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THE ROLE OF NON-MARKET FACTORS IN INTERNATIONAL TRADE: A CASE OF SOUTHERN AFRICA

ABSTRACT

This study examines the impacts of non-market factors on international trade in four regionally clustered African countries (Namibia, South Africa, Zambia, and Zimbabwe). It applies the concept of cross-national distance from international business and incorporates statistical and empirically generated data into the augmented gravity models of international trade to predict the impact of those non-market factors. The study reveals negative effects of geographic distance and positive or mixed cultural distance effects in these countries' foreign trade flows. This paper also suggests useful implications to business scholars and practitioners.

Key Words: Africa, geographic distance, cultural distance, international trade, gravity model

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INTRODUCTION

While still "at crossroads" and with known economic gaps among its countries, Africa is nevertheless moving towards integration into the global economy. Its progress is evidenced in increased trade of natural resources and agricultural products, investment flows, and interaction with Western partners for poverty reduction.

The future of Africa's international trade depends on the transition from narrow specialization towards differentiation of product lines, development of institutional frameworks, management know-how transfer from the West, and on the ability to capitalize factors that contribute to trade while effectively responding to impediments through policy decisions. Hence, an in-depth analysis and understanding of factors that shape African countries' international trade is critical in designing policies.

Within a broad range of economic and non-market factors that moderate cross-national differences in international trade, the most recent scientific inquiries extended the scope of distance measures towards a broader set of variables including geographic proximity, trade barriers, migration, administrative and legal differences, or cultural distance. Stemming from the studies of "liabilities of foreignness" in business relations (Hymer, 1960) and further viewed through a multidimensional perspective on cross-country distance (Dunning, 1993), these inquiries address differences in national business systems (Whitley, 1992) and more broadly, differences along the composite set of economic, administrative, geographic, and cultural variables (Ghemawat, 2001, 2003, 2007). Ghemawat's more recent concept is known as "the most comprehensive attempt to broaden the study of cross-national distance" (Berry, Guillen, and Zhou, 2010: 1463).

At a country-level analysis and in particular, within the studies of African countries, these conceptualizations help predict the role of non-market factors in cross-border trade such as institutions, governance, geographic proximity, or cultural similarities. While understanding the impact of cross-national differences has been a longstanding problem, recently, scholars offered concepts and tools to address the role of relevant distance factors in international business (Berry et al., 2010).

This article sheds light on the interplay of economic processes on the one hand, and geographic and cultural distance factors, on the other, in addressing factors that shape Southern Africa's foreign trade. In the studies of cross-national distance effects, this region historically remained on the periphery of scholarly attention as "one of the more understudies geographical areas in the social sciences" (McKeever, 2008: 454). By targeting four regionally clustered Southern African countries (Namibia, South Africa,

Zambia, and Zimbabwe) we interpret geographic and cultural predictors of their effective cross-border trade flows and contribute to better understanding Southern Africa. This paper analyses to what extent does geographic proximity and cultural differences moderate Africa's international trade. Which factors serve as contributors to effective trade flows and which factors inhibit those flows? This study of the effects of non-market factors in Southern African countries' economic developments and in particular, in their integration into global trade, provides valuable insights for academic scholars and policy makers. It may further contribute to the efforts in poverty reduction and solutions to overcome various disadvantages of the countries' colonial histories.

We respond to the leading-edge cross-national research patterns and integrate economic and non-market data towards predictive models of international trade. First, this paper sets a broader stage introducing trends in the region's cross-border trade and hypothesizes about the impact of geographic and cultural distance on trade flows. Second, we summarize cultural attributes of four African countries (Namibia, South Africa, Zambia, and Zimbabwe) and address measurements of cross-cultural differences between these countries and their trade partners. Third, we process economic models of trade with geographic and cultural distance variables to explore and predict the role of non-market factors in Southern African countries' trade. Finally, based on the study, this study offer recommendations to academics and practitioners.

UNDERSTANDING THE ROLE OF NON-MARKET FACTORS IN SOUTHERN AFRICAN COUNTRIES' FOREIGN TRADE

In the past two decades, Southern Africa has been moving towards a closer integration with the rest of the world in terms of trade and investment. Much of success may be attributed to Namibia, South Africa, Zambia, and Zimbabwe's greater openness, development of institutional frameworks and infrastructure, management skills acquisition, and sound policies that promote and facilitate trade liberalization.

The Southern African region still yields a major share in exporting national resources and agricultural products, and the ratio of foreign trade in manufacturing sector is still low. The impact of informal economies is substantial, and the relatively small size of enterprises impedes the boost of international trade (Nicita and Rollo, 2015; Olofin, 2002). Nevertheless, economic trends in the region attest to accelerating diversification of exports and an increase in intra-African trade.

According to the UN Statistics Division, in the past decade, Namibia's foreign trade in merchandise goods increased from US$ 4.96 billion in 2004 to US$ 14.51 billion in 2014 with primary exports in diamonds, uranium or thorium ores, and fish and fish products with top destinations to South Africa, the UK, and Angola. Primary imports are petroleum oils, motor vehicles, copper, and medicine from South Africa, Switzerland, and China as top partners. During this ten-year period, Namibia's overall trade increased by 192%.

