STOCK MARKET REACTION TO XENOPHOBIC VIOLENCE IN AN EMERGING ECONOMY

Collins C Ngwakwe*, Richard Ilorah**

* Graduate School of Leadership, Faculty of Management and Law, University of Limpopo South Africa
** School of Economics and Management, Faculty of Management and Law, University of Limpopo South Africa

OPEN ACCESS

How to cite this paper:
Ngwakwe, C., Ilorah, R. (2017). Stock Market Reaction To Xenophobic Violence In An Emerging Economy. *Risk governance & control: financial markets & institutions, 7(2,1),* 194-203.
http://dx.doi.org/10.22495/rgcv7i2c1p7

ISSN Online: 2077-4303
ISSN Print: 2077-429X

Received: 09.02.2017
Accepted: 05.04.2017

JEL Classification: D4, D24, O4
DOI: 10.22495/rgcv7i2c1p7

Abstract

This paper presents an initial evaluation of possible effect of xenophobic violence on the Johannesburg Stock Market. Violence is inimical to economic development as it constraints normal business operations and causes a rebound on the stock market. The paper applied the event trend analysis combined with a statistical t-test of paired sample means in the pre and post-xenophobic period stock performance. Data was drawn from the JSE All Share Index - Capped Indices Performance (J303 - Capi DY) for 2008 and 2015, during & after the xenophobic violence of 2008 and 2015. The economic consequences of social instability were substantiated with related literature. The theoretical foundation was inclined on the integrated threat theory and the social contract theory. Findings from the analysis of paired sample t-test showed a significant difference in means of stock performance with P<0.05 within and after the xenophobic period. Furthermore, a t-test of similarity in stock performance chart for periods of xenophobic violence 2008 and 2015 showed no significant difference in stock performance trend – indicating similarity in stock chart between 2008 and 2015 periods of xenophobic violence. The paper recommends the need for further research of a broader scope that will consider many years of xenophobic events or similar violence across countries using multiple stock performance and economic performance indicators.

Keywords: Stock Market, Social Stability, Economy

1. INTRODUCTION

Violence is inimical to economic development as it destroys normal business operations and causes loss of human life, physical and financial assets, causing jittery in the stock market. Xenophobia is not unique to South Africa; rather extant research on xenophobia is scattered across nations (Mocan and Raschke 2016; Helliwell, Wang and Xu 2014; Guiso, Sapienza and Zingales 2009), indicating that xenophobia is not an African issue, but rather a global phenomenon. However, the paper is concerned about the likely economic effect, which may be felt in the stock market (Mocan and Raschke 2016).

Previous researchers have engaged in some socio-economic aspects of xenophobia across countries to unravel possible causes and effects. For instance, Clermont and Eisenberg, (2007) found a high level of success by foreigners in the US federal courts than their local counterparts but insists it is not enough to justify xenophobia against foreigners. The likely causes of xenophobia have also puzzled researchers; prejudice and economic strain were found amongst the determinants of xenophobic attitude on foreigners in the European Union, however educational attainment was discovered as an important factor for positive attitude on foreigners (Gang, I.N., Rivera- Batiz, and Yun 2013). Similarly, migration into Europe has caused economic discrimination and violence against foreigner for which research has indicated the need for effective government policy to curb economic discrimination and violence against immigrants (Dancygier and Laitin 2014)

Publications on xenophobia in South Africa have dwelt mainly on social dimensions such as causes and solutions, reconciliation, integration and diplomatic relations (Thompson, 2016; Langa and Kiguwa 2016; Gordon 2016; Okem, Asuelime, and Adekoye 2015). Current research suggests that phobia and hatred for immigrants in Germany might have serious economic consequences on the host country's economy as this might cause ripples in the labour market, the credit market and other markets in the host country (Mocan & Raschke 2016). However, there is paucity of research on the potential implication of xenophobic violence on the stock market in South Africa. But the stock exchange is an important economic hub of any nation (Kok 1996) and the investors' confidence on the stock market and the general economy is affected by social upheavals including social violence (Crush and Tawodzera 2014; Pietropaolo 2015). This paper contributes an initial thought and analysis to this economically important issue and thus provides an avenue for further research. Two questions stand out though; is there a significant difference between the stock market performance during and after the xenophobic violence and is there a similarity in the stock performance chart between the 2008 and 2015 periods of xenophobic violence in South Africa. Accordingly, the main aim of the paper is to examine potential stock market reaction to xenophobic violence. Therefore, the objective of this research is to analyse any likely differences between the stock market performance during and after the xenophobic violence and evaluate the similarity in stock performance chart between the 2008 and 2015 periods of xenophobic violence in the country.

The paper is organised as follows, the next section after the introduction presents a review of related literature. The next section after the literature is the theoretical framework. The method and results section is presented after the theoretical framework and the last section draws conclusion.

2. RELATED LITERATURE

This section begins with a general review of concepts, followed by events specific to South Arica.

2.1. A General Review of Concepts

The stock exchange market is an important financial hub of a country, providing companies with the important information about the availability and cost of capital (Kok, 1996, 146). It creates capital resources and allocates them between various competing investment opportunities. Savings are channelled into investments with relative ease of conversion into liquidity, and financial instruments such as dividend-bearing shares (equities) of public listed companies are traded freely under regulated procedures (Kok, 1996, 145). Companies' shareholders, such as investors are officially part owners of listed companies, foreign investors, in particular, usually cautious and eager for proper analysis of the market for informed decisions before trading in shares. They research and analyse listed companies as well as their management and host countries, as these can impact on investor dividends which represent investor shares of company profits.

