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Dangerous Spaces: The Structural Context of Violence against Foreign Nationals in South Africa

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DANGEROUS SPACES:
THE STRUCTURAL CONTEXT OF VIOLENCE AGAINST FOREIGN
NATIONALS IN SOUTH AFRICA

by

Alexandra Hiropoulos

A Dissertation submitted to the Graduate Faculty in Criminal Justice in partial fulfillment of the requirements for the Degree of Doctor of Philosophy

The City University of New York

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This manuscript has been read and accepted for the Graduate Faculty in Criminal Justice to satisfy the dissertation requirement for the degree of Doctor of Philosophy.

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ABSTRACT

DANGEROUS SPACES:
THE STRUCTURAL CONTEXT OF VIOLENCE AGAINST FOREIGN NATIONALS IN
SOUTH AFRICA

by

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Advisor: Diana Gordon, JD

Since South Africa's heralded democratic transition in the mid-1990s, ongoing patterns of violence specifically targeting people on the basis of their race and nationality have been observed throughout the country. This dissertation study examines the spatial nature of violent incidents against foreign nationals in the Republic of South Africa and the effect of structural conditions on the occurrence of anti-foreigner violence.

While international migration has been historically accompanied by resentment and ill-treatment of migrants worldwide, this phenomenon is inadequately studied in developing countries such as South Africa. Since nationwide riots targeting foreign nationals in townships in 2008, there has been increased awareness of anti-foreigner violence but limited empirical academic research on its causes. This study takes advantage of improving access to crime data and examines incidents of anti-foreigner violence occurring between 1994 and 2012 with spatial/geographic information on locations and surrounding structural characteristics.

The study is guided by two central research questions: (1) what is the spatial nature of violence against non-nationals? and (2) what is the relationship between social structural conditions and the occurrence of violence? It uses geographic information systems to establish

the spatial distribution of violent anti-foreigner incidents across South Africa, demonstrating that most anti-foreigner incidents occurred within Gauteng and the Western Cape, where they also significantly clustered in and around urban areas, informal settlements and townships.

This research study utilizes the social ecological framework to examine the spatial nature of anti-foreigner violence and interpret the influence of structural factors on its occurrence. Focusing on contextual effects, the study examines whether social structural conditions indicating economic deprivation and social marginalization in areas have a direct impact on the occurrence of violence against foreign nationals. For this purpose, the study estimated a multilevel, multivariate model in which the rate of violence was predicted by several structural variables believed to be linked to anti-foreigner violence. Findings highlight the influence of population size, racial heterogeneity, unemployment, education levels and access to basic services on the occurrence of anti-foreigner violence. Furthermore, this study calls attention to the relevance of spatial context in attempting to understand this phenomenon.

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CHAPTER 1. INTRODUCTION

Overview

This dissertation examines the spatial nature of violence against foreign nationals in South Africa and the effect of structural conditions on the occurrence of such violence. Drawing from relevant literature on social ecology, it uses spatial analyses based on police precincts as the catchment area to examine the distribution of anti-foreigner violence across the country and, subsequently, to examine a range of identified predictors of anti-foreigner violence.

This study has a number of aims. First, it utilizes newly available data that include spatial information on incidents and surrounding structural characteristics to better understand the spatial attributes of violence against foreigners. The geography of the violence itself has not been adequately studied thus far, even though anti-foreigner violence predominantly occurs in South Africa's urban areas and informal settlements and townships (Cawo, 2010). Using geographic information systems (GIS), takes advantage of technological developments in the field by utilizing techniques that establish the spatial distribution of incidents across South Africa, indicating where high and low rates of violence occur, whether there are any visible concentrations of incidents in specific areas, and whether there are statistically significant concentrations of incidents targeting foreign nationals. In this way, this study permits an examination of the spaces within which violence against foreigners is occurring.

Second, this study empirically examines the influence of social structural conditions on the occurrence of anti-foreigner violence. Much of the research on xenophobia in South Africa pays little attention to the spatial and socioeconomic circumstances of anti-foreigner violence in particular locations. While the influence of broad structural factors is frequently discussed in

relation to the perpetration of violence against foreign nationals, very little research has broken down these arguments into specific indicators and empirically tested them in relation to anti-foreigner violence (Landau, 2012). Quantitative research is especially necessary in South Africa where there is an abundance of qualitative studies but a lack of serious empirical studies to explain the high levels of crime or anti-foreigner violence.

Finally, this study assesses the utility of the ecological framework in explaining anti-foreigner violence in the South African context. Thus far, almost all of the research testing factors associated with anti-foreigner violence in South Africa is atheoretical. This research study utilizes the social ecological framework to examine the spatial nature of anti-foreigner violence and interpret the influence of structural factors on its occurrence. Findings highlight the influence of racial heterogeneity, unemployment, education levels and access to basic services on the occurrence of anti-foreigner violence and call attention to the relevance of spatial context in attempting to understand this phenomenon.

International migration to South Africa

Since its first democratic elections in 1994, South Africa has been widely viewed as the flagship of both the southern Africa region and sub-Saharan Africa as a whole, of which it is the wealthiest and most powerful nation. While South Africa has a long history of cross border migration, its relatively strong economic growth has increased migration from surrounding countries, making it a major regional destination for international migration and the main migrant receiving country in Southern Africa (Misago, Landau & Monson, 2009). As international migration continues to grow worldwide, it has become apparent that the character of international migration has transformed. Many countries that were historically referred to as

‘sending countries’ are now receivers and transit points for international migrants. This holds especially true for numerous developing countries that have become destinations for migrants from other such countries. In Sub-Saharan Africa, more than 60 percent of migrants move to other countries within the region. In fact, international migration between countries in the global South may now be nearly as high as North-South migrations, indicating that flows between countries and within regions of the South are noteworthy features of contemporary global migration (Crush & Ramachandran, 2009).

Due to a lack of official data on migration levels and overstatements by authorities and media, it is widely believed that international migration into South Africa is rampant and mostly illegal while public discourse focuses on the economic impact and increase in crime associated with migration (CRAI, 2009). In reality, migration into South Africa is characterized both by highly regulated skilled contract employment and by informal and undocumented migration (Polzer, 2010). Based on the 2011 South Africa Census, around 4.5% of the country’s national population is foreign born (that is, 2.3 million of the country’s 51.7 million inhabitants) (Statistics South Africa, 2012), representing a 238% increase since the 1996 Census. These non-nationals include a mix of documented and undocumented migrants along with refugees and asylum seekers (Landau & Segatti, 2009).

Anti-foreigner violence

International migration has long been accompanied by resentment and ill-treatment of migrants. While this phenomenon has been extensively documented and studied with regards to migration to the West and most especially Europe, it has been inadequately studied in developing countries such as South Africa where anti-migrant sentiment and violence appear to be increasing.

Following the country's first democratic elections in 1994, South Africa underwent a rapid transformation from a white, autocratic and largely repressive state to an inclusive, democratic one where the previously banned African National Congress (ANC) took a reconciliatory, one nation-many cultures approach to the heralded transition (Breetzke, 2012). Its constitutional democratic foundations are based on the most liberal international principles of human rights and justice, assertions of unity in diversity, and its self-defined role as the champion of a renewed African Renaissance (Posel, 2002). Since the mid-1990s, however, a range of civil society organizations, human rights actors and academics have observed ongoing patterns of crimes specifically targeting people on the basis of their race and nationality (Breen & Nel, 2011), such as the 'buyelekhaya' or 'go back home' campaign in 1994 in which gangs of South Africans attempted to forcibly evict perceived "illegals" from Alexandra township¹ (CRAI, 2009).

It was only in 2008, however, that the issue of violence against foreign nationals gained widespread national and international attention. Beginning with an isolated incident of anti-foreigner violence in Alexandra on May 11th, widespread riots spread out to townships in Johannesburg, Cape Town and Durban, leading to the death of 41 foreign nationals, almost 700 wounded, dozens of women raped, at least 100, 000 persons displaced and property worth millions of Rand looted, destroyed or seized by local residents and leaders (UNDP, 2010). The riots constituted the first sustained and nationwide eruption of social unrest since the end of apartheid (Steinberg, 2008) to which the government ultimately responded with the armed forces. They also served as a great embarrassment for the ruling ANC since much of its leadership understands itself as heir to a long non-discriminatory, pan-African tradition (Polzer

¹ Townships are underdeveloped urban living areas built on the outskirts of towns and cities.

and Takabvirwa, 2010). Writing soon after the events, Jonny Steinberg highlighted the irony of the attacks in the wake of South Africa's progressive trajectory:

Few South Africans would deny that what has happened is both a catastrophe and turning point in their country's history. Mandela's South Africa was not long ago the world's most celebrated young democracy, the site at which the last vestige of statutory white rule was abolished from the plane. On South Africa's shoulders rested the promise of a continent-wide epoch of renewal. Johannesburg was Africa's Babel, its inner-city neighborhoods the most cosmopolitan places on the continent. Many dreamt that it was on these streets that a new African identity might emerge" (2008, p 4).

Since 2008, violence against foreign nationals appears to be increasing. Available information reveals that violence has claimed more lives each year since 2008 than it did during the May 2008 attacks. CoRMSA (2011) reports that since mid-2008, almost every month there has been at least one attack on groups of foreign nationals in South Africa. Between mid-2009 and late 2010, there were at least 20 deaths, over 40 serious injuries, at least 200 foreign-run shops looted and more than 4000 persons displaced due to violence targeting foreign nationals. In 2011, at least 120 foreign nationals were killed (five of them burnt alive), 100 were seriously injured, at least 1000 displaced, and 120 shops/businesses permanently or temporarily closed through violence or selective enforcement of bylaws. In 2012, violent incidents increased, with at least 250 incidents recorded resulting in 140 deaths and 250 serious injuries. In 2013, an average of three major violence incidents were recorded per week (PWG, 2013) with attacks regularly reported in many areas across the country during 2014. According to the United Nations High Commissioner for Refugees Southern Africa Regional Office (UNHCR ROSA), by March, 2014, an estimated 300 incidents of violence against asylum seekers and refugees had been reported, an estimated 200 shops had been looted and 900 persons had been displaced (UNHCR ROSA, 2014).

As some had warned in 2008, widespread violence against foreign nationals erupted again this year. Since January, 2015, attacks occurring in Gauteng, KwaZulu Natal and Limpopo provinces have resulted in the death of at least seven individuals (four foreign nationals and 3 South Africans), the displacement of more than 6000 persons and the looting and destruction of hundreds of businesses. In late April, two weeks after a Mozambican national was stabbed to death in Alexandra Township in Gauteng, the government responded to attacks on immigrants by deploying the military to assist police in raids on hostels (such as in Jeppestown in downtown Johannesburg and Alexandra) in search of undocumented foreigners (UNHCR, 2015).

The 2008 riots were hastily ascribed to xenophobia, that is, an irrational fear of foreigners or ‘others’. Since then, attacks against foreign nationals, including the most recent, are predominantly referred to as xenophobic by the media, government officials and the public. It is true that, whether documented or undocumented, foreigners in South Africa are frequently treated as a homogeneous category of “illegal aliens” (Harris, 2004). Indeed, surveys inquiring into South Africans’ opinions of foreigners (in particular foreign Africans) living in South Africa have shown that South Africans across race, class and gender lines hold deep-seated xenophobic/anti-foreigner sentiments and attitudes (Afrobarometer, 2013). However, while appeals to xenophobia may help to explain the readiness to resort to violence, these arguments cannot explain the actual occurrence of violence in particular locations nor the particular forms of violence that continue to occur against foreign nationals. Furthermore, appeals to xenophobia ignore the sources of xenophobic antagonism and the influence of structural factors, such as conditions of economic deprivation and social marginalization, on the perpetration of violence against foreign nationals. With anti-migrant/foreigner or xenophobic sentiment common

worldwide, this study argues that an exploration of the circumstances within which this antipathy expresses itself in violence can contribute more to our understanding of anti-foreigner violence.

Social structural conditions

A major purpose of this study was to examine whether surrounding structural conditions are associated with the occurrence of anti-foreigner violence. While some studies discuss the impact of community characteristics such as poverty and inequality on anti-foreigner violence, few have analyzed the patterns of violence in direct relation to the contexts within which they are embedded.

Though the ANC has made some significant achievements since 1994, there are currently profound concerns about the state of South African affairs. While great steps were taken to create and consolidate the conditions for an equality-based, open society through its Constitution, South Africa finds itself having to defend these conditions instead of strengthening them. Since the collapse of apartheid, it continues to grapple with corruption, the weakening of state institutions by partisan appointments and one-party dominance, and exceptionally high levels of crime (HRW, 2012). There are also growing social and economic inequalities with half the population living under the poverty line (approximately 20-28 million), about a quarter officially unemployed, and the vast majority of the poor living in informal settlements or townships. While the democratic transition promised social and economic betterment for all, very little has changed for many South Africans. This study argues that it is important to understand how these circumstances are related to the occurrence of violence against non-nationals.

Summary

This dissertation is guided by two central research questions:

- (1) What is the spatial nature of violence against non-nationals? and
- (2) What is the relationship between social structural conditions and the occurrence of violence?

Employing a cross sectional research design with pooled data on anti-foreigner violence, this study combines data from three secondary sources. Data from the African Centre for Migration and Society (ACMS) at the University of the Witwatersrand provided information on the location of anti-foreigner threats and violence throughout South Africa between 1994 and 2012. The Governance, Crime and Justice Division of the Institute for Security Studies (ISS) provided data from the 2011 South Africa Census and from the South African Police Service that were used to assess the influence of structural characteristics on the occurrence of anti-foreigner violence. All data were aggregated to the police precinct level and included a spatial referent which permitted the spatial examination of anti-foreigner violence and contributing variables.

A number of analytical methods were employed to address the central research questions listed above. This examination was both statistical and spatial in nature, aimed at producing useful information concerning the nature of anti-foreigner incidents. Initially, descriptive analyses were conducted to examine the spatial distribution of violence against non-nationals across the country. Subsequently, exploratory spatial data analysis procedures were utilized to determine whether incidents of anti-foreigner violence were significantly concentrated in specific locations across South Africa. Independent-samples *t*-tests provided further information on how provinces differed in their experience of structural variables. Finally, negative binomial

regression analysis was conducted to determine the independent effect of structural variables on the occurrence of anti-foreigner incidents.

Results from the analysis found significant spatial clustering of anti-foreigner incidents predominantly in Gauteng and the Western Cape. When compared to each other and the rest of the country, these provinces significantly differed with respect to structural variables, including the size of the population, the ratio of males to females, the amount of urban area, population density, racial and language heterogeneity, the number of informal dwellings, the number of tenant-owned dwellings, and the number of dwellings with access to electricity. The results of negative binomial regression analysis indicated that a number of structural variables had a significant, positive effect on the occurrence of anti-foreigner violence, including population size, racial heterogeneity, unemployment levels, and access to sanitation, specifically to functioning latrines. Education levels were significantly and negatively related to the occurrence of anti-foreigner incidents, meaning that the higher the education levels of residents in a location, the less likely it was for that location to experience anti-foreigner incidents.

The next chapter describes the circumstances within which violence against foreign nationals is currently occurring in South Africa as well as the theoretical orientation of this study. Chapter 3 describes the research methodology utilized, including information on the sources of data, dependent and independent variables, and data analysis procedures. Chapter 4 discusses results from descriptive and exploratory analyses establishing the spatial nature of anti-foreigner incidents and results from independent-samples *t*-tests and negative binomial regression analysis modelling the effect of structural conditions on incidents. The implications of results are discussed in chapter 5 and the chapter 6 summarizes this study and discusses its contributions and the need for future research.

CHAPTER 2. LITERATURE REVIEW and CONCEPTUAL FRAMEWORK

Characteristics of international migration to South Africa

South Africa has a long history of cross border migration from surrounding countries. With the discovery of minerals, long-distance migration for employment pre-dates the drawing of international borders by the colonial powers in the late 1800s (Crush, 2008). Post-apartheid international migration movements towards South Africa, however, greatly differ from those prior to 1994. Along with the increase in international migration already noted, one of the greatest post-apartheid changes has been the influx of both permanent and temporary African and Asian migrants, including significant numbers of refugees and asylum seekers, predominantly from Zimbabwe, Mozambique, The Democratic Republic of Congo, Angola, Somalia, Congo and Rwanda. While European permanent immigrants continued to dominate until 1998, since 2000 most migrants come from Africa and Asia, primarily in search of economic opportunities or protection from political or domestic persecution, violence or natural disasters. Less frequently, they have been in search of passage to a final destination elsewhere, typically Europe, North America, and Australia. International migrants these days also differ demographically from those prior to 1994. They are younger, more ethnically diverse, and include far more female migrants (Landau & Segatti, 2009). In addition to adult migrants, a growing number of unaccompanied children are migrating from neighboring countries due to the death of their parents, lack of money, or not attending school (FMSP, 2009). Finally, the trajectories of migrants are greatly diversifying. Whereas apartheid-era migration policy promoted permanent white immigration and temporary black migration, post-apartheid migration policy encourages a mix of circular, permanent, and transit migration (Landau & Segatti, 2009).

Estimates of the numbers of international migrants within South Africa vary widely, mainly due to the poor quality of official figures on both domestic and international migration attributable to the difficulty in accurately measuring migration given the country's extended borders, poor data on the South African population, and to large-scale migrations within, into, and out of South Africa (Crush, 2011; Landau & Segatti, 2009). At the same time, South African authorities and media regularly overstate the levels of international migration, contributing to the belief that migration into the country is both rampant and illegal.

