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THE RELATIONSHIP BETWEEN SAFETY, SECURITY AND HUMAN DEVELOPMENT IN AFRICA

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ABSTRACT

This study is an attempt to examine the relationship between safety and security index, and human development in Africa. Using data from 53 African countries, statistical analyses were conducted including independent sample *t*-test, ANOVA, and Pearson correlation to try to answer the research question (RQ): Does a statistical significant relationship exist between safety and security index and human development? The results were consistent across the three data analyses techniques, indicating a positive, statistically significant relationship which exists between the dependent and independent variables. We conclude that for African countries, to experience steady economic growth and sustainable human development, security and safety issues must first be addressed.

Keywords: Safety; Security Index; Human Development

1. INTRODUCTON

Human development is one of the main challenges facing African countries today. This challenge affects not only the socioeconomic development of African countries, but also constitutes an obstacle for the achievement of the Millennium Development Goals (Kabeer, 2013). Enyekit, Ubulom and Onuekwa (2011) opined that national development is impossible if human development is stagnated. Identifying factors that affect human development in African countries is critical to the overall development processes in Africa.

Several researchers investigated factors that affect human development in Africa (UNDP, 2012; de la Escosura, 2013; Sanderson, 2010), in which they identified factors such as migration, insecurity, lack of food, socioeconomic upheaval, natural disasters, and poverty as possible obstacles to human development. There is a dearth of literature on the impact of safety and security on human development. The purpose of this study is to fill the gap in the literature by examining how safety and security index correlate with human development in African countries.

The primitive humans used to live in caves (Zanden, 2011). Notably, the evolution of humans has occurred over a long period of time. But slowly and gradually, significant changes have taken place in human development. People are now more familiar with environmental and socioeconomic changes around them (Tadjbakhsh et. al, 2012). Emerging trends in human development depict the world as a global village with new challenges and evolving adaptations to coping with changing developmental processes. The human race is developing with the passage of time as populations grapple with the purpose of life, especially in the developing African countries. New generations are becoming more indigenous, and the world has increasingly become a more developed and hospitable place (Smith, 2013). Remarkable changes have taken place in the dynamics of family life as well as in human

development globally. Emerging trends in human lifestyle particularly in Africa can be attributed to such factors as increased survival rate and the provision of enhanced security and protection. Human development is not possible in the absence of basic human needs such as security, safety, and health (Ikeogu, Uwakwe & Chidolue, 2013; Malik, 2003; Tay & Diener, 2011). A proper understanding of the correlation between safety, security, and human development in African countries has the potential to contribute positively to a holistic approach toward promoting prosperity in the African continent (Black,Shaw & MacLean, 2013).

2. CONCEPT OF HUMAN DEVELOPMENT

The most urgent priority of African countries is to reduce poverty through a sustained economic growth and improved social services. However, these countries are faced with challenges as they struggle to reach the levels of human development found in most developed countries. Notably, human development issues are one of the major challenges facing African countries and preventing them from reaching the Millennium Development Goals (Abayomi & Pizarro, 2013).

Human development can be defined as the process of enlarging the welfare of human beings, opportunities, and freedoms (Kail & Cavanaugh, 2013). This term became popular in the late 1980s based on a critical analysis of the process of development. A direct connection exists between the expansion of preferences of human beings and enlargement in monetary position of a country (Kagitcibasi, 2013). Several researchers have examined the concept and process of human development in developing countries (Abayomi & Pizarro, 2013; Conceição, Mukherjee & Nayyar, 2011; Ikeogu et al., 2013). Essentially, the concept of human development encompasses all facets including food availability, health care, safety and security, socioeconomic advancement, population growth, migration, and many other dimensions of human endeavors.

3. DRIVERS OF HUMAN DEVELOPMENT

Several factors drive human development in any society, and researchers have diverse perspectives on what drives human development in Africa (Gerring, Thacker & Alfaro, 2012). According to Conceição et al., (2011), the prevailing global economic crisis will have long-term consequences on human development especially in Africa, and is bound to affect the realization of the Millennium Development Goals. Many countries might suffer from the short-term consequences of the economic crisis. Conceição et al., (2011) argued that the crisis would have some long-term consequences on the human development in sub-Saharan African countries. In the same vein, food security is another important driver of human development (Conceição et al., 2011). Based on the definition of the World Bank, a food security is achieved when all people have access to sufficient food at all time (Islam & Malik, 1996). Food security is one of the basic needs of human. No human development is possible in absence of food security. Consequently, food security is in the center of every development debates concerning Africa (Conceição et al., 2011).

