IS CONFLICT ADDITIONAL STRUCTURAL OBSTACLE FOR LEAST DEVELOPED COUNTRIES?

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Conflict is highly interlinked with low development, and thus imposes huge development challenges for least developed countries. However, it remains unclear whether conflict is a result of bad policy or a structural impediment to growth which is the main characteristic of the least developed countries. We examine the differences between conflict and peaceful least developed countries, and show that some of the least developed country indicators, particularly those related to human assets, are clearly linked with the conflict indicators. Analysis of individual conflict-affected least developed countries reveals that indicators on human assets improve after the peace is restored, while economic vulnerability reaches its peak prior to the conflict outbreak. As additional direct impact of conflict on human capital, an increase in dependency ratios due to conflict has so far not been captured by the indicators determining the least developed countries. We argue that, while the conflict may not be a structural factor, but a high dependency ratio due to conflicts could be a structural obstacle to growth, an additional structural characteristic of conflict-affected least developed countries.

Keywords: Conflict, Least Developed Countries, Human Asset, Dependency Ratio

JFL: F51, F63, I15, I25, O1, O2

1. Least Developed Countries in Conflict

Least Developed Country Category (LDCs)is the only country group that is recognized by the United Nations and draws special support measures from the international community. As of mid-2017, there are 48 countries in the LDC category. Equatorial Guinea graduated on 4 June 2017, and is included in the analysis of the present paper as an LDC. LDCs are characterized by a low income level and structural impediments to growth. For identifying countries as LDCs, three criteria are used: gross national income (GNI) per capita, and

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the structural handicaps in two categories, namely, high economic vulnerability and low human resources. Structural impediments can act like a trap to economic growth, exposing LDCs to a high risk of remaining low income countries in the long run.

Many LDCs face additional challenges by going through periods of conflict that had devastating impacts on their growth. Since 1991, two thirds of LDCs have experienced armed conflict. Based on UN Committee for Development Policy (CDP) and Uppsala Conflict Data Program (UCDP) data, the LDCs that experienced conflict since 1991 are Afghanistan, Angola, Bangladesh, Burundi, Cambodia, Central African Republic, Chad, Comoros, Democratic Republic of the Congo, Djibouti, Eritrea, Ethiopia, Guinea, Guinea-Bissau, Haiti, Laos, Lesotho, Liberia, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Rwanda, Senegal, Sierra Leone, Somalia, South Sudan, Sudan, Uganda, and Yemen. Generally, conflict affected countries score worse on the LDC indicators as opposed to their peaceful counterparts. Average GNI per capita of peaceful LDCs is 2.6 times higher than that of conflict affected LDCs. While economic vulnerability is not significantly different between conflict and non-conflict countries, human capital is 1.4 times higher on average in peaceful LDCs. Analysis of conflict-development cycle is important itself, but more so in the cases of LDCs, as they are the most vulnerable countries left behind.

Cost of war has been one of the most important topics in the literature. Evidence suggests that the costs are massive, not only in resources but also in human lives and infrastructure. Deaths and other health deteriorations are either a direct result of combat or indirect impacts through the spread of diseases and mal-functioning health care. Health care highly depends on good infrastructure as well as smoothly running supply chains. In the long run, post-conflict recovery can induce as many deaths as direct battle situations because of the severe destruction of infrastructure (Chen et al. 2008).

The budgetary transfer to non-productive sectors acts as an obstacle to economic growth. In an attempt to increase their military expenditures, governments reallocate budget from other productive sectors. Moreover, inequality may rise because of reduced social spending. Cuts in education, health care or pension schemes leave especially the non-wealthy economically worse of.

On the other hand, lack of development can act as a trigger for conflict, particularly in the case of civil wars. Fearon (2003) argues that poverty is a key determinant for conflict outbreak. A high poverty rate marks financially and bureaucratically weak states. According to Collier and Hoeffler (2004), a stable economy increases the opportunity cost for young men to join a rebel movement. Unemployed men have nothing to lose by joining an insurgent group. Yet the authors argue that rebellion can be triggered by various grievances, such as ethnic or religious fractionalization, political and legal exclusion as well as inequality. By means of the Gini coefficient, Collier and Hoeffler measure inequality within societies and found that in pre-conflict episodes it is slightly higher than during stable periods of peace. They conclude that poverty alone does not trigger conflicts but only when economic hardship is compared to others with more wealth. In line of that argument, Grossmann (1991) assumes that the potential reward after a conflict has to exceed the relative costs of a rebellion to make it lucrative. In sum, low development can be a cause

and effect of conflicts, shifting countries into the so-called conflict trap: a vicious cycle of underdevelopment and conflict, each reinforcing the other.