South Africa's foreign trade increased from US$ 87.87 billion in 2004 to US$ 190.5 billion in 2014 with primary exports in platinum, iron ores, gold, coal, and motor vehicles mainly to China and the US; and with primary imports in petroleum oils, commodities, motor vehicles, electrical and data processing machines, and medicine, mostly from China, Germany, and the US. In ten-year period, South Africa's overall trade increased by 117%.

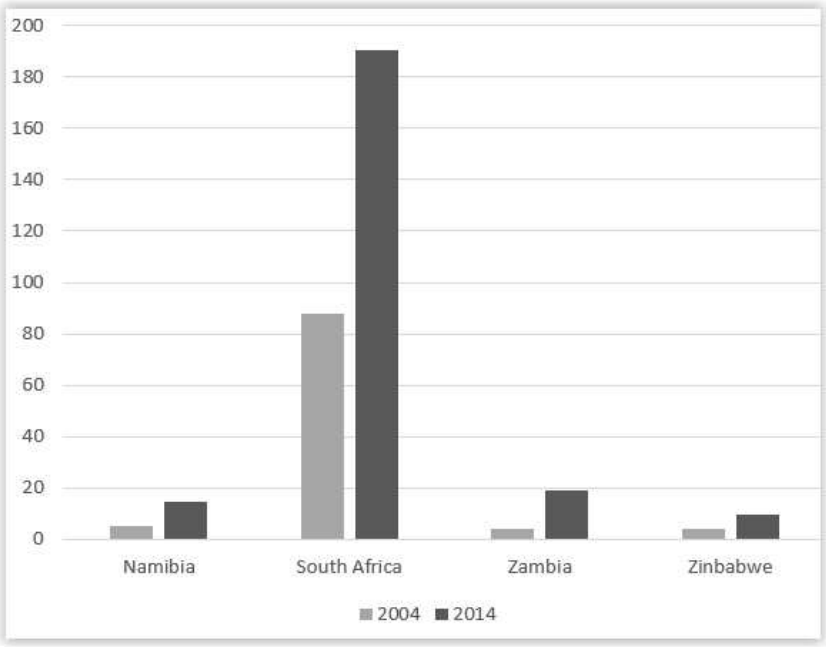
Zambia's foreign trade increased from US$ 3.73 billion in 2004 to US$ 19.22 billion in 2014 with primary exports in copper, corn (maize), tobacco, sugar, and gold, with top destinations in Switzerland, China, and South Africa; and with primary imports in copper ores, petroleum, motor vehicles, and construction machinery, from South Africa, Congo, and China as imports sources. In ten-year period, Zambia's overall trade increased by 415%.US$ 4.13 billion in 2004 to US$ 9.44 billion in 2014 with primary exports in gold, nickel, and diamond as well as tobacco and cotton mainly to South Africa, the UAE, and Mozambique; and with primary imports in petroleum, fertilizers, motor vehicles, and medicaments, mostly from South Africa, the UK and the US. In ten-year period, Zimbabwe's overall trade increased by 129%.

Hence, in the past decade, there has been visible progress in the volume of merchandise trade between each of the four Southern African countries and the rest of the world. It attests to closer integration of these countries into the global economy. Figure 1 displays the growth in these countries' foreign trade from 2004 to 2014.

The increase in bilateral and multilateral trade flows was made possible due to these countries' efforts in interregional integration and cooperation to enhance the flow of trade and investment. Regional economic associations create the environment conductive to inflow and outflow of traded goods and investment, as well as flow of ideas and technologies.

Figure 1. Sub-Sahara African countries' international trade (total) from 2004 to 2014

(in billion USD)



In the Southern Africa regional integration was evidenced in the creation of Southern African Development Coordination Conference (SADCC) in 1980. Initially it coordinated liberation movements' actions against South Africa's apartheid regime. In 1992 it changed into Southern African Development Community (SADC); and with the inclusion of South Africa in 1994, transformed into an economic and political vehicle that served the purpose of regional integration, tackling inequalities and extreme levels of protectionism, and facilitating cross-border trade and investment. SADC Free Trade Agreement was signed in 2008 to promote free trade among its 16 members, including Namibia, South Africa, Zambia, and Zimbabwe. According to McKeever (2008: 457), in the late 1990s intra-SADC commerce was about 20% of all global trade in the region. However, with South Africa dominating this region's economy, SADC displays both its strengths, especially in lowering internal trade tariffs and movement towards economic partnership with the EU; and weaknesses such as inequalities and domination of South Africa's priority interests (Amos, 2010; Krapohl and Fink, 2013).

Geographic and cultural proximity (or distance) play critical role in international trade and, in case of Southern African countries in particular. In his classical work on regional integration Tinbergen (1962) explained that "as a consequence of common cultural elements and regular trade relations, adjoining countries have in many cases a similar way of life, associated with comparable psychological and material needs. Further, they are, on average, more interested in each other's situation than in the situation in the remote countries. These factors can facilitate the conclusion of negotiations and – most important – the execution of common policies" (Tinbergen, 1962: 144).

