Master's Programme in Economic Growth, Population and Development

Overlapping Memberships and Its Impact on Regional Trade

A Panel Study on East and Southern Africa

by

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Abstract

Regionalism in Africa has surged since post-colonial times in a shared aim to consolidate resources and integrate national markets into a common entity. However, intra-regional in Africa has stagnated for decades owing to various structural and procedural roadblocks. Literature discusses that multiple memberships that member states obtain from different regional trade blocs complicate the trading atmosphere and create more delay in the implementation of integration efforts. Accordingly, this paper primarily examines and tests the effect of overlapping memberships on intra-regional trade in four regional trading blocs that are operational in East and Southern Africa: namely, Intergovernmental Authority for Development, the Common Market for East and Southern Africa, Southern African Development Community and East African Community. The study employs an empirical study by constructing a cross-sectional time series data that spans over a time period of 21 years between 1992 and 2012. This study takes up recent studies and uses regional trade agreements as a unit of analysis which concomitantly allowed the inclusion of other important factors such as political integration and size of regional trade agreements that can possibly affect intra-regional trade. Method of fixed effects is used and the empirical results indicate that overlapping memberships in East and Southern Africa significantly and negatively affect intra-regional trade share.

Key Words: Regional Integration, Overlapping Memberships, African Regional Trade Agreements, Spaghetti Bowl Phenomenon, Fixed Effects

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Abbreviations

AfCFTA – African Continental Free Trade Area

ARII – African Regional Integration Index

AU – African Union

CEN – SAD – Community of Sahel-Saharan States

COMESA – Common Market for East and Southern Africa

DWH – Durbin-Wu-Hausman (DWH) test

EAC – East African Community

IAS – Integration Achievement Score

ICT – Information and Communication Technology

IGAD – Intergovernmental Authority for Development

IMF – International Monetary Fund

INSCR – Integrated network for Societal Conflict Research

LAFTA – Latin America Free Trade Area

RIKS – Regional Integration Knowledge System

RTA – Regional Trade Agreement

SADC – South African Development Community

UNECA – United Nations Economic Commission for Africa

UNU-CRIS – The United Nations University Institute on Comparative Regional Integration Studies

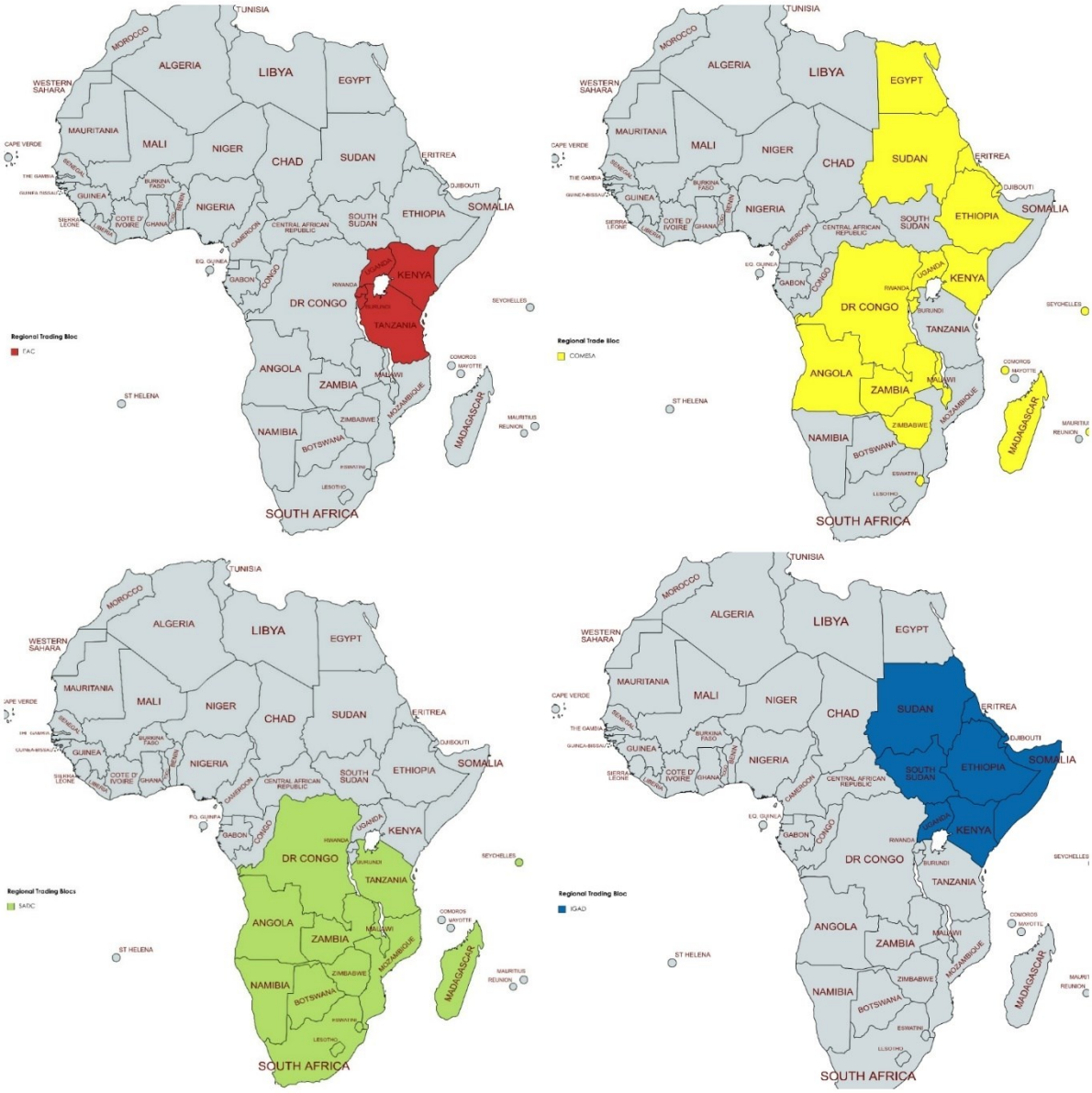
1 Introduction

1.1 Background of the Study

Tangled like spaghetti strands in a bowl, African regional trade agreements seem to have erratically mushroomed across the continent and have resulted in a web of overlapping memberships. This peculiar trend in the continent has been termed as a 'spaghetti bowl phenomena' by Harvard economist Jhagdish Bhagwati (1991) equating it to tousled spaghetti strands in a bowl. The description is apparently accurate to the overlapping trends in membership after the proliferation of regional trade blocs across the continent. Africa, as the second largest continent in the world both in area and population possesses a huge potential in production and trade. Inopportunely, Africa has had a marginal role in the dynamics of trade both regionally and globally which has dragged on for decades in to the modern era. Aside from the apparent causes like low capacity, low level of industrialization, regional instability etcetera, research attempts to find out if there are factors that are unique to Africa that has caused the continent to stagnate both in regional integration as well as in its multilateral trade.

Africa has attempted to combat its multitude of challenges and roadblocks regarding trade by pioneering the concept of regional integration much earlier than the rest of the world. Although under colonial rule, the first regional trade agreement in the form of customs union was signed in Africa between the British Cape Colony and the Boer republic of the Orange Free State in 1889 now known as the Southern Africa Customs Union making it the oldest existing customs union in the world (WTO, 2003). This paved the way to more than eight regional economic communities ratified within the continent of Africa today. These trade treaties take a multitude of forms such as economic communities, common markets, free trade areas, customs unions and so on showing strong resolve and direction for the future of the continent.

Figure 1.1. Trade Blocs in East and Southern Africa

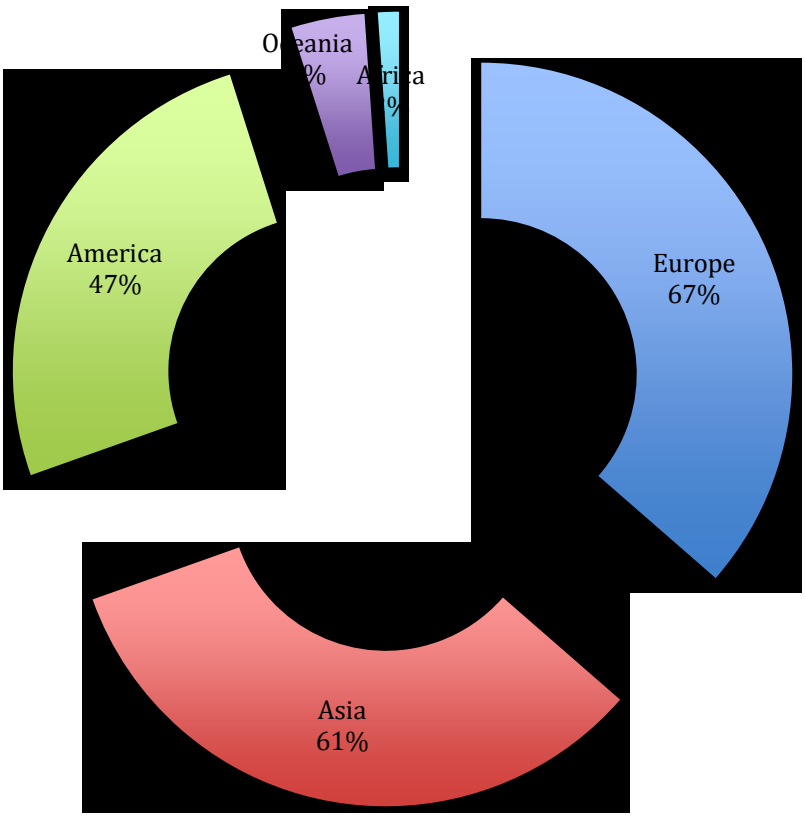


Source: Author's Representation from RIKS (2021a) data

Furthermore, a new continental trade treaty known as the African Continental Free Trade Area agreement was signed in March, 2018 with an objective of creating a common market for the whole continent making it the biggest free trade area agreement in the world in terms of population (AfCFTA, 2019). These measures along with some success in deepening regional integration reveals the

progressive political will of certain national governments and thus, sets an example for laggards to come to the fold. Intra-African trade can play a vital role in fostering the continent's major industries by inducing competition and weeding out inefficiency. Productive and infrastructural integration between member states, often set by regional trade agreements allow for spillover effects from transfer of knowledge and technology that are especially important for Africa in accelerating economic growth. However, these trade agreements have continued to display slow progress in terms of deepening regional integration as well as in the level they impact the economic welfare of member states. Since the Second World War, the flow of intra-African trade has continued to languish while intra-continental trade in all other continents has relatively advanced as seen in figure 1.2 perpetuating the prevalent dependency of Africa especially sub-Saharan Africa on the rest of the world (UNCTAD, 2019). Aside from the apparent gains that arise from strong economic stature and ability, the potency of intra-continental trade in the rest of the world can also be attributed to a broad range of reasons such as good design, heterogeneity of economies and also the presence of fewer but larger regional trading blocs.

Figure 1.2. Intra-Continental Trade Flow (2015-2017)



Source: Author's representation from UNCTAD (2019) data

Thus, the path towards regional integration through a creation of free trade area agreements in different corners of the continent seems to be the most plausible way for Africa to gain leverage globally as well as to strengthen the flow of intra-continental trade. Regional integration also serves as a litmus test to understand how each economy behaves under these kinds of treaties that affect the different agents and stakeholders of the respective economy. Therefore, due to the homogeneity of African economies and the resource endowments they primarily trade, research on a specific set of regional trade agreements in Africa can serve as a blueprint towards diagnosing the different challenges faced by free trade area agreements signed elsewhere in the sub-Saharan region. The focal areas of integration in regional trade agreements in Africa include overall trade in goods and services, monetary integration platforms, investment facilitation and infrastructure development in all modes of transport as well as energy and ICT (Kayizzi-Mugerwa, Anyanwu & Conceição, 2014). Thus, these regional trade agreements involve and regulate the interaction of various stakeholders and agents within the national economic and political structures, which its diverse nature has complicated the implementation efforts. These challenges emanate from the diverse structural and institutional features of member states to superseding external parties that have jointly shaped the state of its implementation today.

This study primarily focuses on the challenges of overlapping memberships in regional trade agreements in Eastern and Southern Africa. This phenomenon has only recently gained attention after decades of reserve summoning institutions and national organizations currently to look in to the matter. Various studies conducted on the topic of multiple memberships in RTAs are generating results that this phenomenon can be negatively associated with intra-regional trade and regional integration (Chacha, 2009, Chacha, 2014; Olowu, 2013; Mapuva & Muwengwa-Mapuva, 2012). On the contrary, some studies (Afesorgbor & Van Bergeijk, 2014); Ngepah & Udeagha, 2019) have found some positive relationship between multiple memberships and intra-regional trade assigning a supplementary role on trade flow. As the area of research and the methodology employed in the aforementioned studies varies, it may be a contributing factor to the different yields gained in the findings.