The interlinkage between conflict and low development has been studied and discussed often at the UN to derive policy interventions (CDP 2005). The 2008 World Economic and Social Survey studied the link between conflict and economic development, emphasizing the impact of wars as "development in reverse" (UN 2009). Low levels of income, slow growth as well as weak diversified structures, so-called point-sourced economies, are the main drivers for conflicts. The effects of wars on household welfare are also clear. By taking the life's of young men in the working age, wars directly destroy human capital. Indirectly, wars affect future earnings because children are taken out of school to replace the lost workforce. In addition, households face tremendous medical cost from the injured and because diseases spread more easily. Anti-personnel mines ruin agricultural land. In the chaos of conflict, productive assets are being stolen or destroyed. To escape the violence, people flee their homes inducing massive migration movements. On a more macroeconomic level, conflict pushes many investors out of the region because of security concerns resulting in large-scale financial as well as human capital flight. Exports usually drop faster than imports because of afore mentioned reasons, negatively influencing the trade balance. These negative effects on human, financial and social capital lead to the so-called development in reverse, in which conflict is the main driver of a deteriorating economy.

Recognizing the interlinkages between conflict and development, the Agenda for Sustainable Development explicitly includes this issue as one of the 17 Sustainable Development Goals (SDGs). The SDG 16 states that, "High levels of armed violence and insecurity have a destructive impact on a country's development, affecting economic growth and often resulting in long standing grievances that can last for generations. Sexual violence, crime, exploitation and torture are also prevalent where there is conflict or no rule of law, and countries must take measures to protect those who are most at risk. The SDGs aim to significantly reduce all forms of violence, and work with governments and communities to find lasting solutions to conflict and insecurity. Strengthening the rule of law and promoting human rights is key to this process, as is reducing the flow of illicit arms and strengthening the participation of developing countries in the institutions of global governance (UN 2015)."Besides a call for arms control and timely international interventions, peace education has been also repeatedly highlighted by the UN to help building stronger and more transparent institutions for the future.

If the conflict trap is another obstacle to overcome for developing countries, there is a need to find when and in what way developing countries, particularly LDCs, are affected by conflict and address the question whether conflict is a structural handicap to development. Cortez and Kim (2012) studied this issue and the cross-section analysis suggested that it is unclear that conflict is a structural factor or a result of bad policies.

Building on the existing research, the present paper reviews the interlinked effects of conflict and low development, but focuses on the indicators that determine the LDCs. We aim to address these questions: Does low development impose structural weaknesses

to LDCs that could eventually lead to the outbreak of a conflict? Or is conflict itself a structural impediment to development in LDCs? If so, what are the possible channels? In section two, peaceful and conflict affected LDCs are compared along the average difference in means of the LDC indicators. In section three, changes over time are being analyzed. In section 4, we consider possible channel of impacts of conflicts as a structural impediment. Section 5 concludes.

2. Differences between peaceful and conflict affected LDCs

We analysed the average differences between conflict and non-conflict LDCs. If conflict affects countries by imposing a structural impediment to growth, conflict affected countries should score worse on the LDC indicators. We use the LDC indicator database compiled by the UN Department of Economic and Social Affairs (DESA). It includes data for each year from the 1970 to 2015 for all countries, showing a total of 9,216 observations.

As mentioned above, the LDCs are identified by three criteria: GNI per capita, the Economic Vulnerability Index (EVI), and Human Asset Index (HAI). GNI per capita summarizes all value generated by domestic producers plus product taxes not included and net receipts from primary income from abroad. GNI not only measures income but also available resources for a country.

The EVI measures the vulnerability to economic and environmental shocks. Its sub-indicators are population size, remoteness as in terms of distance to world markets, merchandise export concentration, share of agriculture, hunting, forestry and fishing, share of population in low elevated coastal zones, instability of exports of goods and services, victims of natural disasters and instability of agricultural production. The converted index scores from 0 to 100, high values marking high vulnerability to exogenous shocks.

The HAI measures available human capital. It consists of four sub-indicators; under-five mortality rate, percentage of population undernourished, gross secondary school enrolment ratio and adult literacy rate. Again, the converted index scores from 0 to 100, low values indicating low available human capita. A low HAI is a structural impediment because it limits the possibilities for economic growth and production (CDP 2015).

Regarding the conflict related indicator, we use the definition and data provided by the Uppsala Conflict Data Programm (UCDP 2016). The UCDP defines conflict as: "a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths (Themnnér and Wallensteen 2014)."

In order to avoid a bias from minor conflicts, we only included intrastate wars that counted more than 1,000 cumulative battle deaths over the course of the conflict. As a robustness check, parts of the analysis are run additionally with an alternative proxy for conflict, namely number of battle deaths also based on UCDP data.

A case selection should not be based on the dependent variable because it can bias statistical findings to a degree where one does not find a relationship even when there actually is one (Geddes 2003). To prevent this kind of selection bias, four group scenarios are included in this part: LDCs that experienced conflict, peaceful LDCs, non-LDCs that

experienced conflict and peaceful non-LDCs. This study will analyse the years between 1991 and 2015, to avoid bias caused by intrastate wars triggered by the cold war. Countries that experienced any conflict as defined by the UCDP between 1991 and 2015 are grouped into the conflict affected countries.

By looking at the average means of the LDC indicators, both LDCs and non-LDCs show similar trends between peaceful and conflict affected countries across all indicators. However, their means vary strongly between conflict and non-conflict situations. The following section shows the average of mean of over 24 years and does not consider time-dynamic changes.

