ECONOMIC INTERDEPENDENCE AND CIVIL CONFLICT ONSET: AN ANALYSIS ON TANZANIA AND THE DEMOCRATIC REPUBLIC OF CONGO

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ECONOMIC INTERDEPENDENCE AND CIVIL CONFLICT ONSET: AN
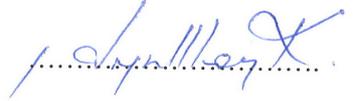ANALYSIS ON TANZANIA AND THE DEMOCRATIC REPUBLIC OF CONGO

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ABSTRACT

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Master of Political Science, 2015

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Tanzania, the Democratic Republic of Congo

This study aims to explicate a set of specific conditions under which colonization may lead to civil war. The specific set of conditions focus on how colonization affects the economic relations of groups within colonized states in both directions. First of all, the study examines the decision theoretic model for explaining how economic interdependency will decrease the probability of conflict. In doing so, static and dynamic formed games are introduced and the models conclude that the utility of engaging in war when groups which have symmetric endowments are higher. Therefore, when colonization monoculturizes the production of groups, the onset of war has more risk to the groups. In order to illustrate the model, the study focuses on two cases: the Arusha and Meru in Tanganyika and the Hema and Lendu in the Democratic Republic of Congo. The case of Arusha-Meru people indicates that colonization actually lead the production scheme to diversify and hence, decreases the tension between them. On the other hand, the Hema and Lendu tribes illustrate the impact of monoculturization on the onset of civil conflict.

ÖZET

EKONOMİK BAĞLILIK VE İÇ SAVAŞ BAŞLANGICI: TANZANYA VE DEMOKRATİK KONGO CUMHURİYETİ ÜZERİNE BİR ANALİZ

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M. Emre Hatipoğlu, Tez Danışmanı

Bu çalışmanın amacı sömürgeciliğin hangi özel koşullarda iç savaşa neden olduğunu açıklamaktır. Bu özel koşullar, sömürgeciliğin grupların ekonomik ilişkilerini nasıl etkilediğine odaklanmaktadır. İlk olarak, çalışma karar teorik model inceleyerek ekonomik anlamda grupların birbirine bağlı olmasının çatışmaları azaltma olasılığını incelemektedir. Buna bağlı olarak, statik ve dinamik kurgusal oyunlar yaratılmış ve sonucunda ise grupların gelir kaynaklarında benzerlik var ise grupların savaşa girmesinde yüksek oranda menfaat olduğu görülmüştür. Bu nedenle, sömürgecilikte grupların tek türlü tarıma yönlendirilmesi durumunda gruplar arasında savaşın çıkma riski daha fazladır. Modelin açıklanması için, çalışma iki olay üzerine odaklanmaktadır: Tanganyika'da yer alan Arusha ve Meru grupları ve Demokratik Kongo Cumhuriyeti'nde yer alan Hema ve Lendu grupları. Arusha ve Meru grupları olayı sömürgeciliğin üretim planlaması yaparak bu iki grup arasında farklılaşmaya gitmesi ve bunun neticesinde de bu iki grup arasında gerilimin azaldığını gösterir. Diğer yandan, Hema ve Lendu kabileleri tek türlü tarım etkisi ile iç savaşın başladığını ortaya koyar.

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CHAPTER 1

INTRODUCTION

If, then, a society can ever be founded in which everyman shall have something to keep and little to take from others, much will have been done for peace (de Tocqueville, quote from 1954 edition, 266)

Civil wars in Africa have often been of concern to civil conflict scholars (see, Herbst, 2000; Michapoulos and Papaioannou, 2012; Englebert, 2000; Elbadawi and Sambanis, 2000; Osafa-Kwaako and Robinson, 2013; Azam, 2002; Dincecco et al. 2014; Besley and Reynal-Querol, 2014; Hymer, 1970; Fearon and Laitin, 2014; Gennaioli and Rainer, 2007; Englebert and Carter, 2002; Blanton et al., 2001, Collier and Hoeffler, 2002, Mamdani, 2002; Ziltner and Künzler, 2013)[1]. Some scholars have expand on how exactly colonization has increased the onset of civil conflict in Africa (Blanton et al, 2000; Djankov and Reynal-Querol, 2007; Mamdani, 2002; Ziltner and Künzler, 2013). To illustrate, in his well-acclaimed book *When Victims Become Killers*, Mahmood Mamdani explains how Belgian colonization changed political identities in Rwanda – but says little on how exactly this change led to violent conflict. According to Mamdani (2002) "by politicizing indigeneity, the colonial state set in motion a process with the potential of endlessly spawning identities animated by the distinctions indigenous and nonindigenous, and polarizing them" (p.33). As a result of this polarization these groups became more wiling to resort to violence. However, some countries in which colonization also created these polarized political ideologies, did not engage in war during the postcolonial period. Mamdani (2002) and the other scholars, who examined the impact of colonization, have not explained why such cases exist.

 In this thesis, we posit that colonization constitutes an exogenous shock to existing land based economic relations among groups in Africa. Often, this shock

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[1] In this study, Africa will refer to sub-Saharan Africa, unless otherwise noted.

deteriorates an otherwise peaceful endogenous relation between these groups. Our formal analysis, however, also suggests that colonization may also make hostile relations also peaceful among African groups. The presentation of two case study analyses indeed demonstrate that colonization fundamentally changes land relations amongst tribes in Africa, and that such change may either make relations more or less conflictual.

The next section will provide a detailed survey of existing studies on civil war onset. In doing so, these studies will be organized according to the level of analysis they employ. This survey will eventually show us that group-level analysis encourages us to take a dyadic approach, and hence, better portray institutional settings increasing the risk of civil war onset between two groups. Building on this observation, in Chapter 4, we extend a simple decision-theoretic model of "Trade or Raid? A Theory of Conflict and Trade" originally developed by Cosar and Hatipoglu (2011). In this model, we first treat colonization as an exogenous shock which forces the inhabitants on a piece of land to change their production schemes and instead to cultivate a pre-defined set of crops (e.g. cash crops). This monoculturization, this model shows, changes the relations between two groups from one of asymmetric to one of symmetric endowments. We then show that symmetric endowments make intergroup conflict more likely.

In Chapter 6, two cases that establish the validity of the causal mechanisms presented in the previous section are presented. The deterioration of the Hema-Lendu relations in the Ituri region of the Democratic Republic of Congo (DRC) following Belgian colonization illustrates how the monoculturization of agriculture may make raiding one's neighbor more attractive, hence increases the probability of civil war onset. In contrast, Arusha-Meru relations in the Meru Mountain region in Tanganyika became more cordial following the German and British colonization of this area. The case analysis suggests that this improvement in relations was due to both tribes choice to establish alternative production schemes rather than "playing the colonizers' game. The conclusions reiterate the findings; suggest how this study can extend, and present policy recommendations on how to achieve stability.

CHAPTER 2

LITERATURE REVIEW

Parsing out the causes of civil conflict has been a cornerstone of political violence and civil conflict literature. This literature has tried to answer this question at different levels of analysis. At the macroeconomic level, the economical and political factors are posited as prominent reasons for conflict onset. Collier and Hoeffler (2004) indicated that greed and grievances of the individuals caused by weak socio-economic conditions are the cogent factors that affect the rebellious acts. The ancient hatreds, economic and political inequalities trigger the grievances among society and if these groups have the window of opportunity to rebel against the ongoing system, conflict is inevitable. Therefore many studies (Bazzi and Blattman, 2013; Collier and Hoeffler, 2002; Collier and Hoeffler, 2004; Elbadawi and Sambanis, 2000; Fearon and Laitin, 2003; Gurr, 1968; Harff, 2003; Hegre and Sambanis, 2006; Miguel, Satyanath and Sergenti, 2004; Mueller, 2000; Reynal-Querol, 2002; Sambanis, 2001) focused on the macro level factors for explaining the underlying factors for intrastate conflict onset.

Later studies, however, realize that macroeconomic factors, which by design impose a monadic research design structure, are too coarse to parse out civil conflict onset mechanisms. As Cederman & Gelditsch (2009, p. 488) state, "existing conflict theory research has looked at national aggregates and averages that are only loosely linked to the rationale for conflict and the postulated micro-level mechanisms"; although, "civil wars are local phenomena, specific to particular areas and actors or groups, then there is no reason why the relevant local characteristics should be captured in national-level measures." Other scholars echo this approach by looking at levels of political relevance in the national polity (Posner 2004), individual motives of greed and grievance (Gates, 2002; Lichbach, 1991; 1994; Weinstein, 2005; 2007; Wood, 2003) among others.

As a major improvement, these studies focus on group and individual level factors for explaining the conflict occurrence. These studies are relaxing the "unitary actor" assumption. By focusing on groups and individuals the possible reasons of starting or joining to rebellious acts can be examined in a better way. As Blattman and Miguel (2010) stated, "to understand the causes of war we must also understand how groups form, cohere, and persuade their members to risk their lives" (p.14).

Even though explaining the onset of civil war in dyadic approach is important to introduce a measure for relative strength on the willingness of the parties to fight, the scholars do not pay much attention. Some studies such as Fearon (2004) and Cunningham et al. (2009) explained the effect of relative strength on the duration of conflict. However these studies do not introduce why at the very beginning these parties decide to start a war. Therefore, the study aims to explain how do the relative economic dependency of the groups affect their willingness and opportunities for the onset of conflict.

In the following parts I will survey the studies that aim to explain the onset of civil war at different levels of analysis. This survey will constitute the basis for my later analysis.

2.1. System (Macro)-Level Analysis

Economic conditions in a polity have been indicated as one of the prominent determinants of the civil war onset. The economy of countries is a salient issue to examine their power. Country with high levels of GDP per capita, strong market conditions, or sustainable growth in GDP raises the capability to handle civil conflicts better. According to a number of studies (Bazzi and Blattman, 2013; Collier and Hoeffler, 2002; 2004; Elbadawi and Sambanis, 2000; Fearon and Laitin, 2003; Gurr, 1968; Hegre and Sambanis, 2006; Miguel, Satyanath and Sergenti, 2004) weak economic conditions, unequal economic distributions and exogenous economic shocks are examined as important factors for the onset of civil war.

Fearon and Latin (2003) and Collier and Hoeffler (2004) have set the tone for large-N studies, which try to explain civil war onset at the state level. According to these studies the economic performance of countries are significantly related to the probability of civil war onset. The studies indicate that as per capita income increases the probability of civil war onset decreases. Authors present the feasibility of rebellion as one of the possible underlying mechanisms. As economic determinants deteriorate

the cost of starting conflict for rebels decrease. Also the greed amongst individuals decrease as the economic well being of country increases. Collier and Hoeffler (2004) additionally include GDP growth as another measure for the economic well being of a country. This variable also affects the likelihood of civil conflict negatively. However, these prominent studies regard the aggregate figures and not the relative deprivation within the polity to explain conflict onset. Economic measures such as GDP per capita, GDP growth or the share of primary resources in GDP represent how the country is poor and computes the poverty by introducing the absolute deprivation. However, the distribution of poverty is much more important in explaining the reasons for waging war and these major studies are lack of introducing how relative deprivation is effecting the conflict onset.

While poor economic performance seems to increase the chances of civil war onset, the prevalence of primary commodity exports in a country's aggregate income constitutes another risk factor for civil war onset. Control over such easily cashable commodities gives rebels the resources to continue their costly endeavour, i.e. fighting with the incumbent government (Homer-Dixon, 1999; De Soysa, 2000; De Soysa, 2002; Fearon and Laitin, 2003; Collier and Hoeffler 2004: Ross, 2004). On the other hand some scholars argue that the dearth of natural resources cause conflict onset since the lack of resources decrease the capacity of individuals to innovate and create productive and sustainable schemes (Homer-Dixon, 1999). These two different causal mechanisms refer how natural resources can be risk factor in different manners. The studies proxy the prevalence of natural resources by measuring the share of natural resources in GDP. Even this measure is used as a common indicator of natural resources it is again lack of showing the relative prevalence of the natural resources among the groups. A country may be oil rich, however the ability of the individuals to get benefit from these resources might not be equal. In other words, natural resources might be abundant for some groups and scarce for the others. Therefore, to include how natural resources are distribution is an important contribution for the civil war onset literature.

Exogenous economic shocks are also constitute significant role for civil war onset (Bazzi and Blattman, 2004; Besley and Persson, 2008; Dal Bo and Dal Bo, 2005). An economic shock is important because it tests polity's limit to handle a sudden change in the population's income levels peacefully. As Dal Bo and Dal Bo (2005) stated "a lower opportunity cost in terms of wages in the labor market should increase the chance that an individual engages in activities such as rebellion or crime" (p. 2). Therefore, the

sudden change in the income levels of individuals is one of the key issues that risk polities to fight. The models include however the absolute changes in individuals' income and do not examine the relative change among the individuals. Relative distribution shock however is a salient issue for explaining the rise of inequality among the individuals, which is overlooked in these studies.

Along with "greed" based explanations on civil war onset, "grievances" are hotly debated for creating high levels of risks for civil war onset. According to Collier and Hoeffler's (2004) study, the components that establish the grievances are insignificant for affecting the civil war onset. The proxies that they used "inequality, political rights, ethnic polarization and religious fractionalization" (p.588) result to have insignificant results, whereas ethnic dominance is the only variable that result with significant effect on civil war onset. Also according to Fearon and Laitin's (2003) study the political alienation and ethnic fractionalization are insignificant variables that do not affect the civil war onset.

Contrary to Fearon and Laitin (2003) and Collier and Hoeffler (2004), some scholars (Harff, 2003; Mueller, 2000; Reynal-Querol, 2002; Sambanis, 2001) argue that the ethnic fractionalization and political grievances do matter for civil war onset. The level of fractionalization in ethnicity, religions and political affiliations are considered as significant components for the conflict occurrence. Reynal-Querol (2002) indicates that the level of polarization matters for civil war onset unlike other studies. Additionally she suggest that "religious differences in a country are more important than linguistic differences as a social cleavage that can develop into civil war" (p.42).