Although most of the studies employ a qualitative approach, there are some studies (Chacha, 2009; 2014; Fergin, 2009; Afesorgbor & Van Bergeijk, 2014; Ngepah & Udeagha, 2019) that have empirically analyzed the topic at hand and while the focus of the studies remains to be regional trade, almost all the studies use countries and bilateral analysis to examine the impact of overlapping membership on trade. However, studies as that of Chacha (2014) have departed from the regular analytical framework and employed regional trade agreements as the unit of analysis allowing for a new standard and alternative for regional trade analysis. This study is one of the most recent research conducted on the topic and was conducted on 20 regional trade agreements across the world.

While many studies (Schiff & Winters, 2003; Yang & Gupta, 2005) have debunked the challenges of regional integration in Africa, the impact of overlapping memberships still has not gained adequate attention and examination and thus, explains the lack of empirical inquiry on the matter. Accordingly, this study will focus on two regions in Africa – Eastern & Southern Africa where the most overlap occurrences in the continent is observed. It also allows for a detailed empirical inquiry in to the two regional trading blocs - the Common Market for East and Southern Africa and South African Development Community that have 42 and 60 % of their members respectively belonging to both blocs (RIKS, 2021a). It will be the first empirical examination of the phenomenon in this region aiming to connect with the last empirical study (Chacha, 2014) on the topic of overlapping memberships.

Regional economic integration plays a crucial role in determining the success of intra-regional trade share. As members of a particular regional trade agreement mobilize and utilize resources and integrate their political institutions, it can allow the region to invest and take advantage of the region's potential in trade. As a region integrates more deeply and graduates from a partial scope agreement to a complete customs union, intra-regional trade is significantly promoted (Magee, 2008). Thus, the depth of integration evaluated by certain parameters can be reflective of the region's potential in trade.

Furthermore, the size of regional trade agreements can also be determinant of the region's potential to boost its trade. Large regional trading blocs offers an opportunity for a larger market access that can promote trade creation and depress possible diversion in trade (Fratinni & Chang, 2009). However, it can also be a stumbling block as more stakeholders and more diverse national policies are present within a large RTA, implementation delay can be exacerbated and evidently results in lower trade flow (Mansfield, Milner & Pevehouse, 2008).

1.2 Statement of the Problem

Regional trade agreements have sprung across the globe exponentially over the past three decades with an aim to establish open regionalism and integration. And regional economic integration is one of the means to achieve deeper integration, by mainly incorporating regional arrangement of liberalization commitments. However, this path has been more challenging for the continent of Africa where implementation of regional integration agendas has been stalled for a lengthy period of time.

In the quest of identifying and understanding the latency of the magnitude of intra-African trade, many factors have been attributed towards explaining the challenges of trade flow ranging from addressing incumbent systemic challenges to extracting specific sub-regional barriers. Different academic scholars from various fields have attributed dissimilar reasons for the cause of low trade flow in Africa - economists attribute challenges like economic similarity and macroeconomic instability as chief factors while opinion leaders attribute lack of political will and third-party interference as key challenges to Africa's low intra-continental trade flow.

Overlapping memberships involves an activity where countries belonging to one regional trade agreement simultaneously engage in memberships with other RTAs. This trend has been observed more in the continent of Africa especially in the Eastern and Southern part of the continent as shown on table 1.1 below and makes the focus of this study especially significant. As many nations assume different regional trade agreements of different nature, implementation impediments through the ensuing complication will create administrative and policy coordination problems (Bhagwati, 1991). Thus, this study will focus on how overlapping memberships influence intra-regional trade flow and the ensuing integration efforts. In doing so, this study will use all the aforementioned trade agreements that are operational in East and Southern Africa in order to assess the relationship between overlapping membership and intra-RTA trade.

Table 1.1. Overlapping Memberships in East and Southern Africa

Countries	Regional Trade Blocs				
	SADC	COMESA	IGAD	EAC	CEN-SAC
Angola	√	√			
Burundi		√		√	
Botswana	√				
Eswatini	√	√			
Congo, Dem. Rep.	√	√			
Comoros		√			√
Djibouti		√	√		√
Egypt, Arab Rep.		√			√
Eritrea		√	√		√
Ethiopia		√	√		
Kenya		√	√	√	√
Libya		√			√
Lesotho	√				
Madagascar	√	√			
Mozambique	√				
Mauritius	√	√			
Malawi	√	√			
Namibia	√	√			
Rwanda		√		√	
Somalia			√		√
South Africa	√				
South Sudan			√		
Sudan		√	√		√
Seychelles	√	√			
Tanzania	√			√	
Uganda		√	√	√	
Zambia	√	√			
Zimbabwe	√	√			

Source: Author's computation from RIKS (2021a) Data

1.3 Research Aim and Purpose

The primary purpose of the study is to establish the impact of overlapping membership on intr-RTA trade flows. To the best of the author's knowledge, no quantitative study has been conducted to identify the impact of multiple memberships in the region studied in this paper. Thus, this study will contribute to the research gap in examining the aforementioned relationship in the regions of East and Southern Africa. The study also aims to provide extractable findings that future studies can be based on and also assist policy planning by providing empirical evidence on how this trend affects regional trade.

As the world moves towards a single market, Africa continues to move astray as it continues to be marginalized in global trade. Thus, trade blocs studied in this study possess the ability to foster deep integration regionally that would solidify the trade credibility of the different economic communities in the region and its member states and also boost the region's bargaining power in the international arena. Thus, studies such as these are timely as intra-regional continues to stagnate for decades. The immobilized and inadequate research backstopping of intra-African trade and its challenge of multiple memberships necessitate research of this nature to provide a better understanding of the phenomenon and to ultimately deliver sound recommendations.

Furthermore, issues of RTA size and depth in regional integration raised in the previous section will also be included in the empirical examination as secondary explanatory factors as it is believed to provide a more complete picture of the intra-RTA trade environment.

1.4. Hypothesis Formation

The reviewed literature and the research problem at hand set the direction towards what the paper aims to test. Overlapping memberships and its correlation with intra-RTA trade growth will be the main relationship set to be quantified by this study. For this reason,

The main hypothesis will be:
H1: If there is more overlap in a regional trading bloc, intra-regional trade within the bloc decreases.
Furthermore, as discussed in the introduction and more in detail in the theory section, other factors have been attributed to have a strong relationship with intraregional trade flow. Accordingly, it is the intention of this study to include these factors in order to gather a more complete picture. Thus, this study will test the following additional hypotheses:
H2: If a regional trading bloc is more politically integrated, intra-regional trade within the bloc increases.

H3: If a regional trading bloc has more members, intra-regional trade within the bloc increases.

1.5. Significance of the Study

As mentioned in the purpose section, this study will attempt to address the under-researched topic of multiple memberships in regional trade. Given this lack of experiential inquiry, this study will contribute to research frontier by empirically substantiating the claims that overlapping memberships can affect the growth of trade and the ensuing regional integration in East and Southern Africa. Thus, the findings of this study will be significant in influencing policy and contributing to the inadequate empirical research coverage of the topic.

1.6. Limitations of the Study

The complex nature of the trade and the intermixing of various factors that affect regional integration can possibly undermine bold recommendations. However, this is expected, as the subtlety of trade under different stakeholders tends to be elusive. Additionally, as the study involves the four regional trade agreements in East and Southern Africa, it requires a uniform set of data from all trade blocs so that it can effectively demonstrate the relationships between trade share and the predictor variables included in this study. However, the presence of unavailable data of certain years did not allow for a seamless analysis, which will be discussed in detail in section 4.2.

1.7. Definition of Terms

The abundance and variety of studies in regionalism has resulted in a definitional debate; accordingly, in this study, the definition of regional trade agreement, regional integration and levels of integration employs their most widely used definitions as described below:

Regional Trade Agreement – is a treaty signed between two or more governments that define the rules of trade for all signatories (WTO, 2010)

Regional Integration - regional integration is a process where nations come together and relinquish certain aspects of their sovereignty to a central power in order to create a larger coherent political and economic system (Laffan, 1992; Daltrop, 1986)

Although there are various articles categorizing levels of integration differently, one of Mariadoss (2015) best explains it by assigning the following four forms to regional integration: free trade area, customs union, common market and economic union.

Free Trade Area: The basic form of regional cooperation is a free trade area where member countries eliminate tariffs to trade amongst themselves but have the mandate to determine trade policies with non-member nations.

Common External Tariff/ Customs Union: At a slightly deeper level, nations create a free trade zone where all tariffs to trade are removed but member nations additionally form an agreement to treat trade with the rest of the world in a similar manner known as a common external tariff.

Common Market: A common market combines the features of a free trade area and a customs union with an additional feature of free mobility of capital and labor among member countries.

Economic Union: the deepest form of integration in trade, which is an economic union, imposes the additional feature of adopting a common economic policy among the member nations where each member nation would relinquish some fiscal spending responsibilities to a supra-national agency.

1.8. Outline of the Study

This paper contains eight chapters that outline the framework of the study. It commences with the introduction section that includes the background, aim and purpose of the study. This chapter also includes a section for the discussion of the problem to provide a clear motive of the research. It continues to the theory section where previous studies related to the topic of regional trade agreement will be reviewed and discussed. In this section, the theoretical rationale will also be forwarded in order to guide the use of theory in formulating the hypothesis and the model to test it. The next two chapters will exclusively showcase the data and methodology section that is used to study the topic at hand. Succeeding chapters will deliberate the empirical analysis that presents the findings and discussions of the study and continues to the chapter containing the conclusions and recommendations of the author. References and appendix will be the last two chapters of this paper.

2. Theory

In the first section of this chapter previous studies will be discussed with a preliminary review of the origin, benefits and challenges to regionalism so as to provide context to the main issue of the topic. Then studies particularly conducted on regional integration in Africa will be discussed providing a bridge to the review of studies conducted on overlapping membership and its effect on regional integration. The second section will commence with the theoretical approach employed for the analytical design of the study along with a discussion of other relevant theories.

2.1. Previous Research

2.1.1 Multilateralism Versus Regionalism

The basic motive behind the joining of nations into multilateral trade agreements such as the general agreement for trade and tariffs of the WTO is to reap a prolific trade relationship that is based on reciprocity and non-discrimination. However, this has been contested by the mushroom rise of regionalism across the globe since the end of the twentieth century (Sheldon, 2006). This has been a divisive topic, which created a stance that supports regionalism while proponents of multilateralism continue to argue against the discriminatory nature of regional integration.

Harvard economist Bhagwati (1991) raised concern whether regional trading blocs serve as building or stumbling blocs. He assigns regional integration or any preferential conduct in trade as being the precursor for discrimination that is responsible for muddling the trading system. However, we can observe contending scholars like Summers (1991) assigning any form of liberalization at a regional or multilateral level should be considered as a move in the right direction.

This dynamic in the current era is evidently moving towards the side of regionalism where key multilateralist countries and blocs such as the US and EU are becoming more regionalists (Sheldon, 2006). This fuels the suspicion that the world may not be equipped for the polarizing effects of multilateralism as different countries and regions across the world are highly heterogeneous in many factors. And thus, the world is seemingly moving towards regional integration where members can discriminatorily focus on issues that are relevant to their own trade needs and also stage of development as seen in figure 2.1. However, scholars such as Baldwin (1993) have put forth different theories to optimistically assign regional integration as catalyzer of trade liberalization in the long run. The domino theory of regionalism is often raised concomitantly in these debates to show that the formation of

regional blocs will eventually elicit new memberships and create an expanding regional trade area. Baldwin (1993) assumes that dominos effect of regionalism can push the trend towards multilateralism and further liberalization through the benevolent impact of regional integration to freer trade.

Accordingly, the trend of regionalism naturally was embraced due to the fact that Africa was discriminated for foreign investment for its high production costs and unfavorable investment climates, which seems to have pressured the continent towards regionalism (Kritzinger-van Niekerk, 2005). The first wave of regionalism emerged in the period between 1960 – 1980 after the advent of decolonization, partly motivated by the Organization of African Unity and was quickly followed by the second wave during the 20 years before the turn of the millennium . (Kritzinger-van Niekerk, 2005*)*. Regional trade agreements are ratified in order to enable a process that enhances regional cooperation through a coordination of trade, fiscal and monetary policies of its signees (WTO, 2010). Alternatively, regional trade agreements inherently are trade liberalization schemes on a discriminatory basis that can be arguably in conflict with Article 1 in GATT/WTO (Lockhart & Mitchell, 2005). So, we can discern that multilateral openness induces the formation of regional trade agreements but also invokes frustration on the side of policy makers by the stalling nature of multilateral trade discussions.