The trading of merchandize goods, the volume of trade depends on physical proximity and transportation cost that corresponds with geographic distance between countries. According to Disdier and Head (2008: 37), on average 10% increase in geographic distance lowers bilateral trade by about 9%. The authors hypothesize that these well-known persistent negative effects of geographic distance in trade do not change when combined with non-market factors effects in the analysis of Southern Africa's trade flows. However, they question if in case of the four target countries geographic remoteness along with inadequate transport, information and communication infrastructure may have even greater negative effects in international trade flows.

Hypothesis 1. Effects of geographic distance on Southern African countries' international trade are negative

The second set of factors that shape international trade refers to differences such as behaviors, values, traditions, and customs. between trading partners measured in terms of cultural distance. These factors may increase transaction costs associated with understanding opportunities and partners, with search for the best trade match, acquisition of information, contracts negotiations, building trust, finding acceptable balance in views, selecting partners, and predicting behavioral responses in planning and conducting trade dealings—including contract enforcement. "Cultural familiarity" or "cultural similarity" associated with colonial ties, trade diasporas and trade-creating effects of immigrants, language compatibility, religious similarities or tolerance of religious orientations, may help remove barriers and minimize cross-border transaction costs in trade.

Measuring cultural distance between and among countries have been a serious problem due to methodological issues, data collection deficiencies, and known ambiguities

in multi-disciplinary studies of culture's effects in the economy. And the perception of cultural distance as "friction" with negative effects in international business has become quite stereotypical (Neal, 1998; Shenkar, 2001).

However, cultural differences may be viewed not only as impediments but also as contributors to effective cross-border investment and trade. Culture may enhance specialization that fuels international trade (Lewer and Berg, 2007). Visible cultural differences that increase risks in cross-border interactions may push international business partners toward a lower risk trade instead of a higher risk direct investment in an unfamiliar environment or toward seeking a partner's culture-specific specialization in that environment (Mohlmann et al., 2010).

While selected studies have been conducted on the generalized impact of cultural distance on trade, most research targeted on selected industrialized countries, and almost none have addressed cultural predictors in regards to African countries. The analysis of those predictors in case of developing countries may shed light on the multiple cultural distance effects and further lead to a more balanced approach to the discussion about cultural contributors or impediments in international trade.

We turn to the second stream of arguments which consider the role of specialization in trade flows in and from developing countries, namely Namibia, South Africa, Zambia, and Zimbabwe and hypothesize positive effects of cultural distance in cross-border flows of goods.

Hypothesis 2. Effects of cultural distance on Southern African countries' international trade are positive

MEASURING CULTURAL DISTANCE BETWEEN SOUTHERN AFRICAN COUNTRIES AND THEIR TRADE PARTNERS

In order to predict the effects of distance factors in international trade for Southern African countries, it is important to measure cross-cultural differences between these countries and their international trade partners in terms of cultural distance.

Culture is a set of attributes that distinguishes social groupings from one another in a meaningful way (Hofstede, 1980: 25, 48; Kroeber and Kluckhohn, 1952: 181) manifested in norms, values, and beliefs that are shared by all or most of all members of a social group and transferred from older to younger generations, and shapes the behaviors of people (House et al., 2004: 15).

African countries are known for cultural attributes that distinguish them from other countries in the global economy (Huntington, 1993). Developmental economics literature argues that in African countries collective actions and contribution to the public good respond to social control on norm observance, family support, and benefits through extra-familiar networks. At the same time, powerful, tightly knit social groups not accountable to society create fertile ground for corruption or cronyism in political institutions (Narayan and Cassidi, 2001).

Cultural distinctions are shaped by each African country's history. Jackson (2004, 2015) claimed that without a question, thorough interpretation of the realities in Africa by cross-cultural theories should be supplemented and complemented by a deep exploration of underlying factors in pre-colonial and colonial histories (e.g., colonialism, imperialism, apartheid). These include Western influences on local business practices, social anthropology's findings on the evolution of values in African societies, cultural heterogeneity of societies, the importance of ethnic or social groups' dominance in organizations, complex stakeholder perspective as well as the emergence of hybrid forms of management in the region.

One of the important cultural distinctions of Southern African countries is the impact of unique combination of pre-colonial and colonial history and decolonization on modern values and behaviors of people (McKeever, 2008). First of all, pre-colonial expansion of Zulu control resulted in common linguistic background and legacy of migration in the region. The colonial history of Southern Africa emphasizes successful waves of agricultural immigrants from Europe with sizable population of European descent. This was followed by imported advancements in institutions, business patterns, and management know-how transferred by colonizers to less developed colonies. For example, the British colonial heritage in institutions, law, and commerce may be traced in Zambia, Zimbabwe or South Africa, embedding cultural similarities (including religious) across those countries. At the same time, comparisons among the countries with different colonizers may expose cross-national institutional (including deviations in legal systems) and cultural differences. For example, one may trace German influences in Namibia, Portuguese influences in Zambia or remnants of Dutch colonization in South Africa. Finally, decolonization of Southern Africa occurred relatively late in the 20th century, with most countries gaining full independence only after 1975.