As expected, peaceful countries tend to have a significantly higher GNI per capita compared to countries in conflict, for both LDCs and non-LDCs (table1). Even though a low income is a premise for the LDC status itself, peaceful LDCs have an average GNI per capita of $946.3during 1991-2015 which is 2.3 times higher than conflict affected LDCs ($407.9). Not surprisingly, non-LDCs in conflict have a lower income level ($3,063) than peaceful non-LDCs have ($13,522.3).

Table 1: Selected statistics of GNI per capita, EVI and HAI for LDCs and Conflict affected countries, 1991–2015

Criteria	Country group	Mean	25th percentile	Median	75th percentile
GNI per capita	LDC, conflict	407.9	197.8	294.0	458.7
	LDC, non-conflict	946.3	368.1	552.2	916.2
	Non-LDC, conflict	3,063.0	458.0	1,037.0	2,467.0
	Non-LDC, non-conflict	13,522.3	2,263.2	5,328.0	20,227.5
	Total	7,506.7	530.5	1,669.6	6,409.8
EVI	LDC, conflict	40.3	33.5	37.7	45.1
	LDC, non-conflict	45.5	37.2	41.9	50.8
	Non-LDC, conflict	25.8	22.0	23.1	28.6
	Non-LDC, non-conflict	35.2	26.1	32.7	42.3
	Total	34.6	23.7	32.7	42.4
HAI	LDC, conflict	32.2	16.5	32.0	43.9
	LDC, non-conflict	43.1	27.0	40.8	55.5
	Non-LDC, conflict	70.3	53.0	71.1	86.4
	Non-LDC, non-conflict	85.7	79.1	90.9	96.8
	Total	67.1	48.2	71.4	91.0

The average difference in mean of the EVI between conflict and non-conflict LDCs suggests that LDCs in conflict are less vulnerable: LDCs in conflict have an average EVI score of 40.3 while peaceful LDCs show an average value of 45.5. This counter-intuitive result is driven by the small Islands states from the non-conflict group. Small Islands are more exposed to natural disasters and other exogenous shocks that hinder development. Yet, they are rarely affected by conflict. Typical conflict causes, such as ethnic or religious cleavages, being landlocked, resource curses, high population density etc. are not present

in small islands. The sub-indicators of the EVI confirm the explanation; only population size, population in low elevated coastal zones and natural disaster drive the high EVI score. The average population value for conflict-free LDCs lies at 50 while the average value for conflict affected LDCs is 25. Similarly, LDCs in conflict have a low value of 6 for the share of population in low elevated coastal zones while peaceful LDCs show a higher vulnerability with an average of 18. Island states are scarcely populated and more exposed to natural disasters such as floods and earth quakes compared to their continental counterparts.

A high HAI value indicates progressive human capital. Not surprisingly, non-conflict LDCs have more human resources available with an average HAI score of 43.1 as opposed to conflict affected LDCs with an average of 32.2. Looking at the sub-indicators of the HAI, the findings are consistent with those from the EVI. The share of undernourished population, for example, is bigger for conflict affected LDCs with a value of 38 while peaceful countries score up to 55.

The correlation matrix shows that there is a negative relationship between economic vulnerability and conflict, confirming the previous findings (Table 2). A high economic vulnerability is not necessarily associated with a higher risk of conflict. This finding does not indicate that there is no causal relationship between economic vulnerability and conflict. It simply suggests that some of the most vulnerable countries did not experience conflict. The correlation might be driven by the sub-indicator, size of the population. The lower the population size, the lower the likelihood of conflict.

The HAI and all its sub-indicators show a significant negative correlation to conflict, meaning that countries with more human capital show less occurrences of conflict (Table 3). In all instances the battle death proxy shows a highly similar correlation.

In sum, the statistical analysis has shown that conflict affected countries have a lower GNI on average, indicating that conflicts dampens economic activity. Nevertheless, peaceful countries show a stronger economic vulnerability. This result is blurred by small island states that are typically vulnerable to natural disasters and population shocks but rarely experience conflict. Human capital is significantly lower in all conflict driven countries.

Table 2: Correlation between conflict and EVI indicators

	Conflict	**Battle Deaths**
EVI	−0.84**	−0.84**
Population Size	−0.88***	−0.86***
Remoteness	−0.33	−0.31
Export Concentration	−0.51	−0.51
Share of Agriculture	0.43	0.39
Low elev. coastal zone	−0.35	−0.38
Export Instability	−0.47	−0.49
Agricultural Instability	−0.63	−0.61
Victims Natural Disasters	0.57	0.57

Note: * $p < 0.1$; **$p < 0.05$; ***$p < 0.01$

Table 3:   Correlation between conflict and HAI indicators

	Conflict	**Battle Deaths**
HAI	−0.98***	−0.99***
Under-5 Mortality	−0.98***	−0.98***
Share undernourished Population	−0.96**	−0.95**
Adult Literacy Rate	−0.94**	−0.94**
Gross Secondary School Enrolment Rate	−0.97**	−0.97**

*Note: * $p < 0.1$; **$p < 0.05$; ***$p < 0.01$*

3. Evidence from time series data

It is important to note that none of the countries experienced conflict at the same time or for the same duration. As a second step we explore how conflict changes the LDC indicators in a more dynamic setting. We clustered all LDCs non-LDCs into two groups. To detect a potential pattern in change over time in pre- and post-conflict situations, we analysed the time-series data of each conflict affected country separately. For this part we only included countries that experienced at least 1,000 battle related deaths during the course of the whole conflict. While we present only a few cases to highlight the findings in the present paper, results for all LDCs in conflict or post-conflict can be obtained from the authors.