2.1.2. Approaches to Regionalism

There are generally three approaches to regionalism as identified by Babarinde (1996); federalist, functionalist and neo-functionalist strategy. The federalist strategy attempts to institute a federalist structure where by member nations concede some parts of their sovereignty to a supranational authority while a functionalist strategy promotes an enhanced intergovernmental cooperation without compromising the member states' sovereignty to a central figure. The third strategy is an approach that marries the above two strategies through achieving a framework where specialized administrative institutions are created at the transnational level. With the current global political climate, majority of regional trade agreements seemingly have formed using the neo-functionalist strategy by developing multiple institutions throughout the member states in order to invoke participation and efficient implementation. Regional integration can also be categorized into positive and negative integration according to Brigid Laffan (1992) where the framework of most favored nations, free trade areas and custom unions, which involve elimination of trade barriers within the RTA, are regarded as negative integration. While common markets and economic unions, which require harmonization and coordination of institutions and policies are regarded as positive integration indicating deeper integration as a positive manifestation of regional integration.

Thus, the gross understanding is that as a regional trading bloc advances from its basic form to a deeper level of integration, the larger the effect on trade flows between member countries. Mainstream economics suggest a sequential move from free trade to deeper integration but contested by Venables (2003) as not the best path for the global south such as Sub-Saharan Africa as the prevalence of economic heterogeneity of economies in these regions allows for a dominance of the more developed economies leaving the smaller economies worse-off.

2.1.3. Benefits and Disadvantages of Regional Integration

Prior to addressing the challenges and disadvantages of regional economic integration, a mention of the benefits of regionalism will highlight the basic intention behind these agreements. The benefit of regional integration crosses through various dimensions that can attract stakeholders and national strategists to lobby regionalism. The three major benefits are as follows:

Trade Gains: Strongly integrated states possess the potential to sway the prices and quality of these exported goods through trade creation. As nations integrate and build the capacity to sufficiently substitute for imported goods, bargaining power is gained that can pressure third party exporters to cut prices to the region thereby pushing for a positive trade effect for the member states (Kritzinger-Van Niekerk, 2005). However, This trade effect and the associated external tariffs that is present in regional trade blocs can be accompanied by the unintended effect of trade diversion if regions adhere only to closed regionalism (Viner, 1950).

Economies of Scale: RTAs enlarge the market access of their member states, which allows for firm competition that leads to the rationalization of production and elimination of inept firms that are usually present in the economy (Kritizinger-Van Nieker, 2005). However, the presence of homogenous economies with low trade complementarity emboldens the few strong economies with a more diversified export basket resulting in the polarization of the trade floor (Pharatlhatlhe, Apiko & Woolfrey 2019; Alex-Adedipe & Atanda 2020). This is possibly a more pressing issue for Africa as trade diversification is minimal and the few stronger economies can negatively influence the trade dynamic in the RTAs.

Investment: The ensuing competition and the free movement of factors of production can induce investment both domestically and internationally. A strongly integrated region can gain investment attractiveness by demonstrating its reduced distortion and lower cost in production. On the contrary, closed regionalism can also lead to investment diversion (Mariadoss, 2015). This is highly pertinent in the case of regional agreements signed within the global south where foreign direct investment has a

significant impact on the economy. For instance, foreign firms from outside the region will have a bias towards investing in countries that are integrated regionally due to the anticipated higher burden of tariffs and regulations.

In addition to the discussed pros and cons of regionalism, regional trade agreements can allow for an enhanced level of political cooperation, which is fundamental in addressing issues of political instability and conflicts (Daniel, 2011). The freer movement of factors of production and the ensuing market expansion due to integration also allows for employment prospects, which in turn can have a positive effect on economic growth.

2.1.4. Regional Integration in Africa

As the AU recognizes eight regional economic communities that seek to deepen integration in Africa, various challenges have emerged while some have worsened. Factors such as geographical proximity, historical links, comparative advantages, overlapping memberships and topography are seemingly the major factors that influence the state of integration in Africa (Woolfrey, 2016). The African Regional Integration index, which is used to assess and quantify the state of regional integration in different trading blocs in Africa, is derived slightly different to other global regional integration indices. When compared to the Asia-Pacific regional integration index which uses six dimensions (Huh & Park, 2017) namely: Trade and investment, monetary and financial, regional and value chain, infrastructure and connectivity and free movement of people, the African regional integration index employs five dimensions, namely: Trade, macroeconomic, productive and infrastructural integration as well as the state of free movement of people (ARII, 2021). Similarly, the integration achievement score computed by Genna (2002) also measures the level of regional integration and was compiled over a more comprehensive time period. This index is the average score of five categories that measure the level of regional integration. It comprises of liberalization of barriers to trade, liberalization of capital and labor mobility. The last two categories attempt to capture the coordination in monetary and fiscal policies within a regional trade bloc.

The above comparisons and a mention of the theoretical foundations of the ARII and the IAS will help us understand the main considerations of regional integration in Africa. Accordingly, Trade integration assesses the success or failure of countries and trade blocs in reducing and harmonizing tariffs, non-tariff barriers, sanitary, phyto-sanitary measures, labeling laws and rules of origin (ARII, 2021). The different dimensions of integration under the Economic Commission for Africa (UNECA, 2019) are productive integration which assesses how much the productive capacities of one country complement those of other countries in the trading bloc usually affected by poor and nonexistent logistics in the region. Macroeconomic integration is another dimension that accounts for the toning and matching of macroeconomic policies in a region to obtain macroeconomic stability and coherence, which in most cases, is impeded by exorbitant inflation. And fourthly, infrastructural integration, which examines the state of trade connections, facilitated by infrastructure. The African Regional Integration index uses a scale of 0 – 1 where a score below 0.333 is classified as low, a score between 0.334 – 0.667 is average and a score of > 0.668 is high integration. The index also explicitly provides information of where the deepest and weakest integration lies.

Africa as a continent scores 0.327 in overall integration in 2019 with the Eastern African Community (EAC) as the leading regional economic community with an overall score of 0.537 while the Common Market for Eastern and Southern Africa scores 0.367 just slightly above the cut-off to an averagely integrated regional economic community (ARII, 2021). This common market has achieved the best score on the trade integration dimension with the lowest score in productive integration. The COMESA's best performers in overall integration are Kenya (with a global score of 0.6), Rwanda and Zambia being the three most integrated countries in the common market. While the lowest performers start with Zimbabwe then followed by Ethiopia (a global score of 0.3) and having Eritrea as the worst performer in COMESA in the same year (ARII, 2021).

2.1.5 Challenges to Regional Integration

Prior to addressing the different challenges of regional integration, it will be of use to briefly state the factors that promote regional integration in order to highlight the necessary components for an effective regional integration.

Common history and cultural heritage as stated by Ngepha & Udeagha (2019) promotes deeper integration among countries as the commonality in language and culture defines how the various institutions that operate within member states interact and cooperate with one another. This can vary from administrative engagements that deal with custom procedures to a better flow of labor between

member states that effectively determines their state of integration. Good physical and institutional infrastructure is also one of the major factors that promote the depth of regional integration in a region (World Bank, 2021a), which typically entails transport, ICT and energy infrastructure. Other diverse factors such as geographical proximity, trade complementarity, regional peace etcetera can be attributed as facilitating factors to regional integration.

When addressing the political economy of regional integration we come across a vast array of challenges that impede the convergence and cooperation of member nations, which have been more rampant in the global south. Implementation gap irrespective of the level of regional integration has been one of the major issues associated with regional integration agreements. Consulting the body of research that has researched the challenges and impediments of regional integration we observe a set of generic factors that are common to all trade blocs with some peculiar factors present in certain regions. The political economy of regional integration published by the World Bank in the sub-Saharan region in Africa attributes the lack of a strong private sector support, a lack of a hegemonic state and the presence of a large and rigid membership framework (Brenton & Hoffman, 2016). As one of the key stakeholders of the dynamics of trade in a given economy, the private sector plays a vital role in regional integration, as the sector is a prime determinant of the economic transactions in all sectors. A lead government is also a vital input in steering the integration efforts by solving the prevalent coordination problems that exist in regional trade agreements (Kirk, 2015). The importance of a hegemonic state as a lead entity can be exemplified by the role of Germany in the successful regional integration of Europe (McCormick, 2017).

Regional trade agreements that involve a large number of actors endure complicated negotiations, as there is a higher probability of divergent preferences (Brenton & Hoffman, 2016). The Latin America Free Trade Area (LAFTA), which encompasses fifteen countries, is a classic example of this phenomenon where the rigid framework led to the emergence of trading blocs with conflicting preferences among its different economic levels. These factors along the implementation gaps by members and poor design of regional economic commissions may have impeded the natural process of regional integration (Brenton & Hoffman, 2016).

The relatively new challenge that pertains to the case of Africa is the effect of globalization whereby most African trade regimes are seemingly prioritizing vertical trade relations outside of Africa (Saadi, 2017). With the EU as the incumbent receiver, the recent rise of China has made the giant the new preferred partner unending the confinement of Africa to low value added and labor-intensive activities. This effect is further felt as it results in the promotion of production similarities and export structures

that has implicitly hampered the growth of complementarity in African economies much needed for regional integration to thrive.

As the main focus of this study, overlapping membership pose another challenge to regional integration as proposed by various research. There is a vast body of inquiry that asserts the negative effects of overlapping membership on participating nations; WTO (2010) and Anne Krueger (1997) have reportedly exclaimed that overlapping memberships obstruct the coordination of policy in regional trade blocs ultimately dampening intra-RTA trade. The United Nations Economic Commission for Africa (2004) and the International Monetary Fund (2021a) also has stated that overlapping memberships have debilitated economic integration in the regions of sub-Saharan Africa and Asia. Political economists have also forwarded studies assigning overlapping memberships as having adverse effects on regional integration efforts (Krueger, 1997; Khandelwal, 2004). So, the question remains how?

Geda and Kibret's (2007) assessment of this phenomenon indicates that these multiple memberships effectively inhibit cooperation. Overlapping memberships can also have monetary consequences by increasing personnel and financial costs creating roadblocks towards the harmonization of policies regionally (Geda and Kebret, 2007). These consequences plausibly continue to constrain the potential of these RTAs to boost intraregional trade and thus achieving deeper integration (Nyrabu, 2004; Feng and Gena, 2005).

2.2. Theoretical Approach

Africa has currently surpassed the world in its efforts towards regionalism with eight regional economic communities and a relatively higher number of intraregional and sub-regional groupings set up with in the sub-Saharan region aimed at various development and liberalization goals (Olowu, 2003). Thus, the road to regional integration would then have to be associated with a significant level of harmonization in policy and goals in order to attain a deeper form of integration that can enable the anticipated affluence in the region. While there is commonality in the overall makeup of RTAs, there are varying differences in the objectives, benchmarks and timelines of these trading blocs (WTO, 2010). And thus, the unintended consequence of diverging approaches and implementation strategies has begotten conflicting national policies that have hampered the original objective of integration.

The proliferation of regional integration across the world and especially in the developing world has formed a convoluted strand of overlapping memberships in multiple regional trade agreements. Overlapping memberships "entails countries maintaining membership in two or more regional trade agreements with concurrent goals of trade and economic liberalization" (Chacha, 2014, p.1). The unpredictability and inaction of the World Trade Organization (WTO)-led trade discussions has seemingly compelled nations to embrace bilateralism and regionalism in order to avoid discontinuity in trade and to gain a new alternative to reach liberalization (Baldwin, 2006). Various internal and external factors inspired nations to extend their memberships in multiple regional trade agreements as a way to enhance their position in the global trade economy and reap the economic benefits of trade liberalization (Chacha, 2014). Hancock (2010), proposing a reverse causality approach, argues that the state of the original RTA a country has signed in to essentially determines its choice to enter into multiple trade agreements. He claims that the shallower the integration in a particular RTA, the higher the tendency to enter into multiple RTAs.