In addition to economic crisis and food security, Poku, Renwick, and Porto (2007) identified human security as a significant driver of human development. According to Gómez, Gasper and Mine (2013), human security is possible only when the right of people to live in freedom and dignity, free from poverty and despair, is upheld and assured. African countries need to promote security in order to achieve enhanced level of human development (Poku et al., 2007). In addition, health and education are also important drivers of human development. In a study addressing human development in Papua New Guinea, Lakshmi (2013) explained that health and education are significant indicators of human

development. Remarkably, Ikeogu et al., (2013) have highlighted the importance of health on human development.

Aid and direct foreign investment have significant impact on human development in Africa. There is a recent decline in direct foreign investment in Africa which has led to growth stagnation and lackluster in human development levels in African countries (Bezuidenhout, 2009). Most African countries are too poor to support their own economic growth and human development (Teunissen & Akkerman, 2006). Consequently, these countries need aid and foreign investment to initiate and support human development. It is important to note that aid can only serve as a short-term remedy to resolving human development issues in Africa. While foreign investment might lead to a sustainable and long-term development, there is an urgent need for African countries to explore internal sources for funding human development efforts. (Kosack & Tobin, 2006). In addition, safety is another important indicator of human development (Lind, 2010; Rotberg, 2009). Safety is defined as a state of well-being involving protection against financial, spiritual, physical, social, psychological upheavals that can be faced by the process of human development (Nahrgang, Morgeson, & Hofmann, 2011). It is a process of the predetermining hazards in order to attain an acceptable level of hazards (Gerring, et. al, 2012).

In short, human development is one of the highest priorities of African countries, and also an important factor affecting the realization of the Millennium Development Goals (Craig & Dunn, 2010). Despite the growing body of research, many African countries struggle to achieve acceptable levels of human development. Such factors as health, safety, food security, human security, education, aid, direct foreign investment, migration and other economic crisis serve as drivers of human development (Herskovits, 2013)

4. RESEARCH QUESTION AND HYPOTHESIS

The study focused on examining the relationship between safety and security index and human development. The independent variable was the safety and security index (S&S) and the dependent variable was human development (HD). The study was an attempt to answer the research question and test the null hypothesis below:

RQ: Does a statistical significant relationship exist between safety and security index and human development?

H_0: There is no statistically significant relationship between safety and security index and human development.

H_1: There is a statistically significant relationship between safety and security index and human development.

5. `OBJECTIVES OF STUDY

This research study aims at aiding the human development project in Africa. Human development is one of the key issues being faced by most of the African nations and various theories and researches have been carried out over the subject. The safety and security debate is something that is quite active in human development programs initiated in Africa. This paper aims at exploring relationship between human development and safety-security aspect. The ultimate aim is to maximize the benefits for humans and carry out the development program in an ideal manner. One of the essential prerequisites for any program is stable internal environment and that is where security and safety of people counts a lot. The

relationship between the dependent and independent variables under consideration help a great deal to carry out the human development program in a pragmatic manner.

6. DATA SOURCES

The Index of African Governance was the data used in this study. The Index of African Governance was a project of Harvard University's Kennedy School of Government's Program on Intrastate Conflict and Conflict Resolution and of the World Peace Foundation. This data set includes data variables on rule of law; sustainable economic opportunity; human development; participation and resource human; and safety and security of every Africa country. For the purpose of this study, we used data on safety and security index and the human development only. The study sample consisted of 53 African countries. The raw data for this study is available on National Bureau of Economic Research website.

7. DATA ANALYSIS

The data analysis process in this study included independent sample *t*-Test, One-Way Analysis of Variance (ANOVA), and Pearson correlation. Although any of the three data analysis technique used could have been adequate to reach conclusion in this study, we decided to carry out all three statistical computations to find out if the results were consistent across the different analyses. Using three different data analysis techniques also allowed us to minimize the threat of validity and Type I error. Independent sample *t*-Test, ANOVA, and Pearson correlation are all valid approaches for examining the relationship between two or more variables (Venkatesh, Brown & Bala, 2013). The data analysis process of this study is divided into two stages. In the first stage, we conducted a descriptive analysis to describe data trend. The second stage involves hypothesis testing.

8. DESCRIPTIVE STATISTICS

Table 1 contains descriptive data.

Table 1. *Descriptive Statistics*

	N	*M*	*SD*
Safety & Security	53	82.447	16.848
Human Development	53	55.268	15.491
Valid N (listwise)	53		

The study sample consisted of 53 participating African countries. The independent variable, safety & security scores ranged from 33.26 to 99.99 with a mean score of 82.477 and a standard deviation of 16.848. The dependent variable, human development scores ranged from 31.52 to 89 with a mean score of 55.268 and a standard deviation of 15.491.