Cultural distinctions shape organizational practices in African society (Horwitz and Jain, 2008; Nkomo and Kriek, 2011; Walumbwa, Avolio, and Aryee, 2011; Wanasika et al.,

2011). First, the importance of *ubuntu* - an African paradigm that interprets the quality of people or a person in a social setting. A broader interpretation of *ubuntu* involves humanistic philosophy, ethics, and worldview while a more focused approach relates it to humanistic and community values such as humane, kind, and generous behaviors in society (Littrell et al. 2013; Mangaliso, 2001). Second, African society is rooted in a tribal system, which influences the perception and interpretation of power. This is manifested in highly centralized organizations, an unwillingness to delegate authority or share information, the minimization of autonomy at lower levels of hierarchies, or the prioritizing of organizational relations over strong performance orientation (Blunt and Jones, 1997). Overall, these unique cultural attributes distinguish African business practices from those in other parts of the world.

While the mainstream cross-cultural researchers built a solid foundation for a multi-dimensional cross-cultural analysis, the representation of African countries and in particular, those from the Southern African geographic cluster in those studies was either non-existent or limited. For example, neither Douglas (1973) nor Hampden-Turnet and Trompenaars (2000) included them in their original studies, Hofstede (1980) addressed only a white sample in South Africa, Schwartz (1992, 1999, 2004) interviewed respondents only in Zimbabwe, Ingelhart (1997) conducted surveys in South Africa, Zambia, and Zimbabwe; and House et al. (2004) analyzed empirical data from Zambia, Namibia, Zimbabwe, along two samples – white and black – in South Africa. Some countries were added to the research at a later time, for example, Hofstede (1993) analyzed societal cultures of Zambia and Zimbabwe in his follow-up work.

The GLOBE research (Chhokar, Brodbeck, and House, 2007; House et al., 2004) sets a powerful foundation for defining selected African countries' cultural attributes (among 57 countries that participated in the study) by accessing local respondents' perceptions about values and practices in those countries; and processing empirical data with advanced analytic tools. The GLOBE study grouped Namibia, South Africa, Zambia, and Zimbabwe into the Sub-Sahara African cultural cluster (House et al., 2004: 187-188). The countries of this cluster share historic roots and attribute in humaneness that individuals and groups display for one another, such as norms of reciprocity, suppression of self-interest, and human interdependence (Mangaliso, 2001).

Within the GLOBE research, societal cultural attributes were assessed per psychological and behavioral traditions in which it was assumed that cultures should be studied as they are interpreted by its members; and measured in terms of two

manifestations of culture: modal practices (behavior-tied data) and modal values (values-tied data) of the collective communities. Local managers from the four Southern African countries were surveyed, and cultures of Namibia, South Africa[1] (separately black and white samples), Zambia, and Zimbabwe were measured on a 7-point response scale on nine cultural dimensions[2]. All four countries' profiles displayed gaps between practices and values scores - most visible on dimensions of power distance, gender egalitarianism, future orientation, and performance orientation.

Behavior-tied results on future orientation, with the exception of South Africa's white sample, displayed scores below all-countries' average (62 societies). All Southern African countries scored above all-countries' averages on power distance and uncertainty avoidance, and on performance orientation (with the exception of Namibia). On gender egalitarianism, Zimbabwe, Zambia, and South Africa (white sample) scored below all-countries' average, and Namibia and South Africa's black sample scored above average. On humane orientation Zimbabwe, Zambia and South Africa's black sample displayed higher scores while Namibia's and South Africa's white sample's scores were below average. On assertiveness, both samples in South Africa scored above average while the other three countries scored below average. On assertiveness, both South Africa's samples scored above average while the other three countries scored below average; and on group collectivism the same two samples scored below average while the other three countries displayed high scores on that dimension. And on institutional collectivism all countries were either on par or higher than all-countries' averages.

Overall, these data support the profile of African management as centralized and hierarchical, with preference for institutional authority, structured processes, and risk-averse behaviors not oriented into the future.

Table 1 displays the GLOBE research's summary on behavior-tied scores for Southern African countries.

[1] In case of South Africa, for the purpose of a country-level economic analysis, we computed additional set of scores by averaging data from white and black samples.

[2] The GLOBE research applied the following nine cultural dimensions to the analyses: Institutional Collectivism (IC), Group Collectivism (GC), Gender Egalitarianism (GE), Assertiveness (AS), Power Distance (PD), Future Orientation (FO), Uncertainty Orientation(UO), Humane Orientation (HO), and Performance Orientation (PO).