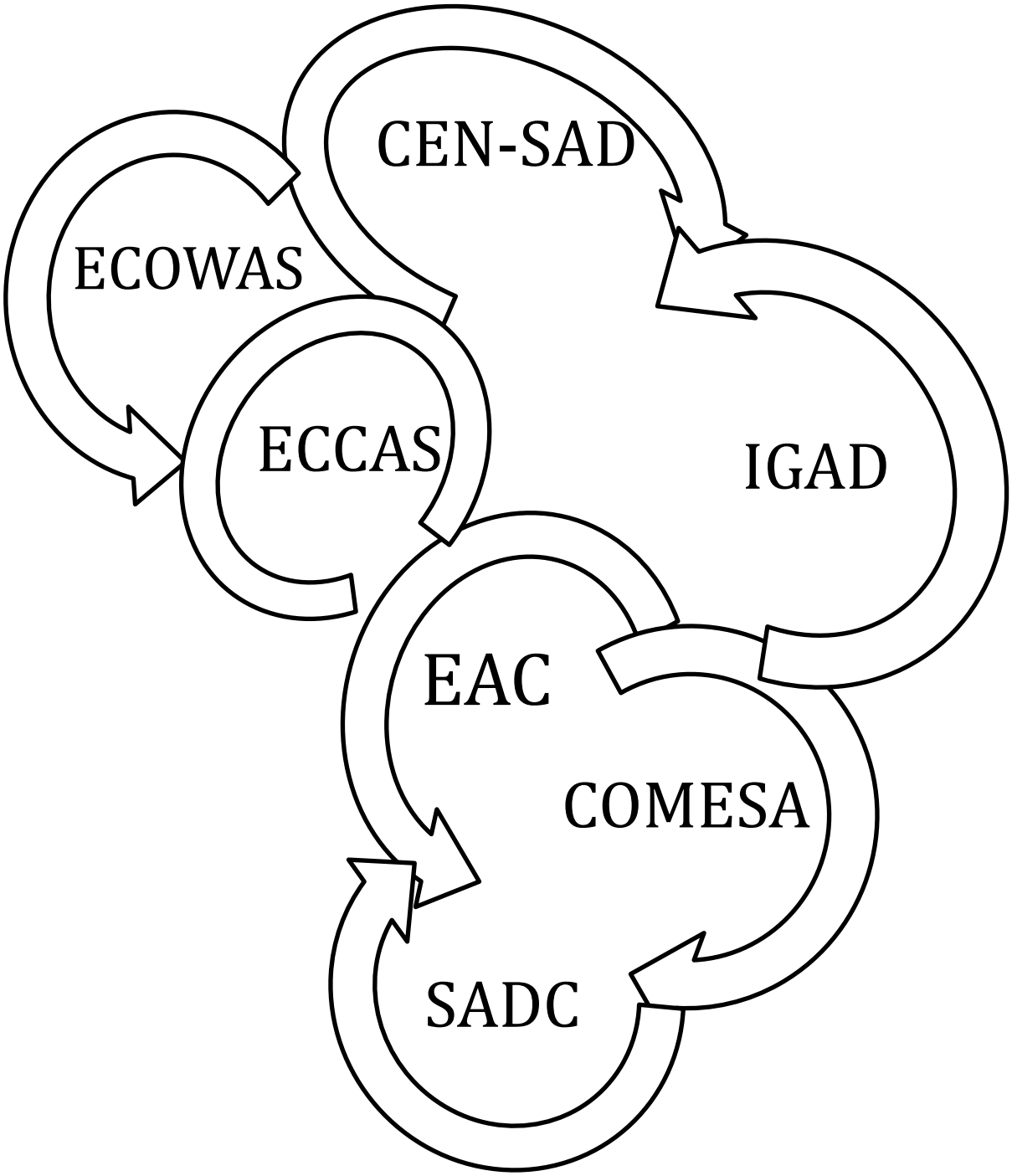
Obtaining multiple memberships were initially sought out under the assumption that it will allow new markets and create mutual interests that can potentially encourage the establishment of conflict-free states (Chacha, 2014). Furthermore, the key-motivating factor into concluding regional trade agreements would be the anticipated economic gains and hence can seemingly be stimulating the rise of RTAs.

In examining the research concerned with the negative impacts of overlapping memberships on intra-RTA trade, we can extract a common premise, which is that overlapping memberships complicate and burden the RTA's rules of origin. Rules of origins are mechanisms through which goods that are subject to preferential treatment can be identified and are the means whereby RTAs accords tariff preferences to member states (Chacha, 2014). These rules of origin offer additional terms to the trade agreements by specifying the nature and composition of traded goods, which will be eligible to preferential access in the RTA's market (Krueger, 1997). The full implementation of these sets of rules is significant in enabling an increased trade flow within a regional trade agreement. Accordingly, concurrent memberships in RTAs allow for additional rules of origins of varying nature that makes implementation problematic and bulky, as one country would have to adhere to two or more rules of origin with a conflicting nature. In dealing with these side effects, member states belonging to two or more RTAs will then have to introduce new or amended policy measures in order to mitigate the conflicts that result in policy frictions and added trading costs (Estevadeordal et al, 2005).

Economic Commission for Africa in their 2004 (p.49) publication stated the issue of overlapping memberships as "The overlap among regional economic communities also adds to the burdens of member states. A country belonging to two or more regional economic communities not only faces multiple financial obligations, but must cope with different meetings, policy decisions, instruments, procedures, and schedules. Customs officials have to deal with different tariff reduction rates, rules of origin, trade documentation, and statistical nomenclatures. "This is indicative of the growing concern of the impacts overlapping membership have on regional trade and integration.

The phenomenon of overlapping trade agreements is popularly described by Jagdish Bhagwati (1992) as the spaghetti bowl phenomenon referring to the interlinked strands of the trading network as depicted in figure 2.2. He uses this term to indicate complexity issues usually associated with overlapping memberships as goods move around multiple RTA structures enduring tariff differentiation at various points.

Figure 2.1. The Spaghetti Bowl Phenomenon in Sub-Saharan Africa



Source: Author's Representation from RIKS (2021a)

Alternatively, the effects of multiple memberships is explained through the hub and spoke model by Cheng et al. (2009) where one member state considered as a hub and other countries which it has a concurrent RTA with considered as the spokes. They explain that through these multiple RTA memberships, the hub country would evade any trade discrimination from the spoke countries.

Regional trade agreements usually adopt distinct and unique mechanisms in legislating their rules of origins as they deal with different circumstances involving the origin of goods (Chacha, 2009). And thus, the impact of overlapping membership in the implementation of rules of origin clearly adds hurdles to the process and invokes inconvenience to all stakeholders such as traders and custom officials discouraging trade flow in the process (Krueger, 1997). She asserts that a prolonged delay of trade flow due to various rules of origin would eventually sabotage any integration and cooperation efforts. Charalambides (2005) states that agents of the private sector and custom officials were confused over which regime and rules of origin to apply at borders.

This results in a decreased intra-RTA trade flow due to the complexity brought by overlapping rules of origin and the ensuing policy frictions. For instance, the common market for Eastern and Southern Africa (COMESA) and the Southern Africa Development Community (SADC) who encompass a significant geographical area that overlaps have 10 member states in common. However, these two trade blocs continue to employ an incompatible set of rules that deal with the origin of goods coming in to the RTAs market (Chacha, 2014). COMESA's rules of origin are instituted as a general rule-to-all given under these conditions (AU, 2009) while SADC's rules of origin (SADC, 2003) are good specific without setting an actual cut-off point for the value addition and/or foreign content when allowing goods to be admitted into the trading bloc. This can evidently be problematic during customs procedures for member states belonging to both trade blocs in terms of which rules to apply and thus, can be assumed to have contributed to the stagnation of intra-RTA trade growth in the trading blocs.

The readily available theoretical body of research on the impact of overlapping membership presents sound arguments in asserting its multidimensional consequences to regional trade agreements' efforts towards regional integration. However, empirical testing of this phenomenon is not as readily available as one would assume. A novel study was conducted by Chacha in 2009 and then in 2014 where the study provides empirical evidence on the effects of overlapping membership on intra-RTA trade share. He investigates various regional trade agreements and found that overlapping membership and intra-trade flow are negatively correlated. He indicates in his (2014) study that a five-member RTA with one member engaging in overlapping memberships would decrease the intra-RTA trade share by 0.15

points per annum holding other variables constant. This is indicative of the plethora of negative effects multiple memberships have on trade flow.

The entering of nations into multiple RTAs has also generally induced divided loyalties and lack of commitment to the obligations set by the regional trade agreements thereby hampering the implementation of policy (Jakobeit et at, 2005). The commitment to regional integration as investigated by Feng and Genna (2003) entails the forging of domestic institutions and national policies in order to address the goal of regional integration and increased trade flow. Their study asserts that institutional convergence at some level is required to achieve the primary goal of any regional trade agreement which is a goal hampered by the presence of multiple memberships. Razeen (2006) appoints the rules of origin, tariff schedule and implementation period as the three parameters of where the presence of multiple memberships complicate the trade floor as they are differently set across each regional trade bloc and thus dampen the growth of trade flow inside the RTA. Thus, the ensuing duplication and complication of trade relations exacerbates the prevailing delay in implementation and lack of commitment.

The conflicting nature of different RTAs can also induce trade inconsistencies through tariff-related issues as indicated by Razeen (2006). For instance, a nation belonging to two trade blocs will have to reduce tariffs to a trading nation under its RTA with it but will have to maintain its tariff levels under a different mandate in its other RTA. Additionally, overlapping memberships can also have the propensity to coerce other member states of an RTA into a third-party agreement as seen in the case of SACU where South Africa entered into a trade agreement with EU implicitly forcing Lesotho and Zimbabwe to enter into the agreement rendering them susceptible to a volatile market and eventually affected their intraregional trade performance. The growing Sino-centric approach in trade relations usually observed in Africa has also resulted in fragmentation and the ensuing overlapping membership has resulted in dilution of human and technical resources and inconsistencies between integration agendas (Saadi, 2017). Accordingly, these multiple memberships can further complicate negotiations with third parties in an ongoing North-South agreement, where the timely conclusion of the negotiations would be beneficial to the participating member states.

The road towards deeper integration has many roadblocks especially in developing nations without the added hampering impact of overlapping memberships. This phenomenon has induced duplication of terms, confusion in implementation and an unhealthy competition levying a significant burden on the taxpayer and the RTAs integration efforts (Olowu, 2003). As no one country can simultaneously belong

to two regional economic communities at any one time, overlapping memberships are obstacles towards regional blocs forming customs union and thus deeper integration.

For instance, COMESA is mainly driven by classical Vinerian thinking, which focuses on the reduction or elimination of trade and non-trade barriers in order to accrue the benefits of integration; SADC is an economic community originally designed to promote economic autonomy and collective political security needs (Mapuva & Muyengwa-Mapuva, 2012). This bloc follows a development approach through sectoral cooperation in its attempt to reach integration. These divergent approaches towards regional integration are governed by different policies and will plausibly induce different outcomes and thus, as countries assume memberships in both RTAs conflict of goals and interests may arise. Accordingly, given the above assumption that multiple memberships in Africa can affect the ensuing trade flow within the trade bloc, instigates the empirical investigation of the relationship to see whether overlapping memberships do in fact have a correlation with trade flow.

On the contrary, there are emerging studies that claim that multiple or overlapping memberships can be the first steps towards establishing an all-inclusive continental African Market (Ngepah & Udeagha, 2019). It is assumed by studies like these that as more countries enter into more memberships within the continent it will eventually lead to a merger that will result in the growth of intra-African trade. However, this assumption should take into account the magnitude of time that this process will take whereby member states that are acutely and continually affected by the low trade creation in the region will not be able to fully take advantage of the envisaged continental common market. Furthermore, Ngepah and Udeagha (2019) also assert that multiple memberships cannot have any negative effect as long as reduction to tariff barriers between countries is achieved. Conversely, it can be asserted that reduction of tariff barriers and other associated issues are further complicated as countries acquire more overlapping memberships in that tariff scheduling for different trade blocs significantly varies and also conflict of interest typically arises during trade preferences. In their 2019 study Ngepah and Udeagha conducted an empirical study on the impact of overlapping memberships on intra-regional trade in Africa using a country level analysis and asserted that overlapping memberships is beneficial towards creating supplementary trade benefits in some of the African RTAs they studied. They refer to their findings that in some regional trade agreements, imports were positively affected by multi-memberships while it was reduced in others. This is an interesting finding to contrast with the common negative association of overlapping memberships on regional integration as asserted by the aforementioned studies.

Trade liberalization through regionalism and multilateralism has been the new trend that has effectively reduced trade barriers across the world. Policies and various interest groups in favor of trade liberalization has created incentives for deeper integration allowing for the growth of trade flow. Milner (1999) assigned the reforms in political institutions and leaders' preferences as the focal reasons for the rise of liberalization for increased trade flow in the developing world. This is evidently observed by the flare of trade agreements that lobby liberalization and cooperation which make up the parameters for assessing integration. The level of integration, which reflects the liberalization and harmonization efforts within a regional trade bloc, has been studied with some empirical evidence to have significant positive effects on intra-regional trade (Milner, 1999). Thus, political integration in addition to the economic integration can be seen as another factor that can affect intra regional trade flow leading to the second explanatory factor to be examined in the next section.