While officials claim there are between 8-10 million undocumented migrants in South Africa, research suggests that these are ill-informed exaggerations (Makina, 2007). More realistic estimates based on triangulation from a variety of data sources indicate that around 2 to 3 million non-nationals currently live in the country, representing an increase of 238% in the fifteen year period since the 1996 South Africa census which measured around 960,000 non-nationals (Statistics South Africa, 2011). This number includes a mix of documented and undocumented migrants along with refugees and asylum seekers.

Due to the brain drain that began in the early 1990s and recent efforts to recruit the skills needed to grow the South African economy, South Africa has become a destination for highly skilled professionals, most notably in the medical professions, mine and mechanical engineering, and information and communication technology sectors (Landau & Segatti, 2009). Increasing numbers of semi to highly skilled Africans migrate to South Africa, particularly from Zimbabwe, Nigeria, Congo, and Cameroon (Statistics South Africa, 2012). In an effort to prevent permanent migration to South Africa, since the end of apartheid the Department of Home Affairs has consistently increased the number of temporary work, study, business and tourist permits granted annually, especially to Africans. Between 1992 and 1999, the overall number of temporary

permits and visas went from 3 to nearly 10 million, while permanent immigration permits went from 14,000 in 1990 to 4,000 by the end of the 1990s, then to 10,000 by 2004 (Statistics South Africa, 2011). In a study that interviewed over 400 skilled migrants, 73% of European migrants arrived before 1991 whereas 87% of African migrants had arrived after that. Three quarters of the skilled migrants who entered South Africa before 1991 were permanent residents whereas a very large proportion of those arriving after 1991 held only temporary permits (Mattes, Crush & Richmond, 2000).

There are also an expanding number of refugees and asylum seekers among the non-nationals living in South Africa. In fact, according to a UNHCR report (2012), South Africa had the highest annual number of asylum applications worldwide in 2011 with 106,904 applications. Between 2008 and 2012, 778,000 individuals registered asylum applications with the Department of Home Affairs (DHA) which is responsible for refugee status determination. According to the DHA, in 2007 there were 170,865 applications for asylum, of which 36,736 were approved under the 1998 Refugees Act. In 2009, there were 223,324 applications, 4,567 of which were approved, 46,055 were rejected and 172,702 were added to a backlog of unprocessed applications which remain over 100,000. Cumulatively, there are around 50,000 recognized refugees in South Africa since 1994 (Landau & Segatti, 2009).

Since 2011, asylum applications have decreased, though figures are unreliable since DHA officials and the UNHCR (which is dependent on DHA figures) report conflicting figures for the same years. Last year, the deputy minister of Home Affairs, Fatima Chohan, stated that South Africa received 85,058 asylum applications in 2012 which she mainly attributed to “the relative peace and stability that has been maintained on our continent during this time” (AfricaCheck, 2013). This decline is more realistically attributable to the closure of DHA

refugee reception offices in major South African cities in 2012 (including Johannesburg, Cape Town and Port Elizabeth) as part of the DHA's strategy to move reception offices to the borders, as well as to a special permits program put in place for Zimbabweans in mid-2010 (Landau & Segatti, 2009).

Zimbabweans register more than half of all asylum applications in South Africa and are by far the largest immigrant group living in the country, amounting to around 1.5 million (Landau & Segatti, 2009). Zimbabwe shares a land border with South Africa and suffers from a collapsed economy, a severe lack of jobs, hyper-inflation, and human rights violations (Bloch, 2008). As the political and economic climate in Zimbabwe has deteriorated, asylum applications have steadily risen, topping the asylum seeker table upon recognition that they had the right to apply in 2006 (Landau & Segatti, 2009). Fewer than 10% of asylum seekers, however, are granted refugee status, around 20% are rejected and the rest are added to a backlog of unprocessed applications that remain over 100,000. At the end of 2012, approximately 230,000 asylum-seekers were awaiting a refugee status determination decision at both first instance and appeal stages. Currently, the total number of recognized refugees is around 65,000 (UNHCR, 2014).

Policy frameworks and the experience of migration

Since the mid-1990s, international migrants to South Africa have encountered an unwelcome environment while public discourse has focused on the economic impact and increase in crime associated with migration (CRAI, 2009). South Africa's constitutional guarantees of basic rights are among the most expansive and progressive in the world. The 1996 Constitution's Bill of Rights gives all persons (documented and undocumented foreigners as well as citizens)

fundamental and procedural protections and expansively delineates the rights of immigrants, protecting them from unconstitutional conduct and human rights violations (Hicks, 1999). These include rights to life, dignity, equality before the law, administrative justice, basic education and health care, and labor rights. South Africa has also signed a number of international treaties guaranteeing additional rights to migrants. Despite this legal framework, many of South Africa's policies and actions to control immigration have been inhumane and unconstitutional, leading legal organizations to regularly turn to the courts to ensure that migrants' rights are realized (CoRMSA, 2011). Non-nationals themselves are remarkably vulnerable to socio-economic exclusion, corruption and harassment from police and immigration officials, and violence and intimidation by government officials and citizens (Landau & Segatti, 2009).

Preoccupied with other matters in the mid-1990s, the ANC did not propose any new immigration policies during the transition and continued to rely on Draconian apartheid legislation to control immigration. The 1991 Aliens Control Act provided the basis for post-apartheid immigration policy throughout the 1990s despite being riddled with constitutional problems. Its removal provisions particularly violated standards of administrative justice by lacking adequate procedural protection and being applied in a discriminatory manner (Crush, 1998). Ultimately deemed unconstitutional, the Aliens Control Act was replaced with the Immigration Act of 2002 and the Immigration Amendment Act in 2004. The 2002 Immigration Act regulates immigration by enabling permits for skilled migrants, students, tourists and other categories of permanent and temporary migrants. Still in place, this legislation retains the strong security and sovereignty-centered agenda of the Aliens Control Act, influenced by the dominant themes of security, border control, and the use of law enforcement to manage migration that strongly parallel right-wing thinking on this issue in the United States and Europe, or 'the West'.

As a result, the new South Africa, like the old, has operated two migration gates, one on labor migration, which has been open, and another for other forms of migration which has remained officially closed (Vale, 2002).

Focused on concerns about economic and physical security rather than regional development and human rights, the immigration regime has been criticized for not adapting to national and regional needs and not providing adequate access to documented migration options in ways which address South Africa's labor needs. Although South Africa's institutional framework was never set up to deal with large-scale migration flows, the government is viewed as being both unable and unwilling to deal with the flow and needs of migrants. Importantly, it has not articulated an overall policy position on migration from Zimbabwe, nor produced an operational framework to coordinate government interventions (Polzer, 2010). Instead, it has zealously attempted to regulate international and internal migration, often resulting in disenfranchisement, human rights violations and heightened poverty (as in Western Tanzania and Zimbabwe where similar attempts have been made) (Coplan, 2009).

Arrest and deportation, also regulated by the Immigration Act, have been the primary response strategy to the increase in immigration by the South African government. Since 2000, deportations of undocumented migrants have risen steadily, with Zimbabwean deportations surpassing those to Mozambique and Lesotho, and reaching 150,000 in 2005 (Sutton & Vigneswaran, 2011). Since then, Zimbabweans have by far been the largest national group deported and have fuelled a massive increase in annual deportation numbers, mainly due to the heightened activity of the police in immigration enforcement (Landau & Segatti, 2009). The processes leading to deportation often occur outside of the law and violate the procedural guarantees put in place by both domestic and international law (CoRMSA, 2011). In many cases,

this has entailed heavy-handed immigration raids as well as the extortion and victimization of undocumented and other migrants by members of SAPS (Bloch, 2008; Steinberg, 2008).

The DHA has been accused of an institutional culture of immigration protectionism, citing instances of excluding Zimbabwean asylum applicants at refugee reception offices and the numerous asylum rejections that have been deemed “manifestly unfounded” by courts (Vigneswaran, 2008). In 2011, the Supreme Court of Appeals (*Abdi v The Minister of Home Affairs*) chastised the DHA for its failures to respect individual rights and for putting forth false legal arguments and suggested that the department did not show sufficient respect for the judicial process (CoRMSA, 2011). Research continues to point out the frequent use of bribery by DHA officials, adding to the common perception that asylum is “bought” in South Africa. With the asylum system delegitimized, few institutions, social services and employers recognize refugee or asylum papers (Landau, 2012).

Undoubtedly, migration has posed a large-scale service challenge to South Africa. Few efforts have been made to integrate non-nationals into mainstream social welfare service provision, leading migrants to experience great difficulty accessing basic government services. Reports have revealed the systematic exclusion of non-nationals from government institutions such as hospitals, housing and schools (Steinberg, 2008). With regards to other basic rights, few non-nationals are entitled to social grants, public housing or other direct state support. Though frequently accused of stealing jobs and homes from South Africans, non-nationals, whether legal residents or not, rarely receive government services and mainly create their own employment (Coplan, 2009) since they continue to experience great difficulty securing employment, despite the fact that courts have clarified migrants’ right to employment since the late 1990s. As a result, restrictive policy frameworks and unlawful practices by government officials contribute to the

marginalization and exclusion of foreign nationals, making them particularly vulnerable to victimization at a time when anti-foreigner sentiment is rife and violence against them is increasing.

Violence against foreign nationals

Violence against foreign nationals was initially noted as a major social challenge in South Africa as early as 1998 when the South Africa Human Rights Commission, the United Nations High Commissioner for Refugees and the National Consortium for Refugee Affairs jointly launched the 'Roll Back Xenophobia' campaign. Despite publicity about recurrent and sporadic violent attacks against foreigners since 1994, the government departments made little effort to address the issue of violence against foreign nationals (Breen & Nel, 2011). This indifference is frequently cited as a cause of the widespread violence of 2008 and subsequent years.

Small scale attacks deliberately targeting foreign nationals continue to occur in 2015. Through the work of academics, research institutions, civil society and international agencies monitoring violence against foreigners, some trends have become apparent. In almost all cases, foreigners are subject to brutal levels of violence reminiscent of the extremes of apartheid.

As was the case in many of the areas affected by the 2008 and most recent violence, indiscriminate mob violence against foreign nationals in a particular area occurs across the country. Typically, local residents instigate the forceful removal of foreign nationals from the area, blaming them for a range of social ills (Breen & Nel, 2011). Examples include De Doorns (Western Cape) in 2009, Sasolburg in 2010, Polokwane (Limpopo) in 2011 and Sebokeng (Gauteng) in August, 2014 when residents mobilized members of the community to attack or remove all foreign nationals from the area. There have also been numerous cases where residents

have suspected a foreign national of a particular crime and then formed vigilante groups to evict all foreigners from the area, such as in Masiphumelele in 2008, Imizamo Yethu in 2009, and Rivieronderend in 2010 (CORMSA, 2010). African foreigners, particularly Nigerians, are stereotypically believed to be involved in illegal activities such as drug dealing.

Apart from mob violence, intimidation or specific looting campaigns targeting foreign-owned businesses regularly occur across the country. Though unrelated to migration, service delivery protests expressing grievances with the government's provision of basic services such as water and electricity frequently involve the specific targeting of foreign-owned shops. Such was the case in Nelson Mandela Bay in the Eastern Cape in 2012 and in Atteridgeville, Gauteng in September of this year. There has been some progress in both policing and the justice response to these incidents, including improved coordination between national police, civil society and United Nations agencies, leading to improved communication and to a number of instances where police have been able to respond quickly to outbreaks of violence (Breen & Nel, 2011). When such cases are reported to the South African Police Service (SAPS), shop owners are typically transported to other areas and returned to their shops to assess the damages once the situation is deemed secure enough.

The latest outbreak of violence between January and April, 2015, occurring in Gauteng, KwaZulu Natal and Limpopo provinces included a mix of mob violence targeting foreign nationals and looting campaigns targeting foreign-owned businesses. As of late April, 2015, over 5500 persons were living in government run sites in Durban, KwaZulu Natal. According to KwaZulu Natal National Disaster Management, around 500 of these had asylum permits, though many report losing their documentation while fleeing. The remaining population is actively being supported to move out of the shelters, either to opt for voluntary repatriation offered by

their respective embassies or to return to their communities with the support of the government's department of Community Safety and Liaison office. Many of those displaced have voiced that they cannot return to the communities. Overall, it is estimated that since January, 2015, over 2000 foreigners have been voluntarily repatriated, mostly from Malawi, Mozambique, Zimbabwe and Tanzania (UNHCR, 2015).

Finally, there continue to be a number of seemingly isolated incidents where a foreign national or small group of foreign nationals are attacked. Whilst South Africa has very high levels of violent crime, individuals are attacked deliberately because they are foreign. Examples include a Burundian national being attacked on a train near Claremont station in Cape Town in 2010, allegedly by a group of people singing 'get out, foreigner'; a Congolese woman being raped by attackers who told her they will do the same to all other foreigners in the area; and a Zimbabwean national being thrown from a train after being threatened because he was foreign (CORMSA, 2010).

Despite victimization, foreign nationals struggle to access justice and police protection. In the past, members of SAPS have been accused of intentionally protecting only South African owned businesses during looting, ignoring requests for an urgent intervention following a threat of mob violence, and being complicit in attacks on foreign nationals who wish to open a case at a police station (CSV, 2011). Government responses to anti-foreign violence have included arresting and deporting undocumented non-national victims of violence who had sought refuge at police stations. Migrants have also complained of cruelty, neglect, extortion and robbery by the police at shelters created for fleeing victims (Coplan, 2009). As noted, the government responded to the latest outbreak of violence by deploying the military in April to assist police in raids on hostels in search of undocumented foreigners (UNHCR, 2015).

The criminal justice response to the 2008 violence was ineffective, contributing to the perception of ineffectual police work and judicial impunity. While a total of 1433 people were arrested in connection with the attacks, only 137 have been prosecuted (CRAI, 2009). Overall, it is estimated that since 2008, around 350 foreign nationals have been murdered in South Africa, with only one known conviction of murder (Misago, 2015). Since the latest outbreak of violence this year, the government has initiated Operation Fiela (meaning 'sweep' in Sesotho), which is a multidisciplinary interdepartmental strategy officially aimed at decreasing crime and restoring order in areas experiencing anti-foreigner violence. As of April, 889 individuals have been arrested in raids by members of SAPS, the South African Defence Force and the DHA across South Africa; 13 arrested for drug related crimes, 13 for assault, four for murder, two for unlicensed firearm and ammunition and 745 for being in the country without documentation who are currently awaiting deportation (allAfrica, 2015).

Criminal offences motivated in part or whole by bias or hate can lead to severe emotional and psychological consequences that may extend beyond the individual victim to the group to which the individual belongs or is perceived to belong (Harris, 2004). Whilst violent crime victimization in general carries the risk of psychological distress, victims of hate crimes have distinct needs and may suffer from consistently higher levels of psychological distress, such as feelings of helplessness, depression, stress, anxiety, and anger than victims of other comparable crimes (Herek, Gillis, & Cogan, 1999). Survivors of violent crimes are also at a high risk for developing a variety of mental health problems, including post-traumatic stress disorder (APA, 2009). Additionally, as the case in South Africa, secondary traumatization by criminal justice and immigration officials and service providers further contributes to psychological distress.

The likelihood of secondary victimization also results in the delay or complete avoidance of approaching the criminal justice system or accessing health care. For example, there have been numerous occasions where, following displacement due to anti-foreigner violence, foreign nationals have been intimidated or encouraged to drop the criminal charges against residents (CORMSA, 2010).

Though increased awareness of the issue of violence against foreign nationals came with the 2008 and subsequent attacks, there have been few empirical studies of the causes of this violence in post-apartheid South Africa. Certainly the lack of official figures on migration as well as foreigner victimization has greatly contributed to the lack of empirical research on the topic and our lack of understanding of the current dynamics of the problem. With improving access to crime data through the efforts of South Africa's research institutions and non-governmental organizations, however, it is possible to better understand the factors associated with the occurrence of violence against non-nationals. This study takes advantage of these developments to examine the relationship between social structural conditions and the occurrence of anti-foreigner violence by utilizing newly available data that include spatial information on incidents and their surrounding ecological characteristics.

Influence of structural conditions on violence

In the aftermath of the 2008 violence, South African academics, think tanks, civil society organizations and research institutions have devoted much attention to explaining violence against foreign nationals. Most of this research locates the origins of this type of violence in xenophobia and in the racism, nationalism, violence, and isolation of the apartheid era (Dodson, 2010).

As previously noted, South Africans, including police officers and immigration officials, hold deep-seated anti-foreigner sentiments and attitudes (Afrobarometer, 2013; Crush, 2008). These sentiments have frequently been cited as explanations for the limited implementation of basic rights towards cross border migrants. However, while appeals to xenophobia may help to explain the readiness of South Africans to oppose the rights of immigrants or even their readiness to resort to violence, these arguments cannot explain the actual occurrence of violence nor the particular forms of violence that occur against foreign nationals. Furthermore, appeals to xenophobia ignore the sources of xenophobic antagonism and the influence of structural factors on the perpetration of violence against foreign nationals.

Economic explanations of violence have long existed in South Africa and are now being applied to violence targeting foreigners. Poverty and inequality specifically have been utilized as key explanatory factors influencing anti-foreigner violence. Pillay (2008) argues that the increase in inequality since the end of apartheid breeds perverse cultures of entitlement and experiences of relative deprivation, which lie at the root of social instability.