Political regimes and institutions also seem to condition civil war onset. Sambanis (2001) argue that highly democratic countries are less likely to experience civil war. He indicate that, supporting democracy is related with supporting the protection of ethnic identity. Thus "ethnic grievance is likely to be exacerbated by the lack of political and civil rights, collapsing mechanisms for the peaceful adjudication of disputes, and an inability to nurture diverse ethnic identities within a cultural and political system" (p. 267). As a result, the political regime that supports the civil rights is less likely to experience conflict. Some studies introduce that the change in political governance (Djankov and Reynal-Querol, 2007; Blanton, Mason and Athoe, 2001, Ziltener and Künzler, 2013) and also political identities (Mamdani, 2002) are significant in understanding the political issues that might increase the risk for civil war.

In particular Djankov and Reynal-Querol (2007) and Blanton, Mason and Athow (2001) discussed colonization's effect on institutions within African countries has influenced the risk of civil war. Moreover, Blanton, Mason and Athow (2001), point out the effects of different institutions in countries that are colonized by different European countries. The authors claim that in particular British colonial rule is more war prone compared to the French governance in African countries. They introduce the governance type of the colonizers as the prominent reason for having these different patterns in conflict onset. The direct rule over the colonized African states leads the British rule to be more prominent among the polities. The authors indicate that, "[the British] purposely maintained opposing traditional structures of control in order to keep the different ethnic populations within a colony from forming a coalition to challenge British hegemony" (Blatmann et al, p.479). According to this strategy of governance, the "British did not force all subjects of a given colony to integrate into a centralized system of formal bureaucratic control, as was the French practice" (Blatmann et al, p.480). As a result of this difference, the risk of the society to engage into a conflict also change depending on different colonizers. These studies are significant for introducing the effect of colonization, however, they point out only the relation of colonization-political system/governance. Even though this relation seems plausible, the influence of colonization on economic relations between groups/individuals is underestimated. Along with the change in political institutions colonizer countries aim to differentiate the economic and production policies of the colonized countries. Henceforth, the proposed studies' causal arguments on how colonization is related to civil war are weak and deficient to explain the economic point of view of colonization.

Along with the systemic level analyses considering economic and political issues, the geographic conditions of countries can be significant for civil war onset (Toft, 2003, 2002; Wiedmann, 2009). Geography is important since; this issue is closely linked to the opportunities of the individuals. In other words "territory sets the stage for violence to become a feasible strategy if spatial group distribution facilitates collective organization for conflict (Wiedmann, 2009, p. 527). Therefore, the territorial conditions gain importance in civil war literature.

As a result, system-level analyses, which is concerned with macro level variables that might affect the civil war onset is deeply examined by various amount of studies. These studies are significant since they explain a general overview of possible causes for experiencing internal conflict. On the other hand, these large-N studies are

problematic in understanding the underlying correlates of civil wars in particular. As Sambanis (2004) states, papers by Fearon and Laitin and Collier and Hoefler are based on "macro level data to test hypotheses about civil war that are based on ideas about micro-level behavior" (p.259). Therefore, evaluating micro-level explanations will shed light on the main causal mechanisms.

Therefore along with these macro-level analyses, studies that try to explain civil war onset by conducting group and individual levels of analyses is explained in the following parts.

2.2. Individual Level Analysis

Individual level analysis is concerned about the possible causes that lead individuals to be more prone to fight. Studies explain many important issues, which concerns individuals and poses important questions that are significant in explain the driving forces of civil wars. Individual level analysis mainly asks the question "why do the individuals decide to join an insurgent group?" This recently developing area of interest contains various amount of different explanations that why individuals fight.

"Selective incentives" are one of the prominent issues that motive individuals to join the rebel armies. Lichbach (1991, 1994), Gates (2002), Wood (2003) and Weinstein (2005, 2007) highlight "incentives" as primary causes for the recruitment process. The provided selective incentive, which might be either financial or ideological, would help to solve the collective action problem and lead the civilians to join the rebel army. Scholars differentiated the types of selective incentives and expect to have different outcomes on the recruitment level. For instance, Wood (2003) express that "self-respect, honor, dignity, recognition, and reputation appear to have played powerful roles" (p. 246) in participation for the El Salvador case. Weinstein (2007) also touch upon the effectiveness of natural resources as incentives for organizing the rebel groups in Mozambique. But he also indicates that ideology was an important tool to encourage civilians to join the rebel forces.

Some argue that education level of individuals might affect the propensity to join a rebel group. One of the causal mechanisms that Thyne (2006) indicates that education's power increases opportunities of an individual. According to a World Bank report, "education is one of the most powerful instruments societies have for reducing deprivation and vulnerability: it helps lift earnings potential, expands labor mobility, promotes the health of parents and children, reduces fertility and child mortality and

affords the disadvantaged a voice in society and the political system" (Thyne, 2006, p. 735). Furthermore, education is argued to develop the interpersonal skills and reflect to society. These important improvements that education enables, henceforth is believed to decrease the likelihood of civil war onset, which is also supported by the analysis. Collier and Hoeffler (2004) also supported education as one of the components, which decreases the onset of civil conflict. According to their inquiry male secondary schooling rate is measured and they resulted significant and negative causal direction. Therefore, between education and the recruitment level of civilians have an important interaction with each other.

Humphreys and Weinstein (2008) also examine the potential reasons of civilian recruitment. This study is significant for examining Sierra Leone case by conducting interviews with the individuals that joined the rebel movement. The individuals accept to join the insurgent group due to lack of economic resources, and access to education as well as for feeling themselves safer by joining.

The individual level analysis gives deeper understanding about the conflict onset. Since the start of conflict depends on the willingness and opportunity of individuals, to evaluate their reasoning for joining the rebel forces is a salient issue. These studies, hence, are very important in portraying the causes and perceptions of the individuals. These studies are better at capturing the relative deprivation compared to the system level analysis and hence these studies propose a clearer line of arguments about the civil war onset.

2.3. Group-Level Analysis

The studies which refers to group-level analysis address the question "why do groups /parties decide to fight within a territory?" The literature on group level analysis examines mostly political superiority and ethnic heterogeneity that groups have (Esteban and Ray, 1999; Alesina and Ferrara, 2005; Caselli and Coleman II, 2012). Addition to ethnic heterogeneity, some scholars focus on the intra-ethnic relations which focus on how the relationship within ethnic groups effect the civil war onset (Stainland, 2002; Münster, 2007; Warren and Troy, 2015; Garfinkel, 2004; Fearon and Laitin, 1996).

One line of arguments in group-level analysis examines the inter-group relations and its effect on civil war onset. Scholars express that in order to understand the actual causes of civil war onset, the intra-ethnic characteristics need to be examined

(Stainland, 2002; Münster, 2007; Warren and Troy, 2015; Garfinkel, 2004; Fearon and Laitin, 1996). The underlying mechanism for evaluating this part of the story is to clarify the "collective action problem." If the groups are well organized among themselves, to act collectively becomes easier, which increases the chance of rebelling against the government. Rebel groups are established on various "social ties" and this variation reflects differences on group cohesion (Stainland, 2002). Münster (2007) share the same causal explanation and expresses that the "group cohesion effect" will lead groups to be more decisive or not. Hence, their act towards inter group conflicts may change depending on their cohesiveness.

Along with the collective action aspect, scholars also emphasize on the effect of intra-group relations to economic issues. As Garfinkel (2004) expressed "individuals within a group might be able to resolve the conflict that naturally arises over the distribution of the resources available to them or the product of their labor in more 'civilized' ways involving less 'social waste'"(p.4). In other words, intra-group cohesion also affects how the available resources are distributed among individuals. If the available resources distributed in a "civilized" way, then the level of free-riding of the individuals will be decreased.

This issue may also tackle a further problem that opens another line of thought, which is not included in intra-ethnic relations studies. Even these studies emphasize on the distribution of a particular resources –might be public good, natural resources- they do not examine the relative dependency of groups. Along with the equal distribution, the groups need to have equal dependency to each other to have a peaceful settlement. Otherwise the income equality is only an issue to decrease the greed but the cost of seizing war depends on the relative strength which is missed in these studies.

Whether the groups are polarized, or heterogeneous within the society are the other significant aspects of civil war onset. For instance, according to Alesina and Ferrara (2005) "fragmented societies are often more prone to poor policy management and pose more politico-economic challenges than homogenous ones" (p.763). Along with the economic consequences of heterogeneous society, some studies focus on the polarization of groups within society that lead to civil conflict (Esteban and Ray, 1999). When "intra-group homogeneity, coupled with inter-group heterogeneity, lies at the heart of a polarized society and this feature is correlated with social conflict" (p.401). The population distribution among both intra- and inter-group therefore is one of the

significant issues on the civil war onset , which is examined in a dyadic and group-level perspective as well.

In this section I have emphasized the on going literature on civil war onset in different levels of analysis. However, to not introducing possible causal mechanisms, which captures the dyadic relations of the groups/individuals, are deficient in the literature. In particular the economic issues are introduced as absolute values, but relative deprivation is underrated. Therefore to understand understanding the trigger for the desire to resort to violence is not fully covered. Hence in this study I will try to explain how the relative economic dependency of the groups has an impact on the increase in the likelihood of civil war onset. Therefore, I will focus on the group-level analysis by examining the dyadic relations of these groups.

CHAPTER 3

CIVIL WARS IN AFRICA

Along with the overall increase in the civil war numbers, the change in the frequency and intensity of civil conflicts among different regions is diverse. In this respect in many studies, Africa has been put forth as a location where the numbers of civil wars are exponentially increasing (Besley and Reynal-Querol, 2014; Collier and Hoeffler, 2002; Dinecco et al, 2014; Elbadawi and Sambanis, 2000; Sawyer, 2003). This increase can be observed in two main conflict datasets: Armed Conflict Dataset by PRIO and Correlates of War Project. These significant datasets contain intra and inter state conflicts with referring different characteristics of these cases[2]. Along with different conflict definitions, Correlates of War dataset contains a wider time span compared to Armed Conflict Dataset. Also related to the different definitions Correlates of War datasets counts only the conflicts with 1000 deaths and above. Whereas Armed Conflict Dataset by PRIO counts conflicts that contain 25 battle related deaths and above. These differences are important to interpret the descriptive statistics that will be provided.

Figure 1 shows, the number of civil wars in Africa has increased overtime and this continent can be interpreted as the second region –after Asia- that experiences high levels of civil conflict.

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[2] On the one hand Armed Conflict dataset defines civil conflicts depending on five main issues: (1) use of armed force, (2) at least 25 battle related deaths, (3) to have warring parties government and a formally organized opposition, (4) to take place in a recognized and sovereign state, and (5) incompatibility concerning government or territory. Corralates of War Project defines civil conflict by considering different aspects. Sarkees (2010) indicated that for the COW dataset, civil war concept was defined by considering the aspects such as "(1) military action internal to the metropole of the state system member; (2) the active participation of the national government; (3) effective resistance by both sides; and (4) a total of at least 1,000 battle-deaths during each year of the war" (p.5).
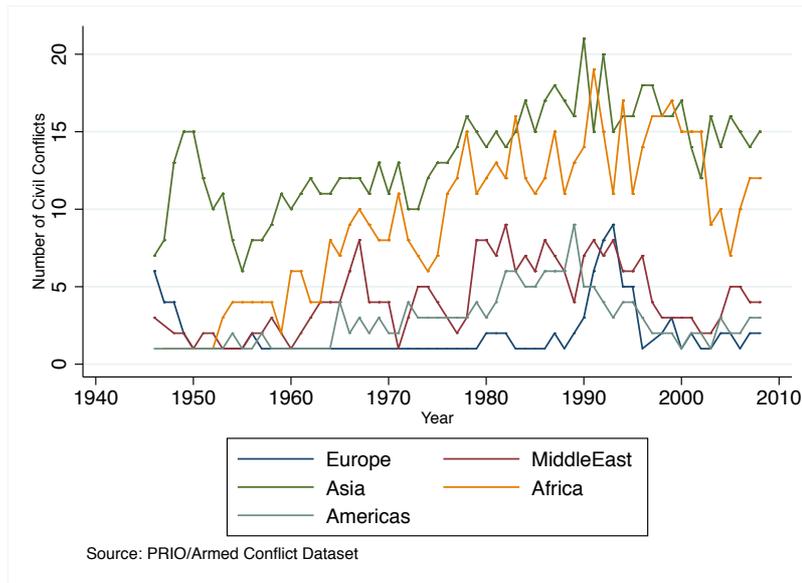
Figure 1 Number of civil wars in Europe, Asia, Americas, Middle East and Africa Regions
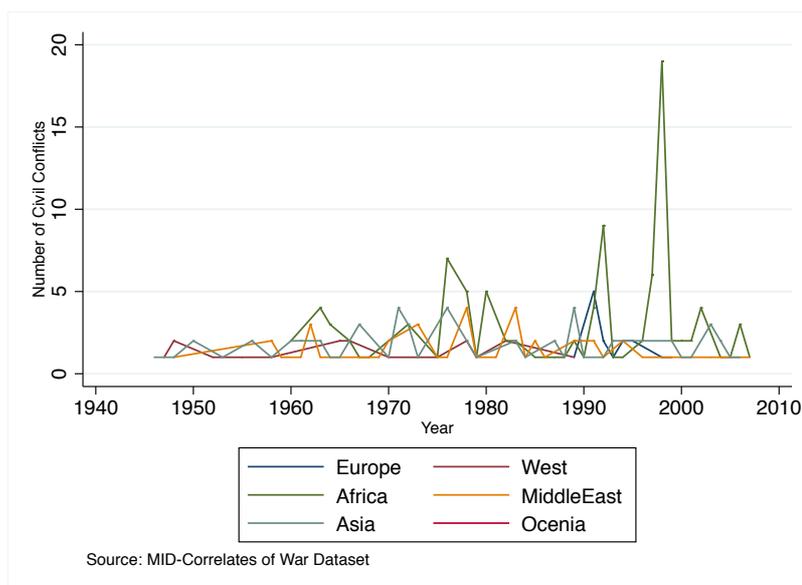
Figure 2 Number of civil wars in Europe, Asia, Oceania, Middle East and Africa Regions