The main finding on HAI is that countries improve a lot after conflict ends. Figure 1 illustrates the trend of HAI over time for LDCs (green line), non-LDCs (blue line), and Liberia (red line). The outbreak of conflict is marked by the vertical black line and the end of a conflict by the dashed line. Clearly the average HAI score is much higher for non-LDCs than LDCs, and Liberia, where a conflict started in 2002 and ended in 2003, showed lower HAI scores compared to the LDCs average. After 2003, the HAI improved fast and approached the LDC average.
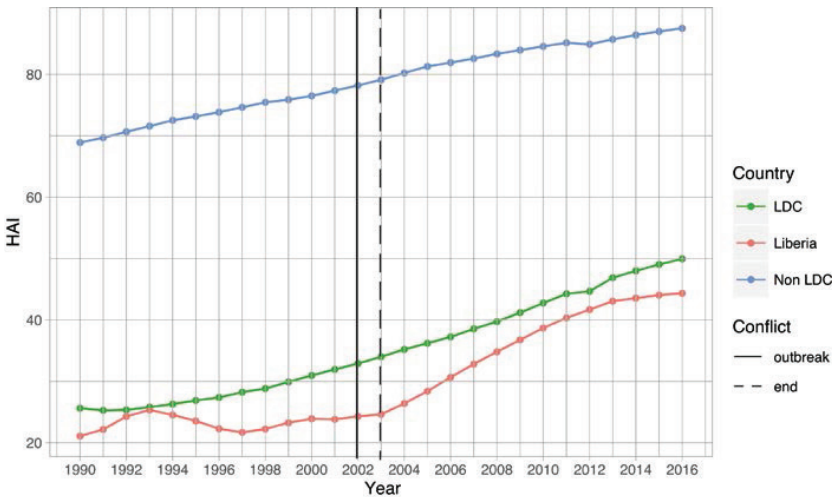

Figure 1: HAI over time, Liberia

The case of Cambodia shows that during longer periods of conflict HAI scores were not able to improve significantly (Figure 2). After the conflict ended in 1998, HAI scores recovered steadily during post-conflict setting. Rwanda shows a similar trend: HAI remained very low during the conflict, and improved fast after 2002 (Figure 3). The upward trend of HAI in Rwanda was not disturbed by the short conflict period of 2009–2012. HAI sub-indicators show similar trends overall.
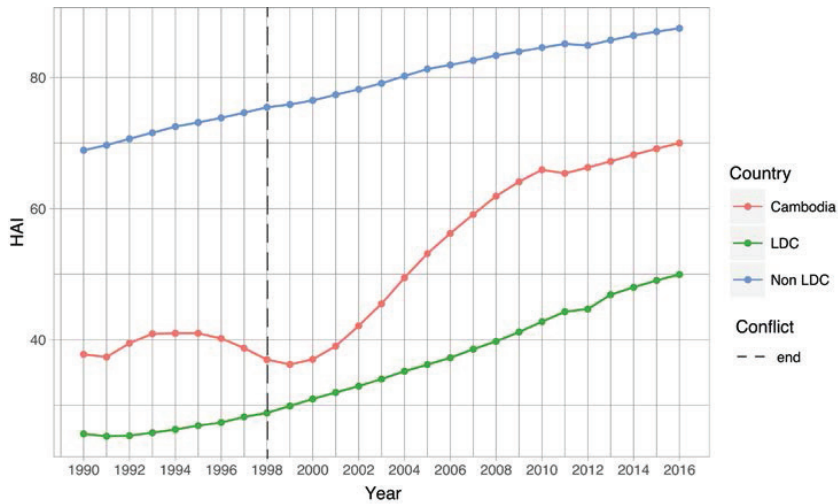

Figure 2: HAI over time, Cambodia
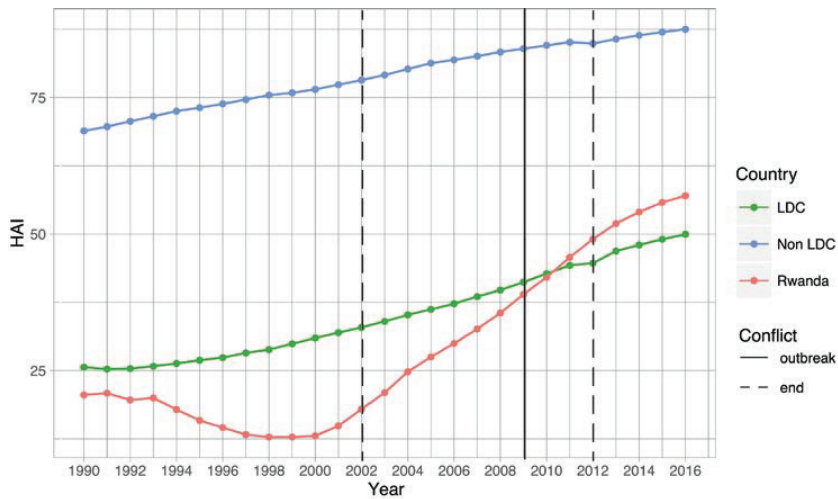
Figure 3: HAI over time, Rwanda