Fratianni and Chang (2009) investigate the size of regional trade agreements as having a significant impact on trade flows. In this paper, they studied trade agreements in the global north and Asia where they investigated the impact of the nature of regional trade agreements on trade flow. They consider whether the RTA is static or expanding asserted that expanding RTAs have performed much better in their intraregional trade. This finding is contested by other studies (Brenton & Hoffman, 2016), which state that larger RTAs have a negative impact on the growth of trade flow within the region as large number of members exacerbate implementation problems and delays coordination efforts. And thus, the theory behind the impact of bloc size on trade performance poses an important premise to investigate empirically in this study.

Milner (1999) and Milner and Kubota (2005) assert that institutional reforms like democratization enables freer trade as democratic regimes have relatively more open markets as opposed to autocratic regimes. Thus, regime types effectively influence the flow of trade between countries. Bliss and Russett (1998) assert that similar democratic regime types trade and integrate with more success than countries with differing regime types or non-democratic countries.

The economic size of a country or an RTA under normal circumstances also dictates its potential to engage in trade. And thus, considered by various studies (Mansfield et al. 2002, Godlstein et al. 2007; Chacha, 2009; Chacha, 2014) as one of the major determinants of trade where larger economies or a larger cumulative economic size of an RTA reflects its ability to allocate better institutions and resources that can enhance its performance in trade.

In summary, previous research and theory on overlapping memberships has mostly attributed the phenomenon to have negative impacts on regional trade flow with some few exceptions. Thus, as the primary focus of this study, the data needed and the methodology employed to examine the relationship in East and Southern Africa will be guided accordingly. In addition, factors like integration depth and RTA size will also be looked at as per the theory discussed in this section. It was also the intention of the study to also mention the theory behind the control variables used in the empirical analysis as reviewed above. Thus, the theoretical rationale discussed puts the analytical framework of the study in to context by highlighting the main factors that will be addressed in this study and also guides the hypothesis formulation stage on which the study is based on.

3. Data

This study examines the four existent RTAs in East and Southern Africa which also have the most overlapping memberships in the continent envisaged to sufficiently address and represent the topic and scope of the study. Accordingly, the sample contains regional trade agreements in Eastern and Southern Africa spanning over 27 countries and over a time period of 21 years from the year 1992 until 2012. The dataset used to conduct the overall study is compiled from various sources and have been cleaned to serve the purpose of the study. The following sections state the source and other related information related to the data collection technique.

RTAs were chosen as units of analysis as they are the primary focus of the study and follows previous studies as that of Haftel and Thomposon (2006), Haftel (2007), Chacha (2009) and Chacha (2014) conducted on the specific focus in regional integration. Thus, mean values and averages from the member states were computed as regional trading blocs are used as units of analysis. This allows for a refocus into RTA markets thereby boosting their relevance in studies of this nature. The study focuses on years between 1992 up to 2012 due to the fact that the integration index (IAS) used in this study has been computed up until this particular year. The values for the majority of the variables, namely: intra-RTA trade share, overlapping membership, polity and GDP have been computed from their country level values, as collective data for trade blocs was mostly absent. This means that by using RTAs as the unit of analysis we use a certain RTA, for instance, EAC as one of the panel units and all the corresponding dependent and independent variables will be computed from the individual values of EAC's member states. This holds true for the other three RTAs (COMESA, SADC & IGAD) studied in this paper where the aggregate values of intraRTA trade share, polity and GDP of the member states will be used in the analysis.

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Dependent Variable

The dependent variable used in this analysis is the intra-regional trade share and computed as a percentage by dividing the intra-RTA trade with the RTA's global trade. This is done by first adding the total import and export values within the region (RTA) in order to compute the total trade in the region yielding the numerator (T_{ii}). Then the total trade the region (RTA) conducts with the world will be computed by adding the total import and export each member state of the corresponding RTA has traded globally (outside the member states in the RTA) which provides the denominator (T_i). Then

finally, the total intra-RTA trade will be divided by the total trade of the region with the world to find the value of intra-RTA trade share of the specific RTA. This has been the standard share indicator employed in trade analysis (Chacha, 2014, Hamanaka, 2015) as well as political science studies (Chen, 2005; Bui, 2008) attributing to its straightforward applicability and its popularity among policy makers. In this study, it also allows an examination of how various factors both of an endogenous and exogenous nature correlates with the magnitude of trade flow in the regional trade agreements. This variable also implicitly absorbs many outcomes that are associated with overlapping memberships and serves as good proxy to capture the consequences of multiple memberships. This variable was collected from a combination of databases namely: RIKS (2021b), COMESA (2021), DOT (IMF, 2021b) and SADC (2019). Higher trade within the studied RTAs is depicted by a higher value while decreasing trade will assume lower values.

$$intraRTA\ trade\ share = \frac{Tii}{Ti}$$

T_{ii} = exports of countries in rta i to eachother plus imports of countries in rta i from eachother

Ti = total exports of rta i to the world plus total imports of rta i from the world

Main independent variable

Pertaining to the main focus of the study, the main independent variable is overlap frequency ratio. As used by prior studies like Chacha (2009; 2014) this variable is the sum total of occurrences of overlapping memberships in a regional trade agreement presented as a ration, with the total number of members of the corresponding RTA. This proxy captures the new instances of concurrent memberships for a particular year whereby new origin of rules are employed along with the institution of various other potential implementation problems that are expected to impede trade flow and allows us to investigate how that impacts the intra-RTA trade flow of the specific RTA. For example, currently Kenya, together with four of its members in the East African Community have a concurrent membership with the Common Market for Eastern and Southern Africa or Intergovernmental Authority on Development and/or the Southern Africa Development Authority so in the perspective of EAC with a membership number of 5 and with five members that are also part of other regional trade agreements will have an overlapping frequency ration of 1 which varies across different years as more or less member states enter or leave RTAs allowing us to capture the impact of this phenomena on the RTA's trade. Data needed to compute this ratio was collected from RIKS (2021a) database and the values range from 0, where no member nation is engaging in multiple overlying memberships, up to 1 where all members have concurrent memberships with other trade blocs.

$$Overlap\ Frequency\ Ratio = \frac{\Sigma\ \text{Overlap Instance}}{Member\ Number}$$

Auxiliary explanatory variables

This analysis will also use additional variables expected to be associated with the intra-RTA trade in the trade blocs. As discussed in the introduction and theory section, as one of the major factors that impact the trade flow in an RTA, depth of each RTA will be denoted using the integration achievement score which was obtained from Genna (2002). This index is chosen over the only other regional integration index available for Africa, which is the African Regional Integration Index (ARII) as the latter was only computed for the years starting from 2016 and does not allow for a panel study of the time period studied in this paper. The Integration Achievement index captures the overall trade in goods and services, the degree of capital mobility, degree of labor mobility, degree of supranational institution importance, degree of monetary policy coordination and degree of fiscal policy coordination. This index ranges between 0 and 2.5 with higher values representative of deeper level of integration and liberalization with better policy coordination and lower values indicating the opposite. As established in the theory section, depth in integration is closely associated with the ensuing trade flow in a regional trade agreement. Thus, this variable is used to further understand and quantify the association between integration depth and regional trade flow within the scope of the studied RTAs. This is highly relevant for the issue of regionalism as it highlights the different aspects of regional integration and how these aspects impact trade flow and align with the prospects of different RTA's trade performance.

The third predictor variable employed in the model is number of membership an RTA has in order to capture the relationship between expanding/static RTAs and intra-RTA trade and also implicitly assess the relationship between the size of RTAs and the magnitude of trade flow within the trade bloc. As discussed in the theory section, the effect of RTA size on trade has been divisive and thus, this study will employ a proxy for RTA size using membership number in order to investigate how larger RTAs behave in the attempt to integrate and trade more harmoniously. This data is obtained from the RIKS (2021a) database along with data used for the computation of overlapping membership frequency ration.

Control Variables

Fourthly, regime type is proxied for a cumulative polity score in order to account for the type of government in the member states. As stated in the theory section, the type of governments is expected to affect the trade flow within a regional trading bloc. Data for this variable is obtained from the Center for Systemic Peace - INSCR (2017) database.

The final variable used is the model is the aggregate economic size of the RTA represented by the total gross domestic product (GDP). This variable will be changed into its natural logarithm form following pertinent prior studies (Mansfield et al. 2002, Chacha, 2014). The country level GDP at current US $ data is obtained from the World Bank's World Development Indicators database (World Bank, 2021b*)*.

The data sources employed to compute and compile values for the variables in this model were chosen for their reliability and as the sources served as the best source for available data.

4. Methodology

This study will employ a quantitative research design with a post-positivist worldview approach in order to address the research problem. This design is chosen, as it will empirically analyze the correlation between overlapping memberships and the trade growth within regional trade agreements. It also assists in giving a valid numerical estimation of how other exogenous factors affect intraregional trade flow. This serves the purpose of filling the gap in the specific topic of study as similar studies are not readily available and provides a clearer and relatively more conclusive explanation of how overlapping memberships affect regional trade growth in East and Southern Africa.

4.1. Model Specification

The final form of the dataset is that of a panel data which captures not only the spatial component but also a temporal dimension in which each bloc used as an analysis tool is examined over a specified period of time. As each RTA was established at different time periods, the dataset contains information on 27 countries from the year 1992 until 2012 grouped under four regional trading blocs.

Models that are specified using panel data capture both the variation in the variables used as well as variation between units also resembling a cross sectional analysis (Dougherty, 2011). Models that effectively employ panel data also remedy unobserved heterogeneity issues that are usually present in econometric models. Accordingly, the theoretical model is presented as follows:

$$\boldsymbol{intraRTA\ tradeshare} = \boldsymbol{f(overlapping\ frequency\ ratio, integraton\ achievement\ score, membership\ size, regime\ type\ and\ economic\ size)}$$

Accordingly, two models are specified using fixed effects estimation method, where the first model does not include the main explanatory variable and the second model is in its complete form. Algebraically, the specified models take the following form and description of the variables along with the expected relationship are depicted in table 1 below:

Model 1:

$$intrarta_{it} = \beta 1ias_{it} + \beta 2membit + \beta 3polit_{it} + \beta 4\ln\_gdp_{it} + \alpha i + u_{it} \text{ ……..} \quad \textbf{(1)}$$

Model 2:

$$intrarta_{it} = \beta 1overl_{it} + \beta 2ias_{it} + \beta 3memb_{it} + \beta 4polit_{it} + \beta 5\ln\_gdp_{it} + \alpha i + u_{it} \text{ ……} \quad \textbf{(2)}$$

Table 4.1. Model Description

	Variable	**Variable Description**	**Expected Sign**
Dependent Variable	intrarta	Intra-rta trade share	
Independent Variable	overl	Overlapping frequency ratio	-/+
Independent Variable	ias	Integration achievement score	+
Independent Variable	memb	Number of members	-/+
Control Variable	polit	Polity Score	+
Control Variable	gdp	Total Gross Domestic Product (Constant US$)	+
	u_{it}	Idiosyncratic error	
	αi	Unobserved heterogeneity	

One of the major assumptions is that the model does not violate the zero conditional mean assumption, E (ui|X) =0 which assumes that there is no omitted variable bias and that all important variables are included in the regression. In a fixed effects model, the error term consists of two parts: $v_{it} = u_i + e_{it}$, where u_i is the unit-specific error term and e_{it} is the residual term for the specific unit in a specific time. In this way, fixed effects account for the variation in the dependent variable which is related to unobserved variables that are unique for each individual or region (Dougherty, 2011). Fixed effects estimation method is employed as it measures changes over time and assumes that something within the unit of analysis may impact the predictor variables and thus the need to control this effect is essential (Torres-Reyna, 2007). Initially, a Durbin-Wu-Hausman (DWH) test was used to choose between fixed and random effects method as the appropriate method to estimate the model. Accordingly, a Prob > chi2 = 0.000 was yielded rejecting the null hypothesis that the unique errors are not correlated with the predictor variables (Green, 2008) and additionally, the presence of significant difference in the coefficients as indicated in table 4.2 indicate that fixed effects should be used.

Table 4.2. Durbin-Wu-Hausman (DWH) test

	---------- Coefficients ----------		
	(b)	**(B)**	**(b – B)**
	fixed	**random**	**Difference**
overl	- 0.192429	0.6552014	- 0.8476304
ias	0.0314539	- 0.0579571	0.089411
memb	- 0.0136729	- 0.0016616	- 0.0120113
polit	- 0.015392	0.0176748	- 0.030668
ln_gdp	- 0.0020781	0.0234852	- 0.0255633

Fixed effects method is assumed to remove the effect of time invariant characteristics and thus controls for all the time invariant differences between the units of analysis. Similarly, regional-specific characteristics, which are unobserved and which do not vary are controlled for with fixed-methods (Angrist & Pischke, 2008). And since this study is also concerned with the within unit effects, the above estimation technique is more relevant as it accounts for the within unit variance.