When this increasing trend provided by PRIO/Armed Conflict Dataset is compared with MID-Correlates of War data, indicated in Figure 2, a weaker trend is observed. However, according to MID-Correlates of War Dataset, Africa has been the region that experienced the highest amount of civil conflict. In particular, years between 1990-2000 the number of civil conflicts reached to its peak which can be also observed in PRIO/Armed Conflict Dataset.
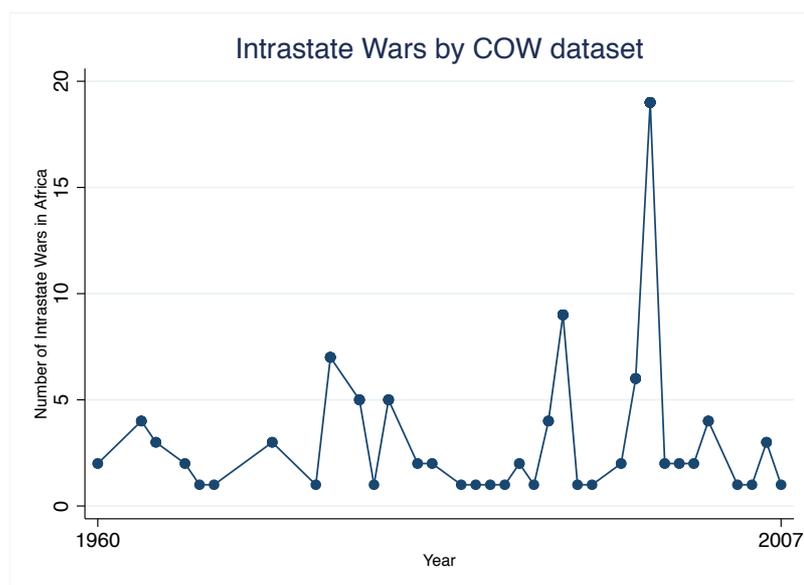
Figure 3 Intrastate Wars – Correlates of War Data in Africa
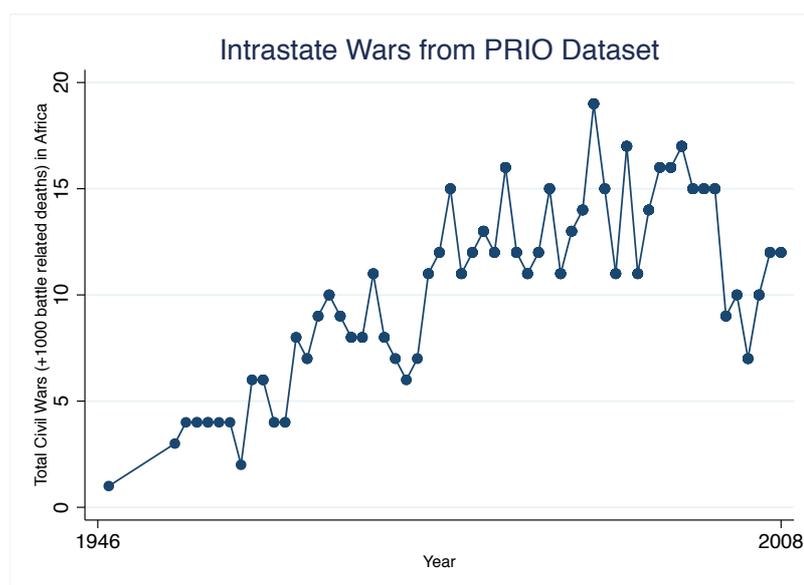
Figure 4 Intrastate Wars from PRIO/Armed Conflict Dataset in Africa

Battle related deaths in intra-state conflicts constitute another important indicator for showing how the conflicts in Africa are intense. Figure 5 is a rough indication of battle related deaths. In the light of PRIO/Armed Conflict Dataset the cumulative number of battle related deaths of African countries are indicated in figure[3]. The lowest number of battle related deaths are in Nigeria with 1050 total battle related

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[3] The figure is formed by the cumulative number of battle related deaths. The number is consisted by the total battle related deaths belong to that specific country considering different civil wars. The white areas indicate that the data is missing for that specific country.

deaths and the highest number of battle related deaths are in Uganda with 53000 deaths. Even the data indicates how severe conflicts Africa has experienced the data is also somewhat problematic and underestimates the number of death in Africa. First of all, the data contains many missing values and henceforth, most of the countries' figure is missing. Also along with the battle related deaths the casualty numbers of civilians are indicated an important measure for intensity of the conflict but the data for civilian deaths is not available.
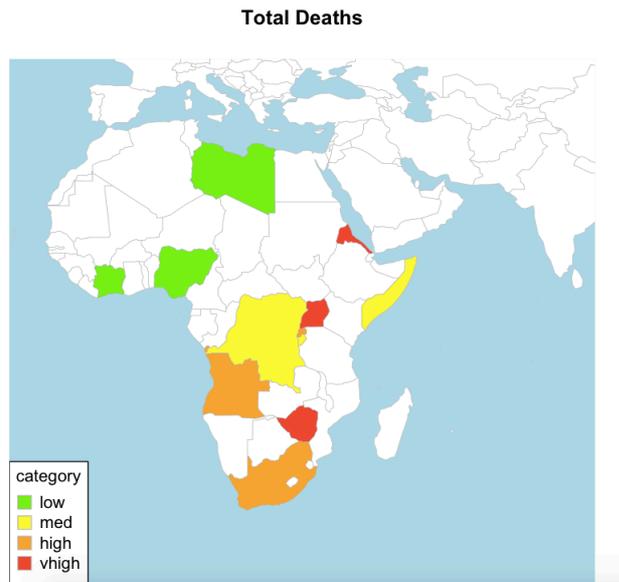
Figure 5 Total Battle Related Deaths – COW Dataset

Whether another country becomes a party for the civil conflict is also another indicator that shows the importance and intensity of the conflicts. The number of internationalized civil conflicts is indicated in Figure 6 and 7. Since MID-Correates of War dataset contains only the conflicts, which had 1000 battle, related deaths and above, I compared these two datasets considering the number of battle related deaths. According to the figures, even if a clear pattern cannot be observed, the number of internationalized civil wars is salient.
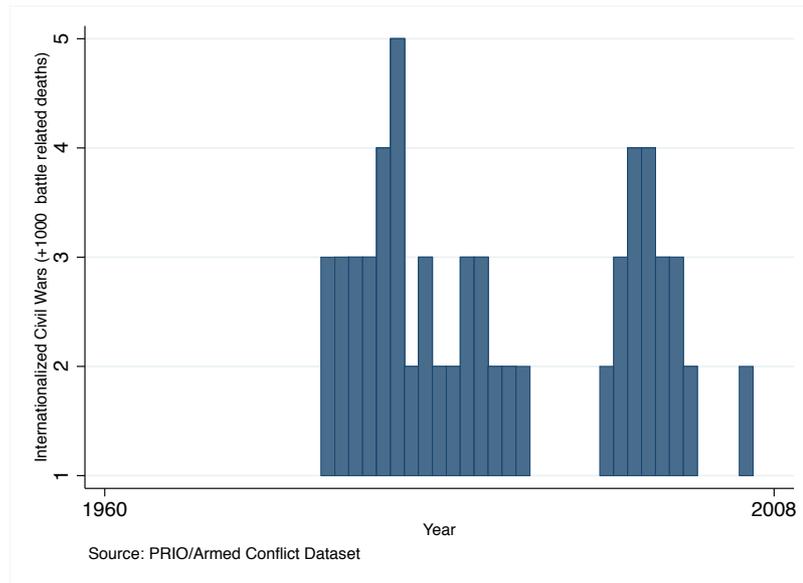
Figure 6 Number of Internationalized Civil Wars in Africa
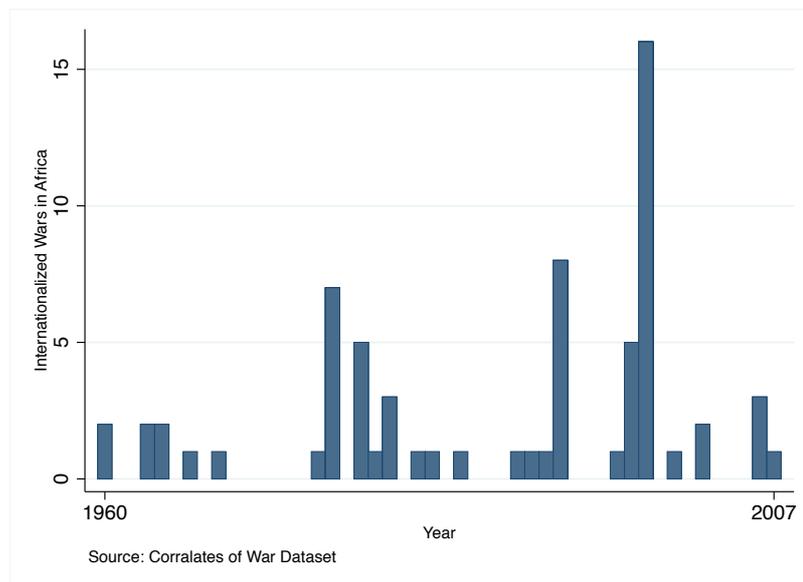
Figure 7 Number of Internationalized Civil Wars in Africa

According to the data provided by PRIO/Armed Conflict Dataset and Correlates of War project, number of civil wars in Africa is rising; hence understanding this trend is becoming a salient issue. Intense battles, high numbers of tension in the region are not declining as the other regions in the world. Therefore, to study particularly African regions to understand the possible reasons for the dissimilar increasing trend in civil conflict is important to understand the basic underlying factors that affect Africa's proneness to conflict.

This increase in number and intensity of civil war in Africa draw attention of scholars to the African cases (Herbst, 2000; Michapoulos and Papaioannou, 2012;

Englebert, 2000; Elbadawi and Sambanis, 2000; Osafa-Kwaako and Robinson, 2013; Azam, 2001; Dincecco et al. 2014; Besley and Reynal-Querol, 2014; Hymer, 1970; Fearon and Laitin, 2014; Gennaioli and Rainer, 2007; Englebert and Carter, 2002; Blanton et al., 2001, Collier and Hoeffler, 2002, Mamdani, 2002).

On accordance with the general literature on civil wars, Africa's main reasons for the highly intense conflicts are clarified through various explanations. Economic development and weak economic institutions are considered as one of the most prominent reasons why African states are more prone to civil war (Elbadawi and Sambanis, 2000; Collier and Hoeffler, 2002). The studies mostly focused on the whether the continent has a "mysterious African effect" (Collier and Hoeffler, 2002) different than the other countries, which make the African countries to be more prone to experience civil conflicts. The empirical analyses points out that "Africa's economic characteristics generated an atypical high risk of conflict, but this was offset by its social characteristics, which generated an atypical low risk" (Collier and Hoeffler, 2002). Therefore parallel to the cross-national studies, state level analyses proposes that Africa's main problem for having high risk of conflict is the economic factors. These studies also point that the ethnic fractionalization and polarization is not an issue for increasing the risk for conflict onset, on the contrary "Africa's ethnic diversity is a deterrent rather than a cause of civil war" (Elbadawi and Sambanis, 2000, p.10).

Regarding the different characteristics of Africa, some scholars elucidated Africa's proneness to civil war by examining the pre-colonial institutions (Englebert, 2000; Gennaioli and Rainer, 2007; Michapoulos and Papaioannou, 2012; Osafo-Kwaako and Robinson, 2013) and historical conflict (Besley and Reynal-Querol, 2014; Dincecco et al. 2014; Fearon and Laitin, 2014). These studies aim to understand whether the ongoing conflicts are actually a continuation of pre-colonial institutions or historical conflicts. Examining the former establishments and incidences in Africa, is an essential peace to completely understand the conflict puzzle of Africa.

The pre-colonial political centralization is pointed as one of the key dimensions for establishing a solid and working economic order since the more centralized political institutions the more likely to enact the modernization programs and apply it to the rural areas (Gennaioli and Rainer, 2007). The argument offered by the scholars (Englebert, 2000; Gennaioli and Rainer, 2007; Herbst, 2000; Michapoulos and Papaioannou, 2012; Osafo-Kwaako and Robinson, 2013) have also examined by using the pre-colonial period's political centralization level and how it effected the current economic and

political development. These studies argued that the more pre-colonial political institutions were more centralized, result better current economic performance of the country is. This correlation between "stateness in pre-colonial times" and current economic performance, in turn, also establishes a negative relation between "stateness in pre-colonial times" and the risk of conflict onset in a country today.

Historical conflicts constitute another salient factor that increases the risk of conflict onset. As a result of the studies, the historical conflicts are significant determinants of current economic development of African countries (Dincecco et al. 2014; Fearon and Laitin, 2014). Therefore, a conflict experienced before colonizers occupied an African territory adversely affected the economic development of that territory later. This inverse development of a country, hence, leads to the current conflicts to be more viable and probable. In other words, these studies explain that actually the current economic development is the consequence of pre-colonial era and therefore, Africa is in a conflict trap that have been started in the pre-colonial times.