The EVI reveals diverse patterns among its sub-indicators and between pre- and post-conflict situations. Figure 4 describes that the economic vulnerability appears to increase before a conflict breaks out with skyrocketing negative records in Liberia. Also Yemen showed a long period of high economic vulnerability before conflict outbreak (Figure 5). This is worthy of being mentioned because both examples used to experience lower vulnerability than average LDCs.
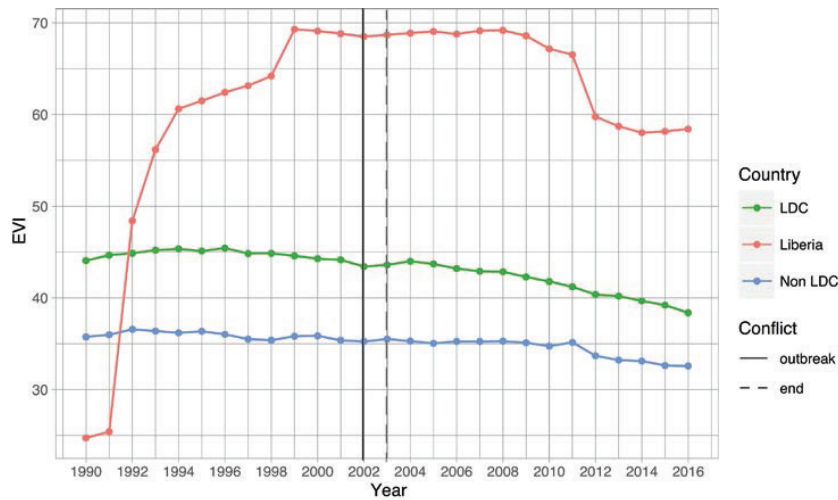

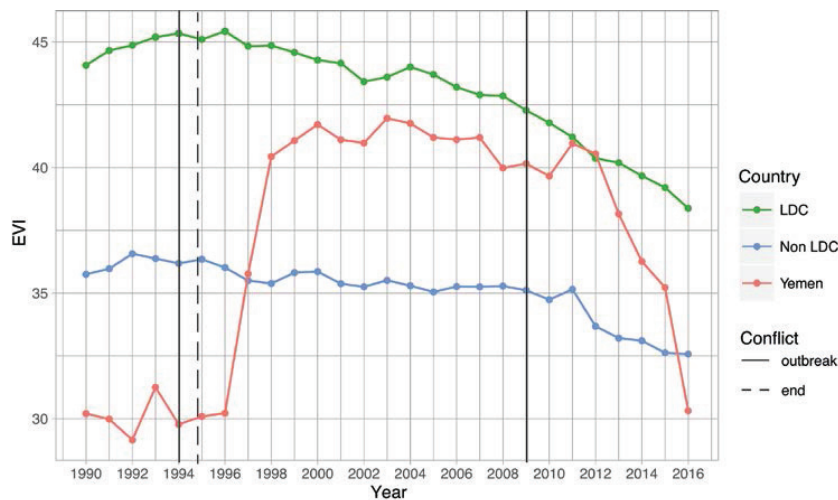**Figure 4:** EVI over time, Liberia

Figure 5: EVI over time, Yemen

Export and agriculture related indicators drive the results shown above. Export concentration and instability both significantly changed prior to conflict. The case of Liberia illustrates this trend (Figure 6). Export instability seems to come with increased agricultural production, as shown in the agricultural measures (Figures 7–9).
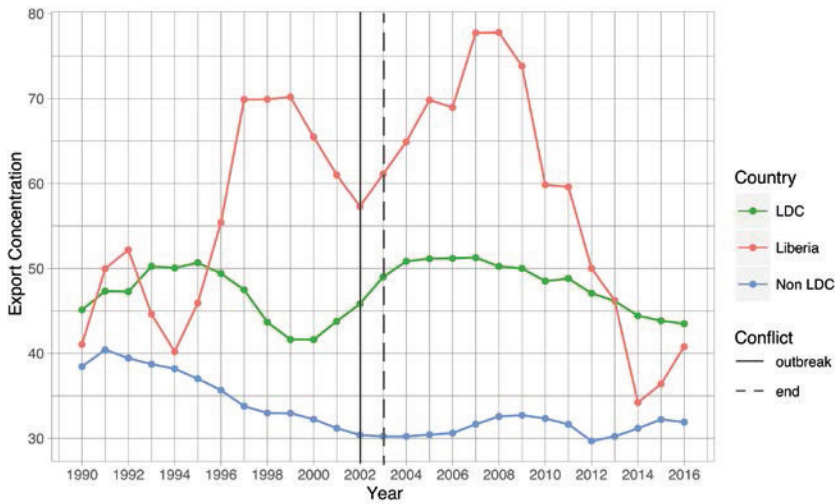