Investors take very seriously political factors such as host countries government stability and leadership, their institutions, tax laws, wage policies, labour laws, trade tariffs, environmental regulations, and developmental priorities. Other factors of great concern to investors include incidences of corruption, unconstitutional change of governments, terrorism, riots and conflicts. For example, conflicts such as violent xenophobic attacks on foreign nationals, reflecting weaknesses in a country's institutions (Crush and Tawodzera 2014), do not go unnoticed by investors (Pietropaolo 2015). Xenophobia, seen as the fear or hatred of foreigners, is an open display of discrimination, often culminating in physical violence and destruction of properties; it is viewed by investors as the inability of the government to guarantee protection of individual rights (Solomon and Kosaka 2013). The incidence of xenophobia in a country portrays the country as lacking in social cohesion, peaceful coexistence, good governance and respect for human rights (Solomon and Kosaka 2013). The inability of government to formulate and implement remedial policies may be perceived as a proof of complicity to the xenophobic scourge (Crush and Ramachandran, 2010). On paper, xenophobia goes against the values of African countries as signatories to the New Partnership for Africa's Development (NEPAD), as members of the continent's sub-regional communities and the African Union (AU). The manifestation of xenophobia towards foreign nationals undermines regional cooperation, harmony, and economic integration (Crush and Pendleton, 2004); by extension, it discourages investment and capital inflows.

Incidences of capital or investment inflows and outflows experienced by a country reflect investor confidence respective changes in investor sentiments, the former perceived as signs of existing growth potentials in the country and the later the lack of growth potentials (Hasan, Kobeissi and Song 2014). Similarly, companies with favourable growth potentials are rewarded with high share prices, and the opposite the case for companies with poor growth potentials. The ruling stock market share price is a measure of company (or firm) performance, providing investors with the valuable information about the financial health and prospects of a company (Hasan et al, 2014), as well as the socio-economic and political stability of the macro-economy. Investors are very concerned about the incidence of violence of any nature, be it prolonged labour strikes or xenophobia and their effects on investments. They may consider liquidating poorly performing investments and move their capital to more attractive investment destinations.

Foreign investors in stocks and bonds typically receive dividends in the local currency of the investment, expected to be converted back into investors' domestic currency. These investors therefore consider exchange rate stability an important factor when analysing a potential return. There is the downside risk that the local currency depreciates relative to investor's domestic currency, lowering the total return for the investor (Kreinin, 1997, Chapter 5). Currency fluctuations can therefore impact the total returns of an investment, implying that investors do face currency or foreign exchange rate risks. When the exchange rate responds freely to market forces, practically all economic events and government policies affect the supply and demand for foreign currencies through their direct or indirect effect on the country's balance of payment (Kreinin 1979, 123). These events and policies could be exogenous in nature, implying that they are foreign generated developments and beyond the control of the domestic economy. The factors could also be endogenous in nature, originating within the domestic economy, usually as products of government poor policies and institutional weaknesses.

Under the exogenous factors, an international demand shift that decreases demand for the country's traditional exports would decrease the volume and price of these exports and depress the exchange value of the country's currency. So would a sharp rise in the country's import prices or an economic slump in its major markets (trading partners) (Kreinin 1979, 124). On the endogenous front, any government policies, institutional weaknesses or socio-economic and political uncertainties leading to the outflow of investment capital from a country, will depress the exchange value of that country's currency. Typical endogenous factors include: violent xenophobic attacks on foreign nationals; labour unrests and strike actions disrupting the country's capacity to produce and export, encouraging more imports than exports; poor competitive tendencies, both locally and internationally; factors that discourage short-term capital inflows; poor expectations based on underlying economic trends or resulting from sheer confidence factors in the political and sociological arena; rumours; and beliefs (Kreinin 1979). These endogenous factors cause exchange rate fluctuations and currency risks, adversely affecting money, income, prices, and resource allocation between production sectors, signifying internal weakness and unsatisfactory performance of the domestic economy (Kreinin 1979) These factors affect stock exchange dividends adversely and discourage foreign investors, undermining the function of a stock market as a place where ownership and indebtedness can be bought and sold (Kok 1996).

Violent xenophobic attacks, for example, capable of attracting the attention of the international community and causing socio-economic and political uncertainties and currency instability are issues of serious concern to investors when making investment decisions. For example, depressed currency values depress investor dividends and incentives, often forcing investors to move their capital to destinations that guarantee more profitable investments. Evidence shows a significant positive relationship between higher investor protection, lower managerial entrenchment and firm value (Hasan et al, 2014). Firms' efforts may improve investor protection and shareholder rights somewhat (Klapper and Love 2004) but may generally be insufficient to establish an environment with good legal infrastructure without the support of an efficient judicial system at the national level (Shleifer and Wolfenzon 2002).

Locals resort to xenophobic violence if they do not have faith in the national government and, worse still, if some government authorities show signs of complicity to the attacks. The human development impacts of migrants on countries of destination are usually overlooked, allowing xenophobes to rather pursue a language of exaggeration, such as blowing out of proportion the number of migrants and their alleged crimes. According to Crush and Ramachandran (2010), exaggerated statistics of migrants and crimes allegedly committed by them are quickly accepted as facts through uncritical repetition. The manipulation of migrant statistics bedevils any rational discussion of migrants' contributions to the economy. Migrants, also called aliens derogatively by their detractors (Crush and Ramachandran 2010), are labelled as outside forces holding under siege their host country, such stereotypes fan further xenophobic attacks. Investors seeking capital growth and high dividends on their investments follow closely all information about any socio-economic or political threats to their investments just as they also follow information about existing opportunities favouring the growth of their capital. They remain cautious about investment decisions, ever ready to move their investments to safer destinations.

