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# ASSESSING AND MEASURING THE IMPACT OF MULTINATIONALS ON PEACE

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**Abstract**


Since the advent of the second wave of globalization after WWII, Multinational Enterprises (MNEs) play an increasingly important role in countries where their affiliates and suppliers operate. This thesis analyses some of most important impacts at economic, social and environmental level that these non-state actors have in countries receiving foreign investment and provides a contribution over the debate on the MNEs and Peace nexus.

Given the considerable and diverse channels through which MNEs influence host countries, the first part of the thesis attempts to provide a comprehensive view upon the macro and the micro effects of MNEs' interventions on Economic development, Human Capital, Institutions and the Environment of recipient countries. Empirical findings do not provide conclusive and definitive results on the direction of MNEs implications over these structural dimensions of host countries. Rather, they underline the importance of conditioning factors at domestic level (e.g., absorptive capacity of domestic firms, level of development of financial markets, initial human capital stock) playing a mediating role in the potential negative or positive impacts of MNEs in host countries. A particular focus is given to Human Rights protection within Global Value Chains and the strategies so far put in place by these major actors in responding to the alarming human rights abuses and worsening working conditions along their supply chains.

The increasing anecdotal cases of MNEs implications in violent conflicts in emerging and developing countries and the lack of a universal consensus on the MNEs effects on both Negative and Positive Peace prompted a further analysis on the relation between MNEs and Peace. The second part of the thesis is therefore dedicated to the role of MNEs in Violent Conflicts and in Peace processes. The final part of the thesis assesses empirically the long-run relation existing between MNEs and Negative Peace, considering the stock of inward FDI (i.e., greenfield and M&A operations) per capita as the variable for foreign investment and the Global Peace Index (GPI) for the level of peacefulness (i.e., Negative Peace as in the Galtung definition of absence of violence or fear of violence). The results show that inward greenfield FDI and peacefulness are linked by a mutual, non-spurious, relation in the long run, whereas there is not significant relation in the short-run: a 10% increase in the stock of inward greenfield FDI per capita leads to an average 0.3-0.4% decrease in the Global Peace Index, i.e. an improvement of peacefulness at country level. However, a lower level of GPI also leads to a higher stock of inward greenfield FDI, implying a virtuous circle between the two.

## Table of Contents

## List of Figures

## List of Tables

# Introduction

Perpetual Peace is the endpoint of the hard journey his republics will take.

E. Kant, Perpetual Peace, 1795

The endpoint of Peace with more cohesive, just and resilient societies represents a grand challenge of today global governance, characterized by a multi-level structure where non-state actors play an increasing and critical role. Multinational enterprises (MNEs) embedded in global value chains and through their investments in developed and developing countries play a role not only on the developmental and institutional side but also, and even more importantly, on conflict and peace dynamics. This thesis reviews critically the debate on MNEs and Peace nexus and contributes to such a debate with the empirical implementation of models suitable to identify the type of relation between MNEs and Peace and the channels of influence in the short and long run between them.

In the last decades MNEs expanded their operations globally through (i) the active participation in global value chains and (ii) direct investments (or foreign direct investment, FDI). They are part, and in the majority of the cases they lead global value chains where all the phases of the production and consumption cycles are today organized at global level, according to specific motivations of cost minimization, access to specific markets, technologic spillovers and/or to overcome trade barriers. In recent decades, this led to a progressive fragmentation of the operations: design, production, marketing and distribution phases of MNEs are part of globalized value chains, in different part of the world with mixed results in terms of economic growth, sustainable development, human rights protection and, ultimately, conflict and peace in countries where they operate through their affiliates and suppliers. Moreover, given the increasing complexity of the international context in terms of relative peacefulness, MNEs engaged in international initiative may find themselves in situations where they confront triggering situations and might contribute directly or indirectly to violent conflict at local level with local communities or rebels, affecting the peacefulness of host countries.

The acclaimed implications of Multinationals in detrimental phenomena for the society as a whole, from corruption, environmental disasters to insecurity and conflicts in emerging and developing countries and deterioration of working conditions and human rights abuses also in advanced countries, prompted efforts to better understand the direct and indirect influence of MNEs operations in host countries from academics, policy makers and from business too. On the latter, a cohort of the most influential Multinational Enterprises from US have recently reconsidered its business model, dropping out the 'shareholder primacy' imperative, including, instead a commitment to all the stakeholders (i.e., customers, employees, suppliers, communities and shareholders) in light of their direct or indirect impacts on global societies and in particular where they operate through foreign investments (Business Roundtable 2019). Their position is the response to pressing calls from international organizations, civil society and human rights advocates for more sustainable and just models of production and consumption at global level.

Scholars of different academic branches, from business ethics to international studies and economics, started to study the linkages existing between MNEs, conflict and peace in order to deepen our understanding on the current role of those important non state actors in such globalized world and, most importantly, provide policy recommendations to minimize the potential direct or indirect negative impact on the level of peacefulness in host countries because of the presence of foreign operations. The multidisciplinary literature overview provided in this dissertation on the different angles through which MNEs may impact host countries sheds light on the complexity of this link. Empirical findings over the different channels through which MNEs may or may not impact host countries are not conclusive and, to some extent, divergent. Nevertheless, important elements of further analysis have emerged from the study of MNEs, their (ethical or not ethical) business models and relative foreign direct investment strategies.

Chapter 1 reviews theoretical and empirical findings over the direct and indirect impacts of trade and MNEs in recipient countries. The progressive trade liberalization and the implementation of economic reforms at country level favored the increase of foreign direct investments worldwide. From the late 1980s the inflow of FDI increased globally and, in particular, developing countries actively promoted inflow FDI for economic opportunities and development, under the assumption that economic upgrading led automatically to social upgrading.

FDI effects are difficult to disentangle and understand because of the different channels through which they operate and because of the difficulty to specify a counterfactual (Barba Navaretti and Venables 2004: 39). The effects of FDI in host countries are a source of debate and controversy, and literature on MNEs is characterized by a high degree of fragmentation. The fragmentation arises from the high level of heterogeneity that characterizes this field of study in terms of types of MNEs, types of FDI, sectors of investment, and effects on the host countries. Indeed, as affirmed by S.D. Cohen (2007), FDI and MNEs can be divided into so many distinct formats that they cannot conform either to a single model of behaviour or to a uniform checklist of effects in terms of impact on wage, productivity, market structure, GDP growth and welfare effects. Some academics agree that the net effect of FDI for the host countries is positive (Barba Navaretti and Venables 2004), others argue that the effects on the host countries are negative (e.g. FDI and GDP on Carkovic and Levine 2005). Recently a focus on the negative impact of MNEs in developing countries brought the attention to human rights abuses and the respect to social and environmental standards not only for MNEs *per se* but also for the industrial clusters related to the GVCs in developing countries (Giuliani 2014, Doorey 2011, Wettstein 2012a, Taplin 2014).

Different streams of literature look at the macro and micro level impacts of MNEs through FDI in recipient countries. Macroeconomic (FDI-growth nexus) and microeconomic (FDI linkages and spillovers) empirical studies underline that FDI has the potential to catalyze development, with final impacts contingent on several pre-existent and concurring context-specific factors (Pineli et al. 2019). The developmental and institutional impact of FDI relates to mediating factors that channel its occurrence and magnitude.

Empirical findings from macro-level studies analyzing the nexus between inward FDI and economic growth found a positive correlation between these variables, considering conditioning factors such as host country's absorptive capacity, human capital stock (Borensztein et al. 1998, Campos and Kinoshita 2002), the stage of financial development (Hermes et al. 2003, Azman-Saini et al. 2010b, Bekaert et al. 2011) and the level of institutions (Slesman et al. 2015, Alguacil et al. 2011). Other findings suggest positive impact of FDI irrespective of conditioning factors (Hansen and Rand 2006, Hsiao and Hsiao 2006) or totally divergent results (Herzer et al. 2018) with little support for the growth inducing effect of FDI in host countries.

Empirical findings from micro-level studies over the spillover effects of FDI on productivity, technology and human capital are also presented. On domestic aggregate productivity, the presence of foreign MNEs tends to be associated with its substantial improvements (Demena and van Bergeijk 2017). Recent studies considering domestic conditions such as the level of human capital and the quality of institutions have demonstrated the importance of these factors in stronger FDI spillover effects (Lin et al. 2011, Liu et al. 2016, Li and Tanna 2018). On the relation between FDI and Human capital formation in host country, several studies support the importance of domestic human capital in attracting foreign investment (Lucas 1990, Zhang and Markusen 1999, Dunning 1988). FDI inflow could contribute to domestic human capital development as in a virtuous cycle where human capital stock attracts foreign investments that, in turn, develop human capital through job creation, training and technical assistance, however this impact could be mediated by the type of sector and the absorptive capacity of domestic firms (Narula and Marin 2003).

