provinces. Nevertheless, changes in the logarithm of intentional poisoning have a negative and significant effect on the economic growth of the provinces.

The logarithm of thefts from government facilities in Tehran province has a negative effect on the economic growth of the provinces, whereas the differential of the logarithm of thefts from such places has a positive and significant effect. The logarithm of residential burglaries in Tehran province shows a positive and significant effect on the economic growth of the provinces.

A one-percent increase in thefts from shops and from industrial and commercial centers in Tehran province reduces economic growth in other provinces. However, the logarithmic differential of shoplifting in Tehran province has a positive and significant effect on provincial economic growth.

The results also indicate that a one-percent increase in motorcycle and bicycle thefts, as well as cattle theft in Tehran province, increases the economic

growth of other provinces. In contrast, the differential of the logarithm of theft of motor boats and marine equipment has a negative and significant effect on provincial economic growth. Moreover, the growth of theft of car accessories or items inside vehicles in Tehran province has a negative and significant impact on the economic growth of other provinces. Similarly, theft of motor boats and marine equipment in Tehran province negatively affects the economic growth of the provinces.

CONCLUSION

The results suggest that a decrease in life security in Tehran province leads to the spillover of investment and production toward other provinces. Consequently, production activities and economic growth increase in those regions.

The analysis of different theft indicators reveals that various types of theft have different impacts on the economic growth of other provinces. Indicators of ordinary theft that create demand for goods and services—such as theft from shops, commercial centers, and government facilities—have a negative impact on the economic growth of other provinces. This is because Tehran, as the capital city, plays a crucial role in generating demand for goods produced in other provinces. Therefore, any reduction in security in Tehran's commercial centers can create ripple effects throughout the national economy.

Moreover, due to the concentration of government offices in Tehran and their nationwide functions, the effects of crimes against government facilities extend beyond Tehran itself. Reduced security in these institutions may weaken the allocation of investment resources and hinder the strengthening of economic infrastructure across the country.

In contrast, certain types of ordinary theft—such as residential burglary, motorcycle theft, and cattle theft—are more localized in nature. An increase in these crimes in a specific region may encourage the relocation of investment to other provinces, thereby increasing their economic growth.

Finally, since crime indicators are highly diverse, the results demonstrate that the impact of crime on economic growth depends on the specific type of crime considered. Comprehensive indicators such as theft from government institutions and commercial centers in Tehran have negative effects on the

national economy. In contrast, more localized and changeable indicators—such as residential theft, which can vary with migration patterns—may generate positive spillover effects on economic growth in other provinces.

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