Despite post-apartheid redistributive justice programs including legislation promoting employment equity, Black Economic Empowerment (BEE) initiatives, increases in social grants and land redistribution, South Africa is one of the most inequitable countries in the world (Seedat, Bawa & Ratele, 2010). The source of this inequality has largely been attributed to the process of economic liberalization of the 1990s and the neoliberal turn taken with the national economy. The redistributive focus of the Reconstruction and Development Program (RDP) was abandoned by Nelson Mandela's successor, Thabo Mbeki, and replaced with a structural adjustment program known as Growth, Employment and Redistribution (GEAR). These market-oriented macro-economic policies adopted measures regarded as fundamental for economic

growth within a liberalized macro-economic framework including free trade regimes, tariff reductions, limited state intervention and the privatization of state industries (Seedat,et.al., 2010). In keeping with the economic philosophy of neoliberalism, proponents preached that removing state distortions of markets would create the conditions for economic growth, while rapid privatization would yield a flood of new private capital investment (Ferguson, 2006).

This neoliberal turn taken with the national economy was accompanied by intensive downsizing, de-regulation, the casualization and irregularization of labor, the steady disappearance of wage employment in its older forms, and rising unemployment (Comaroff and Comaroff, 2012; Trimikliniotis, Gordon & Zondo, 2008). In this way, ironically, South Africa's post-colonial development has been one of jobless growth, leading to deeper poverty and to serious levels of inequality. Today, half the population is living under the poverty line (approximately 20-28 million) and about a quarter of the population is officially unemployed.

The country's high unemployment rate, especially among black South Africans, is frequently discussed in relation to violence against foreign nationals. It is believed that unemployment exacerbates the intensity of competition for jobs in both the formal and informal sectors of the economy and foreigners are believed to unfairly compete with South Africans in low-wage sectors of the economy due to working at lower wages (Dodson, 2010).

Researchers have consistently held that economic conditions, most notably conditions of economic deprivation, are related to crime rates (Pratt & Lowenkamp, 2002). From this perspective, impoverishment itself is criminogenic and there should be a direct empirical link between variables that represent conditions of economic deprivation and crime. Accordingly, most empirical studies have examined the effects of absolute economic deprivation variables (such as poverty and unemployment rates) or relative economic deprivation variables (such as

inequality) on crime rates (Pratt & Lowenkamp, 2002). More specifically, Western studies have attempted to predict general rates of violent crime (Arthur, 1991; Baron & Straus, 1988), homicide rates (Tcherni, 2011; Pratt & Lowenkamp, 2002; Balkwell, 1990), or multiple rates of different types of violent and/or property crimes (e.g., rape, robbery, assault) (Crutchfield, 1989). Findings have generally not produced any definitive conclusions about the relationship between economic deprivation and violent crime, although certain trends have become apparent, such as that the effect may be stronger for property versus violent crimes. Researchers, however, frequently cite the need for further empirical studies to incorporate newer methods to test the connection between economic deprivation and violent crime. Importantly, while a few South African studies have investigated the effects of structural variables on violence targeting foreign nationals, they have been atheoretical and no empirical tests of structural conditions utilizing the ecological framework to explain anti-foreigner violence have been conducted thus far.

If conditions of economic deprivation are criminogenic, it is expected that areas with high levels of poverty and/or inequality and/or unemployment will experience higher levels of anti-foreigner violence than areas with lower levels of poverty and inequality. In this line of reasoning, poor, black South African nationals see foreign Africans as competing with them for jobs, housing, and other resources and services to which they themselves feel entitled (Sharp, 2008). The visible and relative prosperity of foreigners is seen as a theft of national resources where “everything a foreigner gets is thus something a South African has lost” (Steinberg, 2008, p12).

The impact of housing conditions and access to basic government services on anti-foreigner violence are also considered in this study. The vast majority of South Africa’s poor live in informal settlements or townships, many of which lack running water and electricity. It is

within these areas that most violent attacks against foreigners occur. The poor delivery of municipal services can affect the social conditions for violence (Nleya, 2011). Since the 1990s, national development and the delivery of services (such as water and electricity) to citizens have lagged and health and education systems have especially suffered from government neglect. Widespread dysfunction, including financial mismanagement and corruption in local governments has prompted public demonstrations over housing and service delivery to citizens (Human Rights Watch, 2012), some of which have been followed by groups of protesters violently targeting foreign nationals.

High rates of heterogeneity within areas may also affect the occurrence of anti-foreigner violence in those locations. The literature on ethnic heterogeneity and conflict argues that violence is higher in less homogeneous wards. When applied to violence against foreigners, Fauvelle-Aymar and Segatti found population heterogeneity to be significantly correlated with the occurrence of anti-foreigner violence in 2008. The present study examines the effects of population and language heterogeneity on the occurrence of anti-foreigner violence.

Finally, South Africa's historical and persistent patterns of violent crime are frequently cited as causes of violence against foreign nationals. Along with HIV/AIDS, violence is one of the leading causes of all death and disability in South Africa (Norman, Bradshaw, Schneider, Joubert, Groenewald & Lewin, 2007). The homicide rate is estimated to be more than seven times the global average and gun violence rates are comparable to those of the United States and Brazil (Seedat, et.al., 2010). Levels of rape are also exceedingly high, with over 42,000 rapes reported last year (SAPS, 2014) and actual rapes estimated to be around nine times higher. Much of the literature on violence against foreign nationals locates 'xenophobia' in this context where violence is endorsed and accepted as a socially legitimate means of solving problems and

achieving both “justice” and material goals (Charman & Piper, 2012). This study empirically examines whether high rates of violent crime impact the occurrence of anti-foreigner violence. Its focus is on violent crimes since these involve physical contact between victims and perpetrators and have important consequences for the perception of security among South Africans, accounting for approximately a third of South Africa’s crime (SAPS, 2014). Many argue that South Africa has a culture of violence in areas inhabited by the urban poor, where violence is used to resolve minor conflicts and is reinforced by an ineffective justice system (Harris, 2004).

Conceptual Framework

This study explores the spatial nature of violent anti-foreigner incidents across South Africa and examines the impact of structural conditions on the occurrence of anti-foreigner violence in an effort to examine patterns of violence in direct relation to the contexts within which they are embedded. The present section will discuss the ecological perspective which provided a framework for selecting the research questions, operationalizing the variables and selecting the data analysis techniques for the study.

Spatial thinking

Social ecology focuses on people and the communities in which they live, arguing that place matters. The Chicago School is typically credited with bringing attention to the relevance of place to social life. Everything happens somewhere, which means that all action is embedded in place and may be affected by its placement (Porter & Howell, 2012). Therefore, we cannot understand social life without understanding the arrangements of particular social actors in particular social times and places. Social facts are located (Abbot, 1997). This insight has

influenced much research within the social sciences, much of it examining inequalities between places. While almost all studies of places include an implicit spatial reference, space is now being introduced more explicitly and systematically in social science research (especially within criminology and sociology), influenced by the large body of work by geographers (Logan, 2012). Following this trend, this study applies spatial data, measures and models to the above substantive questions, and places less interest in spatial patterns themselves and more interest in how they translate into social relations.

Place is a fundamental concept for spatial social science. Places are not only geographically located and material, they are also spatial and Logan (2012) correctly points out that their spatiality gives rise to fruitful questions. Aerial units such as counties or villages have place attributes of interest to researchers attempting to understand their influence on social behavior. For instance, if “where” violence against foreign nationals is occurring is a residential district, we would be interested in knowing whether that district is an affluent neighborhood or a township. Spatial thinking calls attention to the other attributes that are of interest in social research from a more explicitly spatial perspective. For example, where are attacks occurring in relation to other places, and are they concentrated in city centers or in rural areas? Spatial thinking, then, is the consideration of the relative locations of social phenomena, the causes of the locational pattern, and the pattern’s consequences (Logan, 2012). The present study employs this notion of spatial thinking to understand the spatial attributes of violence against foreign nationals.

As indicated, one of the purposes of this study is to examine the spatial nature of this type of violence. As a first step, this can be simply, yet powerfully, accomplished through the creation of a map of violent incidents that allows visualization of any spatial patterns. The mapping of

phenomena in the social sciences has exploded in the past decade, primarily due to the development of widely accessible computerized mapping and spatial analysis techniques. Most commonly, these mapping and spatial analytic techniques are carried out in Geographic Information Systems (GIS) which house, manage and represent spatial data in a way that can significantly improve the ability of researchers to look more closely at the spatial variations and geographic contexts of crime occurrence (Anselin, Cohen, Cook, Gorr & Tita, 2000). Perhaps the most intriguing, and powerful, property of GIS is that it can be used as a visualization and data management tool within which the integration of data from a diverse set of sources can be synthesized into a single geo-referenced database, containing observations from proximate spatial locations (Hiropoulos & Porter, 2014). Researchers can represent spatial patterns and visualize them across locations, providing insight into potential spatial clustering, spatial heterogeneity and variations over time. The advancement of GIS technology allows us to examine data more rigorously as a way of generating new hypotheses, testing existing hypotheses and identifying unexpected spatial patterns (Cameron & Leitner, 2005).

While research on crime and place in the United States and elsewhere has benefited from these advancements, this has not been the case in South Africa where, until recently, spatial data on crime were not readily available to researchers. Fortunately this is changing, given the availability of more reliable census data and the improving access to crime data through the efforts of some of the country's non-governmental organizations and research institutions. The present study benefits from these efforts, utilizing newly available data on anti-foreigner incidents that include geographic coordinate information. Notably, South Africa's socio-political history makes it uniquely amenable to ecological analyses of crime due to the historical fragmentation of space, the segregation of state-defined population groups into certain spaces,

and surveillance and control of those spaces by the former apartheid regime (O'Donovan, , 2011).

Maps, like photographs, can provide many layers of information (much of it implicit) for they have the ability to offer an objective representation while also calling on people's imagination (Logan, 2012). A thematic map of anti-foreigner incidents can provide information on the extent of variation in violence against foreign nationals and demonstrate whether the variation has a spatial pattern, offering clues about where values are higher or lower as a first step in reaching conclusions about the spatial nature of this type of violence. This inspection can be facilitated by the use of techniques developed for Exploratory Spatial Data Analysis which draw attention to spatial clusters and outliers (Anselin, Griffiths & Tita, 2008). One of the most common of these tools, employed in this study, is the mapping of values of local Moran's I, a measure of clusters of high or low values on a single variable.

Based on statistical measures such as Moran's I, early studies of the spatiality of crime called attention to the existence of crime "hot spots" (Sherman, Gartin & Buerger, 1989), pointing out that many types of crime are both rare and spatially concentrated at certain locations. This phenomenon of spatial clustering is a form of spatial dependence, that is, the tendency for related things to be found in proximity to one another (Tobler, 1970). Typically, spatial clusters are zones in which there is a larger than expected concentration of some characteristic (Logan, 2012).

This study uses spatial dependence to identify significant concentrations of incidents against foreign nationals. If violence is spatially clustered, this clustering can provide information about the processes that lead to higher or lower rates of incidents against foreigners. The interpretation of spatial dependence draws broadly from the ecological perspective in

criminology. For this purpose, the present study estimates a multilevel, multivariate model in which the rate of violence is predicted by several structural variables believed to be linked to anti-foreigner violence. Like all multilevel models, this study treats spatial dependence as a statistical problem and focuses on contextual/structural effects, inquiring whether social structural conditions in the areas where incidents occur have a direct impact on the occurrence of violence against foreign nationals.

Competition Theory

Ecological approaches to ethnic and racial conflict identify community-level mechanisms which give rise to differential rates of crime (Sampson and Wilson 2005; Bursik 1988). The objective is not to explain the involvement of individuals, but to discern community-level characteristics that are associated with higher rates of crime. The focus, therefore, is on the traits of places rather than the traits of individuals involved, although both are required to advance understanding of occurrences of ethnic and racial conflict (Porter, Howell & Hempel, 2014).

Intergroup competition has been identified as a prominent community-level risk factor associated with racially and ethnically-motivated crime. Ethnic competition theory (Olzak and Nagel 1986; Olzak 1992) maintains that ethnic and racial conflict is more likely to occur when racially ordered systems begin to break down. Drawing on human ecology perspectives advanced by Park and Burgess, it is argued that demographic shifts resulting from in-migration bring diverse populations into close contact and direct competition. These conditions often result in niche overlap, where niche is defined as a set of essential resources and repertoires a group uses to maintain itself (Olzak, 1992; Soule, 1992). As populations begin to directly compete for the same resources in a shared environment, the salience of group boundaries increases, as well as the perception that the presence of one group directly reduces the opportunities of another

(Olzak, 1992; Soule & Van Dyke, 1999). Such conditions incite violence against new competitors as the dominant group attempts to remove or diminish the threat posed through exclusion, intimidation, and/or direct violence against members of the ‘outsider’ group.

Proponents of ethnic competition theory focus on intergroup competition and argue that dominant groups are more likely to organize resistance to racial or ethnic outgroups when preexisting barriers between groups have been broken down and have generated increased competition over the same goods (Porter, Howell & Hempel, 2014). Shifts in racial composition generate organized forms of racial resistance when these shifts produce increased and direct competition from another group (Cunningham & Phillips, 2008). Studying anti-busing activity in the United States, Olzak and colleagues (1994) found that while many cities experienced the threat of federally enforced busing, protests occurred mainly in areas where whites had experienced higher rates of interracial contact in both residential areas and public schools. They argued that in these areas, the threat of competition was already partially realized for whites as a consequence of anticipated and actual shifts in interracial contact.

In an exemplary study analyzing the causes of racial and ethnic confrontations, protests, riots and attacks against African Americans and Asian immigrants in the largest cities in the United States in the late 1800s, Olzak (1992) concluded that processes of competition accounted for patterns of conflicts and protests involving these diverse ethnic targets. Factors that raise levels of competition among racial and ethnic groups (such as an increase in immigration levels during times of economic deprivation with high business failure rates) increase rates of ethnic collective action, defined as public actions where two or more persons are involved in events that make racial or ethnic claims or articulate an ethnic grievance. Furthermore, reductions in ethnic and racial inequality and in levels of segregation can foster ethnic conflict and protest.

Competition theorists argue that the degree of ethnic job segregation affects ethnic conflicts, but it is the desegregation of job markets that has an effect, leading ethnic conflicts to erupt when ethnic inequalities and racially ordered systems break down. The desegregation of labor markets in the late 1800s in the United States intensified ethnic competition, which in turn raised the rate of ethnic collective action (Olzak, 1992).

Competition theories share the common premise that racial and ethnic threats generate collective action aimed at defending the position of dominant groups. Ethnic competition theory emphasizes an ecological correlation between increasing racial and ethnic heterogeneity and hate crime (Porter, Howell & Hempel, 2014). In one of the few empirical studies that included analyses of the effects of broad structural factors on ‘xenophobic’ violence, Aymar and Segatti (2012) examined acts of violence against foreigners in 2008 based on media reports along with 2001 Census data. Locating the violent acts according to the electoral wards in which they occurred, they found that violence was less likely in the poorest wards. Violence was more likely when the ratio of intermediary income relative to the proportion of low income increased, leading the researchers to conclude that if inequality plays a role, it is more the inequality between poor and intermediate income than between poor and rich or intermediate and rich that influences anti-foreigner violence. Furthermore, in a study examining the killing of foreign shopkeepers in Delft (a poor, mixed-race area in the City of Cape Town) through the use of surveys and interviews with over a hundred spaza² shopkeepers and key stakeholders, Charman and Piper (2012) concluded that economic competition offered a better explanation for violent crimes against shopkeepers (who were primarily Somalian) than xenophobic sentiment.

² Spaza shops are micro-convenience grocery stores, also known as ‘tuck’ shops. The term ‘spaza’ is taken from the isiZulu language, meaning ‘hidden’ and refers to the era when apartheid precluded black persons from business opportunities within the township retail sector (Bear, 2005; as cited in Charman & Piper, 2012).

Ecological and other perspectives have also brought attention to the fact that crime is strongly linked to city life. Crime may be more common in the city because the city generates a distinctive way of life that produces the possibility for a more criminogenic environment (Carrabine, et.al., 2005). Writing within the tradition of the Chicago school (itself influenced by European theorists such as Durkheim, Tonnie and Simmel), Shaw and McKay's (1942) work on persistent concentrations of deviancy in Chicago in the 1940s was especially influential in generating research attempting to explain differences in urban crime levels. Shaw and McKay observed that over time, rates of crime in areas remained relatively constant, regardless of the racial or ethnic composition of the area. Their findings suggested that characteristics of the area, not of the individuals living in the area, regulated levels of crime and emphasized the effects of local social structural conditions (such as ethnic heterogeneity and concentrated economic disadvantage) on crime rates (Feldmeyer, Steffensmeier, & Ulmer, 2013).

The insights discussed above are important here. Since social facts are located, we cannot understand social life without understanding the arrangements of particular social actors in particular social times and places. As in most countries, social structural divisions based on income, education and inequality are unevenly distributed across geographic areas within South Africa. The relationship between this spatial distribution and the distribution of violence against foreigners is not well understood, however.

Research questions

This study first explores and describes the spatial nature of violent anti-foreigner incidents across South Africa and, subsequently, examines the impact of structural conditions on the occurrence of anti-foreigner violence. It has two central research questions: (1) What is the spatial nature of

violence against noncitizens across South Africa? and (2) What is the relationship between social structural conditions and the occurrence of anti-foreigner violence? This latter question is concerned with the explanation of a potentially spatial non-random distribution of the anti-foreigner violence. The following set of research questions were developed to assist in answering these central questions.

Central research question 1: What is the spatial nature of violence against noncitizens across South Africa?