On the relation between FDI and institutions, the majority of the literature focuses on how institutions attract inward FDI. Bailey (2018) in his meta-analysis synthetized the bulk of literature focusing on this and found that institutional factors such as political stability, democracy, and rule of law attract FDI. On the institutional impact of FDI in host country, inconclusive and diverging results arise from empirical research: for some, institutions are impacted by MNEs, for others there is not significance relevance of it (see Antonietti and Mondolo 2019, Demir 2016).

On environmental protection, literature suggests that multinationals can play a critical role in both environment deterioration (Stonich 1998, Cole 2004) and conservation (Cole 2004 on trade openness) in the same way as they can contribute (directly or indirectly) to human rights abuses within the global value chains or prevent them with effective Corporate Social Responsibility strategy. On this matter, empirical findings do not propose a universal agreement over the impacts of CSR initiatives although it seems that long term effects of CSR policies implementation may bring positive impact in relation to human rights protection and promotion (Fiaschi et al. 2014, Fiaschi et al. 2011, Fiaschi and Giuliani 2012).

The chapter 1 proposes then a literature overview over the role of business in conflict. Despite the lack of a universal agreement over the magnitude and the mechanisms of influence, the overview presents empirical findings over the different channels through which business (especially in some industries such as the extractive) may contribute to violent conflict. The linkages between multinationals and conflict have predominantly been studied in natural resources related business in host countries characterised by abundance of minerals and oil through the lens of the resource curse (Auty 1993, Collier and Hoeffler, 1998, Gilberthorpe and Papyrakis 2015, Sachs and Warner, 1995, 2001). To this regard a case study over the illicit traffic of conflict minerals from the Eastern Congo is presented. On other mechanisms, Frynas and Wood (2001) with the Angolan case, analyse the corruption methods adopted by MNEs that eroded the already weak state legitimacy, with negative impacts on the population in distress. Cases of Corporate criminal complicity have also been underlined as contributing to the perpetuation of violence (Van Baar et al. 2012).

In the last session of the chapter 1 a focus on the potential role of MNEs as peacebuilders is given to underline the different channels through witch these private organizations can contribute to peace building at internal and external level, preventing and/or lessening conflicts and their intensity and promote peace. USIP (2012) proposes a conceptual model with five areas where Multinationals can play a critical role in sustainable peace of the host countries in terms of i) economic activity, since the creation of economic opportunities and jobs in the area could decrease the potential for conflict in a divided society , ii) the adherence and respect of Rule of Law and international standards along the supply chain values, iii) corporate citizenship, through effective initiative of corporate social responsibility iv) Track Two Diplomacy with the adoption of Corporate Security Responsibility framework in conflict zones and

v) risk assessment and conflict sensitive analysis to mitigate the potential negative effects of MNEs operations in the areas.

Chapter 2 explores theoretical foundations and methodological approaches for Peace assessment and measurement, beneficial for the empirical modelling proposed in Chapter 3. Considerations over the concepts of Conflict, Violence, Armed Conflict, War and Peace are presented in a multidisciplinary perspective with the ultimate goal to better understand the methodological approach proposed by the Institute for Economics and Peace (IEP) in the definition of the Global Peace Index (GPI) and the Positive Peace Index (PPI), presented in the second part of the chapter. The GPI and PPI represent attempts to capture in a systemic way what Johan Galtung[1] defines as Negative and Positive Peace.

Negative Peace refers to the absence of organized, collective violence. As stated by Galtung, however, a system characterized by Negative Peace for years could be possible, but not necessarily desirable except for the absence of violence *per se*. This is due to the fact that a system with absence of violence but presence of 'severe forms of inequality, subservience and exploitation is [not] really fruitful' (Galtung 1967: 14). Peace is not only linked to the absence of violence, but, in its most comprehensive sense, embraces other factors, values conducive to a more just and equal society such as (i) Presence of cooperation, (ii) Freedom from fear (iii) Freedom from want (iv) Economic growth and development (v) Absence of exploitation (vi) Equality (vii) Justice (viii) Freedom of action (ix) Pluralism (x) Dynamism' (Galtung 1967: 14). This more comprehensive concept of Peace is defined Positive Peace. According to the definition of IEP, Positive Peace refers to the attitudes, institution and structures that lead to mutual cooperation and benefit and help society move away from violence.

The GPI captures the Negative Peace. This index is a composite indicator and represents a ranking of 163 countries and territories according to their relative states of negative peace over the period 2007-2019. It covers 99.7 per cent of the world's population. It allows an assessment of peace on a continuum – countries can be very peaceful, moderately peaceful and not very peaceful according to the GPI level measuring the state of peace. It is composed of 23 indicators pertaining 3 main domains: (i) Ongoing domestic and international conflict, (ii) Societal Safety and Security, (iii) Militarization. PPI covers 163 countries with time series from 2005 to 2017. It is composed of 24 indicators, organized in the 8 Pillars of Positive Peace, dimensions that are statistically relevant for Negative peace performances, namely: (i) Free Flow of Information, (ii) Equitable Distribution of Resources, (iii) Low Levels of Corruption, and (iv) Acceptance of the Rights of Others.

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[1] Johan Vincent Galtung is a Norwegian sociologist and mathematician. He is considered the father of the discipline of peace and conflict studies. He was the main founder of the Peace Research Institute Oslo (PRIO) in 1959.

Chapter 3 investigates the empirical relation between FDI and GPI to advance on the debate over the role of MNEs in conflict and peace dynamics. In particular, aim of the empirical study is to investigate whether attracting higher amounts of FDI induces a higher negative peace in a country. The study analyzes information on the value of (greenfield and M&A) inward FDI and their relation with data relative to the Global Peace Index for the period 2008-2017, using unit root and panel cointegration techniques to assess the short and long-run causality between inward FDI and Negative Peace. The results show that higher stocks of greenfield FDI per capita contribute to improve the level of peacefulness in a country in the long run. However, the results show that a higher level of peacefulness supports countries attracting more FDI, implying a relationship of mutual causality between the two variables considered.

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This dissertation is organized in three chapters accompanied by introductory and conclusive sessions. In the introductive session the relevance of the subject object of analysis – the impact of MNEs on Peace - is presented.

Chapter 1 surveys the recent empirical literature on the role of MNEs first in the macro e micro dimensions of host countries such as economic growth, institutions, human capital development and technological advancement and secondly, it explores empirical literature pertaining the role of MNEs in affecting the propensity, and intensity, of conflict within host countries and regions and its relevance in the peace building process. The literature ranges from applied international and peace economics to international business studies, but includes also contributions from political science and international relations.

Chapter 2 investigates the current fields of research on Peace Studies with a focus on the different methodologies used by scholars for the conceptualization and measurement of peace. In particular, a detailed presentation of the Global Peace Index and of the Positive Peace Index is provided.

Chapter 3 presents the results of an empirical analysis over the relation existing between MNEs and Negative Peace.

Concluding remarks present a set of conclusions based on the empirical findings of the thesis and the critical analysis of the literature over the role of MNEs in peacebuilding, offering also policy recommendations.

Chapter 1.

## Multinationals, Conflict and Peace. A Systematic review

This chapter surveys the empirical literature on the role of multinational enterprises (MNEs) in affecting the host countries in terms of economic development, human capital, institutions, propensity and intensity of conflict occurrence and creation of more peaceful and cohesive societies.

A focus will be given to the potential role of Multinationals in peacebuilding and peacekeeping. The literature ranges from applied international and peace economics to international business studies and includes contributions from political science and international relations.

The aim of the Chapter is to better analyze the role of MNEs in the development process of host countries through the analysis of macro and micro dimensions related to the economy, the society and the environment of recipient countries. In the conclusive part of the chapter, the Business Peace Nexus will be analyzed.

The literature overview presented in the chapter will allow to respond to the following apical questions:

- What are the economic, social and environmental impacts of MNEs in host countries?

- Do MNEs apply a Human Rights approach along their Global Value Chains[2]?

- Do MNEs foster violent conflict?

- What is the role of Business in Peacebuilding initiatives?

[2] Within value-chain analysis there is a proliferation of overlapping names and concepts (e.g., global commodity chains, value chains, value systems, production networks and value networks), GVC has been chosen among the others for being the most inclusive (Gereffi et al. 2001).

## 1.1 Introduction

Multinational enterprises (MNEs) represent one major players of development globally. They move along global value chains where production, trade and investment models are organized. Pursuing investment maximization, MNEs organize their operations practicing outsourcing and offshoring. At micro level, MNEs take advantages of specific features of a country in relation to the production cost of labour or raw materials (basic elements of a production function) or decide to organize their R&D department in innovative clusters, benefitting from innovation spillover effects (i.e., for product design and innovation: the case of Silicon Valley for tech industry and Italian districts for the fashion industry). In recent decades, this led to a progressive fragmentation of the operations: design, production, marketing and distribution phases of MNEs are part of globalized value chains, in different part of the world with mixed results in terms of development and human rights respect for all.