Table 1. GLOBE behavior-tied scores for Southern African countries

	Namibia	South Africa			Zambia	Zimbabwe	All-countries average scores
		Average	White	Black			
Performance Orientation	3.67	4.39	4.11	4.66	4.16	4.24	4.07
Future Orientation	3.49	4.39	4.13	4.64	3.62	2.77	3.81
Uncertainty Avoidance	4.20	4.34	4.09	4.59	4.10	4.15	4.10
Humane Orientation	3.96	3.91	3.39	4.34	5.23	4.45	4.10
Power Distance	5.29	4.63	5.16	4.11	5.31	5.67	5.19
Institutional Collectivism	4.13	4.51	4.62	4.39	4.61	4.12	4.24
Group Collectivism	4.52	4.70	4.50	5.09	5.84	5.57	5.17
Gender Egalitarianism	3.88	3.46	3.27	3.66	2.86	3.04	3.40
Assertiveness	3.91	4.48	4.60	4.36	4.07	4.06	4.11

Source: House et al. (2004)

Value-tied results for African countries were consistent with uncertainty avoidance – they all scored above all-countries' average. This may be seen as a motivational impediment from risk-driven entrepreneurial and innovative activities. African countries with the exception of South Africa's black sample, scored higher than all-countries' average on performance and on future orientation. These scores may add support to arguments about the motivational potential of African managerial corps. On gender egalitarianism all African countries in the study, with the exception of South Africa's white sample, showed lower results when compared to the all-countries' average. On the other dimensions the findings were mixed, highlighting higher or about average scores on humane orientation and on assertiveness; and lower or average scores on power distance (with the exception of South Africa's black sample). These data support arguments about African managers' search for stronger performance and future outreach, but in an environment with lower risk and uncertainty, and with traditional gaps in organizational gender roles.

Table 2 displays the GLOBE research's summary on values-tied scores for Southern African countries.

Table 2. GLOBE values-tied scores for Southern African countries

	Namibia	South Africa			Zambia	Zimbabwe	All-countries average scores
		Average	White	Black			
Performance Orientation	6.40	5.57	6.23	4.92	6.24	6.45	5.95
Future Orientation	6.12	5.43	5.66	5.20	5.90	6.07	5.51
Uncertainty Avoidance	5.30	4.73	4.67	4.79	4.67	4.73	4.66
Humane Orientation	5.40	5.36	5.56	5.07	5.53	5.19	5.42
Power Distance	2.86	3.14	2.64	3.65	2.43	2.67	2.74
Institutional Collectivism	4.38	4.34	4.38	4.30	4.74	4.87	4.73
Group Collectivism	6.07	5.45	5.91	4.99	5.77	5.85	5.69
Gender Egalitarianism	4.25	4.43	4.60	4.26	4.31	4.46	4.51
Assertiveness	3.91	3.75	3.69	3.82	4.38	4.60	3.86

Source: House et al. (2004)

Each of the abovementioned multi-dimensional paradigmatic studies (e.g., Hofstede, GLOBE) generated quantitative data for different countries thus permitting comparisons and the inclusion of those data into predictive models. In simpler cases, two-dimensional cross-cultural maps may display positioning countries' societal cultures and visually group countries with similar attributes. For example, Ingelhart and colleagues (e.g., Ingelhart et al., 2004; Ingelhart and Welzel, 2005) clustered African countries around traditional values (less secular-rational values) and survival values (less self-expression values) on an Ingelhart-Welzel Map. In studies involving more than two dimensions, researchers offered composite distance measures of cultural differences, such as Euclidian distance (Tadesse and White, 2007) or measures adjusted by variance averaged squared distances known as Kogut-Singh index (Kogut and Singh, 1988). With known weaknesses of these aggregations (Berry et al., 2010; Shenkar, 2001), recommendations for relevant research emphasize that "future studies should incorporate more than one distance measure, or opt for a composite index" (Ambos and Hakanson, 2014: 5-6).

The GLOBE's behavior-tied distance measures distinguish between other countries' cultures that are more or less "compatible" with each of the four Southern African countries' cultural profiles. In the case of South Africa's white sample, the composite distance is close to those for Israel, UK, US, Australia, or Austria were natural due to historic colonial ties and grouping with Anglo cluster. South Africa's black sample also

clustered with North American and European countries. Among countries closer to Namibia are Mediterranean Europe (Portugal, France, and Italy) and Latin America (Costa Rica, Venezuela, Brazil, and Mexico). Zambia's behavioral distance scores leaned to Asian clusters (Indonesia, India, Thailand, Malaysia, and China). Zimbabwe was closer to African countries (Zambia and Nigeria), Asian (India and Thailand), and Middle-Eastern clusters (Morocco, Turkey, and Egypt).

Overall, the application of empirically generated cultural data permits computation of composite cultural distance measures that may be transferred into economic modeling and analysis of Southern African countries' international trade.

DISTANCE EFFECTS IN SOUTHERN AFRICAN COUNTRIES' INTERNATIONAL TRADE

This study builds upon researches in international trade that examine the role of factors that moderate trade flows. It addresses the role of non-market factors in Southern Africa's trade relations with foreign countries around the world. The primary analytic tool stems from economic literature that discussed market and non-market factors in international trade. Some factors like geographic distance have been explored in details and confirmed the negative effects of greater distance between trading partners due to transportation time and cost, or logistics complexity. In economics, the mainstream explanations were supported by trade models that consider trade as a dependent variable and distance measures as independent variables thus permitting predictions of cross-border interaction patterns. These models are known as gravity models as in the Newtonian gravity force relating objects' masses and distance between them.