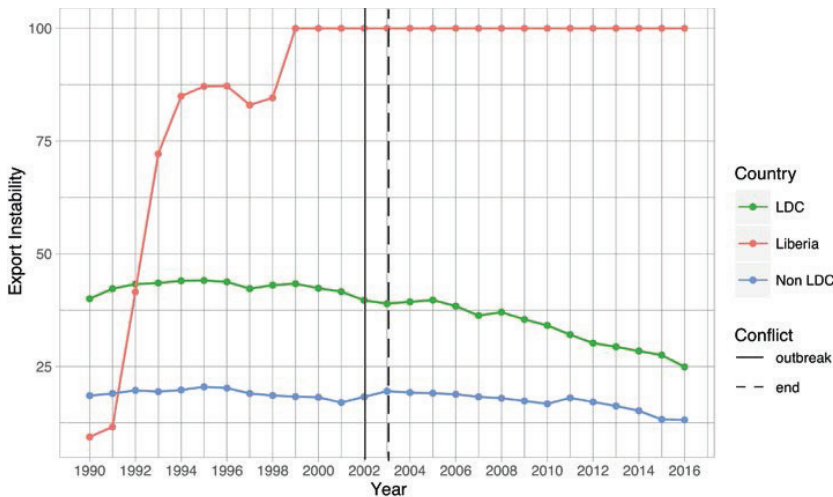**Figure 6:** Export concentration over time, Liberia

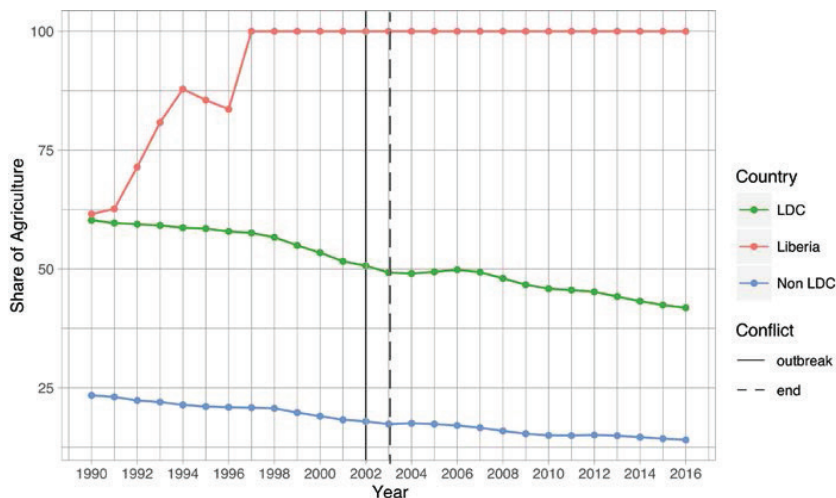**Figure 7:** Export instability over time, Liberia

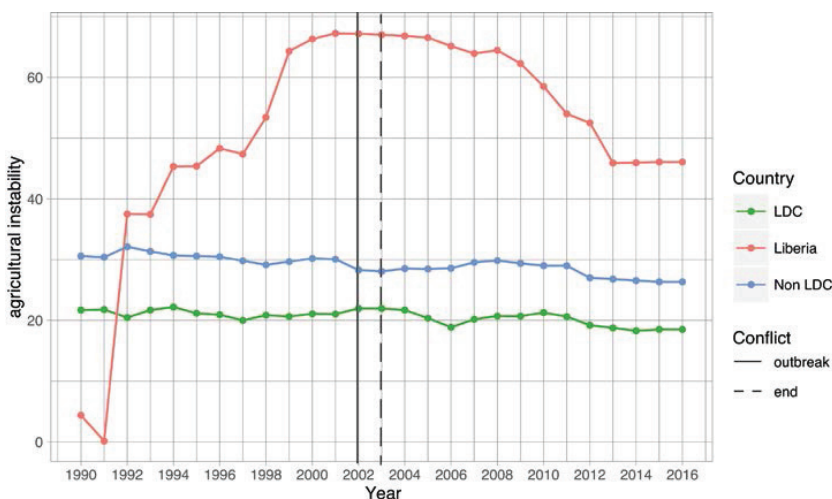**Figure 8:** Share of Agriculture over time, Liberia

Figure 9: Agricultural instability over time, Liberia

There is no clear pattern for post-conflict situations in relation to economic vulnerabilities. As shown above, Liberia and Yemen's EVI and the related sub-indicators do not, or only marginally, recover in post-conflict settings as opposed to the trend in HAI. On the other hand, Cambodia and Rwanda show cases where the vulnerability significantly drops after the end of conflict (Figures 10 and 11). This could be related to more wisely invested support measures. Generally, greatly varying support measures pose a challenge to comparability of LDC indicator trends.