What is the spatial distribution of anti-foreigner incidents across the country?

Where are high rates of violence occurring?

Are there visible patterns associated with reported incidents?

Are incidents concentrated in specific areas or are they randomly distributed across the country?

Do significant independent clusters (hot spots) of incidents exist?

Central research question 2: What is the relationship between structural conditions and the distribution of anti-foreigner violence?

Do structural conditions significantly differ across locations that experience high amounts of anti-foreigner violence?

Do structural variables have a significant independent effect on violence rates?

CHAPTER 3. RESEARCH METHODOLOGY

Overview

This study seeks to examine the spatial nature of anti-foreigner violence and the influence of social structural characteristics on its occurrence. Employing a cross sectional research design with pooled data on anti-foreigner violence, the study combines data from three secondary sources: the African Centre for Migration and Society (ACMS) at the University of the Witwatersrand, Statistics South Africa (StatsSA) which conducts the national census, and the South African Police Service (SAPS). Census and SAPS data were obtained from the Governance, Crime and Justice Division of the Institute for Security Studies (ISS). Approval to conduct the research was obtained from the CUNY Graduate Center's Institutional Review Board in 2015.

The unit of analysis is the police precinct, of which there are 1,115 across South Africa. All data include a spatial referent (latitude and longitude coordinates and matching catchment area spatial polygon files) which permits the spatial examination of anti-foreigner violence and contributing variables, all of which are aggregated to the police precinct level. This chapter describes the sources of data including the geocoding process, measures of structural characteristics contributing to variations in anti-foreigner violence, and data analysis techniques.

Data sources

Anti-foreigner violence

Though South Africa now has a short history of violent crime targeting foreign nationals, it is not officially recorded and does not exist in statistical terms (Landau, 2012). For this reason, the

African Centre for Migration and Society (ACMS) at the University of the Witwatersrand and the United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA) maintain a database of geographically located incidents of threats and violence targeted at non-nationals in South Africa occurring between 1994 and 2012. This database has been collated and maintained by the staff of the ACMS in collaboration with the UNOCHA in Johannesburg (which maintains the database on behalf of the Protection Working Group in South Africa) with the purpose of establishing a scale of anti-foreigner violence and examining locations and trends of attacks in order to plan prevention and response activities and to assess interventions. Information on incidents was collected from reports to the office of the United Nations High Commissioner for Refugees (UNHCR) in South Africa and media reports. Each reported case was independently verified by the UNOCHA.

The database includes 344 single incidents against one or more noncitizens in any location of the country between 1994 and 2012. Since incidents were geographically located, the database includes latitude and longitude coordinate information for each incident, making it possible to link the data with census and crime data that also include a spatial referent (latitude and longitude coordinates). This process included the overlaying of anti-foreigner events “on top” of a spatial coverage of precincts that included the social characteristics of the area. Once these were overlaid, a spatial-join (based on spatial location in proximity to one another, as opposed to ID matching) process was used to aggregate the number of anti-foreigner attacks to the precinct level if their coordinates fell within its borders.

Census 2011

The impact of structural conditions on anti-foreigner violence is assessed by employing data from the 2011 Census. The Census is a population census conducted by Statistics South Africa

(StatsSA) that compiles demographic, economic and social data pertaining to all persons in the country at a specified time. The first population census was conducted in 1996 by the post-apartheid government. Originally envisioned to be conducted every five years, the census was followed by another in 2001. Due to a lack of capacity in the 2000s, however, the next and latest census was conducted in 2011 and released in late 2012³.

Census data were obtained from the Institute for Security Studies (ISS), an applied policy research institute headquartered in Pretoria that conducts policy-related research on crime and the criminal justice system in South Africa. The Governance, Crime and Justice Division geocoded the census information by essentially assigning a spatial referent (latitude and longitude coordinates) to the data, which were then allocated to SAPS police precincts. The census data follow the 2006 ward demarcation system, where each municipality in South Africa is divided into a number of electoral wards depending on the size of the voting population⁴.

In order to allow comparisons as well as spatial analyses, the census data were geocoded according to police precincts by the ISS. More specifically, the Census 2011 data were allocated per small area layer (SAL) to SAPS police precincts. The small area layer is a spatial unit used by StatsSA to publish the results of the national census on a spatial level. The size of a small area is determined by the population density of a specific area. This designation has the effect that the higher the population density, the smaller the small area will be. Areas with very low population densities are therefore slightly larger. Based on an overlay of the police precinct boundaries with the small area layers, most small areas with high population densities fall completely within a police precinct (96%). In some cases, overlapping was due to data capturing

³ The 2011 Census also forms part of the 2010 round of African censuses, which aim to provide comprehensive data on the continent for the purposes of improved planning and aiding development.

⁴ The ward demarcation system was first implemented in the municipal elections of 2000 and was modified for the 2006 local elections (Aymar & Segatti, 2012).

accuracy and solved by assigning very small amounts of data to the other precinct. In order to assign the Census 2011 counts to the overlapping precinct, a basic area proportional assignment method was used. This method calculates the percentage of the area in which a SAL overlaps with a precinct and assigns that amount of census counts to the specific precinct.

SAPS crime statistics

Data on violent crime were obtained from the ISS, described above, and originally obtained from the South African Police Service (SAPS). The SAPS collates crime information in its Case Administration System (CAS) and releases it annually in an aggregated form as a crime count per police precinct. This study focuses on the total reported violent crime, termed ‘contact crime’ or ‘crimes against the person’ by SAPS.

The crime data are aggregate counts that represent the number of contact crimes within police precincts in 2012. By adding spatial referent data to reported incidents of crime, the ISS geocoded annual SAPS crime statistics for all police station precincts in South Africa. Based on their coordinate information, these data were linked with the census data above using the precinct ID and Census ID variables which were matched based on spatial location. This created a “crosswalk” in which both the Census ID and precinct ID were in the same file and made it possible to add both SAPS data and Census data to the files for future analysis.

Dependent and independent variables

The dependent variable in the present study is the occurrence of a violent incident targeted at a foreign national or group of foreign nationals because they are foreign. The dependent variable was constructed using the aforementioned ACMS database on incidents which have been geographically located. The study’s sample consists of 344 single incidents against one or more

noncitizens in any location of the country between 1994 and 2012. For the purposes of the present study, a violent incident is defined as any form of violence or threat of violence targeted at the persons or property of a foreign national or group of foreign nationals because they are foreign. Motivations may include hatred as well as opportunity (including beliefs such as that foreign shopkeepers keep more cash or that crimes against foreigners are less likely to be punished).

A number of theoretically relevant independent variables were identified to measure the impact of structural conditions. These include racial and language heterogeneity, housing conditions, access to basic services (including access to piped water, sanitation and electricity), socio-economic conditions (including education, employment and poverty), population density, the ratio of males to females and total violent crime. These were in the form of raw figures per police precinct and were converted into rates or percentages in order to take account of the underlying population distribution. Table 1 provides details on the operationalization of variables in this study.

Data analysis

A descriptive and exploratory examination of the independent variables was conducted in order to answer the stated research questions. Analyses included three phases, a descriptive phase, exploratory spatial data analysis phase, and explanatory/spatial regression analysis phase. The first two phases attempt to descriptively understand incidents of anti-foreigner violence while the third phase attempts to explain variations in their occurrence. The following section describes the analytical methods employed in the present study.

Table 1. Operationalization of study variables

Variable	Type	Operationalization	Source
Anti-Foreigner Violence	Counts	Each incident was aggregated to the precinct level based on location.	ACMS/UNOCHA
Population Size	Counts	Control variable.	Census 2011
Population Density	Population rate per hectare	Each precinct's population density was determined by dividing its population from the 2011 Census by its hectares and multiplying by 100.	Census 2011
Racial Heterogeneity	Computed population diversity measure	The proportion of the population within each racial group ⁵ multiplied by the natural log of that proportion and summed using the % Black African, % Colored, % Indian or Asian, % White, and % Other. (Higher scores indicate equal distribution of racial groups)	Census 2011
Language Heterogeneity	Computed population diversity measure	The proportion of the population within each language group multiplied by the natural log of that proportion and summed using the % Afrikaans, % English, % IsiXhosa, % IsiZulu, % Sesotho, and % Other. (Higher scores indicate equal distribution of language groups)	Census 2011
Ratio of Males to Females	Ratio	The ratio of males to females in each precinct was determined by dividing the number of males by the number of females and multiplying by 100.	Census 2011
Age 15-24	%	The % of those aged between 15-24 was determined by dividing the number of those within the age group in each precinct by each precinct's total population from the 2011 Census and multiplying by 100.	Census 2011

⁵ The South African population is classified into racial groups. 'Black African' represents the descendants of west and central African populations; 'Indian' represents the descendants of south Asian populations; 'Colored' represents a mixed population including the descendants of the indigenous Khoisan population, imported Malay slaves, and people born in mixed-race relations.

Socio-Economic Conditions			Census 2011
Poverty	%	Those with an annual household income between 0 and 9600 Rand are considered to live in poverty. The % of those living in poverty within each precinct was calculated by dividing the number of those living in poverty by the precinct's total population from the 2011 Census and multiplying by 100.	
Unemployment	%	The % of those unemployed within each precinct was calculated by dividing the amount of those unemployed by each precinct's total population based on the 2011 Census and multiplying by 100.	
Education	%	Highest level of education being grade 12	
Urban Area	%	Percent of the total population classified as "urban" by the Census collection procedures.	Census 2011
Tenant Owned Dwelling	%	The census counts the number of dwellings that are owned by tenants and fully paid off. The % of tenant owned dwellings in each precinct was calculated by dividing this count by the precinct's population and multiplying by 100.	Census 2011
Informal Dwelling	%	The % of informal dwellings (shacks) was calculated by dividing the number of shacks by the total number of households and multiplying by 100.	Census 2011
Access to Basic Services			Census 2011
Access to Piped Water in Dwelling	%	The % of dwellings with access to piped water was calculated by dividing the count of dwellings with such access by the precinct's total households and multiplying by 100.	

Access to Sanitation / Functioning Latrine in Dwelling	%	The % of dwellings with a functioning latrine connected to a sewerage system in each precinct was calculated by dividing the count of dwellings with a functioning latrine by the precinct's total households and multiplying by 100.	
Access to Electricity in Dwelling	%	The % of dwellings with access to electricity in each precinct was calculated by dividing the count of dwellings with access to electricity by the precinct's total households and multiplying by 100.	
Total Contact Crime⁶	Rate per 10,000	The rate of total contact crime per precinct was calculated by dividing its total contact crime by the precinct's total population from the 2011 Census and multiplying by 10,000.	SAPS 2012

Establishing the spatial nature of antiforeigner violence: Descriptive and exploratory analysis

Analyses began with an independent examination of the spatial distribution of anti-foreigner incidents across the country. This examination illuminated the spatial nature of attacks and helped answer the following research questions: What is the spatial distribution of anti-foreigner violence across the country? Where are high rates of violence occurring? Are there visible patterns associated with incidents?

Anti-foreigner incidents were plotted on a map of South Africa to allow for a visual examination of their spatial distribution across the country. The map of incidents was based on

⁶ Contact crime includes murder, attempted murder, total sexual crimes, assault with the intent to inflict grievous bodily harm, common assault, common robbery, and robbery with aggravating circumstances which includes car and truck hijacking and robbery at residential and non-residential premises. Total contact crime data were in the form of aggregate counts per police precinct and were converted into rates per 10,000 members of the population to take account of the underlying population distribution.

quantile classifications, a method that arranges all observations from low to high and assigns equal numbers of observations to each classification category. In other words, it sorts cases into groups with equal numbers of cases in each group. This approach is useful in cases such as the present, where there is a need to highlight a proportion of the observations (Cameron and Leitner, 2005).

This study uses the map of violent incidents in an exploratory way and searches for possible spatial patterns in the occurrence of incidents. The thematic map of violent incidents serves two functions. First, it provides information on the extent of variation in violence against foreign nationals. Seeing the locations of violent incidents arrayed on a map provides much information in a succinct form. The second function is to demonstrate whether the variation has a spatial pattern, offering clues about where values are higher or lower as a first step in reaching conclusions about the spatial nature of this type of violence.

This simple inspection of the map is facilitated by the use of techniques developed for Exploratory Spatial Data Analysis (ESDA) which draw attention to spatial clusters and outliers and offer methods to smooth out random spatial variation so that nonrandom patterns will stand out more clearly (Anselin, Griffiths & Tita, 2008). ESDA procedures enable a more rigorous analysis of spatial patterns and are utilized to answer the following research questions: Are incidents concentrated in specific areas or are they randomly distributed across the country? Do statistically significant independent clusters of incidents exist? In other words, are there hot spots of violent anti-foreigner incidents?

A central feature of ESDA is the use of formal statistical tests to determine whether crime locations show evidence of clustering or are randomly distributed (Cameron & Leitner, 2005).

The present study used the GeoDa software application for ESDA and made use of its functions

of spatial data manipulation and utilities, data transformation, mapping, exploratory data analysis and spatial autocorrelation.

In order to answer whether incidents tend to be concentrated in specific areas, the study employs the Moran's I spatial autocorrelation technique which tests for evidence of crime event clustering. Spatial autocorrelation techniques test whether the distributions of point events are related to each other. Positive spatial autocorrelation is said to exist where events are clustered or where events that are close together have similar values than those that are farther apart. The Moran's I statistic works by comparing the value at any one location with the value at all other locations. The statistic requires an intensity value for each aggregate unit. This unit is then assigned an intensity value, which in this case is the rate of attacks within that area. The Moran's I result varies between -1.0 and +1.0, with a positive coefficient indicating that places close together are statistically more alike, a negative coefficient that places close together tend to be dissimilar to one another, and a coefficient of approximately zero indicating the attribute values are randomly spread over space.

Where aggregate units that are close together have similar values, the Moran's I result is high. This would indicate spatial clustering of high values (hot spots), low values (cold spots), and medium values. The significance of the result can be tested against a theoretical normal distribution by dividing by its theoretical standard deviation (Eck, Chainey, Cameron, Leitner & Wilson, 2005). The quantitative representation of the Moran's I accounts for the summed local count of attacks minus the overall average number of attacks in comparison to the average "neighborhood" level of attacks minus the overall average number of attacks. That is then standardized by the squared local comparison in the numerator and is represented quantitatively as:

$$I = \frac{\sum_i \sum_j \omega_{ij} (x_i - \bar{x})(x_j - \bar{x})}{\sum_i (x_i - \bar{x})^2}$$

The result of the Moran's I spatial autocorrelation technique is the Moran statistic. If the global Moran's I for anti-foreigner incidents indicates positive spatial autocorrelation, evidence for overall clustering will have been found and the null hypothesis of spatial randomness can be rejected.

This assessment of global spatial autocorrelation (i.e. clustering) is supplemented by local measures of spatial dependence. Local Indicators of Spatial Association (LISA) statistics provide information about the nature of the clusters (high or low values) and their location. In contrast to a global statistic such as the Moran's I (which is a single number or graph that indicates whether the null hypothesis of spatial randomness is satisfied for the complete map), a local statistic is designed to detect specific locations of elevated counts or rates (Anselin, et al., 2008) and helps identify whether there are statistically significant independent clusters of incidents.

Local indicators of spatial association (LISA) statistics assess the local association between data by comparing local counts of attacks to global (national average) counts of attacks with an emphasis on areas that statistically deviate from the expected (or average) numbers of occurrences. These are used to identify significant patterns of spatial association around individual locations such as hot spots and can assess the extent to which the global pattern of spatial association is spread uniformly throughout the data or whether there are significant types of locations affecting the computation of Moran's I (Cameron & Leitner, 2005). LISA statistics are therefore useful in adding definition to crime hot spots and placing a spatial limit on those areas of highest attack concentration.

The LISA statistic is the product of any small area unit's standardized count of attacks multiplied by the sum of the weight matrix multiplied by the standardized neighborhood average count of attacks. Ultimately, the LISA statistics are used to identify clusters of small areas that contribute disproportionately to any non-random spatial distribution of the data. The resulting equation is as follows:

$$I_i = z_i \sum_j w_{ij} z_j$$

While the results of the LISA statistics may suggest interesting locations, they do not provide a way to explain why patterns occur where they do (Anselin, et al, 2008). Along with examining the spatial nature of violent incidents, a major purpose of this study is to examine their surrounding locations. Like most studies of space within sociology and criminology, this study is less interested in spatial patterns themselves, and more interested in how these translate into social relations. Therefore, the final phase of analysis examines incidents in conjunction with surrounding structural characteristics.

Modeling the influence of structural characteristics: Explanatory analysis

Following the identification of spatial trends associated with violence against foreigners, explanatory analysis was conducted to answer the study's second central research question: What is the relationship between structural conditions and the occurrence of anti-foreigner violence?

Firstly, independent-samples *t*-tests were conducted to determine whether structural conditions significantly differ across locations that experience high amounts of anti-foreigner violence. The independent *t*-test compares the means between two groups on the same continuous, dependent variable. Since most anti-foreigner incidents were found to occur in Gauteng and the Western Cape, this study examined whether structural conditions (the

dependent variable in this case) are significantly different in Gauteng and the Western Cape (the independent variables) when compared to the rest of the country.

To answer this question, 3 independent *t*-tests were conducted, one examining differences in structural conditions between Gauteng and the rest of the country, another examining differences between the Western Cape and the rest of the country, and another examining differences between the combined conditions of Gauteng and the Western Cape and those of South Africa's 7 remaining provinces, the Eastern Cape, the Free State, KwaZulu-Natal, Limpopo, Mpumalanga, the Northern Cape and the North West. For this purpose, 3 provincial independent variables were created identifying the province of structural variables, coded as 0 or 1 for Gauteng, the Western Cape and the rest of South Africa.