Classical gravity models interpreted the effects of geographic distances on trade between countries with their economic potential defined by their GDP or GDP per capita (Anderson, 1979; Bergstrand, 1985; Tinbergen, 1962). Geographic data for predictive model reflects geodesic distances (shortest routes between points on Earth) calculated based on the great circle formula, which uses latitudes and longitudes of either country capitals or the most important cities/agglomerations in terms of population (Mayer and Zignano, 2011).

To further explore the impact of geographic and cultural distance on cross-border trade flows between South Africa, Namibia, Zambia, and Zimbabwe and their trade partners, we created the augmented gravity model for international trade with the GLOBE-based composite cultural distance measures. In this model, trade serves as a

dependent variable and economy (GDP), geographic distance, cultural distance, language commonality, and colony ties serve as independent variables.

The computations covered 57 countries that participated in the GLOBE study, with economic data derived from the UN' COMTRADE, and geographic data from the CEPII database (Mayer and Zignano, 2011). Geographic distance was applied per cross-country geographic measurements for the most important cities/agglomerations in terms of population. Composite cultural distance index was computed separately on the GLOBE-based behavior-tied data (Model 1) and value-tied data (Model 2), with average squared distances adjusted by variance.

Control variables for culture addressed the use of language differences and historic similarities as dummies. One language variable was based on the fact that two countries share a common official language while the other language variable involves the fact that a language is spoken by at least 9% of the population in both countries. Two history-related variables were used to reflect relationships between countries independently of their level of economic development; first, if two countries have had a common colonizer and/or colonial relationship after 1945; and second, if they have ever had a colonial link (Mayer and Zignano, 2011).

In order to strengthen the model and test the consistencies of outcomes, two sets of economic data were applied, from 2004 when the GLOBE cultural data has been released and the other from 2014. Cultural distance data based on the GLOBE findings was applied to both models assuming that societal cultures usually do not change radically within half-generation (general consideration of generation cycle is 25 years). The following is the logarithmic form of the augmented gravity model with geographic and cultural distance variables:

$$\log X_{ijt} = \alpha_1 + \alpha_2 \log Y_{it} + \alpha_3 \log Y_{jt} + \alpha_4 \log \cdot D_{ij} + \alpha_5 indexA_{ij} + \sum c_k z_{ij}^m + e_{ij} \qquad (1)$$

X_{ijt} – bilateral trade between countries i and j (i = 1, 2, 3, 4 for each Southern African country in the study; j = 1, 2,… 57 for each country in the study)

Y_{it} – GDP for country i;

Y_{jt} – GDP for country j;;

D_{ij} – time invariant measure of geographic distance between country i and country j

A_{ij} - time invariant cultural distance index for GLOBE-tied country pairs (i and j)

z_{ij} – represent m control variables;

e_{ij} is a random error term.

R^2 estimates for each model were consistent with published literature. In Model 1, they ranged between 0.51 and 0.76 for 2004; and between 0.48 and 0.72 for 2014. In Model 2, they ranged between 0.54 and 0.76 for 2004 and between 0.5 and 0.72 for 2014. Tables 3 and 4 summarize model estimates for each of four Sub-Sahara African countries and show regression results of Model 1 (behaviors) and Model 2 (values) with 2004 and 2014 data applied accordingly.

As expected, in all cases involving South Africa, Namibia, Zambia, and Zimbabwe, the size of partners' economies (GDP) displayed statistically significant positive effects on trade (at the level < 0.01 in all models). The results computed for 2004 and 2014 data were consistent. In Model 1, regression coefficients for GDP ranged between 1.23 and 1.57 for 2004 data and between 1.12 and 1.86 for 2014 data. In Model 2, regression coefficients for GDP ranged between 1.26 and 1.5 for 2004 data and between 1.02 and 1.55 for 2014 data. Overall, the findings on the positive impact of the size of economy on partners' bilateral trade were consistent with the mainstream gravity model research.

As hypothesized, geographic distance displayed a statistically significant negative effect (at the level <0.01 in all models) on trade. In Model 1, regression coefficients ranged between -2.74 and -3.52 for 2004 data and -3.06 and 4.72 for 2014 data. In Model 2, these coefficients ranged between -2.9 and -3.55 for 2004 data and between -3.1 and -4.47 for 2014 data.

While consistent with the previous research on negative effects, the impact of geographic distance evidenced in regression coefficients was higher for Southern African countries compared to the average effects estimates within the mainstream research in international trade reported in the literature, such as -0.6 (Learner and Levinson, 1995), -0.87 (Disdier and Head, 2008) or ranging between -0.9 and -1.5 (Redding and Venables, 2003). These data attest to the importance of geographic remoteness considerations associated with communication, transportation costs, and logistics.