According to Kowalski et al. (2015), the participation of a country in GVCs brings social and economic benefits to the population because of spillover effects whilst Smichowski et al. (2016) argue that development patterns in GVCs are constitutive parts of a global process of uneven development. In particular, countries that participate in GVCs may be subject to *immiserising growth*[3]: peripheral countries underperform and destroy value because of detrimental phenomena such as higher social inequality and downgrading. Different aspects of uneven development seem to be both causes and consequences of global value production systems. According to Werner (2016), devaluation (mainly related to economic upgrading of enterprises and the division of labour), regional disinvestment and constitutive exclusion are negative dynamics brought by GVCs. Aim of the chapter is to shed light on the spillover effects and the 'dark side of economic geography' (Phelps et al. 2017) where MNEs play a key role with the ultimate goal to better understand the net impact to the population of the countries where MNEs operate. In particular, the net impact will be considered from an economic, social and environmental point of view, in an integrated approach of analysis that will bring to a better understanding on the role of MNEs in sustainable development and, ultimately, to the negative and positive peace in host countries. The economic, social and environmental factors are interlinked in the analysis of the impact on the level of peacefulness in countries in GVCs. For instance, the mismanagement of natural resources within the GVCs and the concurrent responsibility of MNEs in resource depletion and its consequences will be analyzed. The current models of consumption and production of the GVCs framework are characterized by high natural resources dependency. Meeting the future demand for resources would require dramatic additional improvements in resource efficiency since natural resources today are scarce and subject to

[3] Immiserising growth arises when economic development is associated with a fall in real living standards. The concept was first introduced by Bhagwati J. N. in Immiserizing Growth: A Geometrical Note, Review of Economic Studies, 1958 No. 3, pp. 201-5.

depletion globally (Milligan et al. 2018). Moreover, the lack of a clear and binding legal framework at international level regulating the nexus between natural resources management and indigenous rights (mainly referred to extractive industries, water, fisheries and aquacultures) put at risk the livelihood of local communities (see Toulmin and Quan 2000). This missing link between natural resources and local communities may contribute to speculative behaviors from actors in position of power to exploit finite natural resources, especially in countries with abundance of natural resources and the presence of structural institutional deficiencies (see Chapter 2 on the economic causes of conflict). To this regard, the illicit traffic of minerals from the Coltan Belt in the Democratic Republic of Congo (DRC) to the neighboring countries perpetuated by rebel groups at the expenses of the population shows how predatory behaviors from non-state actors may occur when structural factors at institutional and governance level persist (see Session 1.5 for the case study on the DRC). These rent-seeking opportunities (or appropriative activities) led to detrimental impacts on the social, economic and environmental value for the local communities, exacerbating uneven development of regions and among different groups of people, affecting negatively resilience and peacefulness, being the DRC among the least peaceful countries in the world in terms of Global Peace Index (measuring the negative peace or absence of violence or fear from violence) and the Positive Peace Index (measuring the positive peace).

In the second part of the chapter, a focus on the accountability of MNEs within the GVCs will be considered in light of the potential detrimental effects on the host countries and populations, with particular reference to human rights abuses, environmental disasters and conflicts. Unequal working conditions and allegations of human rights abuses within the GVCs have been underlined by civil society activists and NGOs.

In conclusion, this chapter wants to bring clarity to the current debate on the role of MNEs as detractor or contributor to sustainable development, human rights protection, conflict or peace in host countries.

In the first part of the chapter a review of the literature on the main impacts of MNEs operations in host countries will be presented to depict the different mechanisms or impact factors of MNEs on the sustainable agenda in terms of economic growth, technology spillovers and human capital. A focus on institutions will be considered also, in light of the stronger role of MNEs in policy lobbying.

A second part of the chapter will focus on Corporate Governance of MNEs, shading light on the challenges that enterprises face in terms of human rights abuses along their global value chains.

The final part of the chapter will be dedicated to the role of MNEs in conflict prevention or outbreak and peacebuilding, followed by the case study of the DRC and its conflict minerals.

## 1.2 Impact of Multinationals on host development

What type of impact have foreign multinationals in host countries? Goal of this chapter is to disentangle the impacts of foreign MNEs in host countries with a focus on the different dimensions of development: from economic growth and technology to human capital, institutional governance and the environment.

### 1.2.1 International Trade

The international exchange of goods, services, labor, knowledge and capital started in the late 11th century and grew substantially over the last two centuries, with a fall during World War I and II. After World War II, international economic integration took place consistently through trade, finance and foreign direct investment and thanks to the advancement in transport and communication technologies. After WWII, International trade agreements and the consequent progressive reduction of the tariffs by developed countries contributed to exports and a more global movement of capital and resources. Today the 25% of the global economy is represented by exported goods as showed in the visualization below that accounts for the value of exported goods as merchandise export-to-GDP ratios.

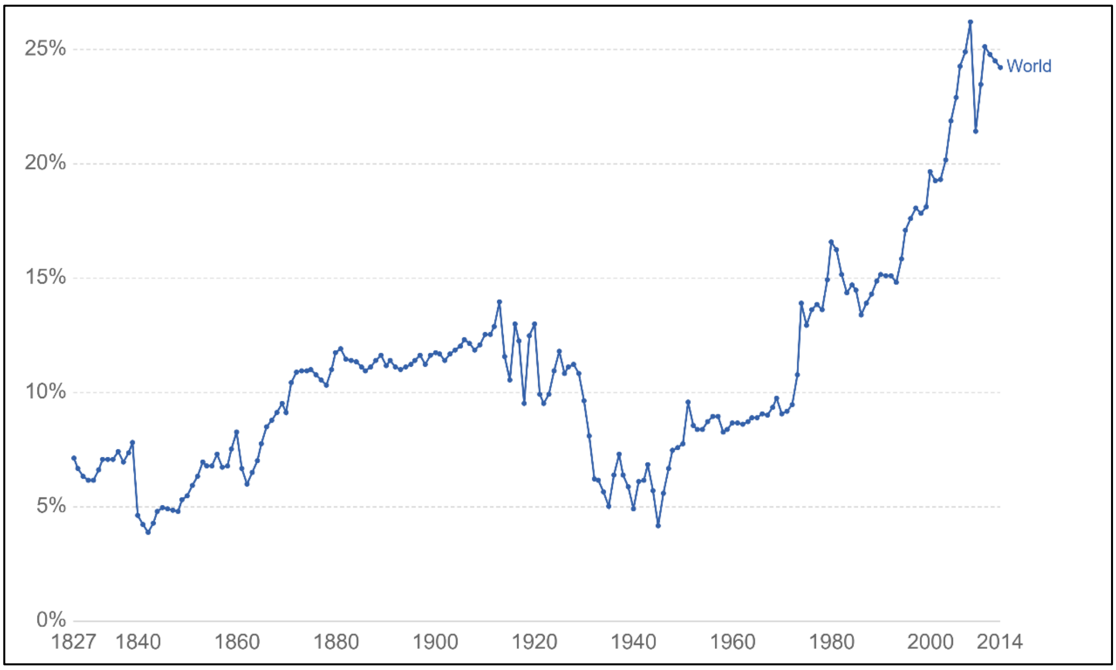


**Figure 1.1.** Value of exported goods as share of GDP

*Source. Ortiz-Ospina et al. (2017), elaboration on data from Fouquin and Hugot (CEPII 2016).*

Looking at international trade from an historical perspective, it can be said that it is characterized by two waves of globalization in the modern era: one from the 19th century since the beginning of WWI and one still on going, from WWII. Both brought structural transformations in our economies and societies and created gains and distributional effects that will be discussed in the next sessions along with an initial discussion on the dynamics of global openness over the last two centuries.

#### 1.2.1.1 International trade dynamics: Colonialism and the two (three) waves of globalization

International trade has represented and represents a major dimension of the global economy. The openness index, an economic metric calculated as the ratio of total trade, the sum of imports and exports, and the GDP, captures the importance of trade over the economic activities worldwide.

In the figure below it is presented the openness index from the last four centuries on the basis of data available on trade globally as elaborated by Ortiz-Ospina et al. (2017).