Socio-economic Events Relatively More Specific to South Africa

The South African institutional infrastructure since the dawn of democracy in the country in 1994 has continued to be tested by frequent violent xenophobic attacks on foreign nationals, especially black Africans. These attacks remain sporadic and are sometimes very violent as in 2007, 2008 and 2014 when they peaked, costing several human lives and properties (Crush and Tawodzera 2014; Crush and Ramachandran 2010; Solomon and Kosaka 2013). For example, in the 2007 xenophobic attacks on Somalis in the Eastern Cape, over three dozen lives were lost and in Zandspruit, over 100 informal Zimbabwean dwellings were burnt down (Solomon and Kosaka 2013). In the 2008 attacks, over 70 people were killed country-wide and over 100 000 migrants hounded out of their homes, many seriously assaulted and injured, and their properties damaged; these attacks have since become a testimony to South Africa's weak socio-economic, political and institutional governance structures (Crush and Tawodzera 2014; Crush and Ramachandran 2010; Solomon and Kosaka 2013). The complicity of South African authorities, namely, the police, Home Affairs officials, and Lindela (a notorious repatriation centre for refugees) employees to these attacks are on record (Solomon and Kosaka 2013). The attacks are seen as the inevitable consequence of decades of unchecked xenophobic sentiment (Crush and Ramachandran, 2010), reflecting an oversight by South African authorities in matters of civic education. Consequently, 33 percent of South Africans, in a national survey by SAMP (2008), see migrants in the country as job-snatchers, 21 percent see migrants as criminals, and about 33 percent would not want migrants and refugees to enjoy the same right to legal protection, police protection, and access to social services as citizens. Even though migrants in South Africa have constitutional rights like other citizens, these migrants, according to Crush and Ramachandran (2010), are dehumanized and demonized, making it difficult to maximize the development potential of migration; this reflects the country's weak institutions.

South Africa as an emerging economy is expected to provide new investment opportunities characterised by high dividends and diversification benefits both to residents and foreign investors. The xenophobic attacks on foreign nationals embarrass the South African government, concerned about the consequences on the country's image and the risk of disinvesting in the country, as these violent attacks catch the attention of the international community. According to Castrillo, Marcos and Sam Martin (2010), the value of listed companies may depend on the companies' internal governance mechanisms, but the impact of the institutional framework at the national level in which the companies are embedded cannot be ignored. In other words, successes of companies and their firms to attract investors depend on the successes of their internal corporate governance as well as the institutional infrastructures at the national level to maintain law and order. Good corporate governance, supported by strong institutional infrastructure at the national level, promotes business value, reflected in high dividends to investors (Hasan et al, 2014).

These imply that both macro-aspects (national level mechanisms), focussing on the regulatory environment, namely, country laws and enforcement institutions (La Porta et al, 2002; Hasan et al, 2014), and micro-aspects (firm level mechanisms), focussing on internal mechanisms (corporate governance), including trust, reputation, culture and norms, operating within the firm (Franks, Meyer and Rossi, 2009; Allen, Qian and Qian, 2005) have great impacts on investor protection and confidence. Similar to a successfully executed project, the structure and attributes of corporate governance and investor protection cannot be separated from the quality of national institutions and social capital, namely, norms and trust, among others (Ilorah, 2014). In a situation of poor institutional environment at the national level, firms have, on their own, been unable to fill the institutional shortfalls even after adjusting their internal governance mechanism to enhance investor protection (Klapper and Love, 2004; Shleifer and Wolfenzon, 2002). Internal corporate adjustments are simply inadequate to provide full investor protection, especially in emerging economies where poor firm valuation, reflected in sub-standard dividends, is usually more pronounced and difficult to eradicate (Klapper and Love, 2004). An unsafe local business environment, characterised by low valuation of stocks, forces local firms and foreign investors to desert the local stock exchange and list rather in foreign stock exchanges, moving their capital to more stable environments (Doidge, Karolyi and Stulz, 2004; Reese and Weisbach, 2002).

Laws may be in place at a national level to protect all people, including foreign nationals, but the enforcement machinery may constitute challenges. Countries tolerating violent xenophobic tendencies on foreign nationals also violate property rights with impunity. Without proper institutional reforms, such countries have problems raising capital and attracting foreign investors (Bremer and Elias, 2007; Ben Naceur et al, 2007; Saidi, 2004). In South Africa, harms to foreign or local investments are equally harms to the country's stock exchange, being the country's financial hub where shares of public listed companies are traded under a regulated procedure (Kok, 1996, 145). A stock exchange market has the ability to exert an influence on companies, oversee and appraise the performance of management whose function, among others, includes seeking a steady and dependable rise in share prices over time (Kok 1996, 147). The ruling market share price provides the investor with an evaluation of the financial health and prospects of a company and the state of the economy as an investment destination.

Companies in need of capital and seeking information about capital availability as well as cost study the stock market. Informed investment decisions by businesses seeking funds for expansion, require proper analysis of prevailing stock market conditions. The more favourable is a company growth potential the higher is the company's share price even in relation to the company's earnings; such a company obtains capital relatively easier in the market. The opposite is the case for companies judged to lack growth potentials. In view of the functions of the stock exchange which include, among others, the creation of capital resources and their allocation between various competing investment opportunities (Kok 1996, 145), the South African authorities should be concerned about risks faced by companies and the country's stock exchange in a violent xenophobic society.

3. THEORETICAL FRAMEWORK

This paper is inclined on two philosophical theories – the integrated threat theory and the social contract theory. The integrated threat theory (Stephan & Stephan, (1996; Stephan and Stephan, 2000) is based on the feeling of discomfort arising from the phobia of perceived potential threat (social or economic) by immigrants on citizens of a particular region. The social contract theory advocates the protection of individuals and business given the inherent right imbued through the relationship between business and the government.