Colonial period, however, is as important as the pre-colonial period to explain high risks in civil conflict (Blanton et al, 2000; Djankov and Reynal-Querol, 2007; Mamdani, 2002; Ziltner and Künzler, 2013). The studies focus on the impact of colonialism on the institutions of colonized state. Colonialism in these studies refers to the establishment and exploitation of African territories by European powers starting with the 19th century. Blanton et al (2000) and Mamdani (2002) for instance emphasized on the change in governance of African states under different European colonizers. Their main argument centralizes on the impact of direct and indirect rule of colonizers on civil conflicts. As I stated previously, Blanton et al (2000) indicate that different colonization rules, such as direct or indirect rule, are one of the main sources for ethnic division. Blanton et al (2000) explained how exactly governance style affects the ethnic stratification as follows:

> … their (British) indirect style left intact traditional patterns of social organization that facilitated the mobilization of aggrieved minorities for collective action. By contrast, the French strategy of administrative centralization left ethnic minorities devoid of the mobilizing structures necessary to mount an organized challenge to the post-colonial state. (p.481)

As it is indicated the different governance strategies led ethnic groups to be able to collectively act or not. However, this argument is deficient in explaining why exactly the colonization process leads these ethnic groups to be willing to start conflict. At this

point, Mamdani (2002) completes why colonization impacts the willingness of individuals to seize violent acts. According to Mamdani (2002) direct and indirect rule have different legal treats to ethnic groups. Direct rule impose racial separation between natives and non-natives in civil law, whereas indirect rule addition to racial separation differentiates natives within different groups. Therefore under indirect rule "every ethnic group was now said to have its own separate set of 'customary' laws, to be enforced by its own separate 'native authority,' administrating its own 'home area'" (p.24). According to Mamdani (2002), the indirect rule of colonizers leads to politicized different cultural groups and create so-called ethnic groups. Unlike the direct rule, which only diversifies the racial difference (the colonizer and natives), indirect rule raises the awareness in political difference.

The arguments about the impact of colonization styles lack referring to why some African colonized states did not experience any civil conflict in postcolonial era. Similar to the African countries which experienced civil war, the ones do not also had varying levels of ethnic diversity, direct or indirect rule and even the presence of political dominance of one group over others. Therefore, what these studies are deficient of is capturing the dynamic conception of mentioned issues. The ethnic groups in African states seized different governance styles in pre-colonial era. Additionally, these states have been hosting different ethnic groups since the pre-colonial times. As such, instead of trying to discover an institutional-picture favorable to civil conflict onset, we will ask what changes to the political environment lead such institutions to induce civil conflict. In doing so, we will look at one such mechanism – the role of colonization. More specifically, we will argue and present qualitiative evidence that colonization may change endogenous forms of agricultural production and exchange via monoculturization of agriculture. Such an exogenous intervention "redefines" the concept and value of land to ethnic groups within a polity. Following colonization, land now may become an exclusive commodity to otherwise mutually benefiting, symbiotic groups. When the use of land evolves one from symbiosis to exclusivity, political dominance becomes a valid currency that the dominant group may use to subjugate others. The following section will formally explicate how this mechanism works.

CHAPTER 4

THE MODEL

As it is stated in the previous sections, the effect of an exogenous shock, which influences group level economic relations on the civil war onset, has not been studied in detail. Therefore, in this model we try to explain whether economic interdependency affects the likelihood of conflict onset. This model, which is going to be presented in the following sections, is extended on Hatipoglu and Cosar's (2011) model by using a dynamic form. In the first part the model of Hatipoglu and Cosar (2011) is going to be explained and following the dynamic form of the static model is going to be introduced. This chapter will conclude with the comparative statics of two models.

4.1. The Model

The model contains two actors Group 1 and Group 2. The strategies of these actors are to *trade* or *wage war*.
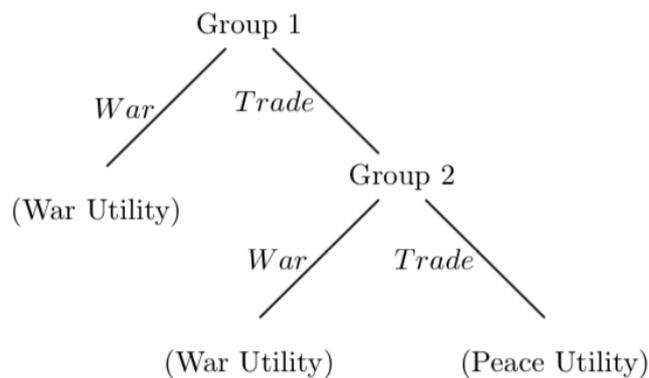
Figure 8 Groups' strategies and their payoffs

If one of the groups decide to wage war, with θ probability the group will win the war and will conquest other group's endowments, otherwise the groups will have an autarky, in which groups will not trade. Also if groups start a conflict they will also have some cost T.

Along with their strategies, actors are allocated with pre-given endowments. In this economic environment the groups will endow Bananas and/or Cattle, which will be denoted as B and C. The groups aim to increase their utilities, which are defined as follows;

$$U_i = \sqrt{I_i} \quad (4.1)$$

Here I_i denotes for the income level of Group 1 or 2. The income is calculated with the amount of the endowments that the groups own.

$$P = B_1 + B_2 + C_1 + C_2 = P_F + P_M \quad (4.2)$$

$$I_i = p_{B,i}\, P_B + p_{C,i}\, P_C \quad (4.3)$$

P is equal to the total amount of the products in the economy and the income is measured by the sum of the endowments that groups have. The value $p_{B,i}$ and $p_{C,i}$ indicates how the endowments are distributed. If this value is 0.5 the products in the economy are distributed symmetrically and the other values indicate that there is an asymmetric endowment distribution. $P_{B,i}$ and $p_{C,i}$ are calculated as, $p_{B(C),i} = B(C)_i\, /\, P_{B(C)}$.

4.2. Static Model

4.2.1. Static Model with Symmetric Endowments

Groups with symmetric endowments refers to possessing the same amount of Bananas and Cattle which can be introduced as follows: $B_1 = B_2 = x$ and $C_1 = C_2 = y$. According to the assigned endowments the total production will be $P = 2x2y$. Since two groups have the same amount of endowments, p_B and p_C are 0.5 that denotes for the symmetry in distribution of economic endowments. Therefore, the income of groups can be indicated as, $I_1 = 0.5(2x)0.5(2y)$ and $I_2 = 0.5(2x)0.5(2y)$. And thus, $I_1 = xy$ and $I_2 = xy$ will be the incomes of Group 1 and Group 2 respectively. According to these values utilities for trade, autarky, conquest and war are introduced as follows.

$$U_{trade} = \sqrt{xy} \quad (4.4)$$

$$U_{autarky} = \sqrt{xy} \quad (4.5)$$

$$U_{conquest} = 2\sqrt{xy} \quad (4.6)$$

$$U_{war} = 2\theta\sqrt{xy} + (1-\theta)\sqrt{xy} - T \quad (4.7)$$

Since the utility of declaring war is higher than engaging in trade, under the condition $2\theta\sqrt{xy} + (1-\theta)\sqrt{xy} - T > \sqrt{xy}$ the groups will be more likely to onset a civil conflict. When the condition is further elaborated, the following will be the condition for the maximum cost for waging war.

$$\theta\sqrt{xy} > T \quad (4.8)$$

In order to understand whether the symmetric endowment distribution leads to war with higher or lower probability I will introduce the static model with asymmetric endowments.

4.2.2. Static Model with Asymmetric Endowments[4]

When the groups have asymmetric distribution of Bananas and Cattles their likelihood for experiencing a civil conflict might be different. For this case, when the endowments are asymmetrically distributed Group 1 will own all Bananas and Group 2 will own all Cattles. Therefore, the distribution of the endowments for *Group 1* will be as, $B_1 = 2x$ and $C_1 = 0$; for *Group 2*, $B_2 = 0$ and $C_2 = 2y$. Along with the different share of endowments, incomes of the groups will also be different. For Group 1 the income is equal to 2x, whereas for Group 2 the income is 2y. Since the groups will trade and at the end of the day will trade Bananas and Cattles to the other groups, they all will endow both Bananas and Cattles. Therefore, the utility to trade, autarky, conquest and war is the same and is provided in the following equations.

$$U_{trade} = \sqrt{xy} \quad (4.9)$$

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[4] Having asymmetric endowments can be in several ways. In this study the focus is on the case in which the groups endow different products. However, also there can be such cases in which only one group can endow everything in the economy. This type of asymmetric endowment distribution is an extreme but an important case to mention. However in this study the focus is on the previously mentioned type of asymmetric endowment distribution.

$$U_{autarky}= 0 \quad (4.10)$$

$$U_{conquest}=2\sqrt{xy} \quad (4.11)$$

$$U_{war}=2\theta\sqrt{xy} - T \quad (4.12)$$

For $2\theta\sqrt{xy} - T >\sqrt{xy}$ condition the utility of the groups to fight will be higher, thus, will engage in war. When the cost is computed the following condition is derived from this equation.

$$(2\theta - 1)\sqrt{xy} > T \quad (4.13)$$

As a result, it can be observed that the cost of fighting changes according to the distribution of economic endowments. In order to understand whether the symmetric or asymmetric endowment distribution increases the risk of war, the two end results, equations 4.8 and 4.13 should be compared. Since θ is a probability and $0 < \theta < 1$ the comparison of end results are as follows:

$$\theta\sqrt{xy} > (2\theta - 1)\sqrt{xy} > T \quad (4.14)$$

Equation 4.14 indicates under what conditions the costs will affect the likelihood for engaging war. So, when the cost is lower than the proposed functions the groups will engage in war. The condition for the case in which groups possess symmetric endowments is higher compared to the case in which groups have asymmetric endowments. Therefore, the groups with symmetric endowments will be more likely to engage war while this probability is lower for asymmetric cases. In other words, when the groups are economically interdependent they will be less likely to engage in civil conflict.

4.3. Dynamic Model

Along with the static model, the model is extended in a dynamic form. In this model the actors will choose either fight or trade in every time period t. If groups decide to trade, in the next period the groups need to decide either to fight or trade again. However, if one of the groups decides to start a war, then the game will end and the groups will gain

the victory or autarky utilities. The probability for winning the war is again with θ probability.

4.3.1. Groups with symmetric endowment

In the dynamic form of decision theoretic model the symmetric endowments are distributed as it is introduced in the static form. According to this distribution, the utilities for the groups that have symmetric endowments are introduced as follows.

$$U_{trade} = \sqrt{xy} + \delta\ (\gamma(\theta V^V + (1-\theta)V^A) + (1-\gamma)V^T)\ (4.14)$$

$$U_{autarky} = \sqrt{xy} + V^A\delta\ (4.15)$$

The introduced utilities include first period's utility, which is $\sqrt{xy}$, and the continuation value of deciding to trade or remain in autarky. The continuation value of trade includes the possible decisions to fight or trade after period 1. With γ probability the groups might decide to fight and otherwise might trade. The values proposed in trade and autarky utilities V^T, V^A and V^V are the continuation values of trade, autarky and victory respectively. V^T and V^A are equal to $\sqrt{xy}/(1-\delta)$ whereas the continuation value for conquest V^V is equal to $2\sqrt{xy}/(1-\delta)$.

$$U_{conquest} = 2\sqrt{xy} + V^V\delta\ (4.16)$$

The utility for engaging a conflict is defined as in the static version of model, which is indicated in equation 4.17.

$$U_{war} = \theta(2\sqrt{x}\ + V^V\delta) + (1-\theta)(\sqrt{xy} + V^A\ \delta) - T = \theta(2\sqrt{xy} + \delta2\sqrt{xy}/(1-\delta)) + (1-\theta)$$
$$(\sqrt{xy} + \delta\sqrt{xy}/(1-\delta)) - T\ (4.17)$$

In order to understand in what conditions groups will engage in war, again the utility of war is compared with the utility of trade. When U_{war} is higher than U_{trade} groups will have more claim to engage in war.

$$\theta(2\sqrt{xy} + V^V\delta) + (1-\theta)(\sqrt{xy} + V^A\ \delta) - T > \sqrt{xy} + \delta\ (\gamma(\theta V^V + (1-\theta)V^A) + (1-\gamma)V^T)\ (4.18)$$

$$\theta(2\sqrt{xy} + \delta2\sqrt{xy}/(1-\delta)) + (1-\theta)\ (\sqrt{xy} + \delta\sqrt{xy}/(1-\delta)) - T > \sqrt{xy} + \delta\ (\gamma(\theta2\sqrt{xy}/(1-\delta) + (1-\theta)\sqrt{xy}/(1-\delta)) + (1-\gamma)\sqrt{xy}/(1-\delta))\ (4.19)$$

24

$$\theta \left[\sqrt{xy} + (\delta(1-\gamma)\sqrt{xy})/(1-\delta)\right] > T \text{ (4.20)}$$

Equation 4.20 shows that, when the left hand side is higher than the cost, the groups will be more likely to onset a war. The condition of war is thus influenced by the probability of victory and the decision of waging war when groups are trading. Also the time discount factor is another variable, which affects the cost, and hence the likelihood of waging war.