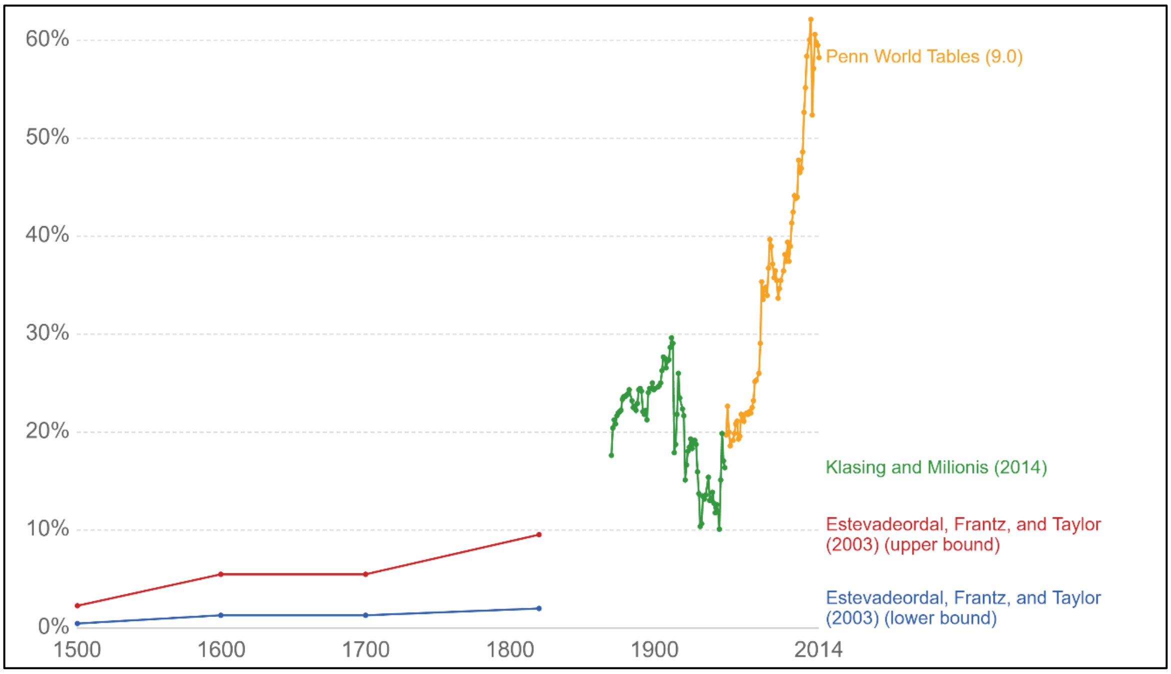


**Figure 1.2.** Openness index: an historical perspective of international trade, from 1500 to 2014

*Source. Ortiz-Ospina et al. (2017), elaboration with series from Penn World Tables 9.0, Estevadeordal, Frantz and Taylor (2003), Klasing and Milionis (2014)*

The figure shows that before 1800 international trade represented less than the 10% of the global economy, mainly due to colonial trade between empires and colonies. Over the centuries, significant variations characterized the intercontinental colonial trade: Portugal was the major Atlantic trader followed by Spain in the 16th and 17th centuries (its only rival), while, in the 18th century Holland took the lead in the international trade followed by Portugal and England and Wales. By the end of the 18th century England and Wales and Portugal outdistances the other colonial empires in intercontinental trade. (Costa and al. 2014).

During the 19th century significant technological advancements (e.g., invention of the telegraph, refrigeration, betterments in steamship and railroad transportation) triggered trade, mainly from trade within western countries. According to Ortiz-Ospina and al. (2017), in the period 1830-1900 intra-European exports went from 1% of Western Europe GDP to 10%, with a higher level of European economic integration and represented one third of global exports. This period belongs to the so-called first globalization or first wave of globalization, which conventionally starts in 1890 and ends in 1914 with the outbreak of the war. In the inter-war period, from 1914 to 1944, international trade was characterized by a global slump and the collapse of the European integration of the first wave of globalization. After WWII a progressive and substantial recovery characterized the economy, with the starting point of the second wave of globalization in 1945. After the Paris Peace treaties, the phase of reconstruction began with the consequent revitalization of the international trade under the Bretton Woods system, the constitution of the IMF and IBRD, International Bank for Reconstruction and Development to promote world trade and stabilized growth. The rapid growth of international trade during this period is also due to the diminution of the transition costs (i.e., transport and communication costs) thanks to advancement in technology. This contributed to an increase in intra-industry trade (ITT) among countries, the exchange of goods in the same industry and the development of global chains of production and consumption. Indeed, ITT has mostly been attributed to phenomena such as the fragmentation of the production (outsourcing and offshoring) as a result of globalization and new technologies (Handjiski et al. 2010: 15).

#### 1.2.1.2 Gains from trade and distributional consequences

International trade evolved across time and followed diverse patterns, from local and colonial to global channels, from inter industry to intra industry goods and services exchanges. In its continuous evolution it generated gains and losses for the society as a whole. It is therefore important to consider also the effects over the society of trade. Consequently, the first question at macroeconomic level to be posed is: Does trade cause growth? The second will be: Does economic globalization caused losers and winners of the game? Respond to those questions will be beneficial to understand the impacts of MNEs to countries where they operate through trade and foreign investments.

Frankel and Romer (1999) contributed to respond to the first question by providing evidence of the causal relation between trade and economic growth. In particular, they focused their analysis on the impact of international trade on living standards through the analysis of geography as a proxy of trade. They found that a rise of one percentage point in the ratio of trade to GDP increases income per person by at least one-half per- cent

Alcalà and Ciccone (2004) investigated the relation existing between international trade and productivity. In particular, they found that international trade, proxied in their empirical research with real openness, the ratio between the sum of imports and exports on purchasing power parity GDP, has a positive statistically significant and robust impact on aggregate productivity within a country. The channel through which international trade affect productivity is through the total factor productivity.

At microeconomic level, Bloom et al. (2016) analyzed the impact of trade of Chinese imports on European firms from 14 European countries and found supportive evidence of the trade induced technical change. Enterprises more exposed to Chinese imports were characterized by technological advancements in terms of patenting, IT, and TFP. At industry level, in industries with more imports from China low-tech firms have seen a fall in employment respect to the high-tech firms. These effects combined contributed to European aggregate technological upgrading in the period 2000-2007 by 14%.

There is conclusive evidence over the positive impact of trade on economic efficiency. However, researchers have provided mixed results on the distribution of the accrued economic performance. There is an acute awareness that the gains from globalization are very unevenly distributed within, as well as between, societies (Gereffi et al. 2001).

#### 1.2.1.3 The role of trade in conflict and peace dynamics

Are trade and conflict linked? Does trade promote or impede Peace? There is not a conclusive agreement among practitioners and academics in responding to these questions, however empirical literature seems to stress the positive impact of trade over conflict resolution and peace. This session will present some of the empirical findings of the main researchers on the role of trade in peace and conflict resolution.

The peaceful effects of trade are developed in classical liberals as recalled by Doyle (1986). In particular, Kant in his Perpetual Peace written in 1795 refers to trade in the Third Definitive Article in the context of universal hospitality. The argument of liberal peace seems to find empirical confirmation by the majority of the literature on the subject (see. Domke 1988, Kim 1998, Mansfield 1994, Oneal & Ray 1997, Oneal & Russett 1997a,b, 1998, Oneal et al. 1996, Reuveny & Kang 1998, Russett et al. 1998, Way 1997).

Gartzke focuses his attention on capital markets rather than trade in goods and services *per se* following the tradition of Montesquieu and Smith who argued that market interests abominate war (2007:170). His claim on capitalistic peace rather than liberal peace follows the thoughts of Angell (1933) who argues that capitalism contributed to interstate peace because, basically, it creates a structure where it is cheaper to trade rather than conquer, with economic interests inimical to war. In his view, financial interdependence created by economic integration may affect negatively both the oppressor and the oppressed, increasing the cost-opportunity of coercion respect to trade. As recalled before in the historical overview over globalization, history confuted the argumentations of Angell with the two World wars; however, the position of Gartzke over capitalistic vs liberal peace gives an interesting perspective of analysis over the governance of trade, with its financial markets and monetary policy coordination.

Dorussen and Ward (2010) argue that trade does promote peace since it creates an economic interest in peace and it 'generates' connections between people that promote communication and mutual understanding. They focus their analysis on trade network where the sharing of goods and services among people from different countries in trade brings a sense of community among consumers. They analyze not only direct linkages of trade but also the indirect ones.

#### 1.2.1.4 Global Value Chains

Internationalization started around the 10th century and has been prompted under the colonial empires. It can be synthetized as the geographic spread of economic activities across national boundaries[4]. In the last two centuries, the progressive fragmentation of the phases of production in different places of the globe in an organized and coordinated manner contributed to the globalization as a phenomenon that 'implies functional integration between internationally dispersed activities' (Dicken 1998:5). The Global Value Chains[5] are concrete representations of the globalization phenomenon over industries. They capture not only the production phase but also all the other activities related to the creation and consumption of a finite output (i.e., marketing, R&D, design, delivery to final consumers, and final disposal after use.) with a better understanding of the linkages between the different actors of the chain and characterized by a certain governance structure. Their analysis will be beneficial to the discussion over MNEs and Human rights abuses within their chains and how, though GVCs, MNEs can promote best practices conducive to conflict prevention and peace building at community level.

In terms of GVC structures, four dimensions characterize each GVC: (i) an input-output structure, which describes the process of transforming raw materials into final products; (ii) a geographical consideration; (iii) a governance structure, which explains how the value chain controlled; and (iv) an institutional context in which the industry value chain is embedded (Gereffi and Fernandez-Stark 2011, Gereffi 1995).