3.1. The Integrated Threat Theory

Whilst analysing the prejudice on immigrants to Spain and Isreal, Stephan, Ybarra, Martnez, Schwarzwald and Tur-Kaspa (1998) applied the integrated threat theory organised into four variables to forecast demeanour on immigrant people in Spain and Israel. The varieties of threats examined include symbolic threats rooted in value differences amongst groups; realistic threats to resources; apprehension about social relations with others; and the apparent sense of threat due to deleterious labels by others. Whilst all the variants of threats were functional on demeanour toward immigrants, findings indicated that apprehension and labels ranked higher in galvanising bigotry against immigrants (see also, Cuddy, Fiske, and Glick, 2007; Cottrell and Neuberg, 2005 ; Stephan, Stephan and Gudykunst, 1999). Other researchers have elevated the phobia of resource competition as fuelling hatred for immigrants (Esses, Dovidio, Jackson, and Armstrong, 2001). Other studies, such as (Velasco, Verkuyten, Weesie and Poppe, 2008), applied the integrated threat theory to study prejudice towards Muslims in the Netherlands, applying the structural equation modelling, their findings disclosed that stereotypes threats constituted a causative factor of prejudice toward Muslims in the Netherlands. In another related study, Harrison and Peacock (2009) applied the integrated threat theory to understand the cause of xenophobia against foreign university students by local students in southwest of England. They found that local students see foreign students as constituting a threat to their academic success and group identity. This finding is similar to other studies that have traced xenophobic demeanor on immigrant traders on the bases of immigrants' business people posing a threat to the success of local business people (Clermont & Eisenberg, 2007; Gang, Rivera- Batiz, & Yun, 2013; Dancygier & Laitin, 2014; Mocan & Raschke, 2014). Whilst a myriad of justification for the threat perception exists, it is important to underscore and find solution to potential economic implication on the local economy. One of such potential solution may lie on the ability of society and government to honor the innate contractual obligation that subsists between it, individuals and the business. This provides the impetus for the brief discussion of social contract theory in the next section.

3.2. The Social Contract Theory

The transition of human existence from the state of nature to a new state that is governed through enshrined collective will, guided by codified laws brought in the state of restraint – to live and act freely, but under the guided laws of the state in a decorum that is devoid of trampling on others' right to freedom. Accordingly, shelving the state of lawless nature where might was rife paved a way to envisaged peaceful society where the mighty and the weak, rich and poor, could live in peace and harmony with the freedom to live and conduct business according to the state laws (e.g. Rousseau, 2016). As expounded by Nobel philosophers such as Thomas Hobbes, Jean-Jacques Rousseau, John Locke and others (Riley, 1999;), individuals and/or companies should have a complete liberty to live and to engage in acceptable means of livelihood and/or business, free from obstructive and destructive interference by others (Weber, 2014). This is because the social pact between state and the citizenry places an inalienable responsibility on the state to protect citizens (and impliedly, businesses and the property) who live in it (Weber, 2014). However, this does not assign a license of absolute freedom to do whatsoever in contravention of the state law; there is also no freedom or protection in a lawless society (Weber, 2014). Recently, modern thinkers and writers have tended to modify and/or adapt social contract theory to link the society's protectionist obligation on business. The society has collectively initiated the state law and the state law has empowered the existence of business to provide economic utility to the citizenry. Therefore, it is therefore argued as reasonable that the society not only confers legitimacy on business because of its economic role but also enters into a contract with business, by which its behaviour is brought into conformity with social expectations (Donaldson, 1983; Swanson, 1999). Therefore, the accorder of legitimacy may not betray the confidence reposed in it by the subordinate – business and/or individuals. As can be expected, violation of social contract between the state and the subordinates and between society and business causes fear which, in addition to people searching for protection of life, also results in fear to investment during periods of betrayal of social contract which resonates with low level of protection of life and property. This therefore may cause apparent rebound on business confidence and on the stock market (Besley and Mueller, 2012; Dewandaru, Rizvi, Bacha, and Masih, 2014; Mnasri and Nechi, 2016;). Given the paucity of research on the potential stock market reaction to xenophobic violence, this paper conducts an initial examination to see if there is any discernible reaction from the JSE stock market. The next section presents the analytical procedure and the results.

4. METHODOLOGY

This paper applied a mixed approach of event trend analysis and t-test statistics of paired two sample for mean difference. Accordingly, a t-test of difference in performance was applied to compare the within and post-performance of the JSE Capped Indices, JSE (2016) in both 2008 and 2015 xenophobic events. T-test is recommended for testing the stock price performance differences between pre and post-event dates (MacKinlay 1997; Kothari and Warner, 2006). In addition to t-test, line charts and bar graphs were applied to show performance trend differences. Stock market performance data was collected from the JSE monthly closing index values for All Share Index - Capped Indices, JSE (2016). It was posited that the JSE All Share Index - Capped Indices Performance (J303 - Capi DY) during the period of xenophobic event is greater than the Capped Indices Performance (J303 - Capi DY) for the months following the xenophobic event. It was therefore hypothesized that stock price performance during xenophobic violence is greater than stock price performance after xenophobic violence, which is abridged as follows:

$H0$ = SPDuringXenoV > SPAfterXenoV

This therefore suggests a one-tailed test; the hypothesis is tested at an alpha of 0.05 and the null hypothesis is rejected if the significance level is less than or equal to the alpha level, which is at $P \leq 0.05$. Previous researchers on the effect of social events, announcements and/or news on stock market performance also applied t-test of paired sample means to analyse the difference in means between the pre and post-event stock market performance (Hill and Maroun, 2015; Tay, Puah, Brahmana and Abdul Malek, 2016).