4.3.2. Groups with asymmetric endowment

The symmetric endowment case is defined as in the static model. While Group 1 endows all the bananas; Group 2 owns all the cattle. For this case, the utilities of trading, conquest and autarky are indicated as follows.

$$U_{trade} = \sqrt{xy} + \delta\ (\gamma\theta V^V + (1-\gamma)V^T) \text{ (4.21)}$$

$$U_{autarky} = 0 \text{ (4.22)}$$

$$U_{conquest} = 2\sqrt{xy} + V^T\delta \text{ (4.23)}$$

Even the peace and conquest utilities are similar the warring utility of the groups is different and is as follows,

$$U_{war} = \theta(2\sqrt{xy} + V^V\delta) - T = \theta(2\sqrt{xy} + \delta 2\sqrt{xy}/(1-\delta)) - T \text{ (4.24)}$$

When the warring and trade utility is compared the condition of groups is presented in the following equations.

$$\theta(2\sqrt{xy} + \delta 2\sqrt{xy}/(1-\delta)) - T > \sqrt{xy} + \delta\ (\gamma\theta 2\sqrt{xy}/(1-\delta) + (1-\gamma)\sqrt{xy}/(1-\delta)) \text{ (4.25)}$$

$$(2\theta-1)\left[\sqrt{xy} + (\delta(1-\gamma)\sqrt{xy})/(1-\delta)\right] > T \text{ (4.26)}$$

Equations 4.20 and 4.26 introduce the condition for having trade or war by computing the cost. Similar to the static model since $0 < \theta < 1$, and hence, $2\theta - 1 < \theta$. As a result of the comparison of cases with groups that endow symmetric and asymmetric products, the economic interdependency arise as a salient issue for preventing conflict onset. Therefore similar to the previous findings when groups have asymmetric endowments, they will be less willing to engage in civil war since the cost is higher.

4.4. Comparative Statics

The decisions of groups depend on different variables in static and dynamic models. The likelihood of victory when a group wages war, the time discount factor and the probability for waging war after groups decide to trade are some of the issues that might affect the decision of groups.

In the static model the condition for cost depends on θ, which is the likelihood of victory when the group decides to wage war. If the group is more likely to win the fight, then the probability of group to wage war rises. For instance, when the group has more military power, which represents its fighting capabilities and increases the likelihood of winning a fight, the group is more likely and willing to wage war. This variable can also considered as the relative power between the groups and when a group is relatively stronger, this group will be more prone to fight.

In the dynamic model we can also compute the relationship of the time discount factor, the probability to start civil war and the probability of waging war while groups are trading. The probability of victory, θ, has similar impact on the likelihood of waging war as in the static model. The differences between static and dynamic model are the effect of time discount factor, δ, and the probability of the groups to divert from trading and wage war which is indicated as γ.

Time discount factor represents the value of actors' strategies in the future. In other words, when time discount factor δ is high, groups value the future and prefer to consume in the future as well. Therefore, as the time discount factor increases the groups will value their future more. This variable is also considered as the patience level of actors. If actors value the future, they will be less patient. In this model the cost for war depends on $\delta/(1-\delta)$. And as δ increases, the right hand side of both equations 4.20 and 4.27 increases as well; henceforth, the likelihood of waging war will increase. In other words, when the perception of groups for future equally values with the present, the value of war will increase which will lead the groups to fight. When the groups value their future and willing to live in the upcoming years, they will wage war in the current period. For instance, if the groups in Africa equally value the future which lead them to perceive colonization as a temporary establishment will increase their probability to engage in war.

The value γ, which denotes for the likelihood of waging war when groups are trading, is also a salient issue that has an impact on the cost of war. When groups decide to trade they continue to decide either to trade or fight in the following period. Therefore the groups have the chance to diverge from trade and wage war. While probability to wage war when groups are trading increases, the likelihood of groups to wage war in the current period decreases. This result is also a valid argument since when a group knows that they will attack in the future, their interest to engage in war currently will decrease.

As a result, models introduce four important conclusions;

1- When two groups have symmetric endowments, the likelihood to wage war increases, whereas when groups have asymmetric endowments the utility of trading increases, therefore, the groups are more willing to trade instead of fighting.

2- If the likelihood of victory when group wages war increases, the groups will be more willing to fight.

3- When the time discount factor of groups increase, the utility of war increases relatively higher than trading, therefore, the groups will be more likely to engage in war.

4- If groups will be more likely to fight in the future, they will not war in the present period.

These findings point different and salient issues about the decision making of groups and every finding refers different factors that have an impact on the decision for waging war. However in this study the focus will on the first outcome and the illustrative cases will be expressed in terms of the symmetric-asymmetric endowment discussion.

CHAPTER 5

METHODOLOGY AND CASE SELECTION

To further elaborate on the possible causal mechanisms behind civil war onset set forth in my formal model, the study resort to comparative analysis. This analysis will enable us to trace the processes through which civil conflict occurred or failed to occur. As Lijphart (1991) stated "the primary function of the comparative method is to test empirical hypotheses and thereby to either corroborate or falsify them" (p. 159).

However, while comparing the illustrative cases every aspect is not deeply described. In order to justify the model the study, by controlling the possible issues that might affect the probability of civil war onset, explains how the economic interdependency lead to a decrease in the likelihood of civil war by *process tracing a natural experiment* of the cases selected from Africa.

Process tracing is one of the significant qualitative methods that attempt "to trace empirically the temporal and possibly causal sequences of events within a case that intervene between independent variables and observed outcomes" (p.144). According to Bennett and George (2005), "political scientists employ process tracing not only to explain specific cases but also to test and refine theories, to develop new theories, and to produce generic knowledge of a given phenomenon" (p. 148). Therefore in this study the following chapter will provide illustrative cases in order to support the mathematical model indicated previously.

The study will examine the illustrative cases selected among the African groups. Besides Africa being one of the areas that experienced intense and violent intrastate conflicts, selecting cases from this continent is because of *colonization*. Colonization creates a natural experiment and as an exogenous shock, which is independent from the relationship of different ethnic groups in African countries, is one of the significant

factors that change (or might not) economic relations between groups. As a result of this shock, which affected the distribution to the economic endowments, we can analyze how the economic interdependency might affect the probability of civil war onset. The pre-colonial, colonial and post-colonial eras are going to be traced and how the change or maintenance of the trading relations had been effected the tension is clearly explained.

However, selecting cases is important to find a support for our model. Therefore in this study we will use *most similar system* in selecting the illustrative cases. In this method the possible factors that might affect the likelihood of conflict onset is controlled. This control will enable us to eliminate the possible factors that might affect the onset of conflict. As Lijphart (1975) stated "the comparative method can now be defined as the method of testing hypothesized empirical relationships among variables on the basis of the same logic that guides the statistical method, but in which the cases are selected in such a way as to maximize the variance of the independent variables and to minimize the variance of the control variables" (p. 164).

The cases in this analysis control a number of conventional onset factors such as the level of ethnic heterogeneity, whether the groups/state are politically centralized or decentralized state, geographical conditions, whether they experienced conflict before and the share of primary commodity and natural resources within that state's economy. The possible reasons for controlling these factors are explained in the following sections.

5.1. The Level of Ethnic Heterogeneity

The level of ethnic heterogeneity has been set forth as an important indicator of civil war onset. Many have argued that (Caselli and Coleman II, 2012; Easterly and Levine, 1997; La Porta et al., 1999; Montalvo and Reynal- Querol, 2004; Sambanis, 2001) ethnic fractionalization increases the likelihood of conflict onset and duration. The possible underlying factors for having this relationship are explained through various different causal mechanisms. One of them is through explaining the impact of ethnic diversity and fragmentation on the economic performance of the state. As Montolvo and Reynal-Querol (2004) stated "The political instability caused by potential ethnic conflicts has a negative impact on investment and, indirectly on growth" (p.769). This indirect growth, hence, lead government to experience a weak economic state and an opportunity for groups to increase tension. Secondly some of the scholars explain "in

heterogeneous societies the diffusion of technological innovations is more difficult, especially when there is ethnic conflict among groups in a country" (Montolvo and Reynal-Querol, 2004, p.769). Therefore, along with the lack of economic growth, ethnic fractionalization leads the society to have difficulties to distribute the technological innovations.

Ethnic Fractionalization
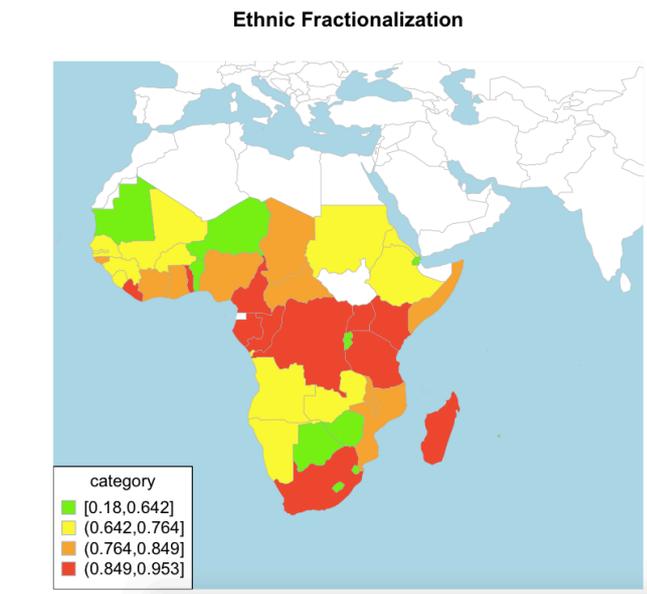
Figure 9 Ethnic Fractionalization Levels (Fearon, 2003)

Cultural Fractionalization
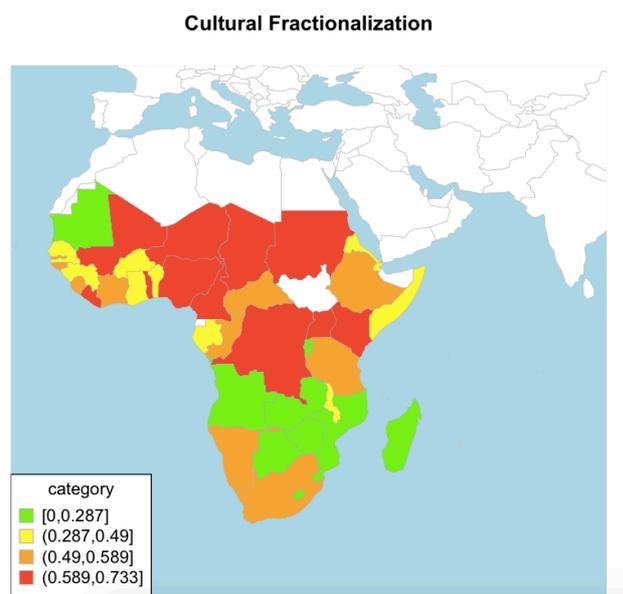
Figure 10 Cultural Fractionalization Levels (Fearon, 2003)

Along with this wide and significant literature the ethnic fractionalization level whether, these different groups are polarized is an important factor to control. Therefore, in selecting the sample, we will check the level of ethnic fractionalization of

the countries. Fearon's significant study Ethnic and Cultural Diversity by Country (2003) provides both of the measures indicate ethnic fractionalization and cultural diversity. Therefore, we will control for the countries, which have the same level of ethnic fractionalization. Figure 9 and 10 indicate the levels of ethnic fractionalization and cultural diversity calculated according to Fearon's data. As a result the countries indicated with red have the highest values of ethnic and cultural heterogeneity. On the other hand, the countries that are homogenous are indicated with green.

5.2. Level of Political Centralization

Economic development literature deals with the effect of political institutions on economic growth and wellbeing. This significant body of work emphasizes the importance of political institutions and states that the economic development and strength of the economic institutions depends on the political institutions (Acemoğlu and Robinson, 2006).

Along with these studies, some scholars (Osafo-Kwaako and Robinson, 2013; Englebert, 2000; Michalapoulos and Papaioannou, 2012; Gennaioli abd Rainer, 2007, Mamdani, 2002; Blanton et al, 2000) examine the effect of political institutions on economic development in Africa. Some of them (Blanton et al, 2000; Mamdani, 2002) introduce the detrimental effect of colonial rules and some studies (Osafo-Kwaako and Robinson, 2013; Englebert, 2000; Michalapoulos and Papaioannou, 2012; Gennaioli and Rainer, 2007) introduced that actually the pre-colonial era has an affect on the current economic development of the African states.

The studies point out political centralization as the main political institutions for the development of a state. The underlying mechanism between political centralization and development is the stable regime which centralized system provides. If a country is governed by a centralized state in the past, this leads the government and political system to be stable and sustainable. This stable environment leads to the establishment of economic institutions, which are also designed to be stable and sustainable. As Englebert (2000) states, "varying levels of legitimacy, in turn, create diverse sets of constraints to the power of political elites" (p. 14). These constraints on the power hence lead for unstable governance that weakens economic conditions. Therefore the political system with centralized governance will lead the society to be governed better compared to decentralized chiefdoms. Englebert (2000) also points that in decentralized political systems "elites are more likely to resort to neo-patrimonial than developmental

policies, not least because the former are less likely to entail difficult distributional decisions and trade-offs of present to future consumption that they can ill afford" (p.14).

Addition to the stability arguments, Gennaioli and Rainer (2007) introduce "local accountability" as an explanation for the influence of political centralization on economic development. According to this study, "pre-colonial centralization fostered public goods provision by improving the ability of colonial and postcolonial African states to control local chiefs" (Gennaioli and Rainer, 2007, p.3). This ability to control is also another significant way to establish or remain sustainable economic development.

According to these underlying mechanisms I will control whether African states have decentralized or centralized governance in pre-colonial era. This will help us to fix the effect underdevelopment due to the political system in the pre-colonial era[5]. Also to control the political centralization will indirectly help to fix the effect of economic development on civil war onset. I will use the Standard Cross-Cultural Sample (SCCS) in order to determine the political centralization in the pre-colonial era.

This dataset contains 186 cultures and their ethnographic characteristics. This immense dataset, created by George Peter Murdock and Douglas E. White, shed light on the pre-colonial groups lives in Africa. The political centralization of the current countries (the groups) is examined by measuring whether there is a "jurisdictional hierarchy beyond the local community" (Osafo-Kwaako and Robinson, 2013) or not. This variable contains 5 categories such as: "no political authority beyond community, petty chiefdoms, larger chiefdoms, states and large states" (Osafo-Kwaako and Robinson, 2013). Some countries however contain more than one group that have different political centralization. Therefore we try to capture the overall level of political centralization by calculating the mean of these different groups within a country.