The rationale for the *t*-test is to compare the difference between the means of structural variables to the difference between the means we would expect to obtain by chance (that is, if the null hypothesis were true). The standard error (i.e. the standard deviation of differences between groups) is used as a gauge of the variability between sample means. If the standard error is small, we expect most samples to have very similar means. When the standard error is large, large differences in sample means are more likely. If the difference between the samples is larger than what we would expect based on the standard error then we can assume that either the difference in means is due to chance or that the difference represents a genuine difference between the locations (and thus the null hypothesis is rejected). As the observed difference between the means gets larger, we can more confidently reject the null hypothesis (Field, 2009).

Comparisons are made by dividing the difference between the overall means of two samples (for example, the overall average unemployment rate of Gauteng and that of the rest of

South Africa) by the estimate of the standard error. This is expressed mathematically in the following equation:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{s_1^2}{N_1} + \frac{s_2^2}{N_2}}}$$

where the standard error is calculated by weighing the variance by the size of sample on which it is based, known as the pooled variance estimate used in this study because sample sizes within provinces differ. The pooled variance estimate is a weighted average in which each variance is multiplied (weighted) by its degrees of freedom, and then divided by the sum of weights.

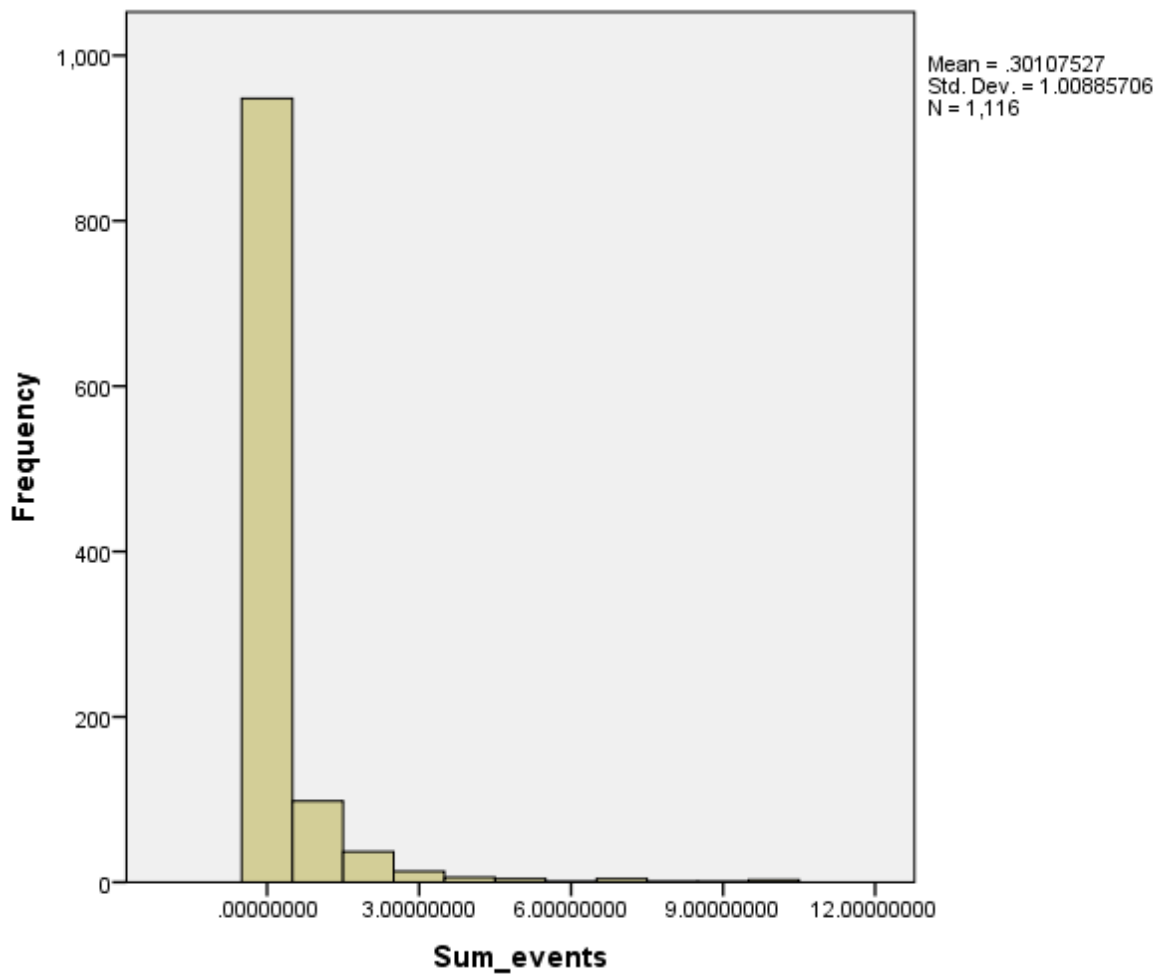
Ultimately, the obtained value of t is compared to the maximum value we would expect to get by chance alone on a t -distribution with the same degrees of freedom (Field, 2009). If the obtained value exceeds this critical value, we can conclude that structural conditions significantly differ based on location.

Following this analysis, a Poisson regression model was utilized to answer whether structural conditions are related to the occurrence of anti-foreigner violence. As can be seen in Figure 1, the dependent variable in this analysis, anti-foreigner violence, closely resembles a Poisson distribution with an abundance of zeros and a highly right-skewed distribution. The Poisson model is a rate-based model (similar to ordinary least square regression) and is appropriate for analyses such as the present where the dependent variable is not normally distributed and where the event is “rare” in the form of counts of incidents per police precinct. The total population was included as an independent variable for these estimations to control for differences in the population size of each precinct. The equation used in the analysis is as follows

and models the count of the violent incidents (Y) on a log scale to be interpreted as incident ratios related to independent variables.

$$\log(E(Y | \mathbf{x})) = \alpha + \beta' \mathbf{x},$$

Figure 1. Poisson distribution of anti-foreigner incidents



CHAPTER 4. ANALYSIS RESULTS

This chapter presents the results from the descriptive, exploratory and explanatory analyses that established the spatial nature of anti-foreigner violence and modelled the effects of structural conditions on the occurrence of violence.

Results of descriptive analysis

Firstly, the spatial distribution of anti-foreigner incidents across the country was independently examined. Anti-foreigner incidents were plotted on a map of South Africa to allow a visual examination of their spatial distribution across the country. Figure 2 displays a map of incidents across South Africa created in ArcGIS 10.0. As previously noted, this study uses the map of violent incidents in an exploratory way and searches for possible spatial patterns in the occurrence of incidents.

The thematic map in Figure 2 provides information on the extent of variation in anti-foreigner violence. As can be seen, anti-foreigner incidents appear to be concentrated in Gauteng and the Western Cape. Figures 3 and 4 provide magnifications of these areas from Figure 2. A visual examination of Figures 2, 3 and 4 indicates that precincts that experience a large amount of anti-foreigner incidents appear to be in proximity to one another, as are precincts that experience small amounts of incidents. This is the first evidence of a potential spatially non-random distribution associated with the count of attacks.

Results of exploratory spatial data analysis

The identification of spatial non-randomness through the visual inspection of Figures 2, 3 and 4 was further examined by the use of Exploratory Spatial Data Analysis (ESDA), which enabled a

Figure 2. Anti-foreigner incidents across South Africa

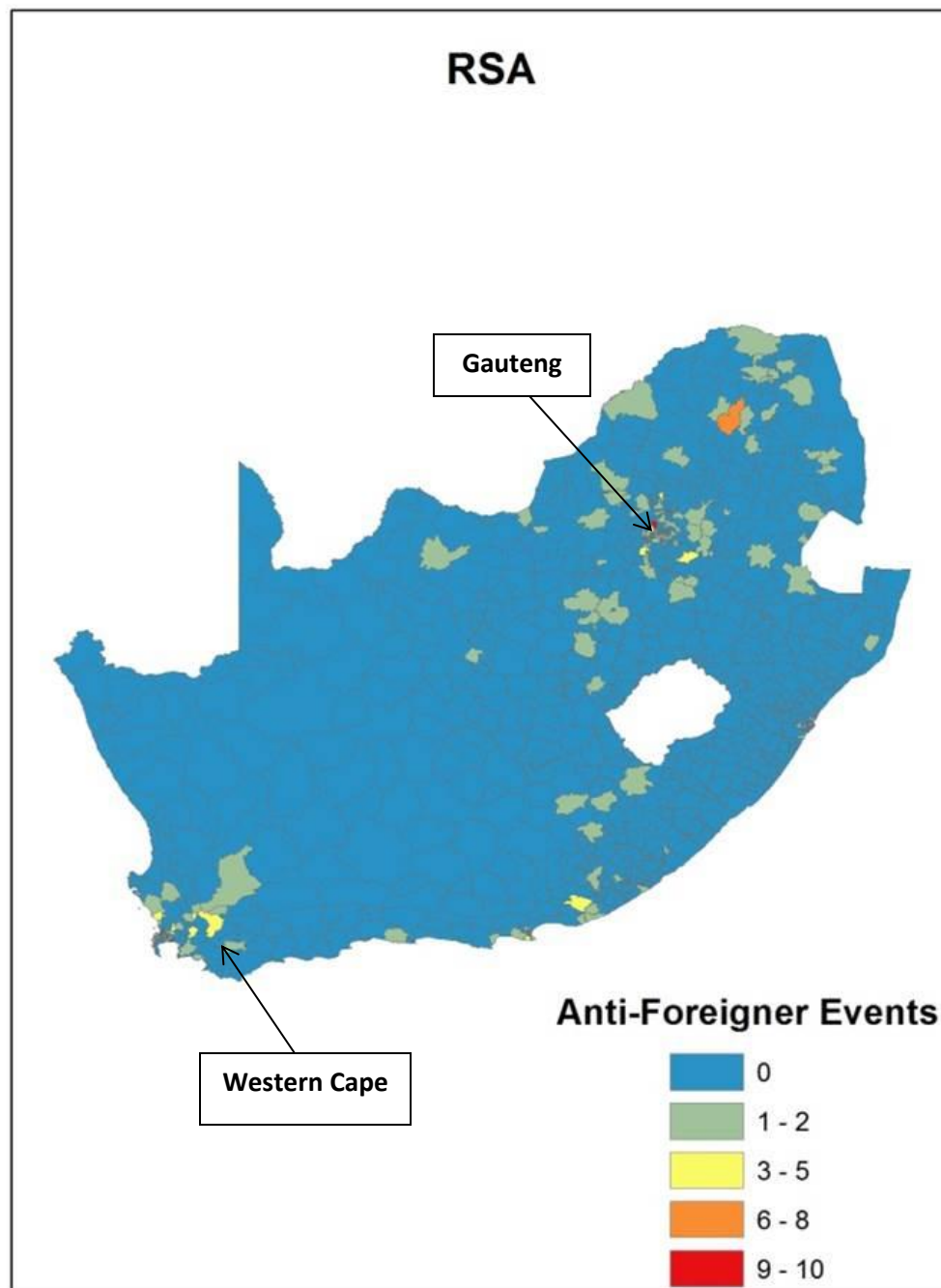
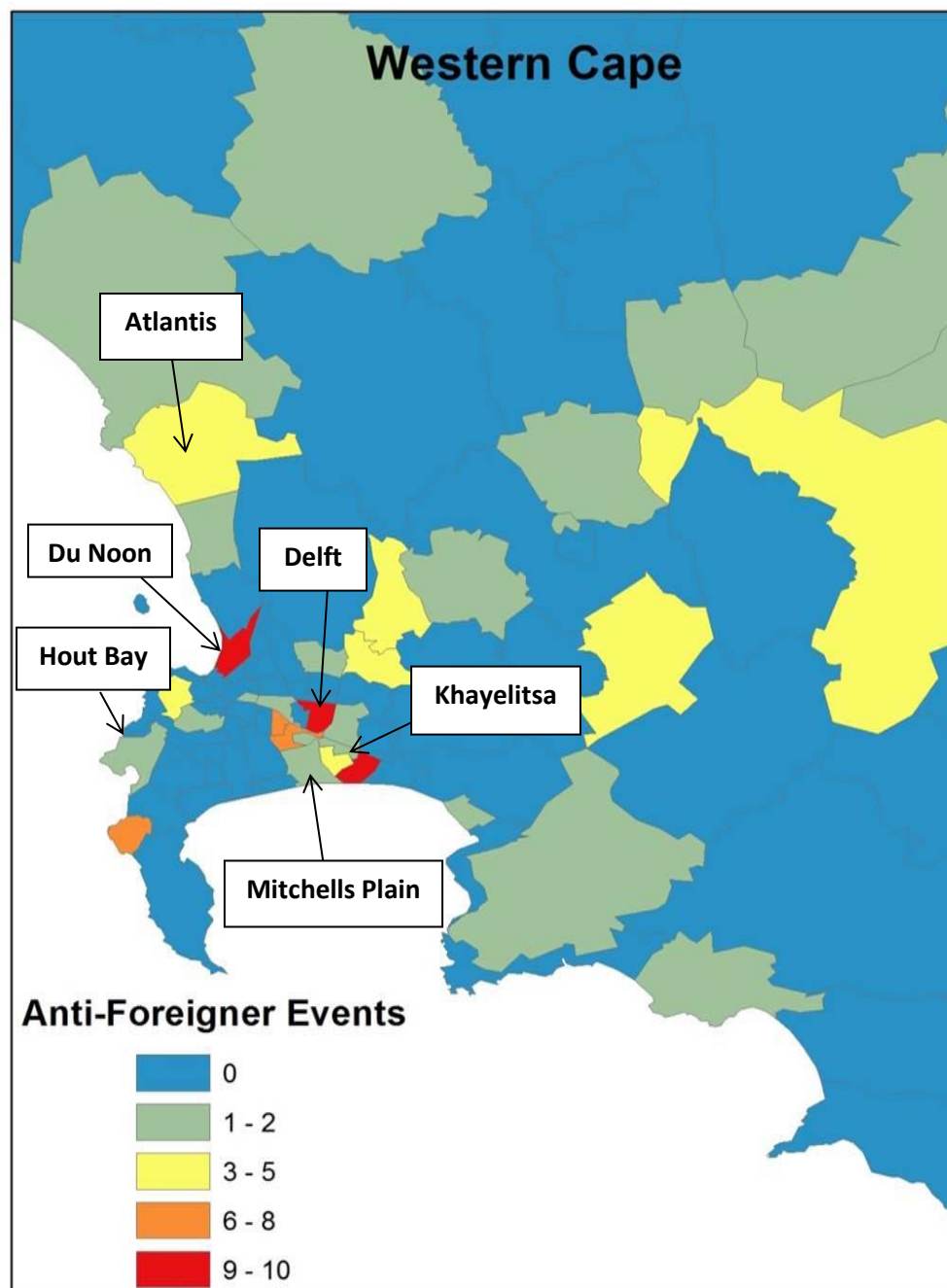


Figure 3. Magnification of anti-foreigner incidents in Gauteng



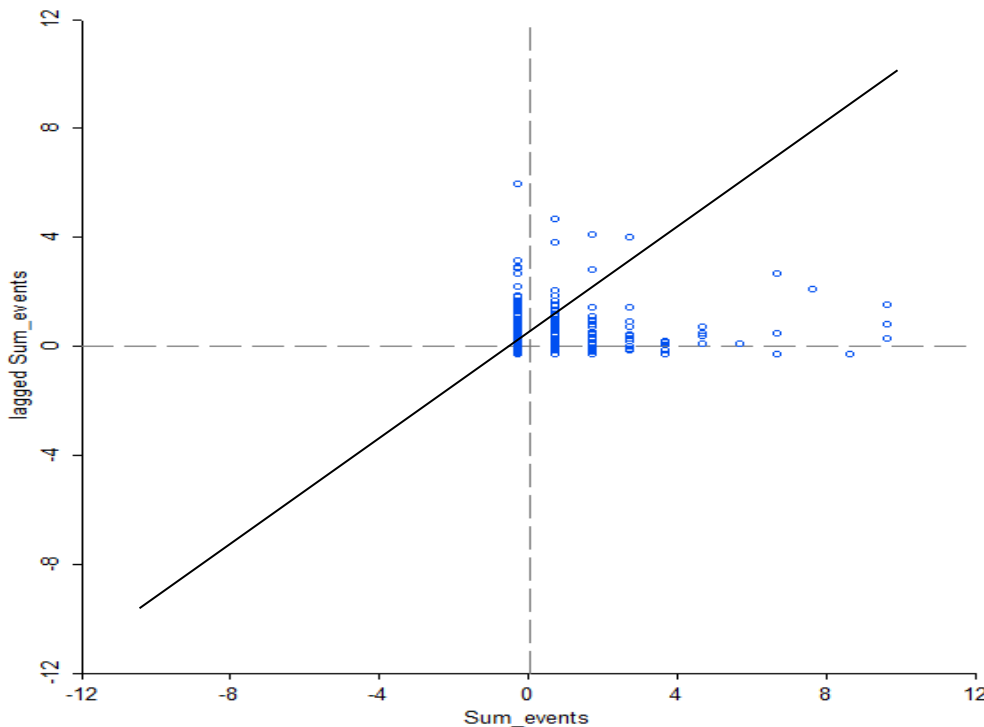
Figure 4. Magnification of anti-foreigner incidents in the Western Cape



more rigorous analysis of spatial patterns. ESDA procedures draw attention to spatial clusters and outliers and offer methods to smooth out random spatial variation so that nonrandom patterns will stand out more clearly (Anselin, Griffiths & Tita, 2008).