The first dimension of GVC analysis refers to the input-output process necessary to design, produce, exchange, consume and dispose an output and it involves tangible and intangible goods and services that add value at different segments of the chain. At each stage of the process different actors play a role, adding specific value to the final product.

Geography is an important part of the GVC puzzle where factors of production and consumption are dispersed globally. The globalized fragmentation of GVC process brought different impacts on different geographical areas in terms of environmental, social and institutional level. These impacts will be analyzed in details in the next chapters.

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[4] Indeed, in the past, slaves also were considered as tradable goods, assets owned by someone and used as labor force in the majority of the cases in primary commodities industries (see Solow 1987 on slavery and capitalistic development).

[5] Although in value-chains analysis there are overlapping names and concepts used by different researchers and practitioners such as Global commodity chains, value chains, value systems, production networks and value networks (Gereffi et al, 2001:2), the term Global Value Chains appears to be the most comprehensive and useful for better understanding the organization network and the strategic decisions made by MNEs in terms of power, governance and impact within the chains.

Governance in GVC is determinant for the good coordination of the different actors of the chain and for value creation. Some firms have the power to influence profoundly GVC and the other parties involved in the process with direct and indirect impacts on the community at local level (e.g., workers, indigenous people, local competitors, public policy makers). Labor-intensive sectors such as the garments, processed fruits and horticulture are characterized by buyers being lead firms with strong control over the chains while other industries more capital intensive might be producer driven (Gereffi 1994, Gereffi 1999, Kaplan and Kaplinsky 1998, Dolan and Humphrey 2000) or based on a competence based network without, necessarily, a leading company (Lee and Chen 2000).

The GVC institutional context refers to the local, national and international conditions and policies that shape the globalization in each stage of the value chain (Gereffi, 1995).

Structural conditions such as the availability of key inputs (e.g., skilled workers), well-functioning infrastructures, the presence of a structured financial market; a stable context with access to education represent important factors for the development of a specific segment of GVC in a country. Moreover, tax and labor regulations, subsidies, innovation policy may influence negatively or positively industry growth and development and the insertion of a country in a specific GVC (Gereffi and Fernandez-Stark 2011:11). The improvement of a country, region or a firm to higher value segments of GVC is known as economic upgrading. Economic upgrading allows the aforementioned actors to increase their benefits from participating in global production (Gereffi 2005).

In a dynamic perspective of evolution within GVCs, Humphrey and Schmitz (2002) defined four different types of upgrading: (i) process upgrading, when more efficient production system is in place, (ii) product upgrading; (iii) functional upgrading, when the overall skill content of the activities is improved and (iv) chain or inter-sectoral upgrading, when firms move into other industries. Different upgrading or downgrading trajectories characterize industries and countries according to the input-output structure and the institutional context of each country (Gereffi and Fernandez-Stark 2011:13). These types of upgrading refer to the economic dimension of firms and GVCs related. Economic upgrading may bring positive effects to firms involved in global chains in terms of innovation and competitiveness, however it does not consider other important dimensions of globalization: the social and environmental aspects related to GVCs. In particular, the social dimension related to globalization refers to all the aspects associated with the working conditions and the rights of the workers of MNEs and their affiliates and subsidiaries. Academics and practitioners refer to the betterment of their conditions in terms of social upgrading within a GVC. Social upgrading is defined as the process of improving the rights and entitlements of workers as social actors and enhancing of the quality of their employment (Barrientos et al. 2011).

Is there a link between economic and social upgrading? Under which conditions social upgrading is likely to occur in presence of economic upgrading? There is not a clear direction on the link between economic and social upgrading. Authors such as Knorringa and Pegler (2007) underlined that positive impacts on the quantity and quality of employment are often assumed by policymakers as a result of inclusion and (economic) upgrading, as if from the economic upgrading a trickle-down effect on social conditions' betterment was automatic. However, case studies on the matter provided mixed results. Bernhardt and Milberg (2011) analyzed the industries of horticulture, apparel, tourism and mobile telephones on economic and social upgrading within GVCs in the period 1990-2009 in twelve developing countries. They found considerable variation on the relation between economic and social change. In apparel and horticulture they found a positive correlation while the mobile phones industry has been characterized by economic upgrading but no social upgrading and Tourism experienced social upgrading with less economic upgrading.

### 1.2.2 Multinationals, Foreign direct investment and host economy

A multinational or transnational enterprise (MNE) is an enterprise that engages in foreign direct investment (FDI) and owns or, in some way, controls value-added activities in more than one country (Dunning and Lundan 2008). Its intensity of multi or transnationality depends on factors such as the number and size of foreign affiliates it owns or exercises control over, the number of countries in which it owns or controls value added activities, the degree of decentralization of its decision-making process and responsibilities towards its foreign affiliates.

MNEs, through FDI, might affect recipient countries via different mechanisms. FDI can be classified in two main categories: vertical or horizontal FDI. The vertical FDI present resource driven motivations mainly related to minimization of production costs while horizontal FDI are guided by market-seeking considerations for multinationals, driven by goals such as a direct access to market and the bypassing of trade restrictions. From the late 1980s the inflow of FDI increased globally. In particular, with the Programme of Action of LDC for the Decade 2001–2010', a UN initiative, Least Development Countries (LDCs) actively promoted inflow FDI for increase economic opportunities and development. However, there is not a universal agreement over the causal relation between FDI and economic growth and also at micro level, distortion over social and environmental dimensions of host countries fueled the debate over the role, positive or negative, of FDI in the sustainable development of host countries.

MNEs are central actors of the global economy: Since the 1960s, studies on these organizations and their investment decisions oversea started. However, scientific analysis on FDI and their long-term effects on recipient nations are a challenge for academics and practitioners who struggle to disentangle the mechanisms and the directions through which MNEs impact, positively or negatively, host countries.

Considering the last data available on FDI, in 2017, globally, FDI fell by about 23 per cent, to $1.43 trillion. This 2017 decline, expected by the analyst, was due to a large decrease in the value of cross-border mergers and acquisitions but it represents a significant signal of alarm in terms of global growth, considering that greenfield investments decreased by 14%.

Investment in developing countries were stable in 2017 at $ 671 billion, with no recovery from the drop of 2016 (-10%). In particular, it is interesting to note that the African continent has been characterized by an important drop in FDI flows, down by 21% (to $ 42 billion) while Asia represents now the largest recipient of FDI flows with $476 billion. Investments to the Least Developed Countries and structurally weak economies remain volatile and low, falling by 17 % at $26 billion in 2017. On transition economies, FDI flows declined by 2 per cent, to $47 billion. According to UNCTAD, this decreased is mainly due to geopolitical uncertainties and poor investment in natural resources related sectors (UNCTAD 2018). Greenfield investments also decreased by 14 per cent. Interestingly, the Secretary-General of the United Nations Guterres affirmed that the overall decline on FDI represents a true challenge globally for the achievement of the Sustainable Development Goals (Agenda 2030), assuming then a causal effect of FDI inflows on SDG achievement (UNCTAD 2017, preface).

. This session of the chapter provides an overview of the extant knowledge about the impact of MNE activities over the host countries. The developmental effect of FDI will be investigated under the lens of aggregated productivity and economic growth, technology spillovers and human capital creation. Key findings of empirical research on macroeconomic aspects (FDI – growth nexus) and microeconomic aspects (FDI linkages and spillovers) will be presented.

#### 1.2.2.1 FDI and economic growth

Empirical findings analyzing the nexus between inward FDI and economic growth found a positive correlation between these variables, considering certain host country features or conditioning factors such as host country's absorptive capacity, the stage of financial development and the level of institutions.

In particular, Balasubramanyam et al. (1996) found that FDI contributed to the growth of developing countries with export promotion strategy. Moreover, over the period 1970-1985, on the 46 developing countries studied, the higher growth rates were concentrated in export prone countries respect to the ones with import-substitution strategies.

Borensztein et al. (1998) found a positive correlation between economic growth and FDI. Their study, based on panel data of 69 developing countries over the period 1970-1989, suggests that FDI contributes more than domestic investment into the economic growth of a country but this contribution is conditional to the level of human capital in the recipient countries. According to their results, a developing country needs a certain human capital stock (in their analysis proxied with the initial-year level of average years of male secondary schooling) and a relative strong absorptive capacity to benefit from foreign capitals.

Campos and Kinoshita (2002) focused their studies on transitional economies by analyzing 25 Central and Eastern European transition countries over the 1990-1998 period. Interestingly, they confirmed the positive correlation between FDI and economic growth with, however, an insignificant or even negative interaction effect of FDI with human capital. The overall and relatively high levels of human capital in transition countries might explain this result.

Li and Liu (2005) employed simultaneous equation modelling to distinguish the impact of FDI on GDP growth or vice versa. In their endogenous growth model human capital and technology gap figured as growth determinants along with the interaction of these two with FDI. They analyzed 84 countries over a period of 30 years, from 1970 to 1999 and confirmed that FDI has a significant impact on GDP growth.