9. HYPOTHESIS TESTING

The hypothesis testing in this study started with independent sample *t*-Test. ANOVA and Pearson correlation were also used to confirm the results. The results of the tests were visually displayed using a boxplot and scatterplot. To prepare for the independent sample *t*-Test, participating African countries were divided into two groups based on their scores on the independent variable, and the safety and security index. The mean (82.447) of the safety and security was used as base score to group the countries. Participating countries with safety and security score less or equal to the mean were put in the *Low SS* group, and the rest were placed in *High SS* group (SS=Safety and Security).

After dividing participating countries into two groups, we computed independent sample *t*-Test to examine the difference between the mean of human development among Low SS and High SS countries. Table 2 presents the summary for the *t*-Test.

Table 2. *Independent Sample t-Test Comparing Human Development among Low SS and High SS*

N		*M*				
Low SS	High SS	Low SS	High SS	Mean Difference	*t*	*P*
21	32	49.428	59.1	9.673	2.546	.014

Note: P less than .05 required for significance. Df =51

A *p* value of less than .05 was required for significance. The test was significant $t(51)=2.546$, $p=.014$. This result indicated that there is a statistically significant difference between the mean of human development of Low SS countries (49.428) and the mean of human development of High SS countries (59.1). Consequently, there is a statistically significant relationship between safety and security index and human development. Therefore, the null hypothesis was rejected. High SS countries had higher human development scores than Low SS countries. Notably, the results support the conclusion that the relationship between safety and security index and human development is positive and statistically significant.

Using the two groups previously analyzed in the independent sample *t*-Test, we computed one-way analysis of variance (ANOVA) to confirm the results obtained from the *t*-Test. Table 3 shows the summary of the ANOVA test.

Table 3. *Summary of ANOVA*

N		*M*				
Low SS	High SS	Low SS	High SS	Mean Difference (High-Low)	*F*	*P*
21	32	49.43	59.1	9.67	5.36	.025

Note: Effect size $\eta^2= .28$, df=51

Again, a *p* value of less than .05 was required for significance. The ANOVA was significant, consistent with the results of the *t*-Test $F(1, 51)= 5.36$, $p= 0.25$. The result of the ANOVA resulted in the rejection of the null hypothesis. The effect size was strong ($\eta^2= .28$), with safety and security factor accounting for 28% of variance of human development. Since the overall test was significant, a post-hoc test using Dunnett's *C* test was conducted to compare the mean of the two groups. The results indicated that countries with high safety and security score had significantly higher human development score than countries with low safety and security score. These results were also consistent with the results of the *t*-Test.

The first two analyses focused on testing the hypotheses by comparing means. To confirm the results of the *t*-test and ANOVA, we computed a Pearson Product Moment bivariate correlation to examine the relationship between safety and security index and human development. The summary of the correlation is presented on Table 4.

Table 4. *Summary of Bivariate Correlation*

Pearson Correlation	P (2-tailed)	*N*
.451**	0.001	53

Note. ** = significant at .01 level (P<.01)

Bonferroni approach was used to control for Type 1 error. The correlation result is shown in Table 4. Asterisks indicate test is significant at 0.01 level (**) (Green & Salkind, 2010). In this case, the test is significant at .01 level, $r(51)=.451$, $p< .01$. Consistent with the results of *t*-Test and ANOVA, the result of Pearson Correlation coefficient indicated that there is a statistically significant positive correlation between safety and security index and human development. Therefore, we rejected the null hypothesis.

10. DISCUSSION OF RESULTS

Independent sample *t*-Test, ANOVA, and Pearson Product Moment correlation were conducted to analyze the data used for this study. Both the *t*-Test and the ANOVA were significant, $t(51)=2.546$, $p =.014$; $F(1, 51)= 5.36$, $p= 0.25$. Based on the results, the null hypothesis was rejected. Furthermore, *the t*-Test comparison and the post-hoc analysis of ANOVA indicated that countries with higher safety and security index had higher human development than countries with low safety and security index. Figure 1 shows the distribution of the human development across the two levels of safety and security index.