As discussed above this model best suites the topic to be studied as it uses regional trade agreements as the unit of analysis and in doing so, it allows incorporating and controlling for other pertinent factors such as regional integration score and RTA size that is theoretically attributed to affect trade flow in a regional trading bloc. This is not possible when using country-level analysis that is usually employed in trade analyzing models such as the gravity model, which is criticized for endogeneity issues (Anukoonwattaka, 2015). Thus, the models used in this study were specified in order to account for the factors that directly affect regional trade blocs which is highly relevant not only for this specific study but for any inquiry aiming to capture impacts on regional trade blocs as it allows to analyze regional trade agreements as a single entity.

Furthermore, two more models (model 3 and 4) will be used in order to analyze the sensitivity of the results from the original model. These models were specified in order to check the robustness of the results by using an alternative estimation technique as well as an alteration of the dataset which will be discussed in detail in section 5.2.

4.2. Limitations

The model is a basic inclusive illustration of the relationship of intra-trade share within regional trading blocs and its major economic and political determinants. However, data availability issues, for instance,

data was completely unavailable for Somalia and Seychelles in GDP and Polity respectively and also there was partially absent data in trade, GDP & polity in Djibouti, Zimbabwe and South Sudan. The index used for regional integration covers a time period ending 2012 and thus, limited the time covered in the study.

5. Empirical Analysis and Results

The analysis is chiefly conducted using the statistical software, STATA, and the descriptive statistics and results obtained are presented in tables below. The descriptive statistics grossly contains the mean, minimum, maximum and standard deviation as presented in Table 5.1.

Table 5.1. Descriptive Statistics

Variable		Mean	Std. Dev	Min	Max	Observations
intrarta	Overall	0,110734	0,613417	0,025566	0,2186	N = 52
	Between		0.0687732	0.0388396	0.01814667	N = 4
	Within		0.00144334	0.0877348	0.01478671	T-bar = 13
Overl	Overall	0,901257	0,069951	0,75	1	N = 52
	Between		0.0754698	0.8406593	1	N = 4
	Within		0.0220289	0.08105978	0.9177407	T-bar = 13
ias	Overall	0,695513	0,277558	0	1	N = 52
	Between		0.2627983	0.333333	0.9642857	N = 4
	Within		0.1509554	-0.0608974	0.9391026	T-bar = 13
memb	Overall	11,36538	6,271719	3	20	N = 52
	Between		7.034687	3.923077	19.42857	N = 4
	Within		0.641087	10.44231	12.44231	T-bar = 13
polit	Overall	1,28812	1,516474	-1,57143	3,93333	N = 52

	Between		1.636177	-0.7953297	3.107939	N = 4
	Within		0.5570302	- 0.1163131	2.114209	T-bar = 13
ln_gdp	Overall	26,13957	0,848544	24,82552	27.26654	N = 52
	Between		0.9365212	25.15981	26.95789	N = 4
	Within		0.2244421	25.77434	26.52287	T-bar = 13

5.1. Results

An observation of note is that the trade share in the four regional trade agreements in the years included in this study is declining or has stagnated with instances of membership overlap increasing. The regression estimates in table 5.2. present the results for the two specified models.

Table 5.2 Regression Results

Variables	(1)	(2)
Overlap frequency ratio		- 0.1948***
		(0.0676)
Integration Achievement Score	0.025**	0.0334***
	(0.01263)	(0.01204)
Membership	- 0.0124***	- 0.0134***
	(0.00254)	(0.0023)
Regime type	- 0.0159***	- 0.0144***
	(0.00422)	(0.00394)
RTA GDP	0.0103	0.00041
	(0.0096)	(0.0959)
Constant	0.0145*	0.4230
	(0.2467)	(0.2745)
Observations	52	52
Groups	4	4
Within R2	0,5498	0,6225
Between R2	0,0039	0,0264
Overall R2	0	0,01
Sigma_u		0.129248
Sigma_e		0.009657
rho		0.99444

Standard Errors are in parenthesis. Statistical significance is: ***p ≤ 0.01, ** p < 0.05, *p < 0.1

As discussed in the previous section, model 1 does not include the key explanatory variable and is run to observe how the other variables in the model interact with the dependent variable. The findings in table 5.2 show statistical significance for both integration achievement score and size of RTA at 95% and 99% confidence interval respectively. Both independent variables display the expected sign which is a positive correlation for regional political integration and negative for RTA size which will be discussed further.

In table 5.2 we can find can also find results for model 2 as well where, the key explanatory variable of the model, which is overlapping frequency ratio shows statistical significance at 99 % confidence confirming that overlapping memberships is in fact correlated with intraregional trade share in the studied region. The sign of the coefficient in model 2 is negative confirming hypothesis 1, which states that overlapping memberships of member states is inversely correlated with intraregional trade share. Thus, according to the complete model in model 2 as overlapping frequency ration varies across time by one unit, intra-RTA trade share is associated with a decrease of 0.194 units holding all other things constant.

Estimates for the other two independent variables included in the model also show statistical significance and lend support to the discussed theory. Regional integration as discussed in the previous section, is expected to have a positive relationship with intra-RTA trade as various milestones under the regional political integration agenda are met the more trade is facilitated within the regional bloc. The finding is extracted from the results in the complete form of the model in model 2 and aligns with the theory showing both positive association and statistical significance, which effectively confirms hypothesis 2. Hence, as the integration achievement score varies across time by one unity, intra-RTA trade share is associated with an increase of 0.344 units keeping all other things constant.

The effect of RTA size on intra-regional trade as mentioned in the theory section is divisive where one school of thought (Brenton & Hoffman, 2016) argues that as RTAs get larger, the tendency to stall on negotiations and the obstacles towards policy harmonization increases. On the other hand, there is theory that asserts that the larger the RTA, the larger the market size and access that facilitates trade flow within a bloc (Fratianni and Hoon Oh, 2009). The results in this study assert a negative association with intra-RTA trade share showing statistical significance, which confirms hypothesis 3. This finding is obtained from the regression results both in model 1 and model 2 where the variable yields statistical significance at 99% confidence. The magnitude of the coefficient can also be considered significant as member size varies across time by one unit, intra-RTA trade share is associated with a decrease in 0.445 units keeping all other things constant.. The case of the East African Community contributes to this discussion where the trade bloc with only three members had a slightly fluctuating magnitude of 19% intra-RTA trade share until 2007, after which two members joined the trading bloc and a trade share of 3-5% decrease was observed. This of course can be attributed to many other country level factors but the addition of more members can also be an exacerbating factor to implementation delays that are already associated with these kinds of treaties.

The coefficient of determination for the complete model (model 2) as seen in table 5.2 shows a 0.5498 magnitude meaning that the model accounts for 55% of the variance within the regional trade agreements, which can be considered as a moderate value.

5.2. Sensitivity analysis

In conducting a sensitivity analysis for the results obtained from the models discussed above, a regression is estimated in order to check the robustness of the results. This will be done by modification, whereby a dataset that excludes COMESA will be constructed in order to check the robustness of the results. This is primarily driven by the facts that COMESA is the largest trade bloc within the studied RTAs with a total membership count of 19 members and a relatively higher overlapping membership occurrence ratio of 0.85 but more importantly, this RTA has a low intra-RTA trade share at an average of 0.076. Thus, it can be asserted that these attributes of COMESA can be driving the results of a negative association between overlapping membership and intra-RTA trade flow. Accordingly, model (3) is regressed using fixed effects that examines a dataset excluding COMESA to confirm whether the results persist or change.

Model 3:

$$intrarta_{it} = \beta 1overl_{it} + \beta 2ias_{it} + \beta 3memb_{it} + \beta 4polit_{it} + \beta 5\ln\_gdp_{it} + \alpha i + u_{it} \ldots\ldots \textbf{(3)}$$

Secondly, a regression will be run using least square dummy variable method under a variance-covariance matrix of the estimators that produces robust standard errors clustered at the RTA level. Least square dummy variable is used alternatively at this stage as it allows us to capture the unobserved heterogeneity (αi) for each RTA by allowing each panel unit to have its own intercept. Additionally, the results also allow us to observe whether the slope of each RTA is significant which contributes to the sensitivity analysis. Accordingly, using i.rta_1(COMESA) as a reference category we can formulate this equation:

Model 4:

$$intrarta_{it} = \beta 0 + \beta 1i.rta2i + \beta 2i.rta3i + \beta 3i.rta43i + \beta 4overlit + \beta 2ias_{it} + \beta 3memb_{it} + \beta 4polit_{it} + \beta 5\ln\_gdp_{it} + eit \ldots\ldots\ldots \textbf{(4)}$$

Table 5.3. Results for Robustness Checks

Variable	(3)	(4)
Overlap frequency ratio	- 0.2369 ***	- 0.1948**
	(0.07558)	(0.07407)
Integration Achievement Score	0.04029**	0.0334***
	(0.14819)	(0.01225)
Membership	-0.0146***	- 0.0134***
	(0.00391)	(0.00292)
Regime type	- 0.00912*	- 0.0144***
	(0.00506)	(0.00275)
RTA GDP	- 0.0131	0.00041
	(0.01462)	(0.0079)
i.rta_2		0.0875***
		(0.0137)
i.rta_3		- 0.092**
		(0.0419)
i.rta_4		-0.2143***
		(0.0339)
Constant	0.7928	0.4794
	(0.394541)*	(0.25481)*
within	0.6580	
Between	0.3111	
overall	0.2425	
Sigma_u	0.15789	
Sigma_e	0.01034	
rho	0.99572	

Standard Errors are in parenthesis. Statistical significance is: ***p ≤ 0.01, ** p < 0.05, *p < 0.1

The results above in table 5.3 show that model (3) yields results that display the same associations captured between the variables as the main regression (2). Overlapping membership retains a negative association with intra-RTA trade share showing statistical significance at 99 % confidence interval with a higher coefficient. Thus, according to results from model (3) - as the overlapping frequency ratio varies across time by one unit, intra-RTA trade share is associated with a decrease of 0.23 holding all other things constant. Estimates for the other two independent variables included in the model also show the same statistical significance and signs as model 2. This model also shows a good value of interclass correlation (rho) value of 0.995, which assumes that 99% of the variance in the dependent variable is explained by the individual effects or differences between u_i. Regional political integration remains positively associated with intraRTA trade share while RTA size continues to be negatively correlated with the dependent variable. This is indicative of the robustness of the results in the main regression, which in effect enhances external validity of the findings.

Similarly, in table 5.3 model (4) yield similar results as the main model where all variables show statistical significance and the same sign, which is expected as both estimation methods usually yield identical results. With regards to the main reason behind running this model, we can see that the coefficients/slopes of each RTA dummy show statistical significance, which supplements the argumentation that the results are robust. Furthermore, the coefficients for the main variable regression (3) retain the same magnitude as the baseline regression with a slight decrease in significance from 99% to 95% confidence interval.

5.3. Discussions

As per the main purpose of the study the effect of overlapping membership on intra-RTA trade share was examined empirically and has yielded a negative correlation. This is in line with the findings of most studies analyzed in the theory section. The main issues of the obstacles faced in harmonizing tariff schedules, rules of origin and implementation period due to overlapping membership is backed by the results of this study as it lends empirical evidence that multiple memberships have a negative effect on regional trade integration in East and Southern Africa. Numerically, we can interpret the results from model (2) by stating that as one member of a ten-member regional trade agreement enters into a multiple membership, it decreases the RTA's trade share by approximately 0.2 % holding all

other things constant. The negative effects can then be assumed to embolden as more members enter into more regional trade agreements.

The results of the study portray the consequences of overlapping RTA memberships in terms of complicated rules of origin, increased transportation costs, policy coordination problems that can deter trade flow with in an RTA. Furthermore, it can be stated that effects of overlapping memberships can be particular in that the effects will depend on the progress each RTA has made in the region. Ngepah and Udeagha (2019) designate COMESA, SADC and EAC as RTAs that have mandated and relatively implemented reduction of tariff while IGAD continues to lag in the process of dismantling tariffs. However, the results of this study confirm that even though tariff barriers have been notably reduced in the majority of trade blocs in East and Southern Africa, the impact of overlapping memberships remains significantly and negatively associated with the intra-RTA trade flow. This can be attributed to the fact that, even though, there is progress in harmonizing tariff schedule between these RTAs, there can still be issues between the various agents that facilitate trade such as custom brokers, custom officials, clearing agents as well as political figures (Charalambides, 2005; Kirk, 2015). The results also are in line with Tumbarello (2007) and UNECA (2004) assessment that overlapping memberships have weakened economic integration in sub-Saharan Africa. Thus, the ensuing complications, duplication, increased cost and reservations from the obligations of member states amalgamated to affect the trade flow within each RTA. Thus, the driving motive of member states to stack multiple memberships in different RTAs that may have contradictory regimes is sufficiently questioned by the results of this study and research alike. The unintended negative interactions between different RTAs that member states assume does not seem to exude synergy and therefore assigns the effects of multi-memberships as not additively separable as termed by Schnieder (2017).