Another important feature of the host country interacting and influencing the potential impact of FDI over economic growth is its financial market (Hermes et al. 2003, Azman-Saini et al. 2010b, Bekaert et al. 2011). Using cross-country data from 1975 to 1995, Alfaro et al. (2004) found a positive causal relation between FDI and economic growth when the recipient country is characterized by well-developed financial markets. Vice versa, limited access to credit markets restricts entrepreneurial development and the capacity of assimilation and adoption of best technological practices made available by FDI (Alfaro et al., 2009). Other studies suggest that trade openness and economic freedom are conditioning factors affecting the relation between FDI and growth in host countries. Azman-Saini et al. (2010a) analyzed in a panel of 85 countries this relation with empirical findings showing that FDI by itself has no direct (positive) effect on output growth. Instead, the effect of FDI is contingent on the level of economic freedom in the host countries.

Institutions play a key role also in the discourse over FDI and economic growth. A recent study by Slesman et al. (2015) underlined how inward foreign capitals had a positive impact over the economic growth for the countries with a certain level of institutional quality. For countries with low institutional quality, the impact of foreign capitals was negative or not statistically significant. Empirical evidence on the importance of institutional factors over the nexus FDI and economic growth is provided also by Alguacil et al. (2011). They findings over a set of developing economies during the period 1976–2005 show that macroeconomic and institutional environment play a critical role in the absorptive capacities of recipient countries to exploit FDI and grow.

Other studies found empirical evidence of the positive impact of FDI on economic growth of recipient countries irrespective of conditioning factors. Hansen and Rand (2006) found evidence of a causal link between FDI and economic growth by analyzing 31 countries covering three continents over the time period 1970–2000. According to them, FDI has a significant long-run impact on GDP irrespectively of the level of development or conditioning factors. Hsiao and Hsiao (2006) studied the relation on East Asian countries over the period 1986-2004 and found that FDI causes GDP either directly, or indirectly through exports.

Other findings present opposite results. For Herzer et al. (2008) the growth inducing effect of FDI finds little support on their analysis. In the majority of the 28 developing countries analyzed on the time period 1970-2003, they did not find a long-term or a short-term effect of FDI on growth. Moreover, looking at the aforementioned conditioning factors, the authors then pointed out that there is no clear association between FDI and the level of per capita income, the level of education, the degree of openness and the level of financial market development in developing countries.

According to the presented empirical findings, the relationship between FDI and economic growth is highly heterogeneous across countries and over time. Conditioning factors relative to host countries appear to be elements of influence over the debate upon the developmental effects of FDI, in light also of the mixed results from non-conditioning factors studies.

In the next two sessions, empirical findings from micro-level studies over the spillover effects of FDI on productivity, technology and human capital will be presented.

#### 1.2.2.2 Productivity growth, Technology spillovers and Innovation

Studies on productivity analyze the impact of FDI over productivity of local firms by looking at the labor productivity or total factor productivity (TFP). The entry of MNEs in host countries may affect directly the average productivity locally, assuming that, on average MNEs are relative more productive than local firms or by crowding out the least productive local firms in the market. Empirical findings from Melitz (2003) suggest that aggregate productivity tends to rise when MNEs gain market share in host countries because of the higher relative productivity.

MNEs could contribute indirectly to higher productivity locally by pecuniary or market externalities. One source of transmission may arise from the linkages between MNEs and local suppliers, through higher economies of scale because of the higher demand from MNE entry for suppliers of intermediate goods that favor all the market. For instance, Wal-Mart in Mexico contributed to the exit from the market of least productive enterprises and to higher productivity and innovation of the local players (Iacovone et al. 2006). Similarly, Javorcick (2004) demonstrated the positive effects of FDI over local productivity considering the Lithuanian firm level data for the period 1996-2000 where positive productivity spillovers from FDI were taking place through contacts between foreign affiliates and their local suppliers in upstream sectors.

Productivity advantages may be transmitted by MNEs via non-pecuniary or knowledge externalities. MNEs may transmit deliberately to domestic firms (mainly domestic suppliers) knowledge and technology with training or licensing to create or deepen backward linkages (Pineli et al. 2019:9) or non-deliberately, as a spillover effect, through demonstration effects and labour market exchanges (Dunning and Lundan 2008: 519).

However, empirical findings on the productivity impact of FDI over domestic firms are diverse and inconclusive on important issues such as the conditioning factors. Though the meta-analysis of Havranek and Irsova (2011) shows that the presence of foreign MNEs tends to be associated with substantial improvements in the productivity of their local suppliers, only around 20% of 69 empirical studies published during the period 1983–2013 effectively controlled for host country conditions (Demena and van Bergeijk 2017). To this regard, recent studies considering domestic conditions such as the level of human capital and the quality of institutions have demonstrated the importance of these factors in stronger FDI spillover effects (Lin et al. 2011, Liu et al. 2016, Li and Tanna 2018).

#### 1.2.2.3 Human capital development

Human capital represents a fundamental dimension of host country development. As discussed before, it represents an important conditioning factor for channeling the magnitude of the impact of MNEs, through FDI, in the host economy and in its actors, in terms of economic growth (Borensztein et al. 1998, Batten and Vo 2009) and can be a channel of transmission for technological and productivity spillovers ( Xu 2000). Galor and Moav (2003) ultimately define human capital as the prime engine of growth.

The majority of the literature on human capital and FDI analyzed the role of the former to attract the latter, sustaining the importance of domestic human capital in attracting foreign investment (Lucas 1990, Zhang and Markusen 1999, Dunning 1988). Moreover, according to Noorbakhsh et al. (2001), the level of human capital in developing countries affects the geographical distribution of FDI and the importance of human capital became increasingly greater through time, in light of the evolution of the structural characteristics of FDI.

On the other way around, FDI may contribute to human capital formation since MNEs provide education and training to their employees or to their suppliers to upgrade their level of expertise on a specific subject/technology relevant for the production and distribution process. As underlined by Miyamoto (2003), in theory, a virtuous circle of human capital formation and FDI might occur: host countries experience inflow of FDI over time by increasingly attracting higher value-added MNEs, while at the same time upgrading the skill contents of preexisting MNEs and domestic enterprises.

Narula and Marin (2003) developed more on the FDI-Human capital development nexus considering the case study of Argentina and found evidence of human capital development in terms of quantity (job creation) rather than quality (technological spillovers to all the industry). This being directed linked to the type of FDI in terms of sector of investments (i.e., traditional sectors such as mining or technology and innovation relative industries) and the absorptive capacity of domestic firms.

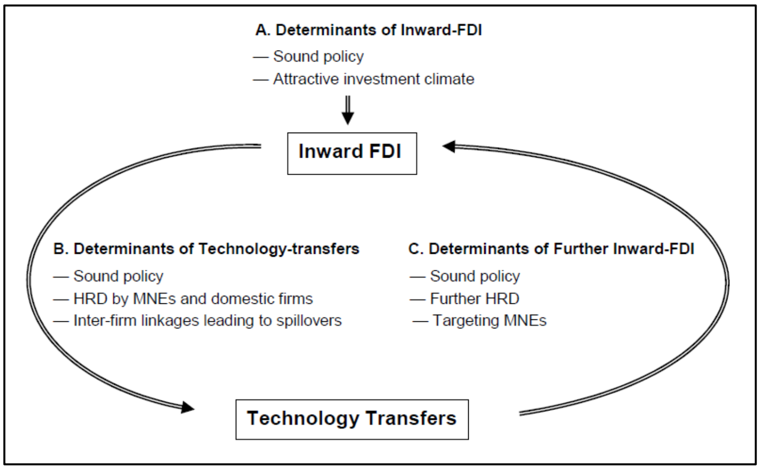



**Figure 1.3.** The virtuous cycle of Inward FDI and Technology-Transfer/spillovers

*Source. Miyamoto 2003:8*

### 1.2.3 Institutions: economic structures, state building and political risks

> As the beneficiaries of the blessings of a stable democracy and a robust economy, we, as Americans, have an obligation to ensure that our corporations – and their officers, directors, and employees – are not undermining the promise of democracy and economic development in other parts of the world by paying bribes.
>
> Deputy Attorney General James M. Cole[6], 2013 in Demir 2016

As suggested by the words of Cole in 2013, MNEs are playing an increasing role in the process of institutional development, serving as agents of diffusion, learning, and convergence in institutional systems (Sell 1999), influencing through foreign operations and lobbying host countries and transnational institutional networks. MNEs interactions with political actors and host institutions may result in MNEs adaptation strategies to host countries, making for instance adjustments in image, or branding to seek legitimacy in the local markets (Kostova & Zaheer 1999, Dahan et al. 2006). Moreover, from the perspective of host countries, they adopt economic reforms to improve the business environment, and

[6] Cole, J. M. (2013). Deputy Attorney General James M. Cole speaks at the foreign corrupt practices act conference. November 19, USA Justice Department. http://www.justice.gov/opa/speech/deputy-attorneygeneral-james-m-cole-speaks-foreign-corrupt-practices-act-conference

attract greater FDI, especially in the investment climate of the 21st century where many developing countries value FDI as a 'desirable mean' for economic restructuring and growth.