According to the Table 1 the most centralized countries are Uganda and Togo, which have institutionalized state level polities. On the other hand, in Cameroon, Namibia and Kenya are the countries, which do not host politically centralized groups the pre-colonial era.

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[5] This variable might have correlation with economic interdependency. The more centralized states might have power to impose certain production schemes. On the other hand when the groups have no political institutionalization, they might prefer the best and productive scheme which will increase the variation in production amongst these groups. Since arguments in the literatuture relates political centralization and its impact on economic development we suggested to control this issue as well.

Table 1 Level of Political Centralization of Pre-Colonial African Countries – SCCS Dataset[6]

Country Name	Level of Political Centralization
Cameroon	0
Kenya	0
Namibia	0
Tanzania	0.25
Algeria	0.5
Ghana	0.5
Eritrea	1
Niger	1
Sierra Leone	1
Chad	1
DRC	1.333333333
Sudan	1.333333333
Nigeria	1.666666667
Ethiopia	1.75
Angola	2
Mali	2
Mozambique	2
Senegal	2
Somali	2
South Sudan	2
Zambia	2.5
Togo	3
Uganda	3

5.3. Conflict Onset Before Independency of the African Countries

Whether a country experienced a civil war before is an important issue to consider and control. As Collier and Hoeffler (2004) argued in their seminal piece *Breaking the Conflict Trap* that "once a country has stumbled into conflict powerful forces – the conflict trap – tend to lock into a syndrome of further conflict" (p.54). This strong claim is derived due to a possible vicious cycle that might stick country in when a conflict occurs. The reverse development of country and low levels of economic wellbeing

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[6] The overall political centralization levels of countries are calculated by taking the mean of the centralization level of the groups. The 5 categories are weighted as follows: no political authority beyond community, -1; petty chiefdoms, 1; larger chiefdoms, 2; states, 3 and large states, 4.

might lead to have a weaker state and more furious individuals. This weak position of the government will make the country more prone to experience a civil war again.

For this reason, while choosing the sample we will check whether the country had experienced a civil war before. In order to control this factor se will use Peter Brecke's data that catalogues the conflicts starting from 1400 to 1990s. I will control whether any of the African States have experienced civil war before their independences –mostly before 1960-. The data contains around 700 civil conflicts in Africa for the years between 1400-1990 and the number of civil wars (both civil wars with intervention and non-intervention)[7].

5.4. The prevalence of *cash crop* and *natural resources* in the local economy

In particular, the existence of natural resources within a country is counted as one of the significant factors for civil war onset, duration and termination (Collier and Hoeffler, 2004; De Soysa, 2000; 2002; Homer-Dixon, 1999; Ross, 2004). The existences of natural resources, such as minerals, oil or diamonds are counted as a main source for greed or grievance among the society. However, the literature offers different causal mechanisms for the effect of prevalence of natural resources. Homer-Dixon (1999) mentions that the scarcity of natural resources is one of the main problems for the civil conflict. The deficiency in natural resources leads individuals to have grievances towards the ones who maintain resources. This line of thought therefore leads individuals to oppose. Additional to the grievance theory, some argue that the abundance of natural resources is the main cause of civil wars (Ross, 2004). This richness is equal to lootable goods, which leads the rebels gain financial opportunities to create conflict.

As a result of these two different underlying causes for civil war onset, the prevalence of natural resources and non-renewable resources is important for the tension among groups. Henceforth, while choosing the cases I will control the level of ratio of both cash crops and natural resources within the state.

For measuring the prevalence of natural resources and cash crops, the dataset presented by Collier and Hoeffler (2004) is used. The authors provide the share of the primary commodities in GDP for every five years starting from 1960 (which I base my control and Table 3 indicates).

Table 2 Number of Civil Wars pre-1960 – with and without a third party intervention – Peter Brecke's Conflict Catalogue (2012)

Country	Civil Wars (among groups)	Civil Wars (with intervention)	Ratio
Malawi	0	6	0.00
Mozambique	0	19	0.00
Niger	0	2	0.00
Togo	0	2	0.00
Mauritius	0	1	0.00
Burkina Faso	1	1	1.00
Mauritania	1	4	0.25
Rwanda	1	0	.
Somalia	1	1	1.0
Ivory Coast	1	10	0.10
Burundi	2	1	2.00
Cameroon	2	3	0.67
Comoros	2	1	2.00
Guinea	2	8	0.25
Senegal	2	9	0.22
Gambia	3	9	0.33
Sierra Leone	3	6	0.50
Djibouti	3	0	.
Madagascar	4	10	0.40
Zimbabwe	4	7	0.57
Kenya	6	13	0.46
Guinea-Bissau	6	8	0.75
Namibia	6	5	1.20
Uganda	7	3	2.33
Angola	8	38	0.21
Democratic Republic of the Congo	8	7	1.14
Benin	9	9	1.00
Mali	12	3	4.00
Ghana	13	25	0.52
Tanzania	14	17	0.82
Ethiopia	25	13	1.92
South Africa	28	17	1.65
Nigeria	34	11	3.09

Table 3 The Ratio of Primary Exports to GDP for the year 1960 (Collier and Hoeffler, 2004)

Country	Primary Exports/GDP	Country	Primary Exports/GDP
Algeria	.19	Kenya	.133
Angola	.202	Lesotho	.077
Benin	.044	Liberia	.448
Botswana	.	Malawi	.171
Burkina Fasso	.041	Mali	.
Burundi	.078	Mauritania	.33
Cameroon	.139	Mauritius	.281
Cape Verde	.039	Mozambique	.099
Central African Republic	.08	Namibia	.221
Chad	.09	Niger	.036
Comoros	.	Nigeria	.123
Congo	.116	Rwanda	.11
Djibouti	.02	Senegal	.154
Dominican Republic	.114	Sierra Leone	.09
Ethiopia	.091	Somalia	.126
Gabon	.381	South Africa	.08
Gambia	.34	Sudan	.131
Ghana	.138	Tanzania	.192
Guinea	.109	Togo	.139
Guinea-Bissau	.039	Uganda	.156
Ivory Coast	.287	Zaire	.076

5.5. The Cases: Tanzania and the Democratic Republic of Congo

According to these controls countries the Democratic Republic of Congo and Tanzania is evaluated. From these countries the focus of the study is the groups Hema and Lendu from the Democratic Republic of Congo and Arusha and Meru from Tanzania.

When control variables are examined, both Tanzania and the Democratic Republic of Congo can be considered as two cases that have the similar characteristics. The ethnic heterogeneity measures for Tanzania, and the Democratic Republic of Congo are the highest among the Sub-Saharan African countries. The ethnic heterogeneity measure of Tanzania is 0.953, which indicates Tanzania as the most fractionalized country in Africa. Similarly, the measure of ethnic heterogeneity for DRC is 0,.33. The cultural fractionalization measures for these countries are also similar.

Therefore by checking these measures we are able to eliminate the claim that ethnic heterogeneity causes civil war onset.

Table 4 Summary of the controlled variables for Tanzania and the DRC

	Ethnic Heterogeneity	Previously Civil Conflict	Cash Crops and Natural Resources	Political Centralization	Civil War
DRC	YES	YES	Around 10%	Mixed	YES
Tanzania	YES	YES	Around 20%	Mixed	NO

Along with the ethnic diversity, I also control whether the countries were engaged in conflicts previously due to the conflict trap argument. According to Brecke's data Tanzania and the Democratic Republic of Congo have similar trends on previous conflicts. They have also experienced conflicts with the third parties –can be named as the colonizers-. Therefore by evaluating this measure lead to eliminate the possible conflict trap argument.

Table 5 Political Centralization Levels of Pre-Colonial Tanzania and the DRC – SCCS Dataset

Group	Political Centralization	Country
Mbuti	No political authority	DRC
Nkundo Mongo	Larger Chiefdom	DRC
Suku	States	DRC
Hadza	No political authority	Tanzania
Luguru	No political authority	Tanzania
Masai	Petty Chiefdom	Tanzania
Nyakyusa	Larger Chiefdom	Tanzania

When the level of political centralization in pre-colonial era is examined, Tanzania and the Democratic Republic of Congo include different groups with different political institutions. In other words, the countries have different groups with different political centralization levels. Both Tanzania and the Democratic Republic of Congo have state like entities and also have groups that are considered as tribes. Also, the share of primary commodities in GDP of Tanzania and DRC are both above 10%. Even they

have a gap in 1960 the level of the prevalence of cash crops and natural resources become similar in the later years.

As a result of case selection, the state level factors are controlled in order to eliminate some of the salient arguments presented in the civil war literature. Controlling these state level factors enable us to focus on group-level issues, which are introduced in the next section. The illustrative cases aim to explain colonization might have different consequences unlike the general literature argues specifically focusing on the groups in Tanzania and the Democratic Republic of Congo.

CHAPTER 6

HOW ECONOMIC INTERDEPENDENCY LEADS TO PEACE BETWEEN GROUPS: AN ILLUSTRATIVE CASE ANALYSIS ON TANZANIA AND THE DEMOCRATIC REPUBLIC OF CONGO (DRC)

6.1. Tanzania and Economic Interdependence Between Groups

Tanzania is among only few countries in Africa that have not experienced civil conflict after their independence from European colonizers. The country specifics of Tanzania does not diverge from the other countries evidently, thus the general arguments about the onset of civil conflict do not clearly explain why Tanzania is one of the rare cases in Africa which did not experience civil conflict.

Tanzania is located in the Great Lakes region of the eastern part of Africa with a coast to the Indian Ocean. In the late 1800s Imperial Germany colonized Tanganyika; however, after World War I the rule of Tanganyika and Zanzibar switched to British rule. Tanganyika, the mainland of Tanzania, gained its independence in 1961 and Zanzibar gained its independence in 1963 from British rule. After 1964 these two regions Tanganyika and Zanzibar merged, and the Republic of Tanzania is formed. Following the independence of Tanzania, the first democratic elections were held in the 1970s and until 1995 the country was ruled under one party rule.

Tanzania - Polity Score
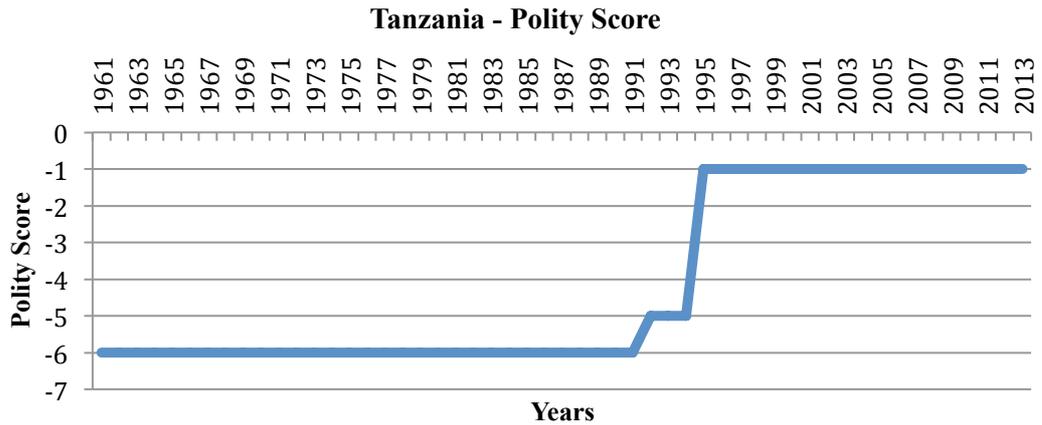
Figure 11 Polity Score of Tanzania years between 1961-2013, Polity IV

As has been stated previously, Tanzania is one of the most ethnically heterogeneous countries in Africa and is host to diverse cultures. Along with Fearon's measure for ethnic fractionalization, Malipula (2014) states that Tanzania embody approximately 120 ethnic groups.

Table 6 Politically ethnic groups in Tanzania (EPR, 2014)

Ethnic Groups in Tanzania	Size
Maasai	.013
Mainland Africans	.964
Shirazi (Zanzibar Africans)	.018
Zanzibar Arabs	.005

In the following sections we will introduce the economic relations of the groups *Arusha* and *Meru* and examine their political and economic relations, starting with the pre-colonial era. We will also examine the colonial period to illustrate the change in economic interactions between these groups and will conclude how they settled their economic and political relations.

6.1.1. Pre-Colonial Era

As stated earlier, the Republic of Tanzania was not formed prior to gaining its independence from colonial powers. Tanganyika and Zanzibar were independent

countries in the pre-colonial era. In explaining the effects of colonization and comparing them with the pre- and post-colonial eras we will only focus on the Tanganyika region of Tanzania. Zanzibar was an island-state and has controlled many trade routes starting in the pre-colonial era, to compare this region with the other African states would complicate the analysis[8].

In Tanganyika, the political structure was mostly based on kinship. "There were only a few societies with high community social formations that developed centralized state systems such as the Chagga, the Hehe, the Ngoni, the Gweno, the Nyamwezi, the Shambaa and the Sangu" (Malipula, p.57). The Standard Cross-Cultural Sample (SCCS, 1969) provides important information about the political centralization of Tanzania, which indicates that the groups in Tanzania had different centralization levels. Osafo-Kwaako and Robinson (2013) defined political centralization for pre-colonial groups, as whether any "jurisdictional hierarchy beyond local community" exists. According to this measure, the *Hadza* and *Luguru* are indicated as groups that have no political authority beyond community, whereas the *Masai* is counted as a petty chiefdom and the *Nyakyusa* as a larger chiefdom. These different levels of group centralization thus indicate that Tanzania hosts different levels of political order which led each group to different inclinations towards economic and security politics.