With the use of formal statistical tests for ESDA, evidence of clustering of anti-foreigner incidents was found. More specifically, the Moran's I spatial autocorrelation technique was employed and provided evidence of positive spatial autocorrelation. This spatial autocorrelation was identified with the use of a Queen's contiguity spatial weight matrix in which all precincts that share a border with a local precinct are considered "neighbors". The Moran's I scatterplot then plots each precinct's local count attacks on the x-axis and their average neighbor count of attacks on the y-axis. Results from the Moran's I spatial autocorrelation technique can be seen in Figure 5 where the Moran's I statistic is visualized in a graph called a Moran scatter plot.

Figure 5. Moran I scatter plot



The four quadrants in the Moran scatter plot in Figure 5 identify four types of spatial association between a location and its neighbors. Quadrants I (upper right) and III (lower left) indicate a positive spatial association. In Quadrant I, a location with an above-average value is surrounded by neighbors whose values are also above average (high-high). In Quadrant III, a location with a below-average value is surrounded by neighbors whose values are also below average (low-low). Quadrants IV and II indicate a negative spatial association. In Quadrant IV, a location with an above-average value is surrounded by neighbors with below-average values (high-low) and in Quadrant II, a location with a below-average value is surrounded by neighbors with above-average values (low-high). The slope of the regression line in the scatter plot is the global Moran's I. The global Moran's I of 0.136 (significant at the 0.001 level with 999 permutations), indicated positive spatial autocorrelation between each precinct and their immediate contiguous precincts' counts of anti-foreigner incidents.

This positive coefficient showed that precincts that are close together are statistically more alike. Based on the Moran's I, evidence for overall clustering of incidents was found and the null hypothesis of spatial randomness was rejected. As noted, the Moran's I is a global statistic, indicating whether the null hypothesis of spatial randomness is satisfied for the complete map. This assessment of global spatial autocorrelation (i.e. clustering) was supplemented by local measures of spatial dependence to detect specific locations of elevated counts of incidents and to identify whether there are statistically significant independent clusters of anti-foreigner incidents. The local Moran statistic, or LISA, identified significant spatial clusters of high counts of anti-foreigner incidents as a percentage of the total count of incidents, based on spatial proximity to one another.

Since the null hypothesis of spatial randomness was sufficiently rejected and evidence for overall clustering was found, LISA statistics provided information about the nature of the clusters (high or low values) and their location and were used to identify clusters of precincts that contributed disproportionately to the non-random spatial distribution of the anti-foreigner incidents. Evidence of statistically significant independent clusters (i.e. hot spots) of anti-foreigner violence was found. Figure 6 illustrates these results in a LISA cluster map of anti-foreigner incidents. The LISA cluster map visualizes specific areas of spatial clustering of incidents across the country. This cluster map shows the four types of local spatial autocorrelation (high-high, low-low, high-low, low-high) for those catchment areas (precincts) with a significant local Moran statistic. This study focuses on high-high clusters because these indicate positive spatial autocorrelation. Shaded catchment areas correspond to clusters of police precincts that experience high or low counts of violent incidents against foreign nationals. From this map, it was possible to statistically determine the precincts which were hot spots for anti-foreigner violence as well as the precincts that experienced considerably fewer incidents than would be expected if anti-foreigner violence were randomly distributed across the country. Most clusters occurred in Gauteng and the Western Cape, as can be seen in Figures 7 and 8 which provide magnifications of clusters from Figure 6. Table 2 lists the police precincts in Gauteng and the Western Cape located within significant spatial clusters of anti-foreigner incidents.

Since anti-foreigner violence was found to be spatially clustered, this clustering can provide information about the processes that lead to higher or lower amounts of incidents against foreigners. For this reason, the third phase of analysis examined the influence of structural conditions and attempted to explain the non-random distribution of anti-foreigner violence based on these theoretically relevant predictor variables.

Figure 6. LISA cluster map for South Africa

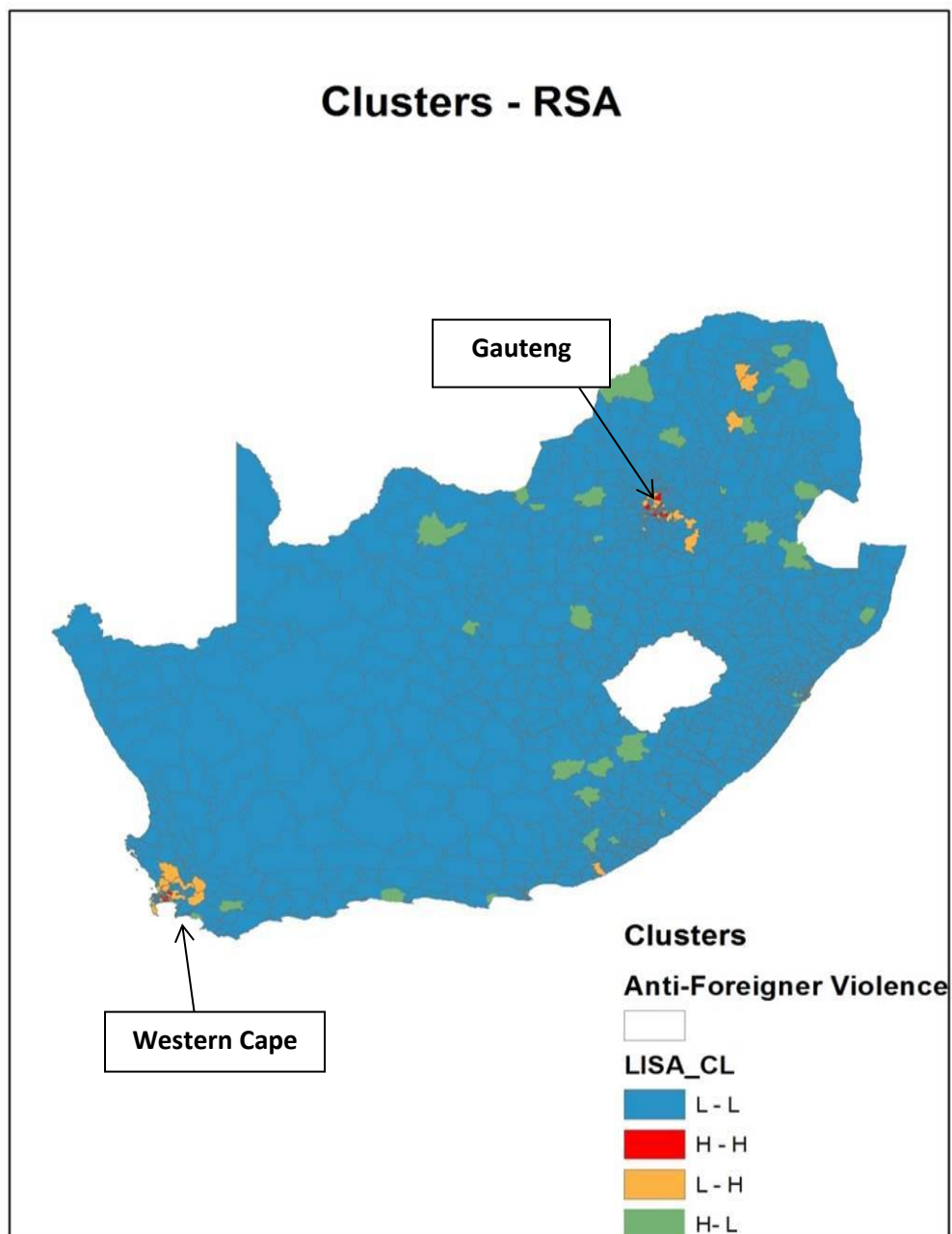


Figure 7. Magnification of LISA cluster map for Gauteng

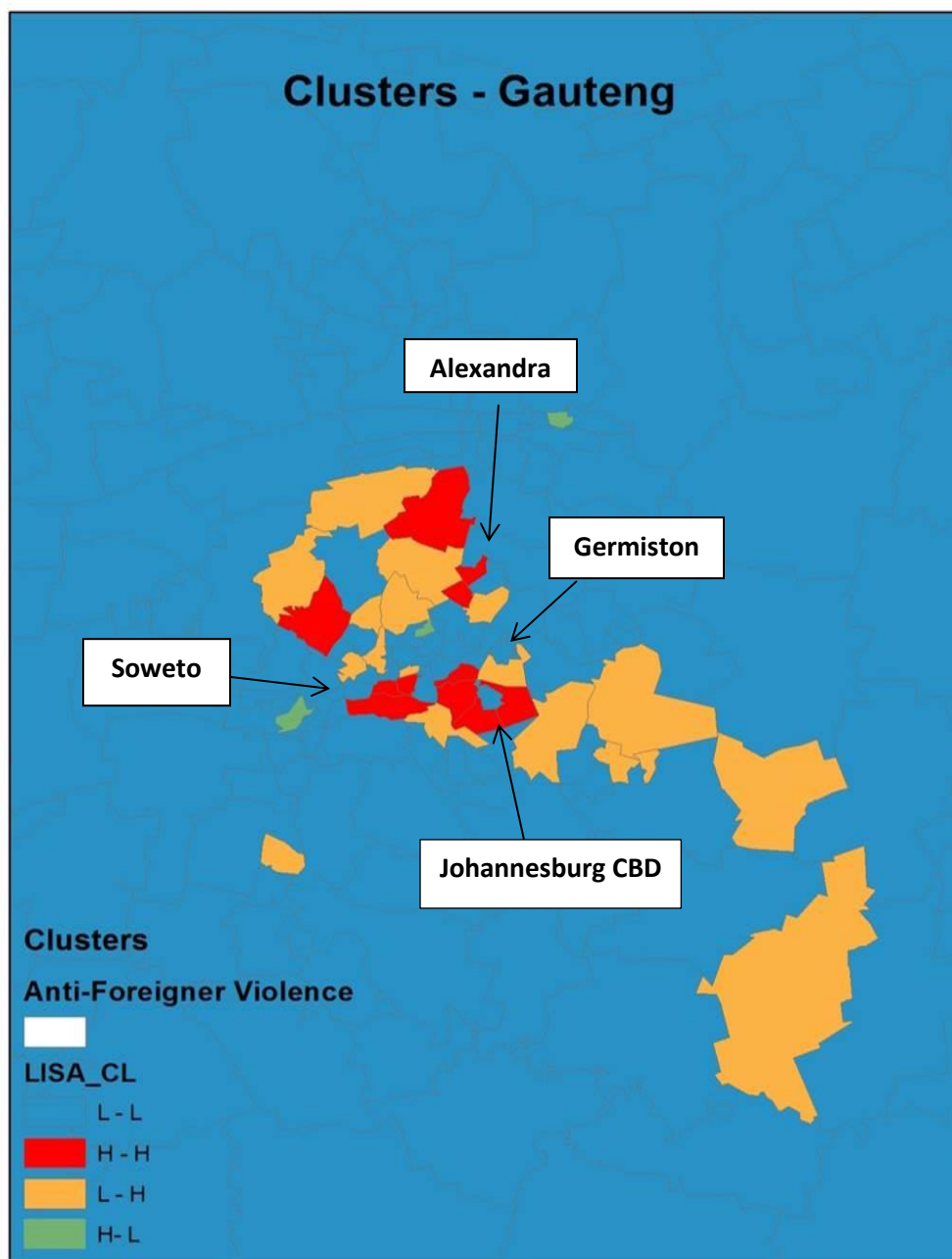


Figure 8. Magnification of LISA cluster map for the Western Cape

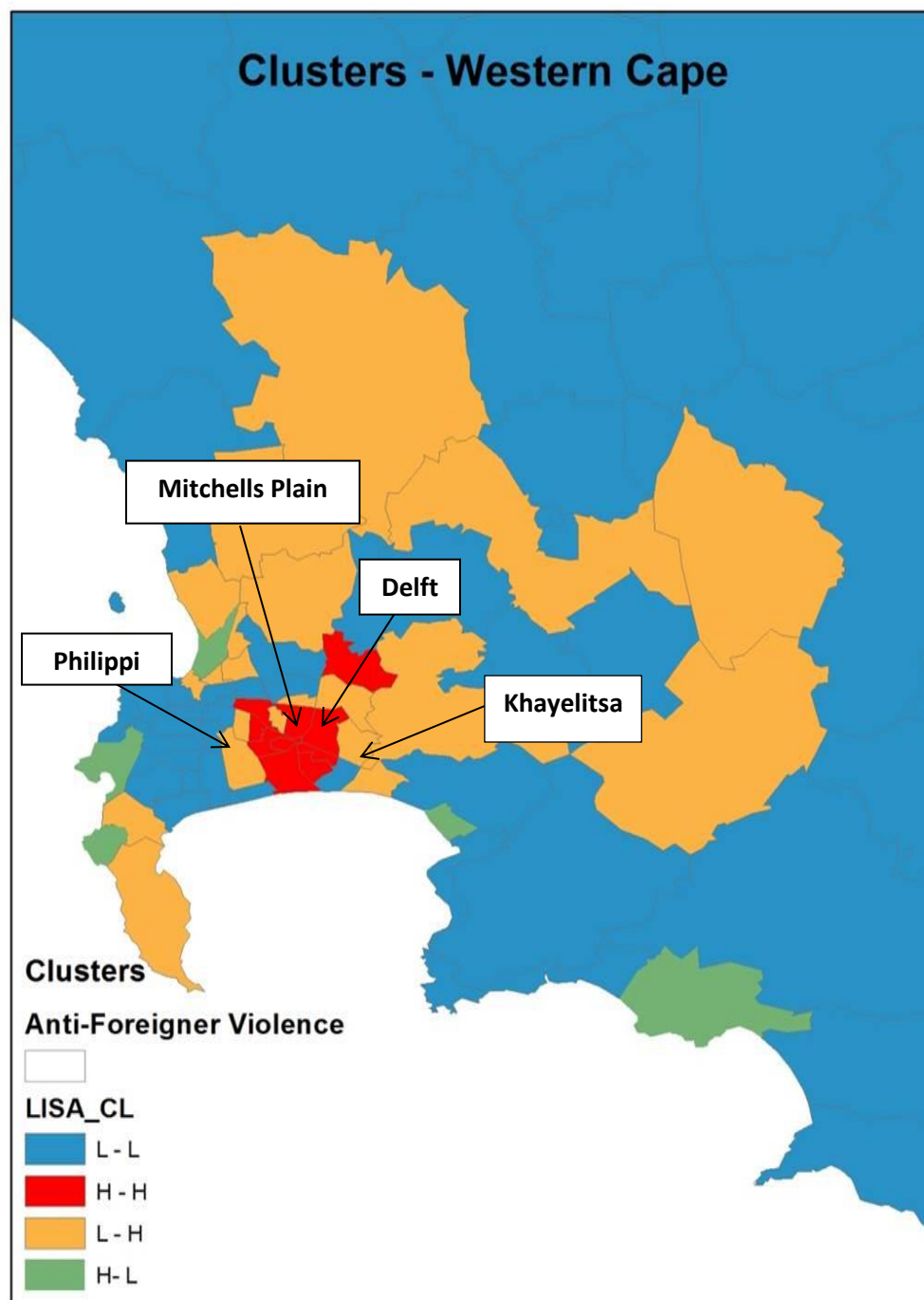


Table 2. Police precincts in Gauteng and the Western Cape located within significant spatial clusters of anti-foreigner incidents

Gauteng		Western Cape	
Wierdabrug	Johannesburg Central	Brackenfell	Mitchells Plain
Ivory Park	Booyens	Mfuleni	Lingulethu West
Rabie Ridge	Primrose	Delft	Khayelitsa
Honeydew	Germiston	Bishop Lavis	
Jeppe	Elsburg	Guguletu	
	Boksburg	Nyanga	

Table 3. Description of structural conditions by location

Variable	Gauteng (N=135)		Western Cape (N=148)		7 Remaining Provinces (N=832)		RSA (N=1115)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Population Size	87,667.73	67,188.65	38,935.45	41,536.37	39,881.78	43,844.73	45,318.06	49,517.8
Population Density	2,882.67	3,722.28	1,712.54	3,293.31	393.86	1225	870.23	2,229.75
Racial Heterogeneity	58.28	38.8	80.59	29.03	38.7	34.32	46.63	37.25
Language Heterogeneity	74.99	156.99	73.23	48.95	54.74	65.95	59.65	81.22
Ratio Male to Female	103.22	12.03	97.77	9.25	98.39	22.48	98.89	20.2
Aged 15-24	9.21	1.77	8.8	1.85	13.93	113.63	12.68	98.17
Poverty	7.35	2.76	4.82	2.35	9.5	68.88	8.62	59.53
Unemployment	11.38	5.21	7.13	4.43	18.93	290.87	16.45	251.27
Education	16.06	17.32	28.29	24.78	110	2449.13	87.78	2,115.67
Urban Area	94.02	16.46	83.33	20.06	48.03	40.03	58.28	39.97
Tenant Owned Dwelling	26.82	13.01	37.27	12.02	43.92	18.85	40.97	18.36
Informal Dwelling	6.17	6.86	4.3	4.6	3.11	3.66	3.64	4.42
Water in Dwelling	21.04	8.79	22.67	7.19	20.62	312.95	20.94	270.33
Latrine in Dwelling	26.01	7.87	23.49	6.77	18.27	191.64	19.9	165.58
Electricity in Dwelling	27.65	6.1	26.77	5.82	21.88	7.05	23.23	7.17
Total Contact Crime	185.13	499	176.16	73.84	159.6	1287.3	164.89	1,125.58

Results of independent-samples *t*-tests

Table 3 provides information on the average levels of structural conditions in Gauteng, the Western Cape, South Africa's 7 remaining provinces, and the entire country. Due to the fact that anti-foreigner incidents were found to cluster in Gauteng and the Western Cape, independent-samples *t*-tests determined whether structural conditions in these locations were significantly different than the rest of the country.