The quality of Institutions, commonly defined by factors such as (i) democratic institutions, (ii) political stability, and (iii) rule of law is important in the long-run development and peace (Acemoglu et al 2005, IEP 2018). However, despite the general agreement on the relevance of institutions in sustainable development and peace, no universal consensus has been reached on the determinants of institutional heterogeneity (Bayley 2018) and on the causal relation existing between institutions and development (Khan 2006). As already discussed, institutional capacity may also represent a contributing factor that favors or not economic growth, knowledge spillovers and productivity accrual in host countries in the presence of FDI.

The majority of the literature analyzes how institutions might attract inward FDI. Bailey (2018) in his meta-analysis attempted to synthetized the bulk of literature focusing on how institutions influence FDI attractiveness and found that institutional factors such as political stability, democracy, and rule of law attract FDI. To this regard, for instance, Guerin and Mazzocchi (2006) studied the role of democracy and economic reforms towards privatization in channeling FDI from advanced into emerging economies and found that they have a joint and positive impact on FDI flows.

Conversely, institutional factors such as corruption, tax rates and cultural distance may deter FDI. Moderating factors influence the effects of the aforementioned institutional elements: in particular, environmental considerations such as level of development, region of destination, and competitive industry environment have varying influence on the strength and significance of the nexus Institutions-FDI (Bailey 2018).

But, what are the impacts, if any, of FDI on host institutions? What are the institutional effects of FDI in host countries on factors such as the level of corruption, political stability and economic and social reforms? Inconclusive and diverging results arise from empirical research.

Demir (2016) analyzed the effects of bilateral FDI flows (North- South, South- South flows) on institutional development gaps between home countries and host recipients considering 134 countries, using a variety of institutional development measures during the period 1990–2009. He found that institutional development effects of FDI flows are not statistically significant in any direction, North-South or South-South. Conversely, he found that the aggregated South-South FDI inflows influence negatively on host country institutions.

Antonietti and Mondolo (2018) analyzed the effects of inward FDI looking at 127 countries over a period of 22 years and found out that FDI improves the average quality of institutions in recipient countries, especially for factors such as political stability, regulatory quality and the rule of law and when host countries are developing or transition economies.

On corruption, Pinto and Zhu (2016) studied the impact of FDI in 95 countries in the years 2000-2004 and underlined the importance of context factors of the recipient country as its economic and political conditions, availability of local resources in assessing whether FDI has a positive or negative effect on corruption levels.

### 1.2.4 Environment and its deterioration

Environmental deterioration relates to different types of pollution in the short or long run, with effects locally and/or globally. Degradation might occur with more short term and local impacts, or with global indirect and long-term impacts (Arrow et al. 1995, Cole et al. 1997, Cole 2007). At local level, examples of pollutants are water, SO2, SPM, NOx and CO (Cole et al. 1997) whilst at global level CO2 emissions, municipal wastes, energy consumption represent environmental indicators.

Niger Delta, today characterized by one of the most endangered ecosystems (Anejionu et al., 2015, Akpokodje and Salau 2015) shows the urgent need to better understand the impact of FDI over environment. Moreover, a better definition of the normative tools that indigenous communities may have to mitigate the negative impact of MNEs and collaborate, if possible with MNE in the planning of specific development plans of adaptation and mitigation is necessary. The case of Caribbean shows how economic development may not lead to sustained and integrated development for the people and the planet: if economic development has been attained in terms of new job created by the large investments in the industry of tourism, this created also considerable environmental damages to the coastal and marine environment (Stonich 1998). The environmental disaster caused by Union Carbide (latterly Dow Chemicals) in Bophal India in the 1980s caused deaths and long-term soil and water pollution alongside severe health issues for the population (Meyer 1998, Pearce and Tombs, 2012).

But, besides anecdotal or well known cases of factual detrimental effects of MNEs on host environment, what does empirical research say about the nexus FDI-environment?

Acharyya (2009) studied pollution emissions (CO2) in India and found that FDI increased environmental degradation during the period 1980-2003 through output growth. Baek and Koo (2009) analyzed the short and long run relationships among FDI, growth and the environment (in terms of carbon dioxide emissions) in China over the period 1980-2007 and in India over the period 1978-2007, two among the fastest economies in the world. They found that for China, FDI has a negative impact over the environmental quality in both the short and long-run. For India, FDI has a detrimental effect on the environment in the short-run with little effect in the long-run. Interestingly the authors found that income growth in both countries tends to worsen the environment in both short and long-run. The so-called Pollution Haven Hypothesis (PHH) for which, under the circumstances of globalization, industrialized countries tend to move pollution-intensive industries to developing countries with weaker regulations to avoid costly pollution control compliance expenditures in their home countries (Copeland and Taylor 2003), found indirect evidence from China.

The PHH has been verified by Xing and Kolstad (2002) in relation to environmental regulations. In particular, they evaluate the effect of the stringency of environmental policy on the location of polluting industries on US FDI for pollution intensive and less pollution intensive industries, finding that laxity of environmental regulation in host countries is a significant determinant of FDI.

Cole (2004) investigated PHH by analyzing trade patterns from North (i.e., developed countries) to South (i.e., developing countries) and assessed PHH. He found that differences in the stringency of environmental regulations between the North and the South provide the latter with a comparative advantage in pollution intensive production. He underlined that pollution havens do exist although they are likely to be temporary and limited to certain regions and certain sectors. They might contribute to the Environmental Kuznets curve (i.e., the inverted U-shaped relationship between per capita income and pollution, see Cole et al. 1997) but partially, being their effects relative small respect to other variables such as structural change and trade openness. The pollution comparative advantage may explain the migration of 'dirty' industries from the developed regions to the developing regions. Nevertheless, his findings underline also that, controlling for structural change, income and possible pollution havens, trade openness holds a negative, statistically significant relationship with pollution. According to Cole et a., 'the net reduction in pollution experienced at higher income levels is the result of an increased demand for environmental regulations and increased investment in abatement technologies (both facilitated by higher income levels), trade openness, structural change in the form of a declining share of manufacturing output, and increased imports of pollution intensive output' (Cole 2004: 79).

The empirical evidence provided show that multinationals may play a critical role in both environment deterioration and protection. As put by Stopford (1998: 19), 'with regard to the environment, international big business is both the creator of pollution and the only resource available for its cleanup' referring to the potential for environmental upgrading within GVCs for their domestic affiliates and local competitors.

### 1.3 Multinationals, Human Rights and Corporate Governance

Social upgrading does not come automatically from economic upgrading. Even worse, in some cases, the globalization brought to social and environmental disasters (social and environmental downgrading) and important human rights abuses within GVCs. An interdisciplinary field of research, Business and Human Rights, emerged to better understand the business responsibilities in the area of human rights, responding, at academic level, to the efforts put in place by the United Nations, OECD and EU at policy level to understand, monitor and guide MNEs in their global activities (Wettsten et al. 2019).

According to policy makers, civil society members and academics, accountability of MNEs on their global operations should be improved, in light also of the crucial role of MNEs in the countries where affiliates and subsidiaries operate. Moreover, as suggested by Hart and Zingales (2017), large MNEs are expected to contribute positively to address human rights challenges, since their acknowledged political and economic power of non-state actor, sometimes rivals that of governments.

Aim of this session will be to shed light on the role of Multinationals in Human Rights protection and, ultimately, in the accountability and responsibility associated to their activities along the GVCs. In particular in the first part of this session a focus will be given to the status of human rights abuses perpetrated by MNEs and its affiliates or subsidiaries, followed by an overview on the Corporate Social Responsibility practices and their effectiveness.

#### 1.3.1 FDI and Human rights abuses within the multinational chains

Human rights represent inalienable fundamental rights to which a person is inherently entitled simply because she or he is a human being; they refer to the political, civil and socio-economic and cultural dimensions of each human being as defined by the UN Universal Declaration of Human Rights, and more broadly the International Bill of Human Rights and subsequent treaties (UNDP 2000: 20–21).

Thought human rights are predominantly discussed in relation to abuses perpetrated by criminal or violent parties (e.g., militias, repressive governments, etc.), their abuses are more and more linked to legitimate business operations, especially in globalized contexts.

Anecdotally, through the work of the civil society, local NGOs, media, national trade unions and human rights activists, several controversies over human rights emerged, including human trafficking, child labor, collusion with corrupted governments and environmental disasters. These controversies put at risk the lives and the livelihood of many, normally the most vulnerable members of the society. However, apart for these anecdotal cases, do exist a causal relation between FDI and human rights abuses? What is the role of the institutional and developmental context and other conditioning factors in human rights abuses? There is not a conclusive agreement over researchers on these questions. Two distinctive and contrasting views emerged in the literature: one underling the negative impact of MNEs over human rights in host countries and another one underling the opposite.