In sum, the analysis shows that economic vulnerability is likely to increase before a conflict brakes out. The result is driven by export and agricultural related factors. Human asset, on the other hand, is destructed by conflict. The indicators decrease after the outbreak of violence but also recover relatively quickly in stable post-conflict situations.
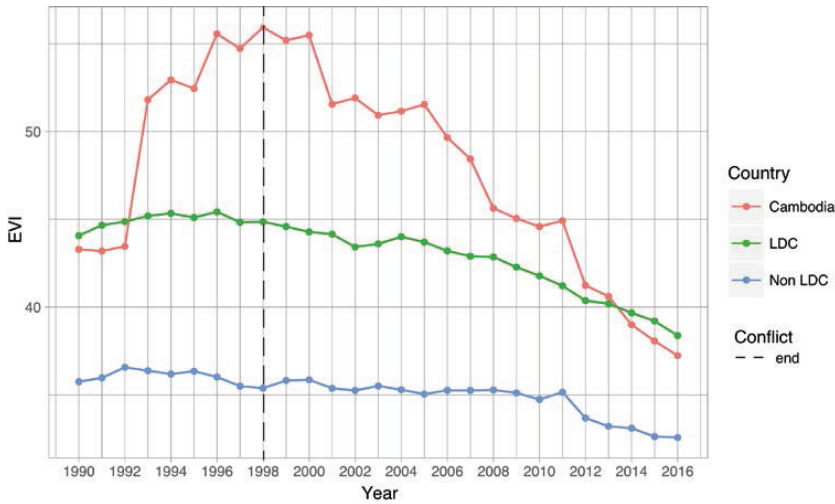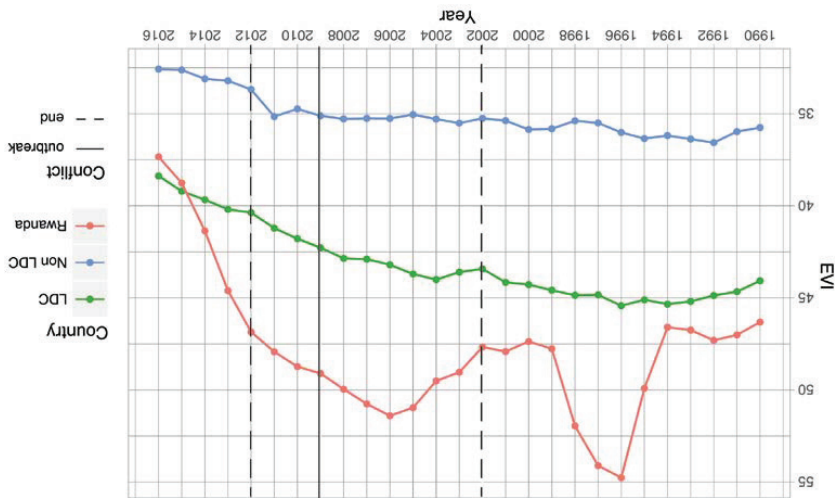
Figure 10: EVI over time, Cambodia

Figure 11: EVI overtime, Rwanda

4. Channels of impact through human assets

The costs of war can be split into direct and indirect costs. Direct costs are caused immediately by the effects of combat, such as destruction of property and infrastructure. They are called contemporaneous costs or impact costs and incur during the same period as the conflict. Indirect or accumulated costs are long-run costs and result in future loss during post-conflict situations (Gardeazabal 2012).

Li and Wen (2005) investigated the effects of armed conflict on adult mortality in a time-series cross-national study. The authors theorized that conflicts influence adult mortality through six mechanisms. First, as a direct result from combat, warfare causes people to die. The other five mechanisms are; destruction of the economy and of health-related facilities as well as crowding out of health-related investment, negative influence

on social cohesion and traumatic experiences. Their results show that intrastate wars have a much stronger immediate impact on adult mortality than interstate wars. Immediately after a conflict adult mortality of men is higher as opposed to women, meaning that more men die during combat. However, in the long run adult mortality of women seems to be equally affected by conflict through indirect mechanisms.

Chen et al. (2008) support this claim with cross-country data from countries in post-conflict situations. Another proxy, disaggregated male and female mortality, shows a similar trend. In post-conflict situations, male mortality displays a bigger drop than female mortality, meaning that most fatalities during war are men. These studies have shown how conflicts severely influence adult mortality and hence human capital. Particularly direct impacts on adult mortality seem to have devastating effects on human capital since it is usually the young men who fight in combat.

Chen et al. furthermore analyse the change in the dependency ratio. The dependency ratio implies the burden of the working-age population in relation to children and the elderly. For example, in situations where single women are the only caregiver of a household the dependency ratio is high. Less developed countries typically show higher birth rates. Larger families lead to higher (youth) dependency ratios. The World Bank (2016) notes that patterns of development in a country are partly determined by the age composition of the population. Infrastructure needs, resource use and environmental implications are influenced differently by varying age groups. Hence, the age structure of a population is useful for analyzing future policy and planning goals.

The World Bank (2016) defines the dependency ratio as following:

"Age dependency ratio is the ratio of dependents–people younger than 15 or older than 64–to the working-age population–those ages 15–64. Data are shown as the proportion of dependents per 100 working-age population."

Chen et al. split the dependency ratio into old and young age dependency ratio. The old age dependency ratio increases in absolute and relative terms after war. The young age dependency ratio, however, only in relative terms.