The local people in different regions of Tanganyika seized different production schemes and henceforth produce various amounts of crops and different means of production. Weaving, iron smelting, and salt were the other primary products of different regions of Tanzania and "each area contributed the specialty which helped to define its identity" (p. 19). Iliffe (1979) indicated this division in production as:

> Nyakyusa produced none of the staples but were expert mat-makers. Kisi fishermen exchanged their catch for the cattle from the plains of Usang. Tobacco was probably the most widely traded agricultural product; standardised packages from Usambra were reaching the coast by the early nineteenth century. (p. 19).

These different primary commodities produced in regions of Tanganyika present that the groups produce asymmetric endowments. Due to this various amount of primary commodity production, the trade in pre-colonial era had been a salient issue, which stabilized Tanganyika territories.

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[8] I will also use Tanganyika and Tanzania interchangeably.

Along with the general perspective on Tanganyika, the focus of the study is on the Arusha and the Meru, as distinct societies, which shared the same territory called Mount Meru located in the northeast of Tanganyika. The Meru were native settlers of Mount Meru, whereas the Arusha people colonized settlements of Mount Meru in pre-colonial years beginning with the 1850s[9].

Following their settlement in the Mount Meru area, the Arusha strengthened their role in production and trade schemes in the region. Arusha people "w[ere] but one of several similar oasis communities on the plains around Kilimanjaro – all of which played critical roles in the regional economy, raising crops and trading with pastoral Maasai- and they subsequently became crucial supply and trade centres for the caravan routes that developed in the later nineteenth century" (Spear, 1997, p.38). Arusha people developed intensive regional trade and caravan routes by producing various amount of products such as; maize, sorghum, millet, beans, bananas, tobacco also they made iron weapons and collected honey for trade livestock (Spear, 1997, p.38).

The Arusha expansion in agriculture and trade also lead them to spread their settlement in the region to fertile areas, which also included the settlement area of Meru people. Addition to this enlargement of Arusha people, deficiency in the level of trade between these two groups increased the tension with Meru people. Starting with 1851 Arusha people raided the cattle and captives of Meru people. "Arusha warriors started raiding Meru for cattle and women so that they could marry, clear the land, and farm it" (Spear, 1997, p. 54).

The pre-colonial relationship of the Arusha and the Meru is a very good illustration on how groups with symmetric endowments are more likely to engage in conflict. Both Meru and Arusha people were competing to get arable lands and had no interdependent production schemes in the pre-colonial times. This led these groups to choose not to trade and engage in conflict instead. In other words, the utility of waging conflict was higher than trading; hence, a peaceful settlement was less likely for the pre-colonial Arusha and Meru people.

Arusha and Meru people, therefore, can be indicated as two warring parties in the pre-colonial era. Fertile land was one of the issues escalating the tension in Mount Meru. Also the higher capabilities of Arusha people in military weapons were another

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[9] The possible reasons for the migration of Arusha people and the conditions how the existing conditions are established are important aspects to understand the relationship between the Arusha and Meru people. However the data availability about the Arusha and Meru people before 1800s is dearth. Therefore the previous conditions are not mentioned clearly.

issue that increased the ability of Arusha people to fight (Spear, 1997). As a result in the pre-colonial years the Arusha people were dominant over the Meru people and their economic relations led them to wage a conflict.

6.1.2. Colonial Era

The colonial era in Tanzania consists of two important periods: the German Colonization (1881-1920) and the British Colonization (1916-1961). Germans invaded Tanganyika in 1881. Rule of Tanzania changed after World War I, and became a League of Nations Mandate under the rule of Britain. Therefore, the structural analysis of these two periods will be significant for understanding colonizers' strategies on Tanzania and in particular on the relationship of Arusha and Meru people.

6.1.2.1. German Colonial period

The German colonization of Tanzania started in 1881 and lasted until the defeat of Germany in the First World War. Compared to British and French colonies, Germany seized different strategies in colonization in different aspects such as economic, political and cultural. These different approaches led Tanzania's socio-economic conditions to a different path compared to the other colonized African polities. In the following section I will focus on the general impact of German colonization on Tanganyika, and following this general overview, I will focus on the Arusha and Meru relations.

The Overall Impact of Colonization on Tanganyika

The colonization of Tanzania affected land policies and decreased the access of locals to arable lands. The local "settlers were forced to accept lower land around the bases of the mountains, rapidly ringing each with a chain of European farms and plantations" (Spear, 1997, p.88). Therefore Tanzanians were restricted to own or use the land. Iliffe (1979) indicated, "Africans owned only the land they cultivated, that they could not alienate land without the governor's approval, and that all other land was 'ownerless Crown Land' which only the government could distribute" (p.127). This new land policy resulted with constraints on the usage of land by the local people.

Along with the change in land policies, economic activities seized by the locals also started to change with the colonization. First of all transportation networks, such as railways through main markets, were developed. The east and the west of the country was connected with a railway and thus, the trade of the groups increased with parallel

with the change in the trade routes. The colonizers (Germans) in Tanganyika "banked on a mixture of settlers and plantation agriculture on the one hand and cash-crop oriented peasants on the other. As it is stated, "colonialism in both states weakened the role of bona-fide pre-colonial traditional economic systems and ethnic authorities; and superimposed new ones with colonial assigned non-ethnic political, cultural and social bases" (p.58). Iliffe (1979) illustrates this change by stating the following examples;

> Better transport extended markets and enabled large producers to oust small: the early twentieth century was prosperous time for Kisi potters. In 1904 a joint stock company took over the ancient brine springs at Uvinza and converted the salt dealers into porters. (p. 138)

One other consequence for the colonization was the mobilization of local people to newly established plantations of Germans. The change in production and improvement of transportation changed regions' economic strength and therefore the population started to migrate to the locations where the production was higher. Iliffe (1979) pointed that:

> …crucial determinants of labor migration were need for cash and the alternate means available for earning it. Bondei did not need to migrate because they could sell food to plantations, Ngindo because they could collect rubber, pastoral peoples because cattle were mobile. Once railway transport enabled them to market their crops, even Sukuma began to abandon migration. (p. 163)

The Impact of Colonization on the local people in the region Mount Meru

Along with the general consequences, the German Colonization also affected the economic relations of Arusha and Meru people. "The Germans attacks destroyed the power of warriors, eliminated the main Arusha and Meru leaders and delivered devastating blow to their economies" (Spear, 1997, p.75).

German invaders also forced the local people to join their plantations as labors and they also retained slaves for newly established plants. According to Spear (1997) "labour, then, certainly one reason for Meru and Arusha opposition to Europeans. Potential loss of land was probably another" (p.70). Most of the Arusha and Meru people were reluctant to work in German plantations. As a result, the Meru and Arusha people were mostly against to the invasion and their economic conditions were

worsened. However "crop slaves and wages also provided them with cash to rebuild their own herds devastated by conquest and disease" (Spear, 1997, pp.75-76).

Addition to the economic consequences of colonization on the Arusha and Meru, Germans also applied different governance strategies on these groups. On the one hand Germans chose leaders in Meru who "came initially from the ranks of local lineage or clan leaders" (Spear, 1997, p.82). On the other hand in Arusha "headmen were initially drawn from the ranks of local age-set spokesman chosen by their age-mates to mediate internal disputes" (Spear, 1997, p.82).

As a result German colonization based their strategies on "'solid regulated work', capitalist production for market, and authoritarian politics conflicted sharply with Arusha and Meru moral economies based on everyone's rights to sufficient land to support one's family, to the fruits of one's own labour, and to the exercise of social and political influence" (p.90). Therefore, even the established land policies created problems for the Arusha and Meru people they generated possible solutions.

6.1.2.2. British Colonial Period

After the World War I, British Colonization took over the rule of Tanzania. This period hence, is also important to understand how the economic relations among the society had been changed.

Britain was one of the most influential colonizers in Africa. Before Britain took over the rule of Tanganyika, it had colonized many significant countries such as Kenya, Uganda, Malawi, Sudan etc. Tanzania compared to Britain's other colonies, was the colonization with few significant products. For Tanzania this "implies greater limitations that stood the way of the kind of large scale economic transformations seen in formal colonies such as South Rhodesia and Kenya" (Malipula, p.59). Also accordingly this decreased the level of intervention and attention of Britain on economic and political rules in Tanzania. Therefore, the effectiveness of British led the strategies of groups in Tanzania to differ. Spear (1997) indicated that, "the initial differences between German and British colonialism were not great, partly because the two entertained similar colonial goals and partly because the British simply sought to carry on, in their best common law tradition, what the Germans had already started" (p.109). British colonizers also did not change the governance style of the Arusha and Meru. "In placed like Meru the Germans and the British sought to employ pre-existing chiefly

institutions, but in societies like Arusha, where there had been no chiefs, they created them" (Spear, 1997, pp. 111-112).

The land issues between the locals and British Colonizers also continued. The British rule aimed to expand the plantations whereas the Arusha and Meru people sought to expand the areas for production. Spear (1997) pointed out that, "the Germans made Meru one of their primary settlement areas and first fastened the 'iron ring' of land alienation around the base of the mountain; the British maintained and extended German policy in spite of increasing evidence of land shortage and extreme political pressure from Meru and Arusha for land" (pp. 175-176). Therefore, in this period the land issues which was one of the main problems between the Arusha and Meru continued to be a problem but with the change to another party.

The conflict in the land policies therefore directed Arusha and Meru people to pursue different strategies. According to Spear (1997), Arusha and Meru people "could work for wages on the European estates then being developed around the base of Mount Meru, as they had before their own fortunes recovered in 1907; they could move onto the plains; or they could seek to increase their own yields to support more people on the mountain itself" (p.123). When the land alienation policies, and the increase in the population regarded, among these tactics these two local groups seized to move other plains and to intensify their agricultural production.

The colonization affected the Arusha and Meru's economies by alienating them from the arable land of Mount Meru. The land policies of both German and British Colonizers therefore, diverted the attention of Arusha and Meru people, from their competition on land to find a place to sustain their production and living. Therefore the colonization in this case did not conclude with monoculturization of the groups' production, but diversification. At the end of the day, the colonization had an impact on Arusha and Meru to increase their interdependence level and to sustain their peace.

6.1.3. Post Colonial Era

In 1961, Tanzania gained its independence from the British rule. After its independence, Tanzanian officials launched an official settlement scheme in 1963 and their independence resulted in 1967 with the Arusha Declaration. Along with these improvements Ujamaa Villages Act was enacted in 1975. These developments led Tanzania to have important economical rules seized after the colonial rule.

Subsequently to the newly established policies, the independence in Tanzania did not led the country to experience any civil war.

The Ujamaa Villages Act was an important issue that enabled Tanzania to have relatively different economic improvements and non-violent post-colonial era. "Official figures reveal that out of approximately 5000 villages established by January 1974, only about 400, or roughly 8 per cent, had advanced to the third state of ujamaa development, generally defined as the point at which collective farming would begin to assume major economic importance and the village would, as a consequence, be entitled to register itself legally as a co-operative society" (p.451). Even if the following policies of Arusha Declaration was unsuccessful in being sustainable, the attempt to solve land problem at the very beginning of independence contrary to fighting for it, indicates one of the prominent reasons for Tanzania's peaceful settlement.

If specifically the Arusha and Meru people, are examined their economic relations had been changed with the colonization period. While these two groups were conflicting in the pre-colonial era, post-colonization witnessed the establishment of a well working economic relation between the two. On the one hand "Meru put their emphasis on expanding banana and coffee cultivation that provides the mainstay of the area's agriculture today, while Arusha tended to rely more on mixed farming of annual crops and cattle, shifting to a greater reliance on bananas and coffee only in the 1950s and 1960s" (p.118). Therefore, this diversification in production led these two groups to be interdependent with each other. Therefore in particular for these groups the land alienation policies of colonizers led them to focus on their own production and find the best and coherent way to sustain their lives. As a result, these two conflicting parties who endowed symmetric productions and land changed their production scheme with an exogenous shock and remained in peace afterwards.

6.2. The Democratic Republic of Congo and Economic Relationship among groups

The Democratic Republic of Congo (DRC) is an African country, which is located in Central Africa and also has a border to Great Lakes Region. Unlike Tanzania, the Democratic Republic of Congo experienced many violent civil wars, after their independence from Belgium. But specifically I will focus on the civil war called *Ituri Conflict*.

Belgian colonizers invaded todays Democratic Republic of Congo in 1908 and the Congolese people gained their independence in 1960. Following the independence,

Joseph Mobutu declared his presidency with seizing a coup in 1965. After his 32 years of dominance in political arena, with the migration of Rwandan and Burundi people to Congo in 1994, Laurent Kabila challenged Mobutu's dominance with the help of Rwanda and Uganda. However this change was also challenged and in 1998 and the government was toppled down in 2001 with the assassination of Kabila.
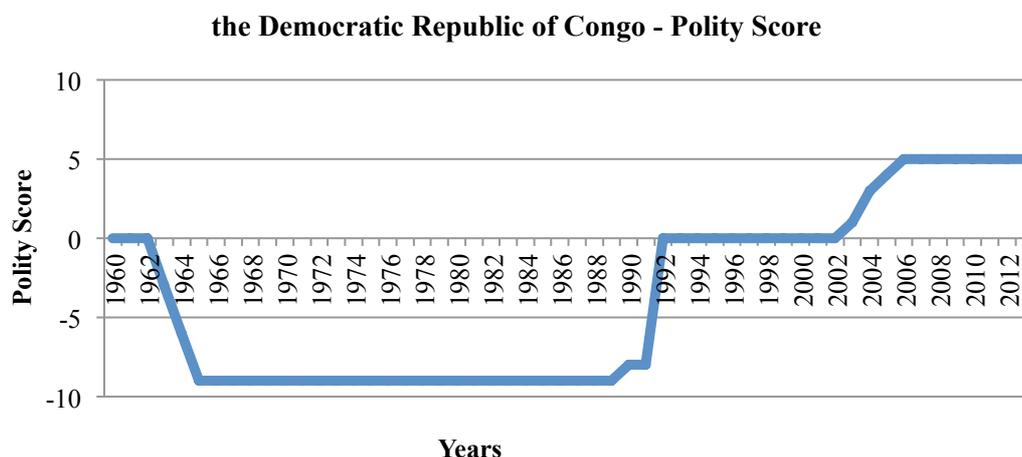
the Democratic Republic of Congo - Polity Score

Figure 12 Polity Score of the Democratic Republic of Congo years between 1963-2012[10] - Polity IV

These sudden changes and challenges in the governance of Tanzania indicate how fragile and unsustainable the polity of the DRC is. Following these conflicts within DRC, "a transnational government was set up in July 2003; it held a successful constitutional referendum in December 2005 and elections for the presidency, National Assembly, and provincial legislature took place in 2006"[11].