Table 4 lists the results from the *t*-test comparing structural conditions in Gauteng with those in the rest of the country. As can be seen, Gauteng's population size ($M = 87,668$, $SE = 5,783$) was significantly higher than the average population size of provinces in the rest of the country ($M = 39,484$, $SE = 1,389$), $t(1113) = -11.17$, $p < .01$. On average, Gauteng also had significantly higher population density ($M = 2,883$ residents per hectare, $SE = 320$), more residents living in urban areas ($M = 94.02$, $SE = 1.41$), higher levels of racial heterogeneity ($M = 58.28$, $SE = 3.34$) and language heterogeneity ($M = 74.99$, $SE = 13.51$), higher ratio of males to females ($M = 103.22$, $SE = 1.03$), more informal dwellings ($M = 6.17$, $SE = .59$), and more dwellings with access to electricity ($M = 27.65$, $SE = .52$) than the rest of the country ($M = 593$, $SE = 56.47$; $M = 53.36$, $SE = 1.27$; $M = 45.03$, $SE = 1.17$; $M = 57.53$, $SE = 2.04$; $M = 98$, $SE = .67$; $M = 3.29$, $SE = .12$; $M = 22.61$, $SE = .23$ respectively) (see Table 4). Finally, Gauteng had fewer dwellings owned by tenants on average ($M = 26.81$, $SE = 1.12$) than provinces in the rest of the country ($M = 42.92$, $SE = .58$). All were significant at the $p < .05$ level or lower.

Table 5 presents the results from the *t*-test comparing structural conditions in the Western Cape with those in the rest of the country. On average, the Western Cape had significantly higher population density, more residents living in urban areas, higher levels of racial heterogeneity and language heterogeneity and more dwellings with access to electricity than did the rest of the

Table 4. Results of *t*-test comparing structural conditions in Gauteng with the rest of SA

Variable	Gauteng (N=135)		Rest of South Africa (N=980)		<i>t</i>	<i>p</i>
	Mean	Standard Error (SE)	Mean	Standard Error (SE)		
Population Size	87,667.73	5,782.68	39,484.17	1,389.04	-11.17	.000***
Population Density	2,882.67	320.36	593	56.47	-11.87	.000***
Racial Heterogeneity	58.28	3.34	45.03	1.17	-3.9	.000***
Language Heterogeneity	74.99	13.51	57.53	2.04	-2.35	.019*
Ratio Male to Female	103.22	1.03	98.3	.67	-2.66	.008**
Aged 15-24	9.21	.15	13.15	3.34	.44	.66
Poverty	7.35	.24	8.8	2.03	.26	.79
Unemployment	11.38	.45	17.15	8.56	.25	.80
Education	16.06	1.49	97.66	72.09	.42	.67
Urban Area	94.02	1.42	53.36	1.27	-11.74	.000***
Tenant Owned Dwelling	26.82	1.12	42.92	.58	9.96	.000***
Informal Dwelling	6.17	.59	3.29	.12	-7.27	.000***
Water in Dwelling	21.04	.76	20.93	9.21	-.01	.996
Latrine in Dwelling	26.01	.68	19.06	5.64	-.46	.65
Electricity in Dwelling	27.65	.52	22.62	.23	-7.86	.000***
Total Contact Crime	185.13	42.95	162.1	37.9	-.22	.824
df=1113						

***<0.001, **<0.01, *0.05 significance level

Table 5. Results of *t*-test comparing structural conditions in the Western Cape with the rest of South Africa

Variable	Western Cape (N=148)		Rest of South Africa (N=967)		<i>t</i>	<i>p</i>
	Mean	SE	Mean	SE		
Population Size	38,93545	3,414.27	46,294.92	1626.42	1.68	.092
Population Density	1,712.54	270.7	741.31	63.98	-4.99	.000***
Racial Heterogeneity	80.58	2.39	41.44	1.14	-12.74	.000***
Language Heterogeneity	73.23	4.02	57.57	2.73	-2.19	.029*
Ratio Male to Female	97.77	.76	99.06	.69	.73	.468
Aged 15-24	8.79	.15	13.27	3.39	.52	.606
Poverty	4.82	.19	9.2	2.05	.83	.405
Unemployment	7.13	.36	17.88	8.68	.48	.628
Education	28.29	2.04	96.89	73.06	.37	.714
Urban Area	83.33	1.65	54.45	1.31	-8.44	.000***
Tenant Owned Dwelling	37.27	.99	41.53	.61	2.63	.009**
Informal Dwelling	4.3	.38	3.54	.14	-1.94	.053
Water in Dwelling	22.67	.59	20.68	9.33	-.08	.933
Latrine in Dwelling	23.49	.56	19.35	5.72	-.28	.777
Electricity in Dwelling	26.77	.48	22.68	.23	-6.58	.000***
Total Contact Crime	176.16	6.07	163.16	38.86	-.13	.896
df=1113						

***<0.001, **<0.01, *0.05 significance level

Table 6. Results of *t*-test comparing structural conditions in the Eastern Cape, the Free State, KwaZulu-Natal, Limpopo, Mpumalanga, the Northern Cape and the North West with those in Gauteng and the Western Cape

Variable	EC, FS, KZN, L, M, NC & NW (N=832)		Gauteng & Western Cape (N=283)		<i>t</i>	<i>p</i>
	Mean	SE	Mean	SE		
Population Size	39,581.78	1520.04	62,182.29	3585.9	6.76	.000***
Population Density	393.85	42.47	2,270.73	210.84	13.14	.000***
Racial Heterogeneity	38.70	1.19	69.95	2.13	13.09	.000***
Language Heterogeneity	54.74	2.29	74.07	6.8	3.48	.001***
Ratio Male to Female	98.39	.78	100.37	.65	1.42	.155
Aged 15-24	13.93	3.94	8.99	.11	-.73	.465
Poverty	9.50	2.39	6.03	.17	-.85	.396
Unemployment	18.93	10.08	9.16	.31	-.56	.572
Education	110	84.91	22.46	1.33	-.60	.548
Urban Area	48.03	1.39	88.43	1.14	16.35	.000***
Tenant Owned Dwelling	43.92	.65	32.28	.80	-9.58	.000***
Informal Dwelling	3.11	.13	5.19	.35	6.98	.000***
Water in Dwelling	20.62	10.85	21.89	.48	.07	.945
Latrine in Dwelling	18.27	6.64	24.69	.44	.56	.573
Electricity in Dwelling	21.88	.24	27.19	.35	11.37	.000***
Total Contact Crime	159.6	44.63	180.44	20.7	.27	.788
df=1113						

***<0.001, **<0.01, *0.05 significance level

country. As can be seen in table 5, it also had significantly fewer dwellings owned by tenants than did the rest of South Africa.

Table 6 presents the results from the *t*-test comparing structural conditions in provinces that experienced the highest amount of anti-foreigner incidents, Gauteng and the Western Cape, with South Africa's 7 remaining provinces, the Eastern Cape, the Free State, KwaZulu-Natal, Limpopo, Mpumalanga, the Northern Cape and the North West. On average, these 7 provinces that experienced few anti-foreigner incidents had significantly fewer residents living in urban areas, less population density, less racial and language heterogeneity, fewer informal dwellings and fewer dwellings with access to electricity than did both Gauteng and the Western Cape. Finally, these provinces had more dwellings owned by tenants ($M = 43.92$, $SE = .65$) than did Gauteng and the Western Cape ($M = 32.28$, $SE = .80$). As table 6 shows, this difference was significant $t(1113) = -9.58$, $p < .01$.

Results of negative binomial regression analysis

This study further examined the relationship between structural conditions and anti-foreigner violence. For this purpose, a multilevel, multivariate model was estimated in which the rate of violence was predicted by several structural variables believed to be linked to anti-foreigner violence, as described above.

The dependent variable in this analysis, anti-foreigner violence, was not normally distributed and took a Poisson distribution. Given the exploratory confirmation tests for over-dispersion, negative binomial regression analysis proved to be the appropriate modeling tool and was used to estimate the influence of structural conditions, since this type of analysis allows for the estimation of non-normal dependent variables in count form. The Moran's lag of

“neighborhood” average counts of anti-foreigner incidents was used as a spatial weight to control for spatial autocorrelation in the regression model and was inserted as an independent variable in the model to determine the effect of neighboring precincts with high counts of anti-foreigner violence.

Table 7 presents results from the negative binomial regression analysis estimating counts of anti-foreigner incidents across police precincts. The model was highly significant, indicated by the significant χ^2 for the likelihood ratio. Controlling for space, results showed that population size and heterogeneity, unemployment, access to latrines in dwellings, and neighboring precincts significantly and positively predict the occurrence of anti-foreigner incidents. Education levels were found to significantly and negatively predict anti-foreigner violence, indicating that the more residents in a precinct with high education levels, the less likely it is for anti-foreigner incidents to occur.

From the results presented in Table 7 it can be seen that the percent of those unemployed was positively associated with the amount of anti-foreigner incidents in a precinct. Thus, for every additional increase in the percentage of unemployment a precinct experienced, the likelihood of anti-foreigner incidents rose by 9%. For every additional increase in the percent of dwellings with access to functioning latrines, the likelihood of the occurrence of anti-foreigner incidents increased by 5%. Furthermore, for every additional increase in population size and racial heterogeneity, the likelihood of anti-foreigner incidents increased by around 1%. Finally, for every additional increase in the percent of residents within precincts with a grade 12 education, the likelihood of anti-foreigner incidents decreased by around 1%.

The Moran’s lag inserted in the model allowed for the continued analysis of spatial proximity and was found to be a highly significant predictor of anti-foreigner violence. With

every increase in anti-foreigner incidents a precinct's neighbors experienced (that is, all precincts with which it shares borders), the likelihood of anti-foreigner incidents within that precinct increased by 37%. The next chapter discusses the implications of these findings and the limitations of the study

TABLE 7. Negative binomial model estimating counts of anti-foreigner incidents across police precincts

Variable	IRR	z	p
Population Size	1.00	5.96	0.000***
Population Density	1.00	0.52	0.605
Racial Heterogeneity	1.01	4.02	0.000***
Language Heterogeneity	.999	-0.05	0.961
Ratio Male to Female	.985	-1.84	0.065
Aged 15-24	1.05	0.83	0.409
Poverty	1.06	1.40	0.162
Unemployment	1.09	2.94	0.003**
Education	.986	-3.63	0.000***
Urban Area	1.01	0.59	0.555
Tenant Owned Dwelling	.998	-0.23	0.816
Informal Dwelling	1.03	1.78	0.075
Water in Dwelling	.961	-1.72	0.086
Latrine in Dwelling	1.06	2.57	0.010**
Electricity in Dwelling	1.03	1.17	0.242
Total Contact Crime	1.00	1.27	0.204
Moran/Spatial Lag	1.37	2.68	0.007**
χ^2	1579.97		0.0000***
N = 1115			

***<0.001, **<0.01, *0.05 significance level

CHAPTER 5: DISCUSSION

The geography of anti-foreigner violence

By utilizing newly available data on the location of violent incidents against foreigners throughout South Africa and applying spatial analyses, this study aimed to contribute to a budding discussion of the ecological characteristics of anti-foreigner violence. The use of Geographic Information Systems (GIS) is still in its infancy in South Africa and has great potential for helping to understand the particularities of this type of violence. Especially when used in conjunction with relevant social theory aimed at the examination of the determinants of crime and criminality, GIS can be a powerful practical tool in the presentation of crime data and this study hopes to inspire further research into the topic. With enhanced recording practices of anti-foreigner violence and better information on the locations of attacks, much research can now be conducted to establish a scale of the problem, determine patterns of attacks and examine the processes that may lead to these patterns. Such analyses can enhance our understanding of this phenomenon and guide interventions, including prevention plans and response activities.

GIS techniques established the spatial distribution of anti-foreigner incidents across South Africa which enabled an examination of the spaces within which violence against foreigners took place. The thematic map of anti-foreigner events provided information on the spatial nature of these events and demonstrated how they are distributed across the country. As expected, the highest amounts of anti-foreigner incidents occurred in Gauteng and the Western Cape's urban areas and informal settlements and townships. Few attacks occurred in suburbs or rural areas.

Significant spatial clustering of incidents targeting foreign nationals was observed, predominantly in urban areas in Gauteng and the Western Cape. These spatial clusters, or hot spots, within provinces are zones in which there was a larger than expected concentration of anti-foreigner incidents. This finding is not surprising considering that most incidents since 1994 have been concentrated in South Africa's urban areas (Charman & Piper, 2012) where most migrants live. While in previous decades most international migration was concentrated in agricultural and mining areas, since the early 1990s both international and domestic migrants are increasingly concentrated in South Africa's urban centers that have become important nodes for migrants (Landau, 2012).

This is most evident in Gauteng which hosts around half the country's foreign born population and is by far the most urbanized. Covering less than 2% of South Africa's landmass, Gauteng is the smallest of the nine provinces. However, it contributes almost 34% of South Africa's gross domestic product (GDP), representing almost 10% of the GDP for sub-Saharan Africa. Within the province, non-nationals are concentrated in certain cities, such as Johannesburg where around 8% of the population are foreign born, and particular neighborhoods. Inner-city areas like Yeoville, Berea, and Hillbrow are now close to or above 50% foreign-born, while few non-nationals are believed to live elsewhere in the city (Landau & Segatti, 2009). Anti-foreigner violence measured in this study tended to cluster around these immigrant-dense areas, both in Gauteng and in the Western Cape.

Influence of structural conditions on anti-foreigner violence

The interpretation of the observed spatial effects of anti-foreigner violence is heavily dependent on theory and this study drew from the ecological perspective to examine the processes that

contribute to anti-foreigner violence, asking whether social structural conditions have a direct impact on the occurrence of violence against foreign nationals. It is far from a critical test of the ecological perspective, however, and findings from this study should be viewed as suggestive since the focus is limited in terms of units of analysis and availability of data for more refined measurements of relevant variables. Nevertheless, this study discusses the relative validity of explanations of anti-foreigner violence within the ecological perspective and recommends further specification and testing of the perspective's propositions.

Based on this perspective, anti-foreigner violence needs to be understood in the context within which it is embedded. This study sought to explain this phenomenon with reference both to its larger determinations and its proximate conditions. Because structural conditions vary considerably across the country, it is important to understand how causal processes may operate differently in particular locations in producing patterns of anti-foreigner violence but few studies have examined these patterns in direct relation to the context within which they are embedded.

High amounts and clusters of anti-foreigner violence were found in Gauteng and the Western Cape. Each of these provinces differed significantly from the rest of the country with respect to a number of structural variables. Gauteng's population size was significantly higher than provinces in the rest of the country. Gauteng also had significantly higher population density, more residents living in urban areas, higher levels of racial and language heterogeneity, a higher ratio of males to females, more informal dwellings, and more dwellings with access to electricity than did the rest of the country. Finally, Gauteng had fewer dwellings owned by tenants on average than provinces in the rest of the country. Similarly, the Western Cape had significantly higher population density, more residents living in urban areas, higher levels of racial and language heterogeneity and more dwellings with access to electricity than did the rest

of the country. It also had significantly fewer dwellings owned by tenants than did the rest of South Africa.

Population size and heterogeneity were found to significantly and positively predict anti-foreigner events. Both Gauteng and the Western Cape had more heterogeneous populations than the rest of the country as well as higher rates of population density. These findings are consistent with Aymar and Segatti's (2012) study of the 2008 anti-foreigner attacks that found high rates of heterogeneity to be correlated with anti-foreigner violence.

Though provinces did not significantly differ with respect to unemployment rates, a lack of employment was found to be positively and significantly associated with anti-foreigner violence. This finding is consistent with much research in South Africa as well as the West which argues that economic conditions are related to crime rates (Dodson, 2010; Pratt & Lowenkamp, 2002) and provides support for the belief that unemployment exacerbates the intensity of competition for jobs in both the formal and informal sectors of the economy where foreigners could be seen as unfairly competing with South Africans in low-wage sectors due to working at lower wages.

Research linking conditions of economic deprivation to crime argues that impoverishment itself is criminogenic and there should be a direct empirical link between high levels of poverty and/or inequality and/or unemployment and crime. In this line of reasoning, areas with high levels of economic deprivation should experience higher levels of anti-foreigner violence than areas with lower levels of poverty and inequality since poor, black South African nationals see foreign Africans as competing with them for jobs, housing, and other resources and services to which they feel entitled (Sharp, 2008). Findings from the present study contradict these arguments, however. Poverty was not found to predict anti-foreigner violence, nor was it

found to significantly differ in provinces that experienced the most anti-foreigner events when compared to the rest of the country. These findings are, however, consistent with Aymar and Segatti's study which dismissed absolute poverty as an explanatory factor in anti-foreigner violence.