5. RESULTS

Sporadic spates of xenophobic skirmishes, which culminated to full-blown attacks in May 2008 and in April 2015, surfaced some months before major violence; both the news and the actual attacks may have provoked a shock in the stock market (see e.g. Hill and Maroun, 2015; Tay, Puah, Brahmana and Abdul Malek, 2016). The JSE All Share Index - Capped Indices Performance (J303 - Capi DY) trend data for four months during the events of xenophobia in 2008 and 2015 and four months after the 2008 and 2015 xenophobic event were plugged into the t-test of paired sample for mean difference. Tested at 0.05 alpha level, the t-test for mean performance of Capped Indices (Table 1 and Table 2) show a significant low performance of mean Capped Indices at P=0.04, which is less than the alpha level of 0.05. This result therefore indicates that the mean performance of Capped Indices during the 2008 and

2015 xenophobic violence was significantly less than the mean performance for the months following the xenophobic violence. Within the ambit of this analysis, this may suggest that the stock market might have the propensity to respond to shocks arising from the news and actual xenophobic violence. The mean of share index performance is represented pictorially in the bar charts in Figure 1 and Figure 2.

Table 1. T-test: Paired Two Sample for Means in 2015 JSE All Share Index - Capped Indices Performance (J303 - Capi DY) during & after Xenophobic Violence

t-Test: Paired two sample for means		
	After2015XenoV	During2015XenoV
Mean	3.1075	2.89
Variance	0.0128	0.0064
Observations	4	4
Pearson correlation	-0.494	
Hypothesized mean difference	0	
df	3	
t-Start	2.586	
P(<=t) one-tail	0.0406	
t Critical one-tail	2.353	
P(<=t) two-tail	0.081	
t Critical two-tail	3.182	

Table 2. T-test: Paired Two Sample for Means in 2008 JSE All Share Index - Capped Indices Performance (J303 - Capi DY) during & after Xenophobic Violence

t-Test: Paired two sample for means		
	After2008XenoV	During2008XenoV
Mean	3.11	2.635
Variance	0.174	0.010
Observations	4	4
Pearson correlation	0.028	
Hypothesized mean difference	0	
df	3	
t-Start	2.220	
P(<=t) one-tail	0.056	
t Critical one-tail	2.353	
P(<=t) two-tail	0.113	
t Critical two-tail	3.182	

Figure 1. Bar Chart of Means in 2015 JSE All Share Index - Capped Indices Performance (J303 - Capi DY) During & After Xenophobic Violence

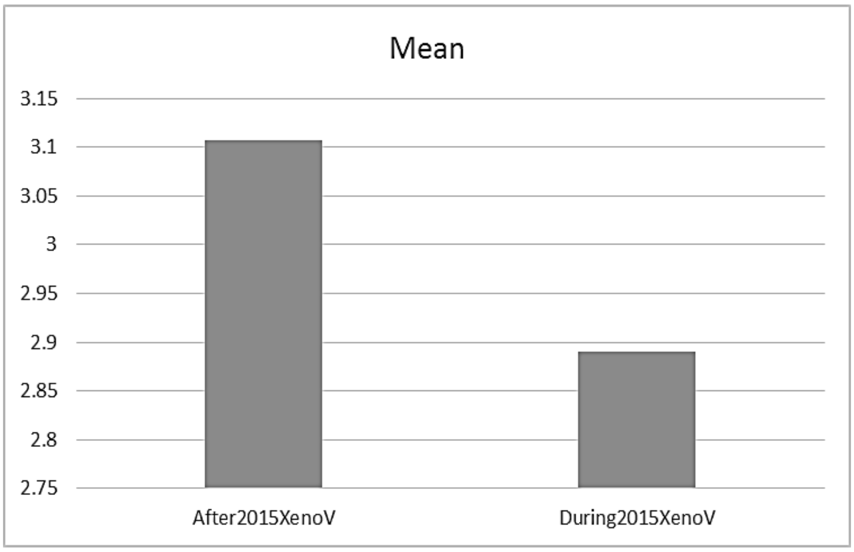
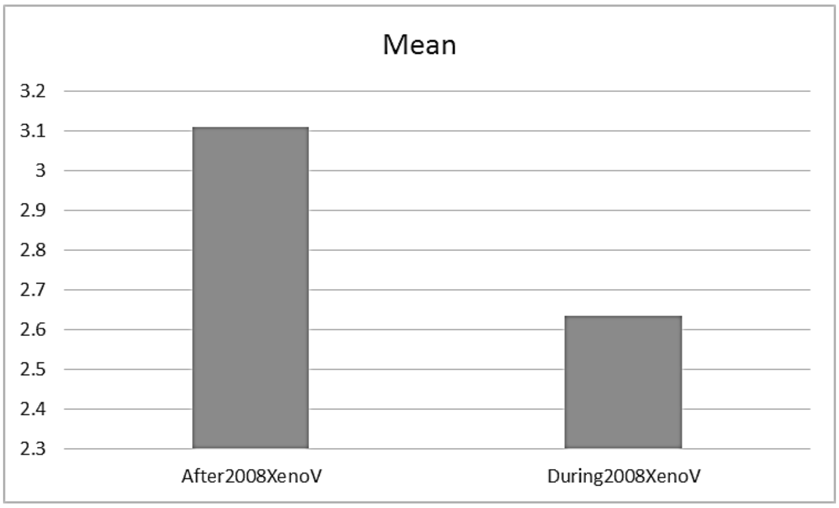


Figure 2. Bar Chart of Means in 2008 JSE All Share Index - Capped Indices Performance (J303 - Capi DY) During & After Xenophobic Violence



Similarity in Line Chart of Capped Indices Performance (J303 - Capi DY) for 2008 and 2015 Xenophobi Periods

Furthermore, there seems to be a similarity in the line chart of JSE Capped Indices Performance (J303 - Capi DY) between the 2008 and 2015 xenophobic periods in Figure 3. Historical similarities of stock trends have been found to resonate with practical historical events (O'Rourke, 2016). Whilst keeping other factors constant, the line chart in Figure 3 suggests the likelihood that periods of xenophobic unrest might contribute to behavioural resemblance in the stock market chart of two periods which experienced the same event – this is however open to further in-depth research that may apply several periods of unrest across countries. This leads to the final question, which this research sought to answer – are these apparent similarities significantly unrelated. Therefore, a t-test is further applied to analyse whether this seeming similarities are statistically close or whether it is a mere visual illusion. A second null hypothesis is therefore stated as – the Capped Indices Performance charts (J303 - Capi DY) for 2008 and 2015 Xenophobi Periods are not significantly different from each other. This is abridged as follows:

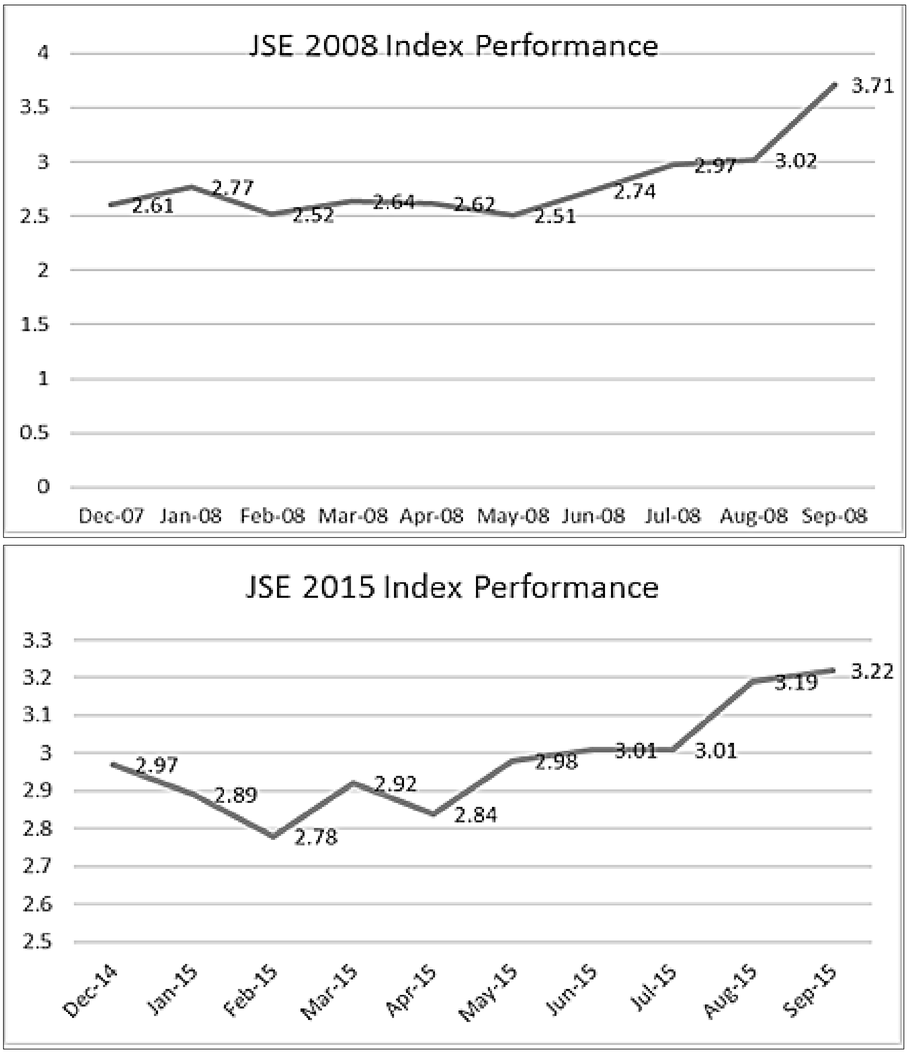
H0: 2008XenoPeriodStockChart = 2015XenoPeriodStockChart

This implies a two tailed test, which means that the null hypothesis is rejected if the P level for both tails is less than or equal to the alpha level of 0.05, which is if $P \leq 0.05$. From the t-test result in Table 3, it can be seen that whilst the one tail *P* is 0.03, the two tail *P* is 0.06, therefore since the two tail P is greater the alpha of 0.05, we cannot reject the null hypothesis. This means that there is a statistical similarity between the Capped Indices Performance chart (J303 - Capi DY) for 2008 and 2015 xenophobic Periods.

Table 3 t-test of Difference between the Capped Indices Performance chart (J303 - Capi DY) for 2008 and 2015 xenophobic Periods

	2008XenoperiodChart	2015XenoperiodChart
Mean	2.811	2.981
Variance	0.129	0.019
Observations	10	10
Pearson correlation	0.804	
Hypothesized mean difference	0	
df	9	
t-Start	-2.058	
P(<=t) one-tail	0.034	
t Critical one-tail	1.833	
P(<=t) two-tail	0.069	
t Critical two-tail	2.262	

Figure 3. Similarity in Line Chart of Capped Indices Performance (J303 - Capi DY) for 2008 and 2015 Xenophobi Period



Source: Compiled by authors with data from JSE (2016)

LIMITATIONS OF THE STUDY

This research is limited by the relatively small number of periods in which xenophobic financial data was collected. However, the researchers could not add more years since the interest of the paper is on the xenophobic violence and associated stock market reaction. Therefore, it was reasonable that data on xenophobic violence should focus on the actual months and years in which the violence took place. The paper recommends an expanded number of periods in future research.