Table 7 List of Civil Wars Parties in the Democratic Republic of Congo after 1960 (PRIO/Armed Conflict Dataset)

Waring Party 1	Warring Party 2	Year	Intensity
Congo (Zaire)	State of Katanga	1960-62	0
Congo (Zaire)	Independent Mining State of South Kasai	1960-62	0
Congo (Zaire)	CNL	1964-65	1
Congo (Zaire)	Opposition militias	1967	1
Congo (Zaire)	FLNC	1977-78	1
Congo (Zaire)	AFDL, Rwanda	1996	1
Congo (Zaire)	AFDL, Angola, Rwanda,	1997	1

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[10] The polity score between 1992 and 2002 is not provided due to the çivil war in Democratic Republic of Congo.
[11] This quotation is retrieved from the CIA factbook,
https://www.cia.gov/library/publications/the-world-factbook/geos/print_cg.html

	Uganda		
Congo (Zaire),Angola, Chad, Namibia, Zimbabwe	MLC, RCD, Rwanda, Uganda	1998	1
Congo (Zaire), Angola, Chad, Namibia, Zimbabwe	MLC, RCD, RCD–ML, Rwanda, Uganda	1999-01	1
Congo (Zaire)	CNDP	2006-08	1
Congo (Zaire)	BDK	2007-08	0

DRC's level of ethnic heterogeneity is similar to that of Tanzania's. According to Fearon's measure, Democratic Republic of Congo has the second most various amounts of ethnic groups. The cultural diversity is also slightly higher compared to Tanzania; DRC's cultural heterogeneity level is measured 0.628, whereas Tanzania's cultural heterogeneity is measured as 0.564. Also the Table 9 indicates that the DRC is consists from different ethnic and cultural groups.

Table 8 List of Politically Active Ethnic Groups in the Democratic Republic of Congo (EPR, 2014)

Ethnic Group in Congo	Size
Azande-Mangbetu cluster	.07
Bakongo	.103
Luba Kasai	.07
Luba Shaba	.05
Lulua	.05
Lunda-Yeke	.056
Mbandja	.04
Mongo	.16
Ngbaka	.02
Ngbandi	.02
Other Kivu groups	.05
Tetela-Kusu	.08
Tutsi-Banyamulenge	.02

Even if the DRC shares the similar characteristics with Tanzania, which are indicated in the literature as the possible causes for civil war onset, the Democratic Republic of Congo unlike Tanzania experienced many intense and bloody conflicts. In

order to understand the underlying causal mechanism I will specifically focus on the groups Hema and Lendu who experienced the Ituri Conflict. In the following sections I will introduce the economic and political relations between Hema and Lendu tribes and explain the onset of conflict, which occurred following the independence of the Democratic Republic of Congo.

6.2.1. Pre-Colonial Era

The pre-colonial era of the Democratic Republic of Congo is important to understand the current political and economic system. As stated previously, the DRC is one of the countries that hosted various amounts of ethnic groups. Addition to this variety, the political centralization levels of pre-colonial institutions also diversified in the DRC. Brecke's data about the pre-colonial groups indicates the polities in DRC and their political centralization level. Accordingly the *Mbuti* is one of the groups, which have no political authority beyond community, whereas the *Nkundo Mongo* is a large chiefdom and *Suku* is remarked as a state (Osafa-Kwaako and Robinson, 2013). Along with these major tribes in DRC the Hema and Lendu groups also seized different political systems. "The social organization of the Lendu, who lived in dispersed clan settlements was in strong contrast to that of Hema society, which had a clearly developed authority structure" (Vlassenroot and Raemaekers, 2004, p.388).

In pre-colonial times the DRC experienced migration flows, which is specified as one of the prominent factors in their ethnically and culturally divided society. In particular, "the Bantu speaking groups contributed more than any group to shaping Congo's remarkable cultural heritage" (Gondola, 2002, p.23). Therefore, starting from the pre-colonial period the Democratic Republic of Congo contains many diverged groups.

Hema and Lendu tribes in particular are the two significant ethnic groups within the Ituri region. Hema tribe is located in the Ituri region and the ones live in the north of Ituri spoke Lendu, whereas there are Hemas that speak Bantu language.

Along with the ethnic and cultural diversity between Hema and Lendu tribes, their economic affiliations were also different in the pre-colonial time. According to the sources, "the Hemas, who are pastoralists, came to the district from the east in the seventeenth or eighteenth century, while the Lendus, who are agriculturalists, are regarded as its earliest occupants. For several centuries, the two tribes had a peaceful but unequal relationship" (Virculon, 2010, p.210).

As a result, Hema and Lendu tribes in pre-colonial era maintained their existence by sharing different aspects of the local economy. Each of the tribes were interested in different modes of production. The asymmetry in their endowment levels led them to increase their utility for trade and hence waging war became more costly. As the formal model indicated groups with asymmetric endowments encounter with lower levels of risk to fight.

6.2.2. Colonial Era

Belgian colonizers invaded Democratic Republic of Congo in 1870s. In order to settle the natives, Belgians seized two different strategies. First of all, they decided to remove the Hema king and "regroup the local ethnic communities into separate administrative centers, thus giving the Lendu the right to self-rule" (Vlassenroot and Raemaekers, 2004, p. 389). This strategy benefitted the Lendu tribe and caused problems for Hemas.

Secondly, Belgians introduced "a system of land registration and private ownership" (Vlassenroot and Raemaekers, p. 389) as another policy for settling the Hema and Lendu tribes. This was an important attempt because the land tenure in the DRC was significant for having equal opportunity to produce and trade similar to the land policies in Tanzania. However, with the change in land tenure by Belgian colonizers, the equal opportunity for production and trade has been prohibited. Only the groups, which the colonizers permitted, were able to gain access to produce agricultural goods. As Vlassenroot and Raemaekers (2004) stated "land was the guiding motive of the first eruption of violence" (p.392). Along with the enactment of law policies and the change in political rule "led to the emergence of a rural capitalism and the creation of a Hema farming elite" (Vircoulon, p.210).

The re-cultivating policy is also another salient change, which was imposed by the Belgium Colonizers. The Belgium colonization imposed a compulsory change in the production schemes of Congolese tribes and forced them to produce cotton. Rösler (1997) indicated that Ituri forest became the "cotton zone of the North" (p.49).

As a result of Belgium colonization of Democratic Republic of Congo, politic and economic relations had been changed drastically. The changes in the land and cultivation policies are however the main causes for the following Ituri conflict. These major changes led the interdependent Hema and Lendu tribes to challenge each other for producing the pre-defined products. The unequal redistribution of the productive land and to impose different production schemes, unlike in Tanzania, led Hema and

Lendu tribes to nurse grievances to each other. These changes forced by the colonizers in the peaceful pre-colonial era hence led the two economically interdependent countries to monoculturize, which increased their tendency to engage in conflict.

6.2.3. Post-Colonial Era

In 1999, the tension between Hema and Lendu tribes converted into a violent civil conflict in DRC. The war also spilled onto the neighboring countries. These different battles lasted as one big conflict that pulls down the Democratic Republic of Congo into big problems, which started to be solved, after the end of Ituri Conflict in 2003. This so called ethnic conflict "resulted in about 50000 deaths and the displacement of about 50000 people" (Vircoulon, p. 209).

When the enacted land policies in colonization period and economic and politic relations of Hema and Lendu tribes in pre-colonization time is examined, Vlassenroot and Raemaekers (2004) concluded that "the outbreak of violence in Ituri is the result of the exploitation, by local and regional actors, of a deeply rooted local conflict over access to land, economic opportunity and political power" (p. 387). Therefore the shift of the endowment from asymmetric to symmetric can be considered as a major source for the conflict onset.

The two cases Arusha-Meru and Hema-Lendu very good illustrates the model we presented to indicate colonization as an exogenous shock on distribution of endowments affects the likelihood of conflict. These two diverging examples are introducing salient issues to examine further the interdependency argument in-group level of analysis. Along with the introduction of group-level analysis, tracing the historical background of these groups by evaluating the pre-colonial era and post-colonial era together is salient for showing the change in economic relations clearly caused by the exogenous shock. Using natural experiment, hence, provides a clear pathway to examine the effect of colonization.

CHAPTER 7

CONCLUSION

This study attempted to clarify mainly two points raised in civil war onset literature. First of all, the study aims to test the dyadic group level analysis for explaining conflict onset. By introducing the decision theoretic model, we conclude that the distribution of endowments, which affects the level of interdependence, has an impact on the willingness and costs of waging war. When two groups have interdependent economies, they will be less likely to engage in war. On the contrary, when the groups have symmetric endowments, due to the decrease in the utility of trade, the likelihood of engaging war escalates.

This study also aimed to explain the role of colonization on conflict onset. In doing so, the study has proposed that colonization, as being the establishment and exploitation of African territories starting with the beginning of 19th century, exogenously affected the economic relations between groups who reside in the same region. The influence of colonization on the economic relations of these groups, however, is different. As in the cases of Arusha-Meru and Hema-Lendu, the relations between groups changed differently. Therefore, this study challenges the literature, which propose colonization as a cause on civil war onset, by indicating that colonization had different impacts on economic relations among different groups. This change in economic relations is the main factor for civil war onset. To propose colonization as one of the main reasons of civil conflict, therefore, is challenged and concomitant to this study, the proposed argument needs further research in order to understand the impact on civil conflict onset.

Besides extending this study by evaluating other African cases, re-defining the *exogenous shock* concept is an appropriate way to generalize the relation of economic

interdependency and civil war onset. For instance, the industrial revolution can be defined as another kind of exogenous shock, which might have an impact on the economic relations in agricultural societies due to the sudden increase in the demand of cash crops, especially cotton. This effect, thus, can be examined to understand how conflicts or peaceful relations arise in these regions after the industrial revolution. Like the example of industrial revolution, exogenous shock types can be varied and this will enable us to generalize the cases and understand whether the economic relations and relative deprivation is a major factor on civil war onset.

Relevant policy recommendations derived from this study include land policies in Africa. As Diop (2013) indicated, Africa is " home to 202 million hectares or half the world's total holdings of useable uncultivated fertile land, that problem is accentuated by extremely low agricultural productivity, high rates of unemployment and inequality". Therefore, finding sustainable and fertile land policies, which also regards equal opportunity for the individuals to be a part of the production are the prominent issues to ameliorate the economic conditions. When these land issues are solved, the probability of engaging war will decrease.

Even scholars agree that land policies are prior to be revised in Africa for decreasing conflict onset and intensity; the offered policy recommendation on land tenure varies. Some studies (Dorner, 1972; Harrison, 1987) argue that the indigenous land rights systems created constraints on the agricultural development, hence affected the current conflicts in Africa. On the other hand, some (Cohen, 1980; Boserup, 1981; Noronha, 1985; Bruce, 1988) argue that the land systems enacted in pre-colonial times were salient in increasing the agricultural production. These contradictory arguments arise due to different perceptions of Africans and Europeans on land. Therefore, before presenting possible land policies for African countries, understanding their perception on land is important.

Unlike the Europeans, land in Africa is perceived as "the base for agricultural activities in the predominantly agrarian societies in African continent" (Obioha, 2013, p.208). This perception is the key for communal land policies in Africa. Land in Africa is not considered as a product but a common area, which is the crucial element for production. Colonization of African continent, on the other hand, is the inception for the individualization of land. The raid of European colonizers and establishment of their own plantations by eliminating the locals from agricultural production increased problems on land issues. Therefore in current policies to regard the difference in

perception of land is the primary issue to apprehend. Therefore, to establish land polices regarding the indigenous land tenure is an important step to enact land policies.

In a recent study by World Bank (2013) argued that the use of communal land is a significant way for improving the production of African societies, which might also have an impact on the decrease in civil conflict onset. Since in the communal land system the authorized group is clearly defined and there are rules "specifying their rights and obligations with respect to the land and its resources" (Migot-Adhola et al, 1991, p. 159), the land tenure might ameliorate the agricultural land production by increasing the opportunity of people to produce and regulate the production schemes. The indigenous land tenure is important for increasing the opportunity to use the arable lands because without individualizing the land, many groups can be authorized. The regulation of the production schemes is also another salient issue for the benefits of communal land tenure. Since this type of land governance clarifies the rules and regulations of land users, the production schemes will also adjusted according to the authorized groups and demand. This will restrict the land users to produce different crops and due to the previously enacted programs groups will be interdependent to each other.

As a result, in order to decrease both the number and intensity of conflicts in Africa, land possesses a huge impact. The land tenure system, and proper production schemes are current debates, which aim to be improved by policy makers. Also this study concludes that in order to advance economic relations and increase interdependency, land tenure system should be changed from individualized to indigenous land tenure system.

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