Table 3. Regression results (behavior-tied)

Category	Namibia		South Africa		Zambia		Zimbabwe	
	2004	2014	2004	2014	2004	2014	2004	2014
Cultural Distance (cultural_distance_practices)	0.005 (0.390)	1.214*** (0.439)	-0.232 (0.251)	-0.052 (0.250)	0.082* (0.295)	0.640 (0.351)	0.172 (0.254)	0.381 (0.330)
Geographic Distance (Ln_geo)	-3.522*** (0.765)	-4.716*** (0.816)	-3.201*** (0.569)	-3.059*** (0.557)	-2.743*** (0.672)	-3.134*** (0.784)	-2.879*** (0.478)	-3.077*** (0.653)
Economy size, GDP (Ln_gdp_2004/ Ln_gdp_2014)	1.568*** (0.209)	1.859*** (0.230)	1.382*** (0.125)	1.290*** (0.132)	1.282*** (0.245)	1.558*** (0.289)	1.292*** (0.157)	1.136*** (0.248)
Language dummy 1 (comlang_off)	-1.154* (0.622)	-0.215 (0.700)	-0.060 (0.417)	-0.407 (0.419)	0.325 (.715)	0.155 (0.842)	-0.427 (0.492)	0.306 (0.653)
Language dummy 2 (comlang_ethno)	0.219 (0.623)	0.379 (0.728)	0.949** (0.438)	0.906** (0.436)	1.440* (0.791)	1.854* (0.944)	0.520 (0.558)	1.406 (0.711)
Colonization dummy 1 (colony)	-0.325 (1.659)	-1.593 (1.836)	-0.328 (0.929)	0.366 (0.915)	1.194 (2.410)	-1.218 (2.849)	0.035 (1.733)	-0.496 (2.174)
Colonization dummy 2 (comcol)					-1.017 (0.973)	-1.158 (1.145)	-0.307 (0.700)	-1.854* (0.875)
R^2	0.633	0.677	0.761	0.720	0.509	0.509	0.671	0.476
Adjusted R^2	0.582	0.633	0.732	0.685	0.425	0.425	0.619	0.381

Note: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

Table 4. Regression results (values-tied)

Category	Namibia		South Africa		Zambia		Zimbabwe	
	2004	**2014**	**2004**	**2014**	**2004**	**2014**	**2004**	**2014**
Cultural Distance (cultural_distance_values)	0.345 (0.322)	1.024*** (0.376)	-0.203 (0.270)	-0.259 (0.265)	0.626 (0.442)	0.545 (0.547)	0.290 (0.257)	0.597* (0.353)
Geographic Distance (Ln_geo)	-3.552*** (0.741)	-4.473*** (0.809)	-3.177*** (0.569)	-3.110*** (0.552)	-2.919*** (0.664)	-3.266*** (0.809)	-2.899*** (0.475)	-3.106*** (0.640)
Economy size, GDP (Ln_gdp_2004/ Ln_gdp_2014)	1.496*** (0.214)	1.552*** (0.241)	1.394*** (0.124)	1.290*** (0.129)	1.264*** (0.237)	1.528*** (0.301)	1.255*** (0.160)	1.020*** (0.248)
Language dummy 1 (comlang_off)	-1.030* (0.626)	0.019 (0.712)	-0.173 (0.409)	-0.461 (0.405)	0.536 (0.715)	0.320 (0.883)	-0.323 (0.497)	0.599 (0.669)
Language dummy 2 (comlang_ethno)	0.345 (0.598)	1.492** (0.706)	0.990** (0.432)	0.834* (0.427)	1.405* (0.748)	1.420 (0.935)	0.568 (0.555)	1.502** (0.703)
Colonization dummy 1 (colony)	-0.439 (1.624)	-1.363 (1.831)	-0.196 (0.916)	0.356 (0.890)	1.385 (2.346)	-0.449 (2.909)	0.119 (1.718)	-0.265 (2.133)
Colonization dummy 2 (comcol)						-1.259 (1.176)	-0.270 (0.695)	-1.775** (0.862)
R^2	0.642	0.675	0.760	0.725	0.531	0.481	0.677	0.495
Adjusted R2	0.592	0.631	0.730	0.691	0.451	0.393	0.625	0.404

Note: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

Culture's consequences in trade were reported with regression coefficients for cultural distance and for dummy variables in common language and common colonial history. The results computed for 2004 and 2014 data were not much different between the two sets of equations (Model 1 and Model 2) in terms of the coefficient values, thus confirming the consistency of findings and supporting the importance of composite index tests beyond a single cultural distance measure.

In Model 1, the effects of cultural distance were positive for Namibia, 0.01 for 2004 and 1.24 for 2014 (statistically significant at the level < 0.01); for Zambia, 0.08 for 2004 (statistically significant at the level < 0.10) and 0.64 for 2014; and for Zimbabwe 0.17 for 2004 and 0.38 for 2014. These effects were negative however not significant for South Africa, -0.23 for 2004 and -0.05 for 2014.