CONCLUSION

This paper set out to evaluate potential effect of xenophobic violence on the Stock Market reaction. The literature review highlighted and substantiated the significance of social stability on the economy. The paper was anchored on the integrated threat theory and the social contract theory. Whilst threat of immigrants might contribute to unleash destruction on lives and business, the social contract theory reminds of the need for the state to honour the innate contractual obligation to protect life and business. The paper's significance lies on the paucity of research about the potential stock market reaction to xenophobic violence in South Africa. Therefore, this paper makes the initial enquiry on this socio-economic issue. The paper applied the event trend analysis combined with a statistical t-test of paired sample means in the pre and post-xenophobic period stock performance. Data was drawn from the JSE All Share Index - Capped Indices Performance (J303 - Capi DY) for 2008 and 2015, during & after the xenophobic violence of 2008 and 2015. Findings from the analysis of paired sample t-test indicated a significant difference in means of stock performance with $P<0.05$ within and after the xenophobic period. Furthermore, a t-test of similarity in stock performance chart for periods of xenophobic violence 2008 and 2015 showed no significant difference in stock performance trend. This means that there is a similarity in stock chart between 2008 and 2015 periods of xenophobic violence. It can therefore be said with limited assertion to this study, that two periods of xenophobic violence might have similar stock performance behaviour when embedded in a stock performance chart. This similarity might provide business and policy makers with pertinent information to prepare in advance for a possible hedge against poor performance of business during such periods. The paper recommends the need for further research of a broader scope that will consider many years of xenophobic events or similar violence across countries using multiple stock performance and economic performance indicators.

REFERENCES

1. Allen, F., Qian, J. and Qian, M. 2005. Law, finance and economic growth in China. *Journal of Financial Economics,* 77: 57-116.
2. Besley, T. and Mueller, H., 2012. Estimating the Peace Dividend: The impact of violence on house prices in Northern Ireland. *The American Economic Review, 102*(2): 810-833.
3. Ben Naceur, S., Ghazouani, S. and Omran, M. 2007. The performance of newly privatized firms in selected MENA countries: The role of ownership structure, governance and liberalization policies. *International Review of Financial Analysis,* 16: 332-353.
4. Bremer, J. and Elias, N. 2007. Corporate governance in developing countries? The case of Egypt. *International Journal of Business Governance and Ethics,* 3(4): 430-445.
5. Castrillo, L., Marcos, S. and San Martin, J. 2010. Corporate governance, legal investor protection and performance in Spain and the United Kingdom. *Corporate Ownership and Control,* 7 (4): 416-429.
6. Crush, J. and Pendleton, W. 2004. *Regionalizing xenophobia? Citizen attitudes to immigration and refugee policy in Southern Africa.* Canada: South African Migration Project (SAMP).
7. Crush, J. and Ramachandran, S. 2010. Xenophobia, international migration and development. *Journal of Human Development and Capabilities: A multi-Disciplinary Journal for People-Centered Development,* 11(2): 209-228.
8. Crush, J. and Tawodzera, G. 2014. Medical xenophobia and Zimbabwean migrant access to public health services in South Africa. *Journal of Ethnic and migration studies,* 40(4): 655-670.
9. Clermont, K. M., & Eisenberg, T. 2007. Xenophilia or Xenophobia in US Courts? Before and After 9/11. *Journal of Empirical Legal Studies*, *4*(2): 441-464.
10. Cottrell, C.A. and Neuberg, S.L., 2005. Different emotional reactions to different groups: a sociofunctional threat-based approach to" prejudice". *Journal of personality and social psychology*, *88*(5):770 – 789.
11. Cuddy, A.J., Fiske, S.T. and Glick, P., 2007. The BIAS map: behaviors from intergroup affect and stereotypes. *Journal of personality and social psychology*, 92(4): 631- 648.
12. Curşeu, P. L., Stoop, R., & Schalk, R. 2007. Prejudice toward immigrant workers among Dutch employees: Integrated threat theory revisited. *European Journal of Social Psychology*, *37*(1): 125-140.
13. Dancygier, R. M., & Laitin, D. D. 2014. Immigration into europe: Economic discrimination, violence, and public policy. *Annual Review of Political Science*, 17: 43-64.
14. Dewandaru, G., Rizvi, S.A.R., Bacha, O.I. and Masih, M., 2014. What factors explain stock market retardation in Islamic Countries. *Emerging Markets Review*, 19:106-127.
15. Doidge, C., Karolyi, A. and Stulz, R. 2004. Why are foreign firms listed in the U.S. worth more? *Journal of Financial Economics,* 71 (2): 205-238.
16. Esses, V.M., Dovidio, J.F., Jackson, L.M. and Armstrong, T.L., 2001. The immigration dilemma: The role of perceived group competition, ethnic prejudice, and national identity. *Journal of Social issues*, 57(3): 389-412.
17. Franks, J., Meyer, C. and Rossi, S. 2009. Ownership: evolution and regulation. *Review of Financial Studies,* 22(10): 4009-4056.
18. Gang, I. N., Rivera-Batiz, F. L., & Yun, M. S. 2013. Economic strain, education and attitudes towards foreigners in the European Union. *Review of International Economics*, 21(2), : 177-190.
19. Gordon, S., 2016. The relationship between national well-being and xenophobia in a divided society: the case of South Africa. *African Review of Economics and Finance*, 7(1): 80-103.
20. Guiso, L., Sapienza, P., & Zingales, L. 2009. Cultural biases in economic exchange? *Quarterly Journal of Economics,* 124(3): 1095–1131
21. Hasan, I., Kobeissi, N. and Song, L. 2014. Corporate governance, investor protection, and firm performance in MENA countries. *Middle East Development Journal,* 6 (1),: 84-107.
22. Harrison, N. and Peacock, N., 2009. Cultural distance, mindfulness and passive xenophobia: Using Integrated Threat Theory to explore home higher education students' perspectives on 'internationalisation at home'. *British Educational Research Journal*, *36*(6):877-902.
23. Helliwell, J.F., Wang, S., & Xu, J. 2014. How durable are social Norms? Immigrant Trust and Generosity in 132 Countries. NBER Working Paper 19855. Cambridge, MA: National Bureau of Economic Research.
24. Hill, N. and Maroun, W., 2015. Assessing the potential impact of the Marikana incident on South African mining companies: An event method study. *South African Journal of Economic and Management Sciences*, 18(4): 586-607.
25. Ilorah, R. 2014. Recurring challenges as main constraints to AU/NEPAD projects. *Journal of African Business,* 15(3): 156-168.
26. JSE 2016. Monthly closing index values for All Share Index - Capped Indices, available at:https://www.jse.co.za/content/JSEIndexClassificationandCodesItems/Monthly%20ALSI%20Values.xlsx [Accessed September 16 2016]
27. Klapper, L. and Love, I. 2004. Corporate governance, investor protection and performance in emerging markets. *Journal of Corporate Finance,* 10 (5): 703-728.
28. Kok, W. J. 1996. The capital market. In Faurie, L. J., Falkena, H. B. and Kok, W. J. (Eds) *Fundamentals of the South African financial system,* Halfway House, Johannesburg: International Thomson Publishing.
29. Kreinin, M. E. 1979. *International economics (A policy approach).* New York: Harcourt Brace Jovanovich.
30. Kothari, S. & Warner, J. 2006. The econometrics of event studies. In: Eckbo E.B. Ed. *Handbook of Empirical Corporate Finance,* Amsterdam, Elsevier, 1:4-32
31. La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R. (2002), Investor protection and corporate valuation. *Journal of Finance,* 57: 1147-1170.
32. Langa, M. and Kiguwa, P, 2016. Race-ing xenophobic violence: Engaging social