Leff (1969) argues that the part of a population out of the working age still contributes heavily to the expenditures of a family, leading to high consumption rates without contributing to productivity. This in turn has implications for a society's potential for savings. The author gives statistical support to the hypothesis that the more people are dependent on one income the lower the aggregated saving-rates. High dependency ratios account for the great disparity in aggregated savings rates between developed and underdeveloped countries. In the same line of argument, Feyrer (2007) explores the connection between workforce demographics and aggregate productivity. The study shows that a significant portion of the productivity gap between rich and poor countries is related to different demographic structures. Dependency ratios have important implications on the size and composition of the labour force. Considerable dependency ratios imply smaller labour forces, which in turn may have a negative effect on output growth (Vos 2008). Koegel (2005) demonstrates that larger youth dependency ratios have negative effects on factor productivity growth. In addition, a high youth dependency ratio will reduce aggregated savings. Then again,

declining aggregated savings will again reduce factor productivity growth. In a more recent study, Mason et al. (2016) confirm this argument and further explain how high dependency ratios in low income countries lead to poverty. The more children a family has, the lower is the per-child investment - leading to a less productive human capital stock. A too rapidly growing population might also impose problems on a society, since it is not easy to provide resources and jobs for everyone (Nations 2010).

Furthermore, young people are usually more creative and innovative, thus a society with a small share of young laborers typically lags behind with advances in technology. In addition, studies show that there is an age curve in productivity that peaks around the mid-forties and thereafter declines. High old-age dependency ratios thus dampen productivity and technological advancement. For the labour force, consumption is usually related to personal income. For young people it is usually the parents' income paying for their consumption. For old people it is their savings.

Gender imbalance might also affect economic productivity. Duponchel et al. (2015) show that in the agriculture sector the women's productivity is 20–30 per cent lower than that of men. The authors argue that time used for child care is a likely cause that gap.

In conclusion, various studies suggest a link between a high dependency ratio and stagnant economic development. The highest rates of youth-dependency ratios can be found in sub-Saharan Africa - the same region where most of the conflict-affected LDCs are located.

We suggest additional evidence of possible demographic factors that affects human capital accumulation during and post conflict. While stylized facts suggest that human asset is negatively influenced by conflict, the negative effect of conflict on human capital might not be fully grasped by the HAI. HAI measures mortality only for under-5 years old. Combatant deaths are not grasped by that measure. We argue that the death of many young men can be additional structural impediment to development due to the rise in the number of people dependent on one person's income.

Armed conflict forces particularly young men into direct battle as combatants. Many of them die, while many others end up with long term health issues. Women, children and old people are left behind. This has severe implications on the demographic composition of entire regions. Armed conflicts have two effects on the demographic balance of a society. Firstly, the dependency ratio increases, making more people dependent on one income. Secondly, by leaving more women behind a gender imbalance induces.

Children and old people are not part of the productive workforce. In LDCs women are typically less productive than men (Duponchel et al. 2015). If more people are dependent on one income, investment and saving rates decrease. Children and old people still contribute to the consumption of a family but since they do not generate their own income, the consumption has to be covered by fewer incomes. Less money for savings and future investments will be available. For example, a single mother with five children will have less means to invest into the education of all her children compared to an intact family with the same number of children. The single mother still has to dedicate her time looking after the children missing out being part of the productive workforce.

The outbreak of a conflict itself could be interpreted as a result of policy, not a structural factor. As argued above, however, the dependency ratio and the resulting low productivity which are driven by the conflict have clearly negative impacts on the development potential of a country. Therefore, the dependency ratio could be considered as additional structural obstacle that the LDCs need to overcome to achieve sustainable development.

5. Conclusion

In this paper we addressed the question whether conflict poses a structural impediment to development for LDCs. We examined LDCs in conflict and compared them to their peaceful counterparts. In the first part, the difference in mean analysis showed that GNI as well as human capital are lower in conflict affected countries. Economic vulnerability seemed worse in peaceful countries and the result is driven by peaceful small island countries that have small population size and high vulnerability towards natural disasters.

In a second step we analysed time-series data of all LDC indicators and looked at each conflict affected LDC separately. The data showed that HAI related indicators remain at low values during the conflict, and improve quickly in post-conflict situations. Economic vulnerability, on the other hand, seemed to increase prior to conflict outbreak. Examining the sub-indicators showed that mainly export and agricultural related indicators peak before a conflict breaks out.

The most obvious and direct impact of conflict on human assets are battle deaths of mainly young men. Young men are the pillar of the workforce in developing countries. Their deaths leave young mothers behind who need to take care and feed the whole family. More people dependent on one income results in higher dependency ratios. This in turn negatively affects economic development in various ways, such as decreasing savings and productivity.

LDC indicators do not grab demographic related measures besides total population size. We showed that conflict could act as an impediment to economic development by increasing the dependency ratio. Hence, it might be time to evaluate the function of demographic imbalances and the change in them to include into the LDC indicators.

The channel of impact related to economic vulnerabilities that peak prior to conflict outbreak is unclear, and should be subject of further research. The findings suggest more targeted support measures for conflict affected countries. Countries that managed to lower their vulnerability in post-conflict conditions might serve as a good example of well targeted support measures. Other countries such as Burundi, Liberia, Sierra Leone and many more still struggle to lower their economic vulnerability even though their conflicts have long ended. Knowing what areas were hit worst by conflicts allows putting together more targeted support measure package for conflict affected as well as post-conflict countries.

In addition, the knowledge allows to target support measures prior to conflict outbreaks in order to minimize the risk of conflict onset. If international support measures target volatile export and point-sourced economies it might the economy and eventually prevent conflict.

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