In Model 2, the effects of cultural distance were positive for Namibia, 0.35 for 2004 and 1.02 for 2014 (statistically significant at the level < 0.01); for Zambia, 0.63 for 2004 and 0.55 for 2014; and for Zimbabwe 0.29 for 2004 and 0.60 for 2014 (statistically significant at the level < 0.10). These effects again, were negative however not significant for South Africa, -0.20 for 2004 and -0.26 for 2014.

While the magnitude of regression coefficients was relatively small and in many cases statistically insignificant, certain patterns may be retrieved from the analysis. In three country cases (with the exception of South Africa), cultural distance served as a contributor to trade flows (significant in the case of Namibia and Zimbabwe); and results were consistent for behavior-tied and for value-tied data. This result confronts the stereotyped negative perception of cultural distance in cross-border trade relations and offers statistical arguments for perceiving cultural distance as contributor to trade flows.

In this regard, we propose the following arguments in support of these results. First, in less developed Southern African countries with relatively narrow diversification of exports economic specialization does matter; and specialization stems not only from a country's possession of natural resources and emphasis on agriculture but also from its history, including colonial specialization, and cultural distinctions.

Second, greater cultural distance creates higher risks for foreign direct investment (communication, organizational learning, etc.); and multinational companies doing business with Sub-Sahara African countries may prefer lower risk trade over commitment to direct investment. These results supported the arguments about the impact of culture-sensitive specialization in trade and international firms' preference for trade over foreign

direct investment in higher friction environments; such results were compatible with similar findings in the literature (Dunning, 1993; Mohlmann et al., 2010).

The other important finding is the positive and in most cases statistically significant effect of language commonality between an African country and its trading partners. It supports the natural assumption that commonality in language contributes to more effective trade negotiations and communication.

While Hypothesis 2 was not confirmed in full, the results of the analysis offer new insights on the impact of cultural distance on trade relations and display a more complex perspective. The models support arguments against a one-sided view of cultural distance as a negative factor in international trade and may add to the value and appreciation of cultural distinctions and the self-awareness of local managers in cross-border activities.

Finally, when analyzed with different sets of economic data (2004 and 2014), the results of the study were consistent. When analyzinng different sets of cultural data (behavior and value), the results were also consistent. These outcomes strengthened the validity of the research on the effects of non-market factors in Southern African countries' international trade.

CONCLUSION

This research presented statistical evidence and offered arguments in support of the distinctive pattern that challenges conventional and somewhat negative interpretations of cultural distance as "friction" in international trade in the mainstream international business literature. The article advocated for a balanced approach to the evaluation of cultural effects in developing countries' cross-border trade relations. Application of augmented economic models of trade with cultural variables to the case of Southern African countries, namely Namibia, South Africa, Zambia, and Zimbabwe, exposed positive impact of cultural differences on these countries' trade flows.

The article discussed the role of these variables by offering a multi-disciplinary approach to the problem and by integrating economic, geographic, and cross-cultural data in the analysis of African countries' trade relations. The observations based on the augmented gravity model predict the important negative role of geographic distance and mixed or positive role of cultural distance in trade. While this research has limitations coming from underdeveloped literature on non-market factors in Africa's international trade as well as due to the limited cross-cultural data available for the analysis, it offers new insights and opportunities for future developments.

Theoretical implications address the development of augmented gravity models for international trade. The paper confirmed negative effect of geographic distance in advanced models. It also advocated for a balanced approach to the role of cultural distance in trade flows by providing statistical evidence of positive effects of cultural distance. The results of the study lead to a more balanced interpretation of distance effects rather than viewing those as impediments from effective international trade. Application of economic data from different points in time (2004 and. 2014) and application of behavioral and anthropological cross-cultural data (behavior-tied vs. values-tied empirical data) strengthened the results and validity of this multi-disciplinary analysis.

Managerial implications stem from the proposed shift towards a more balanced approach in perception of non-market factors; and offer a rigorous multi-disciplinary approach to trade decisions. Managers and policy makers should not blame inefficiencies in cross-border trade on cross-cultural frictions but take a constructive perspective and seek ways to capitalize on cultural differences (Ghemawat, 2003; Gratchev, 2001). The results of this study serve a productive purpose to those involved in practical decisions about cross-border trade and to policy-makers who work on international assistance and poverty reduction projects.

Overall, in the global merchandise trade, government protectionist policies or advances in regional economic integration, accessible infrastructure or specialization stem from the available natural resources which are among the primary contributors to or impediments from effective trade flows. Research on culture's effects in international business, African countries so far have remained on the periphery of scholarly attention, and this study add to narrowing the gap in the discussion about non-market factors of effective trade in developing and underdeveloped countries. Extending the scope of the analysis to non-market attributes of trade may enrich perspectives and open new horizons for better understanding of African trade as an international phenomenon. This may contribute to a broader discussion about a growing influence of cross-national similarities or cultural divides on economic cooperation in the modern era of globalization shaped by new realities of multipolarity, economic isolationism, and populism.

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