representations of the black African body in post-apartheid South Africa. *Agenda*,

33. www.tandfonline.com/doi/full/10.1080/10130950.2016.1222086
34. MACKINLAY, A.C. 1997. Event studies in economics and finance. *Journal of Economic Literature,* 35(1):13-39
35. Mnasri, A. and Nechi, S., 2016. Impact of terrorist attacks on stock market volatility in emerging markets.*Emerging Markets Review*. http://dx.doi.org/10.1016/j.ememar.2016.08.002
36. Mocan, N. H., & Raschke, C. (2014). *Economic Well-being and Anti-Semitic, Xenophobic, and Racist Attitudes in Germany* (No. w20059). National Bureau of Economic Research.
37. O'Rourke, K.H., 2016. The Great Depression of the 1930s and the world economic crisis after 2008. *A History of the Global Economy*, p.110.
38. Okem, A., Asuelime, L. and Adekoye, R., 2015. Re-visiting Xenophobia in South Africa and its Impact on Africa's Integration. *Africa Insight*, *45*(2):75-85.
39. Pietropaolo, R. 2015. Xenophobia is a threat to your investment portfolio; here is what you need to know. Retrieved from: http://www.tradeknowledge.co.za/article/xenophobia-threat-your-investment-portfolio
40. Rousseau, J.J., 2016. *The social contract*. Open Road Media. Available at: http://www.khwebcom.com/kuhist1000/uploads/09_Jandrowitz.pdf
41. Reese, W. A. Jr. and Weisbach, M. S. (2002), Protection of minority shareholder interests, cross-listings in the United States, and subsequent equity offerings. *Journal of Financial Economics,* 66: 65-104.
42. Riley, P., 1999. *Will and political legitimacy: A critical exposition of social contract theory in Hobbes, Locke, Rousseau, Kant, and Hegel*. Bloomington, iUniverse.
43. Stephan, W. G., & Stephan, C. W. (1996). Predicting prejudice. International Journal of Intercultural Relations, 20, 409–426.
44. Stephan, W. G., Ybarra, O., Martnez, C. M., Schwarzwald, J., & Tur-Kaspa, M. 1998. Prejudice toward Immigrants to Spain and Israel An Integrated Threat Theory Analysis. *Journal of Cross-Cultural Psychology*, *29*(4), 559-576.
45. Stephan, W.G. and Stephan, C.W., 2000. An integrated threat theory of prejudice. In: Oskamp, S. ed. *Reducing prejudice and discrimination*. Sussex: Psychology Press, :23-45.
46. Stephan, W.G., Stephan, C.W. and Gudykunst, W.B., 1999. Anxiety in intergroup relations: A comparison of anxiety/uncertainty management theory and integrated threat theory. *International Journal of Intercultural Relations*, *23*(4):613-628.
47. Stephan, W.G., Ybarra, O., Martnez, C.M., Schwarzwald, J. and Tur-Kaspa, M., 1998. Prejudice toward immigrants to Spain and Israel an integrated threat theory analysis. *Journal of Cross-Cultural Psychology*, *29*(4), :559-576.
48. SAMP (Southern African Migration Project). 2008. The perfect storm: the realities of xenophobia in contemporary South Africa. *SAMP Migration Policy Series, No. 50,* SAMP, Cape Town.
49. Shleifer, A. and Wolfenzon, D. 2002. Investor protection and equity markets. *Journal of Financial Economics,* 66(1): 3-27.
50. Solomon, H. and Kosaka, H. 2013. Xenophobia in South Africa: Reflections, narratives and recommendations. *Southern African Peace and Security Studies,* 2(2): 5-29.
51. Tay, L.M., Puah, C.H., Brahmana, R.K. and Abdul Malek, N.I., 2016. The effect of white collar crime announcement on stock price performance: evidence from Malaysian stock market. *Journal of Financial Crime*,
52. www.emeraldinsight.com/doi/abs/10.1108/JFC-03-2015-0016
53. Thompson, D.K., 2016. Risky business and geographies of refugee capitalism in the Somali migrant economy of Gauteng, South Africa. *Journal of Ethnic and Migration Studies*, 42(1):120-135.
54. Velasco González, K., Verkuyten, M., Weesie, J. and Poppe, E., 2008. Prejudice towards Muslims in the Netherlands: Testing integrated threat theory. *British Journal of Social Psychology*, 47(4): 667-685.
55. Weber, T.M., 2014. Examining Social Contract Theory. *Praxis*, 1(1): 2 – 9.