Another interesting trend is that the intra-RTA trade share of IGAD displays a one point decrease in the overlapping membership frequency ration in 2011 yielded a higher intra-RTA trade share in the following year which can be indicative of a reciprocal relationship between the two factors supporting the findings of this study.

The overall results confirm the concerns raised by these regional trading blocs operating in East and Southern Africa and echo the main agenda in the trade talks between the member states of COMESA, EAC and SADC as they plan to merge and resolve the issue of overlapping memberships (Braude, 2007). The East African Community (2010) also has reported that overlapping memberships have hampered the trade growth among its member-states. This was a novel report regarding this issue as it was perceived that more memberships meant more trade flow.

While the results state a negative relationship between overlapping memberships and intra-RTA trade, findings from the other variables are significant and thus worth mentioning. More politically integrated member states tend to trade more within their RTA – this was attested by the positive relationship between the integration achievement score and the trade conducted within the trade agreement. This is in line with the theoretical foundations illustrated in the previous sections that political integration efforts tend to increase trade within an RTA. In addition, the findings are also consistent with the theoretical argumentation that RTAs that are integrated at a shallow level display lower trade flow and less commitment towards the implementation agenda, which makes the member states more susceptible to engage in multiple memberships.

Furthermore, the study of RTA size across the temporal dimension of the panel yields a negative association with intra-Regional trade which reflects the theoretical argumentation discussed in previous sections that as the number of members increase in an RTA, it paves the way to more incompatible regimes and policies to interact in the trading floor allowing for a possible stagnation in trade flow and discoordination of policies. This is apparently the case for East and Southern African trading blocs where as RTAs indulge more members the ensuing intra-Regional trade stagnated or decreased.

6. Conclusions

The theoretical approaches and the empirical evidence presented by this study substantiate the claims that overlapping memberships are negatively associated with the momentum of trade flow with in the regional trade blocs in East and Southern Africa. The findings also make it safe to argue that multiple rules of origin instituted due to overlapping memberships can negatively affect the trade creating function of an RTA. The unintended effect it could have on intra-regional trade flow can also adversely impact the impetus of regional integration, which is vital to the region and the continent in general. Alongside other structural challenges that the region and Africa is facing, overlapping memberships continues to burden states from achieving the necessary cooperation and the desired integration.

Arguably, overlapping memberships can also create divided loyalties, which is one of the fundamental pre-requisites for deep regional integration. This can explain the very shallow nature of most RTAs in the region and in Africa, as the required level of commitment from member states is deficient, which exacerbates the already reached depth in integration. As trade involves at least two entities, a form of etiquette ensues where one follows the other and thus makes the region severely susceptible to the lack of commitment shown by each member state.

In Africa, where regionalism and regional integration can be a cure to the many ailments the continent faces in trade, many nations have misconstrued the manner in which to engage integration. Although, scanty research have addressed the reason why African nations enter into multiple memberships – political considerations and a sightless need to increase market access have possibly allowed this phenomena to proliferate over the past 40 years. Furthermore, findings of this study raise the relevant question of what other levels overlapping memberships affect regional integration.

Although the issue addressed in this study warrants sufficient research, it has not been given the necessary attention it requires and thus, makes this study important towards supplementing the already instituted reforms. The COMESA-ECA-SADC merger talks is certainly a step in the right direction towards eliminating the negative effects of overlapping membership on regional trade but has not been prioritized still as it continues to face delay in many fronts. Further research should study other regional trade blocs in Africa as the issue of overlapping membership continues to grow in other corners of the continent with a potential to hamper the efforts of creating the envisaged continental common market. Thus, the external validity of the findings of this study and similar others appeal to the need of merging these fragmented trade blocs into one.

Furthermore, the political motive behind regional trade agreements is a relevant factor in Africa and thus, opens the inquiry to how overlapping membership and the ensuing apportioned political loyalty hampers regional integration. The impact and consequences of this study's topic can thus be argued that it is multidimensional in nature where it can possibly affect the political as well as the economic cooperation of member states.

7. References

AfCFTA. (2019). African Continental Free Trade Area, Available online: https://africancfta.org/aboutus [Accessed 05 January, 2021]

Afesorgbor, S & Van Bergeijk, P. (2014). Measuring Multi-membership in Economic Integration and Its Trade Impact: A Comparative Study of ECOWAS and SADC

Alex-Adedipe A & Atanda O. (2020). Nigeria: AFCFTA And Trade Benefits To Nigeria. Pavestones Legal.

Angrist, J. & Pischke, J. (2008). Mostly Harmless Econometrics: An Empirical Companion, London School of Economics

Anukoonwattaka, W. (2015). The gravity models for trade research, Trade and Investment Division, Phnom Penh, Cambodia

ARII. (2021). African Regional Integration Index Platform, Available online: https://arii.uneca.org/en-US [Accessed 8 April 2021]

AU. (2009). Training Module on Rules of Origin, Available online: https://au.int/files/documents/rulesoforigin [Accessed 02 May 2021]

Babarinde, O.A. (1996). Analyzing the Proposed African Economic Community: Lessons from the Experience of the European Union, Brussels, Belgium

Baldwin, R. (1993). A Domino Theory of Regionalism, National Bureau of Economic Research, Working paper No. 4465, Cambridge, MA

Bhagwati J. (1991) The World Trading System at Risk. Princeton, NJ: Princeton University Press

Bliss, H. & Bruce, R. (1998) 'Democratic Trading Partners: The Liberal Connection, 1962–1989', Journal of Politics 60(4): 1126–47.

Braude, W. (2008). SADC, COMESA and The EAC, Conflicting regional and trade agendas, Occasional paper no. 57, institute for global change, Available online https://www.eldis.org/document/A41845 [Accessed May 18, 2021]

Brenton, P. & Hoffman. B. (2016). Political economy of regional integration in sub-Saharan Africa

Bui, T. (2008). Intra-Regional Trade of ASEAN Plus Three: Trends and Implications for East AsianEconomic Integration. KIEP CNAEC Research Series No. 08-04.

Chacha, Mwati. (2009). Regional Integration and Trade: Overlapping Memberships and The Challenges of Regionalism in Africa, International Studies Association, San Francisco

Chacha, M. (2014). Regional Integration and the Challenge of Overlapping Memberships on Trade, school of Humanities and Social Sciences, Nazarbayev University, Kazakhstan.

Charalambides, Nick. (2005). The Private Sector's Perspective, Priorities and Role in Regional Integration and Implications for Regional Trade Arrangements', Maastricht: European Center for Development Policy Management (ECDPM) Discussion Paper No. 66.

Chen, Z. (2005). NATO, APEC, and ASEM: Triadic Interregionalism and Global Order. *Asia Europe Journal*. 3.(3). pp. 361–78.

Cheng, X., Wang, Y. and Lui, Y. (2009). Analysis on the development and influence of overlapping free trade agreement, Canadian Social Science, 5(1): 44-52.

COMESA. (2021). Merchandise Trade by country, Available online: http://comstat.comesa.org [Accessed 02 April 2021]

Daltrop, A. (1986). Political Realities: Politics and the European Community. London: Longman.

Daniel, H. (2011). Benefits of Regional Economic Integration, Available online: http://benefitof.net/benefits-of-regional-economic-integration/ [Accessed 24 March, 2021]

Dougherty, C. (2011). Introduction to Econometrics, London School of Economics and Political Science, Oxford University Press, Available online: http://www.gbv.de/dms/zbw/839444168.pdf [Accessed 18 May 2021]

Dur A., Baccini L. & Elsig M. (2014). The Design of International Trade Agreements: Introducing a New Dataset. *The Review of International Organizations*. Available online: https://www.designoftradeagreements.org/media/filer_public/7f/5e/7f5eed37-12b2-4f2c-aece-19b4fdd4a2f1/the_design_of_international_trade_agreements_introducing_a_new_dataset.pdf [Accessed January 2020]

East African Community. (2010). COMESA-EAC-SADC Tripartite Framework: State of Play, Available online http://www.eac.int/tripartite-summit.pdf [Accessed 22 April 2021]

Estevadeordal, A., Kati,S., Pablo S. & Alberto, T. (2005) 'Rules of Origin in Preferential Trading Arrangements: Is All Well with the Spaghetti Bowl in the Americas?

Feng, Yi and Gaspare M. Genna. (2005). Measuring Regional Integration. workshop on Regional Economic Integration in Asia, Claremont, CA.

Fergin, E. (2011). Tangled up in a spaghetti bowl – trade effects of overlapping preferential trade agreements in Africa, Available through: LUSEM Library http://www.lusem.lu.se/library [Accessed 10 May 2021]

Fratianni, M. and Chang, H. (2009) 'Size of Regional Trade Agreements and Regional Trade Bias', Applied Economics Letters 16(16): 1603–6

Geda, A. & Kebret, H. (2007). Regional Economic Integration in Africa: A Review of Problems and Prospects with a Case Study of Comesa, *Journal of African Economies*. 16: 5 (2007), 1-38.

Genna, Gespare (2002) 'Changing Power, Sovereignty, and Loyalty in the European Union', Ph.D.dissertation, Claremont Graduate University, Claremont, CA.

Goldstein, J., Douglas, L. & Michael, T. (2007). Institutions in International Relations: Understanding the Effects of the GATT and the WTO on World Trade. International Organization

61(1): 37–67.

Haftel, Y. (2007) 'Designing for Peace: Regional Integration Arrangements, Institutional Variation, and Militarized Interstate Disputes', International Organization 61(1): 217

Haftel, Y & Alexander, T. (2006) 'The Independence of International Organizations: Concept and Applications', *Journal of Conflict Resolution* 50(2): 253–75.
Hamanka, S. (2015). The Selection of Trade Integration Indicators: Intraregional share, intensity, homogenous intensity and introversion index. *ADB Economics Working Paper Series*

Hancock K. (2010) Regional Integration Choosing Plutocracy

Huh, H. & Park, C. (2017). Asia-Pacific Regional Integration Index: Construction, Interpretation, and Comparison, Economics Working Papers, Available online: http://dx.doi.org/10.22617/WPS178772-2 [Accessed 16 March 2021]

INSCR. (2017). Center for Systemic,Political Regime Characteristics and Transitions, 1800 – 2013, Available online: https://www.systemicpeace.org/polity/polity4x.htm [Accessed 10 May 2021]

International Monetary Fund (IMF). (2021a). World Economic Outlook. http://www.imf.org/ [Accessed 22 April 2021]

International Monetary Fund (IMF). (2021b). Direction of Trade Statistics (DOTS), Available online: http://www2.imfstatistics.org/DOT/ [Accessed 12 May 2021]

Jakobeit, Cord., Trudi, H. and Nick, C. (2005).Overlapping Membership in COMESA, EAC, SACU and SADC Trade Policy Options for the Region and for EPA Negotiations' Available online: http://www.gtz.de/de/dokumente/en-epa-overlapping-memberships [Accessed 17 May 2021]

Kayizzi-Mugerwa, Steve & Anyanwu, John & Conceição, Pedro. (2014). Regional Integration in Africa: An Introduction. African Development Review. Volume 26. 1-6. 10.1111/1467-8268.12102.

Khandelwal, Padamja (2004) 'COMESA and SADC: Prospects and Challenges for Regional

Trade Integration', International Monetary Fund Working Paper WP/04/227

Kirk, Robert. (2015). The Political Economy of Trade Facilitation in Eastern and Southern Africa, chapter 5 in The Political Economy of Regional Integration in sub-Saharan Africa. Washington, Dc: The World Bank.

Kritizinger-Van Nieker, L. (2005). Regional Integration: Concepts, Advantages, Disadvantages and Lessons of Experience.

Krueger, Anne. (1997). Problems with Overlapping Free Trade Areas: In Regionalism Versus Multilateral Trade Arrangements .Eds Takatoshi, I & Anne O. Krueger. Chicago: University of Chicago Press, 1997. 9-24.

Laffan, B. (1992). Integration and Co-operation in Europe. London: Routledge.

Lochart, N & Mitchell, A. (2005) Regional Trade Agreements Under GATT 1994: An Exception and its Limits*, Challenges and Prospects for the WTO, p. 217, Cameron May Ltd.*

Magee, Christopher. (2008). New Measures of Trade Creation and Trade Diversion. *Journal of International Economics,* 75:349–362

Mansfield, E., Milner, H. Pevehouse, J.(2008). Democracy, Veto Players, and the Depth of Regional Integration. World Economy. 31(1): 67–96.