Conditions of poverty and social marginalization, however, were found to significantly differ in those provinces experiencing most anti-foreigner violence in this study. As noted, the vast majority of South Africa's poor live in informal settlements or townships, many of which lack running water, electricity, and functioning latrines in dwellings. Residents within different provinces were found to have differing access to basic government services. Gauteng had significantly more informal dwellings than other provinces and fewer dwellings owned by tenants. Similarly, the Western Cape had significantly fewer tenant-owned dwellings. Though the number of informal dwellings was not significant, the Western Cape had more informal dwellings than other provinces in the country and this finding approached significance.

Contradicting previous research linking the poor delivery of municipal services to violence (Nleya, 2011), access to electricity and running water in dwellings were not found to significantly predict the occurrence of anti-foreigner violence. On the other hand, access to functioning latrines in dwellings was found to be significantly related to anti-foreigner violence, though in the opposite direction of what would be expected. Areas with more dwellings with functioning latrines experienced more anti-foreigner events.

Education levels were found to significantly and negatively predict anti-foreigner violence. The more residents with high education levels an area had, the less likely it was for anti-foreigner incidents to occur. Finally, the rate of violent crime an area experienced was not found to be significantly related to the occurrence of anti-foreigner violence, contradicting much

of the literature on violence against foreign nationals in South Africa that argues that violence is endorsed and accepted as a socially legitimate means of solving conflicts (Charman & Piper, 2012).

Competition theory provides a useful framework to interpret this study's findings. According to this theory, racial and ethnic threats generate collective action aimed at defending the position of dominant groups (Porter, et.al., 2014). Ethnic and racial conflict is more likely to occur when racially ordered systems begin to break down and two or more groups come to compete for the same scarce resources (Olzak 1992). Dominant groups are more likely to organize resistance to racial or ethnic outgroups when demographic shifts in racial composition resulting from in-migration produce direct and increased competition from another group (Cunningham & Phillips, 2008).

Competition theory predicts a positive relationship between minority group size and racially or ethnically motivated crime. Though data on the size of the immigrant population in areas were unavailable in the present analysis, most anti-foreigner violence was found to occur in those areas with reportedly high amounts of immigrants. Moreover, population size was a significant, positive predictor of anti-foreigner violence, meaning that areas with large population sizes experienced more anti-foreigner violence. As previously noted, Gauteng's population was significantly larger than the rest of the country and both Gauteng and the Western Cape had more residents per hundred hectares than did all other provinces.

Competition theory also emphasizes an ecological correlation between increasing racial and ethnic heterogeneity and hate crime (Porter, et.al., 2014). Findings from this study support this assertion. Racial heterogeneity was found to be a significant predictor of anti-foreigner violence in South Africa. Those provinces that experienced most anti-foreigner events, Gauteng

and the Western Cape, were more heterogeneous than the rest of the country, both with respect to race and the use of different languages.

Importantly, ecological perspectives have brought attention to the fact that crime is strongly linked to city life and that neighborhood characteristics influence crime levels, pointing to the effects of local social structural conditions such as ethnic heterogeneity and concentrated economic disadvantage on crime rates (Feldmeyer, Steffensmeier, & Ulmer, 2013). This study found most anti-foreigner violence to be concentrated in South Africa's urban areas.

Furthermore, both Gauteng and the Western Cape had more residents living in urban areas than did all other provinces. While figures were not available for the present analysis, it will be important for future research to examine the spatial dynamics of migration to particular urban centers and its relationship to anti-foreigner violence. Despite obstacles to data collection, triangulation from a variety of data sources indicates that internal migration is the most frequent form of movement in South Africa, that is, movements between and within provinces and municipalities (Landau & Segatti, 2009).

Both citizens and non-citizens frequently move within, into and out of South Africa. For example, research by the South African Cities Network (2006) found that more than 10% of the total population of Metsweding, a smaller municipality in Gauteng, had recently moved there whereas in Durban, the figure was less than 1%. According to the Community Survey conducted by Statistics South Africa in 2007, 18% of Gauteng's inhabitants had moved within the province since 2001 (Statistics South Africa, 2007). In the inner city of Johannesburg, research by the African Center for Migration and Society found the South African-born population to have moved twice, on average, since coming to the city, usually within the last decade. Foreigners, who are typically in the city for shorter periods, averaged slightly above three moves (Landau &

Segatti, 2009). This is unsurprising considering that current policy frameworks within South Africa and practices by government officials such as members of the DHA and SAPS have encouraged the impermanence of international migrants within locations. Finally, while discussions of urbanization in South Africa typically focus on primary cities, the fastest growing parts of Gauteng are not Johannesburg and Pretoria but rather smaller communities beyond the urban edge. This growth has resulted in the expansion of poorly serviced informal settlements surrounding more established and well-serviced formal settlements. As a result of these internal movements, out-migration is also significantly shifting the population profiles of a number of South Africa's smaller and less affluent communities, resulting in significant changes in social composition (Landau & Segatti, 2009). If reliable figures become available, it will be important to examine how these shifts influence the occurrence of anti-foreigner violence.

Competition theory posits that demographic shifts resulting from in-migration bring diverse populations into close contact and direct competition for scarce resources. Established inhabitants perceive they are competing with migrants for residential space and working opportunities (Wimmer, 1997). The salience of group boundaries increases as populations begin to directly compete for the same resources in a shared environment, as well as the perception that the presence of one group directly reduces the opportunities of another (Olzak, 1992; Soule & Van Dyke, 1999). Such conditions incite violence against new competitors as the dominant group attempts to remove or diminish the threat posed through exclusion, intimidation, and/or direct violence against members of the 'outsider' group.

Factors, therefore, that raise levels of competition among racial and ethnic groups increase rates of ethnic conflict. Findings from this study support this argument. Conditions of economic deprivation such as unemployment were found to be significantly related to the

occurrence of anti-foreigner violence and increased its likelihood. Conditions of poverty and social marginalization also differed significantly in those provinces experiencing most anti-foreigner violence in this study. Furthermore, competition theory argues that reductions in ethnic and racial inequality and in levels of segregation can foster ethnic conflict and protest (Olzak, 1992). This framework provides an adequate explanation for the finding that access to functioning latrines in dwellings increased the likelihood of anti-foreigner violence. Gauteng and the Western Cape also had significantly more dwellings with access to electricity than did South Africa's remaining provinces, yet experienced the most anti-foreigner violence. As these inequalities between citizens and non-citizens are reduced, populations directly compete for the same resources in their shared environment. As a result, the salience of group boundaries increases, as does the perception that the presence of foreigners directly reduces the opportunities of citizens, leading to an increase in anti-foreigner violence to diminish the threat to citizens' opportunities.

Due to a lack of available data, it was not possible to directly test the tenets of competition theory in this study. In order to more accurately assess the arguments of competition theory, future analyses could measure the effect of such characteristics as the in-migration rate in South Africa's cities and provinces, the ratio of citizen to non-citizen unemployment, the ratio of citizen to non-citizen income, the ratio of citizen to non-citizen education, and the ratio of citizen to non-citizen access to government services on the occurrence of anti-foreigner violence. It will also be salient to examine not only the proportion of non-citizens but also the rate at which this proportion has changed and the demographic circumstances in which this in-migration occurred. It may be that anti-foreigner violence could be predicted based on an interaction between citizens' numeric dominance in an area and the recent rate of in-migration of foreigners.

Furthermore, in line with competition theory, future analyses could examine intergroup competition over symbolic goods as well as material resources. Threats to the symbolic position of the dominant group may serve as an important antecedent to racially motivated crime. For example, an examination of hate crimes in New York City between 1987-1995 found increased rates in locations where nonwhites had moved into previously white strongholds, yet decreased rates where nonwhites had long resided in significant numbers. Moreover, neither economic competition nor adverse economic conditions were found to be significantly correlated to hate crime victimization, leading researchers to point to cultural and social-psychological mechanisms that operate in tandem with demographic shifts. The numerically dominant group not only shares a common space but also a common cultural identity and supporting social networks that rely on the exclusion of racial or ethnic outgroups. In-migration may be linked to hate crimes in these neighborhoods due to the threat to the cohesiveness of the dominant group's identity and way of life posed by increased integration (Green, Strolovitch & Wong, 1998). This symbolic threat may lead to racially-motivated crime when dominant groups mobilize to defend their turf by sending a message to keep out undesirable others through violence (Pinderhughes, 1993). Finally, along with material inequality, research examining cultural differences (e.g. in dress, language, or styles of house construction) may provide useful insights into the dynamics of anti-foreigner violence since cultural differences may be just as stratified in practice as income or wealth (Ferguson, 2006).

The power of spatial thinking

Through the application of the ecological framework and the concept of spatial thinking, this study explored the nature of violent anti-foreigner incidents across South Africa in order to

examine patterns of violence in direct relation to the contexts within which they are embedded. The ecological perspective focuses on people and the communities in which they live, arguing that place matters.

Within the fields of sociology and criminology, increased attention has been given recently to the relationship between geographic context and the ecological settings in which social process and behaviors occur. This focus has been inherently geographic, emphasizing concepts associated with such examples as individuals being situated within a neighborhood. While the methodological tools for such analyses (such as GIS software) are relatively new in their development, this type of spatial thinking has long been at the core of traditional sociological theory that marks the foundations of the discipline (Porter & Howell, 2012).

Edward Hayes (1908) first wrote of the need for a geographically focused sociology which should aim to understand the role of the physical environment as an explanation for variations in human behavior. During the early development of geographically focused sociological explorations, researchers pointed to the need to better understand the mechanisms driving many of the social processes identified by sociologists at the time and argued that this could be accomplished through the synthesis of social theory and geographical methods (Ellwood, 1927). This synthesis allowed researchers to better understand individual action within a given context and has led to the belief, advocated in this study, that the understanding of human behavior cannot be separated from contextual situations (Porter & Howell, 2012).

Primarily due to the development of widely accessible computerized mapping and spatial analysis techniques in the past decade, the mapping of phenomena in the social sciences has exploded, especially the mapping of crime. Yet, despite crime mapping's growing popularity,

criminology's use, understanding, production and application of maps remain largely superficial and uncritical (Hill & Paynich, 2013).

As noted, modern criminology's attraction to mapping the spatial distribution of crime can be directly traced to the work of the Chicago School sociologists of the 1920s and 1930s. Ernest Burgess' iconic concentric zone model depicts the internal structure of Chicago through social groups that are spatially arranged in a series of rings. This particular way of seeing urban space has endured for almost a century (Kindynis, 2014). As Hayward (2012) correctly points out, the concentric zone model continues to exemplify criminology's conception of the city as a source of only quantitative data, demographics and rational discourse as seen by city planners, developers and statisticians. Since the early 1900s, unfortunately, the School's appreciative focus increasingly fell victim to outside policy influence and rational abstraction, ultimately leading to the creation of theoretically empty disciplinary variants such as environmental criminology. The School's superficial interpretation of urban space has since predominated within criminology (Kindynis, 2014).

Such superficial interpretations of space are not only unnecessary but dangerous. Geographically focused explorations of social phenomena are related to geography in their ability to descriptively locate population characteristics in space but are able to move beyond this stage to a more dynamic one involving weighting schemes and explanatory power through the use of methodological tools created for geo-social analyses. In many ways, the recent developments in spatial analytic methods have allowed social scientists to re-visit the core tenets of sociology and criminology and examine how they may aid in the understanding of the direct causal effects of varying ecological conditions on human behavior. In fact, not explicitly

controlling for one's proximity to a given ecological situation decreases our understanding of the confounding effects associated with geographic context (Porter & Howell, 2012).

This study attempted to move away from typical criminological research that superficially maps crime and provided a more sophisticated analysis of the nature of the problem and the characteristics of areas with significant concentrations of anti-foreigner violence. The influence of spatial proximity was examined in the study through the inclusion of the Moran's lag of precincts' average counts of anti-foreigner incidents in the regression model. By inserting the lag as an independent variable in the model, it was possible to determine the effect of neighboring precincts with high counts of anti-foreigner violence on the occurrence of anti-foreigner violence in a given precinct.

Controlling for the influence of all structural variables measured, the Moran's lag was found to be a highly significant predictor of anti-foreigner violence. With every increase in anti-foreigner incidents a precinct's bordering neighbors experienced, the likelihood of anti-foreigner incidents within that precinct increased by 37%. This represents a clear finding of a spatial process related to anti-foreigner violence that could not be explained by the structural conditions measured and points to the concentration of social processes in space that need further exploration. Most often, these processes are related to the concentration of cultural components, which are inherently spatial in the sense that the carriers of culture commonly share a regional or sub-regional geographic area that they refer to as home (Porter, Howell & Hempel). As a consequence, unobserved cultural orientations are explicitly related to many social outcomes, though it is currently unknown how they relate to the occurrence of anti-foreigner violence. Future research should employ the spatial approach employed in this analysis to capture these

orientations through the introduction of spatial parameters aimed at accounting for these unmeasured processes.

Limitations

This project was limited in a number of respects. In addition to the limitations discussed above, it is important to note that the results of the study reflected time-displaced, cross-sectional data of locations, that is, data collected at different points in time. Data on anti-foreigner violence reflected incidents taking place between 1994 and 2012; Census data was collected in 2011 and SAPS data reflected the amount of violent crime in 2012. For this reason, the model presented in this study estimated effects which did not occur concurrently, possibly leading to the failure of models to capture relationships between actual variables. However, limited data availability prevented the use of concurrent datasets.

Furthermore, the ACMS database of anti-foreigner incidents is limited in that it is not exhaustive. While it consists of 344 anti-foreigner incidents, many more are suspected to have occurred during the time period studied. Such an undercount is not uncommon with criminal justice statistics related to sensitive topics. There are strong arguments for the use of the dataset for analyses, however, especially since it is the only existing dataset in South Africa that captures a significant amount of incidents of violence against noncitizens. Thus, it is both a unique dataset in terms of its ability to answer the questions put forth in the study, as well as the best known available data for this topic. Similarly, SAPS has been criticized as undercounting crime, especially violent crime which is measured in the present study.

Finally, data limitations precluded analyses of immigrant population levels in precincts. If accurate estimates were available, it would be useful to examine the ratio of citizens to non-

citizens in areas that do and do not experience anti-foreigner violence. This study's measure of racial heterogeneity was limited to the data collection methods of the South African Census which categorizes residents into 1 of 5 racial groups, black African, Colored, Indian or Asian, White, or other. More specific data on the level and ethnicity of migrants in areas was unavailable. It will be important to examine these differences considering that international migrants' origins differ significantly among South Africa's provinces and cities. For example, Mpumalanga and Limpopo provinces primarily host Mozambicans and Zimbabweans, while there is a far greater diversity of foreigners living in Durban and Cape Town including many more Zimbabweans, Mozambicans, Congolese and Angolans. Somalians are also present in all major cities and smaller towns in much smaller numbers (Landau, 2012). Qualitative research could provide estimates of migrants at a local level that could be incorporated into future analyses.

CHAPTER 6. CONCLUSION

This dissertation examined the spatial nature of violence against foreign nationals in South Africa and the effect of structural conditions on the occurrence of such violence. Drawing from relevant literature on social ecology, it examined the distribution of anti-foreigner violence across the country as well as the influence of a range of structural variables on its occurrence.

This research contributes to the literature in a number of ways. First, it utilized newly available data that include spatial information on anti-foreigner incidents and surrounding structural characteristics to better understand the spaces within which violence against foreigners occurs. With the use of GIS techniques, the spatial distribution of incidents across South Africa was established, demonstrating that the most anti-foreigner incidents occurred within Gauteng and the Western Cape, where they also significantly clustered in and around urban areas, informal settlements and townships. The spatial clustering of anti-foreigner violence was further examined to gain insight about the processes that led to higher amounts of incidents against foreigners in particular locations.

Second, this study examined patterns of anti-foreigner violence in direct relation to the context within which they are embedded through an analysis of the influence of indicators of economic deprivation and social marginalization on the occurrence of anti-foreigner violence. A number of structural conditions were found to positively predict the occurrence of anti-foreigner violence, including population size, racial heterogeneity, unemployment levels, and access to sanitation, specifically to functioning latrines. High education levels reduced the likelihood of anti-foreigner violence in locations. Furthermore, those provinces that experienced the most anti-foreigner violence, Gauteng and the Western Cape, significantly differed from the rest of the

country with respect to a number structural conditions, including the size of the population, the ratio of males to females, the amount of urban area, population density, racial and language heterogeneity, the number of informal dwellings, the number of tenant-owned dwellings, and the number of dwellings with access to electricity.

Third, this study provides evidence in favor of the use of ecological theories in understanding anti-foreigner violence in non-Western contexts. By utilizing maps as research aids, criminologists can develop innovative and explicitly spatial methodologies with which to generate further empirical insights into the lived experience and socio-cultural complexities of space and crime (Kindynis, 2014).

The study was, however, severely impacted by limitations in the nature and quality of available data. There is an urgent need for more reliable data on anti-foreigner violence in South Africa as well as on domestic and international migration figures within and to South Africa. This study's findings, therefore, should be viewed as suggestive since the focus is limited in terms of units of analysis and availability of data for more refined measurements of variables.

Finally, the finding that anti-foreigner violence was influenced by conditions of economic deprivation and social marginalization requires further exploration. Linked to market liberalization, these conditions are similar to those in the 'West', which is also experiencing rising tides of ethnic conflict, racism and xenophobia (Comaroff & Comaroff, 2012). However, the social sciences continue to have a tendency to overlook the 'third world' and developing countries' experience of liberalization and associated economic deprivation of members of the population. It is particularly useful to study anti-foreigner violence in this context within South Africa in order to better understand how the effects of these processes manifest themselves in social relations.

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