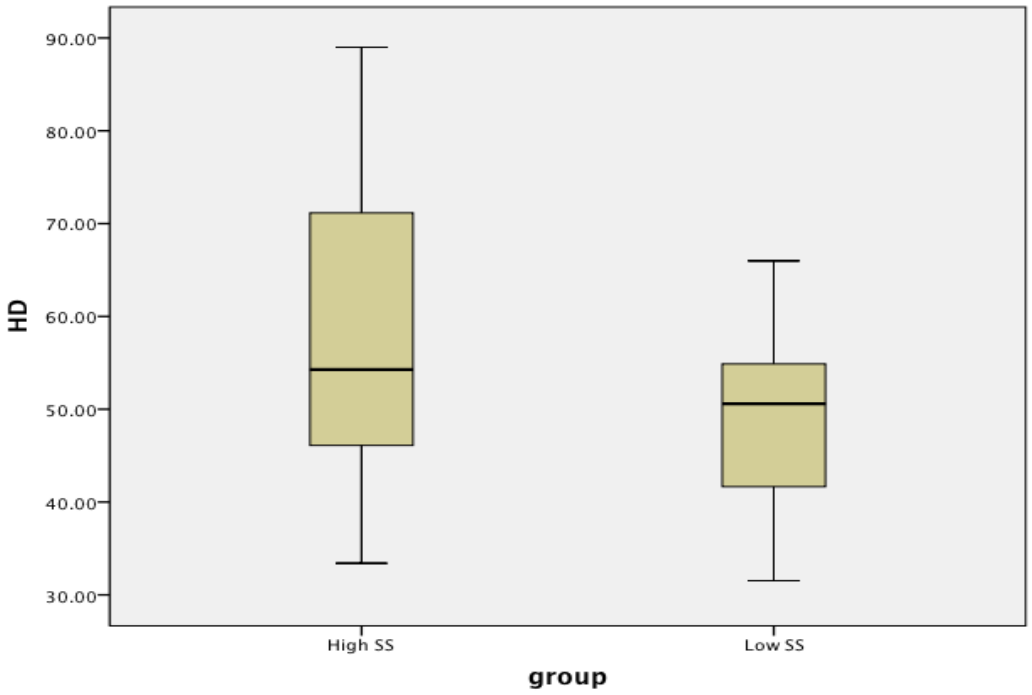

Figure 1. Distribution of human development scores

Similarly, the scatterplot in Figure 2 presents evidence in support of the findings made using *t*-Test and ANOVA.

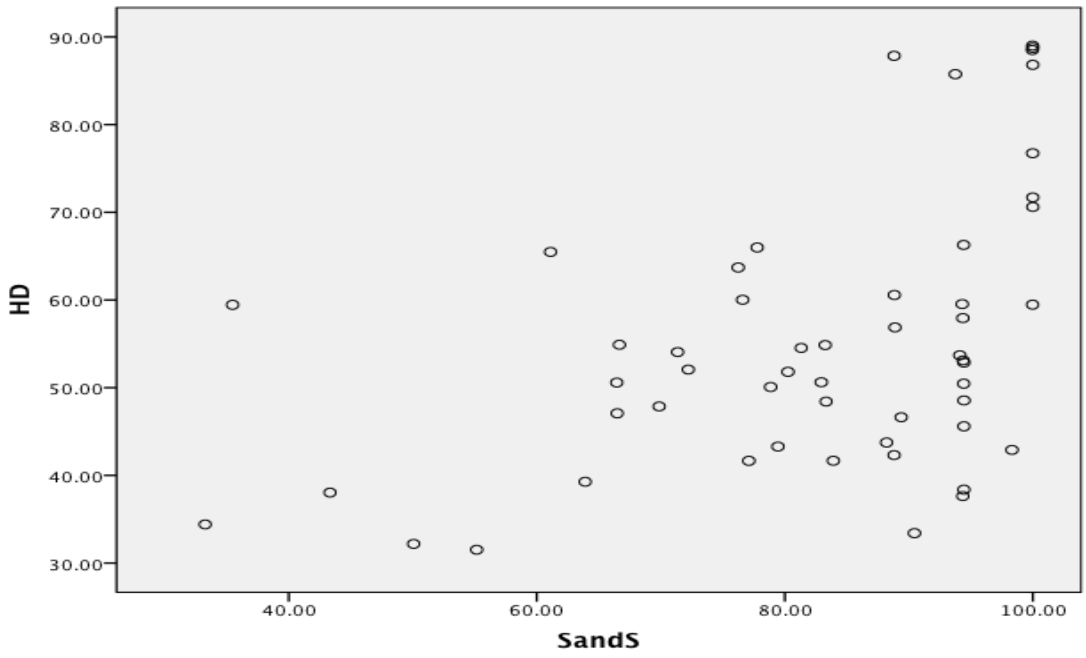

Figure 2. Scatter plot of the relationship between S&S index and HD

11. CONCLUSION

Based on the results of the three statistical analyses, we conclude that safety and security issues are essential components of a successful human development program in Africa (Poku et al., 2007). A holistic approach toward human development efforts is advocated with safety and various security elements intricately integrated into the package. People have to feel safe and secure in order to develop (Lind, 2010). Safety and security for African people should include personal and group freedom of expression, feelings of political and socioeconomic empowerment, free from hunger and oppression, job availability and stability, affordable health care, provision of quality education, and freedom of religion without oppression. We submit that for a sustainable human development to occur in African countries, all facets of human development must be addressed simultaneous and with passion by political leaders. This calls for good governance and a deep sense of selfless commitment to the United Nations Millennium Development Goals (Craig & Dunn, 2010). The internal stability is guaranteed through safety and security of people and once these dimensions are in right direction the ultimate aim of human development program can be carried out in most desirable manner.

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