McCormick, J. (2017). Understanding the European Union: a concise introduction. Palgrave

Mapuva, J., & Muyengwa-Mapuva, L. (2014). The SADC Regional Bloc: What Challenges and Prospects for Regional Integration. Law, Democracy and Development, 7th ed., 18, 22-36.

Mariadoss, B. (2015). Regional Economic Integration, core principles of international marketing, pressbooks, Available online: https://opentext.wsu.edu/cpim/chapter/2-4-regional-economic-integration [Accessed 12 May2021]

Mansfield, E., Helen, M. & Peter, B. (2002). Why Democracies Cooperate More: Electoral Control and International Trade Agreements, International Organization 56(3): 477–514.

Milner, Helen V. (1999). The Political Economy of International Trade, *Annual Review of Political Science* 2(1): 91–114.

Milner, H & Keiko, K. (2005). Why the Move to Free Trade? Democracy and Trade Policy in the Developing Countries', International Organization 59(1): 157–93.

Ngepha, N. & Udeagha, M. (2019). Supplementary Trade Benefits of Multi-Memberships in African Regional Trade Agreements, Journal of African Business

Nyirabu, Mohabe. (2004). Appraising Regional Integration in Southern Africa, *African Security Review.* 13:21-32.

Niekerk, K. (2005). Regional Integration : Concepts, Advantages, Disadvantages and Lessons of Experience

Olowu, D. (2003). Regional integration, development, and the African Union agenda: Challenges, gaps, and opportunities. Transnational Law & Contemporary Problems, 13(1), 211-254.

Pharatlhatlhe K., Apiko P. & Woolfrey S. (2019). Nigeria and South Africa: Shaping Prospects For The African Continental Free Trade Area. Discussion Paper No. 242, ECDPM

Razeen, S. (2006). Free Trade Agreements and the Prospects for Regional Integration in East Asia, *Asian Economic Policy Review.* 1 (2006), 306-321.

RIKS. (2021a). The United Nations University Institute on Comparative Regional Integration Studies. Regional Integration Knowledge System, Available online: https://riks.cris.unu.edu/ [Accessed 12 May, 2021]

RIKS. (2021b). The United Nations University Institute on Comparative Regional Integration Studies. Regional Integration Knowledge System, Intra-regional Trade Share, Available online: https://riks.cris.unu.edu/ [Accessed 12 May, 2021]

SADC. (2003). Southern African Devleopment Community Rules of Origin Exporters Guide Manual.

SADC. (2019). South African Development Community Annual Reports, Available online : https://sadc.int/documents-publications/annual-reports/ [Accessed 08 April 2021]

Saadi, M. (2017). North Africa's Trade Arrangements: Complementarities and Contradictions with the Continental Free Trade Area

Schiff, M., & Winters, A. (2003). Regional Integration and Development. Washington, DC: IBRD/The World Bank and Oxford University Press.

Schneider, C. (2017). The Political Economy of Regional Integration, *The Annual Review of Political Science*, Department of Political Sciences

Sheldon, I. (2006). Multilateralism vs regional free trade, Dept. of Agiculture, Environmental & Development Economies, Ohio State University, Available online: httpls://aede.osu.edu/sites/aede [Accessed 12 May2021]

Summers, L. (1991) Regionalism and the World Trading System. Policy Implications of Trade and Currency Zones. Federal Reserve Bank of Kansas City, Kansas City

Torres-Reyna, O. (2007). Panel Data Analysis Fixed and Random Effects using Stata, Available online https://dss.princeton.edu/training/ [Accessed May 13 2021]

Tumbarello, P. (2007). Are Regional Trade Agreements in Asia Stumbling or Building Blocks? Some Implications for the Mekong-3 Countries. *Working Paper WP/07/53.* International Monetary Fund. Washington, DC

United Nations Economic Commission for Africa.(2004). Assessing Regional Integration in Africa, Addis Ababa

UNCTAD (2013). Goods Trade with Africa. Available online: http://www.usfunds.com/media/images/investor-alert/_2015/2015-02-06/COMM-The-Scramble-for-Africa [Accessed 28 December, 2020]

Venables, Anthony. 2003. “Winners and losers from Regional Integration Agreements.” Economic Journal. 113(49): 747–761, Available online : https://doi.org/10.1111/1468-0297.t01-1-00155, [Accessed 12 May 2021]

Viner, J. (1950). The custom union issue, Carnegie endowment for international peace, New York

Woolfrey, S. (2016). The Political Economy of Regional Integration in Sub-Saharan Africa. European Center for Development Policy Management, Available online: http://ecdpm.org/peria/comesa [Accessed 03 May 2021]

World Bank. (2019). Regional Trade Agreements, Available online: https://www.worldbank.org/en/topic/regional-integration/brief/regional-trade-agreements [Accessed 15 May 2021]

World Bank. (2021a). Regional Integration Overview, Available online: https://www.worldbank.org/en/topic/regional-integration/overview#:~:text=The%20World%20Bank%20Group%20helps%20its%20client%20countries,inefficient%20policies%20are%20an%20impediment%20to%20economic%20growth. [Accessed 19 April 2021]

World Bank. (2021b). GDP Current US Indicator, Available online: https://data.worldbank.org/indicator/NY.GDP.MKTP.CD [Accessed 12 April 2021]

WTO. (2003). Trade Policy Review – South African Customs Union, www.wto.org, Available online : https://www.wto.org/English/tratop_e/tpr_e/tp213_e.htm [Accessed 18 April 2021]

WTO. (2010). Scope of RTAs, Available online http://www.wto.org/english/tratop_e/ region_e/scope_rta_e.htm [Accessed 12 May 2021]

Yang, Y. & S, Gupta. (2005). Regional Trade Arrangements in Africa*: Past Performance and the Way Forward,* International Monetary Fund.

8. Appendix

Appendix 1a. Trading Blocs in East and Southern Africa and Their Member States

IGAD	
Djibouti	1986 - Present
Eritrea	1993 - Present
Ethiopia	1986 - Present
Kenya	1986 - Present
Somalia	1986 - Present
South Sudan	2011 - Present
Sudan	1986 - Present
Uganda	1986 - Present

EAC	
Burundi	2007 - Present
Kenya	1967 - Present
Rwanda	2007 - Present
Tanzania	1967 - Present
Uganda	1967 - Present

COMESA	
Angola	1994 - 2007
Burundi	1994 - Present
Comoros	1995 - Present
Djibouti	1993 - Present
Congo; Dem. Rep.	1998 - Present
Egypt; Arab Rep.	1999 - Present
Eritrea	1994 - Present
Ethiopia	1994 - Present
Kenya	1994 - Present
Lesotho	1994 - 1997
Libya	2005 - Present
Madagascar	1995 - Present
Mauritius	1994 - Present
Malawi	1994 - Present
Mozambique	1994 - 1997
Namibia	1994 - 2004
Rwanda	1994 - Present
Seychelles	2001 - Present
Sudan	1994 - Present
Swaziland	1999 - Present
Tanzania	1994 - 2001
Uganda	1994 - Present
Zambia	1994 - Present
Zimbabwe	1999 - Present

SADC	
Angola	1992 - Present
Botswana	1992 - Present
Congo; Dem. Rep.	1997 - Present
Lesotho	1992 - Present
Madagascar	2005 - Present
Mauritius	1995 - Present
Malawi	1992 - Present
Mozambique	1992 - Present
Namibia	1993 - Present
South Africa	1994 - Present
Seychelles	1997 - Present
Swaziland	1992 - Present
Tanzania	1993 - Present
Zambia	1992 - Present
Zimbabwe	1992 - Present

Appendix 4a. DWH test results

```
                 ---- Coefficients ----
             |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
             |     fixed        random       Difference          S.E.
-------------+----------------------------------------------------------------
       overl |  -.1948415     .6552014       -.8500429               .
         ias |   .0334727    -.0579571        .0914298               .
        memb |  -.0134064    -.0016616       -.0117448         .000861
       polit |  -.0144421     .0176748       -.0321168               .
      ln_gdp |   .0004193     .0234852       -.0230659               .
------------------------------------------------------------------------------
                           b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                  chi2(5) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =      845.71
                Prob>chi2 =      0.0000
                (V_b-V_B is not positive definite)
```

Appendix 5b. Regression Results for Model (1)

```
Fixed-effects (within) regression               Number of obs     =         52
Group variable: rta                             Number of groups  =          4

R-sq:                                           Obs per group:
     within  = 0.5549                                         min =         12
     between = 0.0048                                         avg =       13.0
     overall = 0.0002                                         max =         14

                                                F(5,43)           =      10.72
corr(u_i, Xb)  = -0.8211                        Prob > F          =     0.0000
```

intrarta	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
ias	.0228997	.0131798	1.74	0.089	-.00368	.0494794
memb	-.0128543	.0026133	-4.92	0.000	-.0181246	-.0075839
polit	-.0171124	.0045729	-3.74	0.001	-.0263345	-.0078902
confl	-.0009666	.0013676	-0.71	0.484	-.0037246	.0017915
ln_gdp	.0069759	.0108274	0.64	0.523	-.0148597	.0288115
_cons	.0861937	.2862299	0.30	0.765	-.4910438	.6634312
sigma_u	.12282949					
sigma_e	.01048642					
rho	.99276406	(fraction of variance due to u_i)				

```
F test that all u_i=0: F(3, 43) = 115.84                     Prob > F = 0.0000
```

Appendix 5c. Regression Results for Model (2)

```
Fixed-effects (within) regression               Number of obs     =         52
Group variable: rta                             Number of groups  =          4

R-sq:                                           Obs per group:
     within  = 0.6225                                         min =         12
     between = 0.0264                                         avg =       13.0
     overall = 0.0100                                         max =         14

                                                F(5,43)           =      14.18
corr(u_i, Xb)  = -0.8407                        Prob > F          =     0.0000
```

intrarta	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
overl	-.1948415	.0676979	-2.88	0.006	-.3313673	-.0583157
ias	.0334727	.0120413	2.78	0.008	.009189	.0577563
memb	-.0134064	.0023826	-5.63	0.000	-.0182115	-.0086014
polit	-.0144421	.0039462	-3.66	0.001	-.0224004	-.0064837
ln_gdp	.0004193	.0095977	0.04	0.965	-.0189363	.019775
_cons	.4230765	.2745322	1.54	0.131	-.1305704	.9767234
sigma_u	.1292489					
sigma_e	.00965785					
rho	.99444749	(fraction of variance due to u_i)				

```
F test that all u_i=0: F(3, 43) = 112.37                     Prob > F = 0.0000
```

Appendix 5d. Regression Results for Model (3)

```
i.rta             _Irta_1-4          (naturally coded; _Irta_1 omitted)

Linear regression                               Number of obs     =         52
                                                F(8, 43)          =     427.24
                                                Prob > F          =     0.0000
                                                R-squared         =     0.9791
                                                Root MSE          =     .00966
```

intrarta	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
overl	-.1948415	.0740735	-2.63	0.012	-.3442249	-.0454582
ias	.0334727	.0122571	2.73	0.009	.0087539	.0581915
memb	-.0134064	.0029213	-4.59	0.000	-.0192979	-.007515
polit	-.0144421	.0027559	-5.24	0.000	-.02	-.0088842
ln_gdp	.0004193	.007952	0.05	0.958	-.0156174	.0164561
_Irta_2	.0875779	.0137006	6.39	0.000	.0599481	.1152078
_Irta_3	-.0922283	.0419402	-2.20	0.033	-.1768087	-.0076479
_Irta_4	-.2143006	.0339041	-6.32	0.000	-.2826748	-.1459265
_cons	.4794985	.2548172	1.88	0.067	-.0343894	.9933863

Appendix 5e. Regression Results for Model (4)

```
Fixed-effects (within) regression               Number of obs     =         38
Group variable: rta                             Number of groups  =          3

R-sq:                                           Obs per group:
     within  = 0.6580                                         min =         12
     between = 0.3111                                         avg =       12.7
     overall = 0.2425                                         max =         13

                                                F(5,30)           =      11.54
corr(u_i, Xb)  = -0.8993                        Prob > F          =     0.0000
```

intrarta	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
overl	-.2369379	.075582	-3.13	0.004	-.391297	-.0825788
ias	.0402933	.0148194	2.72	0.011	.0100281	.0705586
memb	-.0146383	.0039128	-3.74	0.001	-.0226293	-.0066474
polit	-.0091237	.0050671	-1.80	0.082	-.0194722	.0012247
ln_gdp	-.0131667	.0146207	-0.90	0.375	-.0430261	.0166927
_cons	.7928482	.3945473	2.01	0.054	-.012925	1.598621
sigma_u	.15789101					
sigma_e	.01034715					
rho	.99572373	(fraction of variance due to u_i)				

```
F test that all u_i=0: F(2, 30) = 129.53                     Prob > F = 0.0000
```