Conventional wisdom suggests a tension between FDI and human rights. Traditionally, the contradiction between them arises from the theoretical strands initiated by Lenin (1919, 1939). For Lenin, firms internationalized for profit maximization in countries with locals to be exploited and controlled.

In the view of Hymer (1971), multinational corporate capitalism is characterized by a dual pattern of development that limits human rights progress. Multinationals, to maintain their power and financial control, support the repressive governments where they operate, against the poorest, to avoid rallies and mass lobby to change the social, political and economic order. In line with Hymer, Greider (1999) refers to the marketplace as a repressive 'closet dictator'.

Support of this view comes from, for instance, the work of Guidolin and La Ferrara (2007) and case studies from Meyer (1998) and Papaioannou (2006). Guidolin and La Ferrara analyzed the Angolan civil war and one of the sector most affected by the war: diamond extractive industry. They found empirical evidence of 'war benefits' for the 7 MNEs working in the zone during the war and listed on major international stock exchange markets. Their abnormal returns of the Angolan portfolio declined by 4 percentage point at the end of the war in 2002 and the difference between the Angolan and control abnormal returns (similar diamond mining companies not holding concessions in Angola) was 7 percentage points. The authors interpreted these findings with the presence of higher entry barriers for competitors during the war, a lower bargaining power from Angolan government and consequent lower licensing, the lack of transparency due to the ongoing war that gave space to lucrative unofficial dealings (Guidolin and La Ferrara 2007).

In line with the argument of MNEs taking advantage from weak state capacity (and relative lower bargaining power) there is also the well documented case of ITT's involvement in 1973 in subverting the democratic government in Chile: some of ITT's internal documents leaked to the media showed the company conspiring with the CIA to overthrow Chile's left-wing president Salvador Allende (Meyer 1998, Bucheli and Salvay 2013). The coltan belt in the Democratic Republic of Congo is also a well-documented case of illegal exploitation of natural resources where MNEs are benefitting from the instability of the Estearn region, contributing to perpetuate violence and human rights abuses (Papaioannou 2006).

Conversely, Perlmutter (1969: 18) believed that certain types of MNEs would 'make war less likely, on the assumption that bombing customers, suppliers and employees is in nobody's interest'. Moreover, Spar (1999) studied the impact of FDI on human rights developments in host countries and emphasized the positive effect of foreign investment on the matter. In particular, her argumentation was based upon the different scope and nature of FDI spread across wider set of industries respect to the past (e.g., not only resource extraction firms but also consumer-product firms). While she admitted that Hymer thesis on multinational corporate capitalism may be plausible in extractive industries, for industries investing to sell to domestic customers, it is in the interest of MNEs the social progress of the local population that benefits from MNEs activities directly or indirectly, through improved conditions created by foreign investments.

Letnes (2002) revised Spar thesis and defined the relation FDI and Human Rights as still ambiguous. His findings over 103 countries on the time period 1985-1995 suggest that FDI might have positive impacts in host countries if the latter exceed a threshold of created assets to benefit from FDI.

On this matter, Giuliani (2010) investigated the factors favoring a positive (or negative) effect of MNEs operations on host developing countries. In particular, she adopted an integrated approach of analysis looking at economic (with a focus on technologic spillover) and human rights' impacts. As shown in the following table, she identified 4 main scenarios to which economic and human rights scholars have associated one or more mediating factors. Looking at the different scenarios, the forth represents the best one, where, in the presence of social capabilities and state capacity the MNE with a market seeking strategy produces positive contributions in terms of technological spillovers and human rights. Giuliani, with this exercise, stressed the importance of mediating factors in defining the potential MNE impacts. On mediating factors, she identified in the literature empirical findings on external and internal factors in host countries. In particular the presence of a certain level of social capabilities and state capacity and the implication of the civil society channel positively MNEs impact while at industry level there is not a conclusive agreement by economic and human rights researchers over the presence of a threshold relative to (i) competition level, (ii) the technology intensity and the (iii) type of industry. On the internal factors relative to MNE operations and organization, no agreement arises from the different empirical studies from economists and human rights academics on the magnitude and direction of factors such as MNEs strategy (i.e., natural resources seeking, efficiency seeking, market seeking) or nationality of parent. As reported by Giuliani (2010:33), at subsidiary level, economists found that absorptive and innovative capacities play a mediating and positive role in MNEs impact over host countries (see e.g., Marin and Bell 2006, Todo and Miyamoto 2006).

**Table 1.1.** MNEs Impact on Human Rights in host countries: 4 scenarios

| **Impact on Technological Spillovers (TS)** | **Impact on Human Rights (HR)** | |
|---|---|---|
| | *Negative* | *Positive*** |
| *Negative** | **Scenario (I)**<br>*Mediating factors associated with this scenario:*<br>- Primary industry<br>- Resource-seeking strategies<br>- Efficiency-seeking strategies | **Scenario (II)**<br>*Mediating factors associated with this scenario:*<br>- Market-seeking strategies (without production plants in the host country) |
| *Positive* | **Scenario (III)**<br>*Mediating factors associated with this scenario:*<br>- FDI in highly competitive industries<br>- FDI in low- tech sectors | **Scenario (IV)**<br>*Mediating factors associated with this scenario:*<br>- Social capabilities; State capacity; Civil society<br>- Market-seeking strategies (with production plants in the host country) |

**Note:**

* Negative TS impact refers to the case in which the MNC does not generate TS or does generate negative TS.

**Positive HR impact refers to the case where there is no negative HR impact (i.e. no human rights' abuse).

*Source Giulian (2010): 35*

Blanton and Blanton (2006) tried to respond to another important question with empirical methods. They analyzed if and how the respect of human rights in host countries may influence FDI inflow. They found empirical evidence of a positive causal link between human rights and FDI. In particular, human rights influence directly FDI as a signal of political stability and, indirectly, they are conducive to the development of human capital, crucial element for MNEs, attracted to countries with skilled labor.

### 1.3.2 Corporate Social Responsibility (CSR)

> you can't have the corporate social responsibility department saying that factory overtime hours have to be kept at reasonable levels and then the purchasing department demanding 10,000 pink blouses delivered in a week
>
> A corporate social responsibility executive quoted in Moffett, 2013

Who is to blame? That is the question Taplin (2014) tried to answer in examining what happened in the disaster of Rana Plaza, an eight-story complex of clothing factories in Bangladesh that collapsed with 1,127 deaths, mainly of young women. The garment industry in Asia is experiencing a strong growth, at the expense of its workers, who work in hazardous environments and live in precarious conditions, as it was for western workers a century ago. Countries such as Cambodia and Bangladesh focus their positioning in the fast fashion garment industry in the assembly phase, taking advantage of their large population of relative low waged workers respect to other global players as China. MNEs such as Wal-Mart, Gap, H&M and Spain's Inditex (i.e., Zara) subcontract the garment assembly to suppliers with other sub-contractors in fragmented and complex supply chains characterized by short notice and strict deadlines, to respond to the fast fashion model of production and distribution (i.e., reduction of the inventory and quicker response to the market demand). This model contributed to put higher pressures to the subcontractors with work intensification in factories and possible safety short cuts as in the case of the Rana Plaza disaster (Taplin 2014:73). Taplin responds to the Who is to blame question by affirming that 'a systemic pattern of exogenous forces that create conditions under which such events, if not inevitable, are at least not unlikely' is in place and the responsibility of MNEs is (just) one part of the issue. Responsibility for these disasters, human rights abuses and all sorts of distortion within the industries against people and planet (i.e., SDGs of the 2030 Agenda) is shared among different actors of the GVCs, from institutions, with trade liberalization and limited social safeguards to local and foreign enterprises, with exploitive practices and customers.

Taplin underlines the necessity for a global governance of such globalization distortions causing environmental and social disasters. MNEs in the late decades developed corporate governance to deal with these distortions within their GVCs, also to respond to the pressing voices of local NGOs, human rights advocates and their consumers, more and more conscious of the risks of labor intensification and pollution. Multinational corporations put in place private regulatory self-regulatory mechanisms as the Kimberley process certification scheme for diamonds or the Wolfsberg Principles on money laundering for private financial institutions and a set of self-commitments in the fields of social and environmental standards, in line with the recommendations and guidelines from international organizations such as OECD, UN and UE.

These types of commitments frame the corporate social responsibility (CSR) of MNEs. Empirical evidence of the effectiveness of CSR initiatives in place has provided mixed results in terms of improvements against human rights abuses and environmental degradation within the GVCs and experts on CSR are divided among optimistic and pessimistic over the impact of CSR.

Falck and Heblich (2007) are supportive of the adoption of CSR initiatives and code of conducts by MNEs to promote social advancement under a win-win situation where strategic philanthropy, through CSR, leads both the organization and the society to prosper.

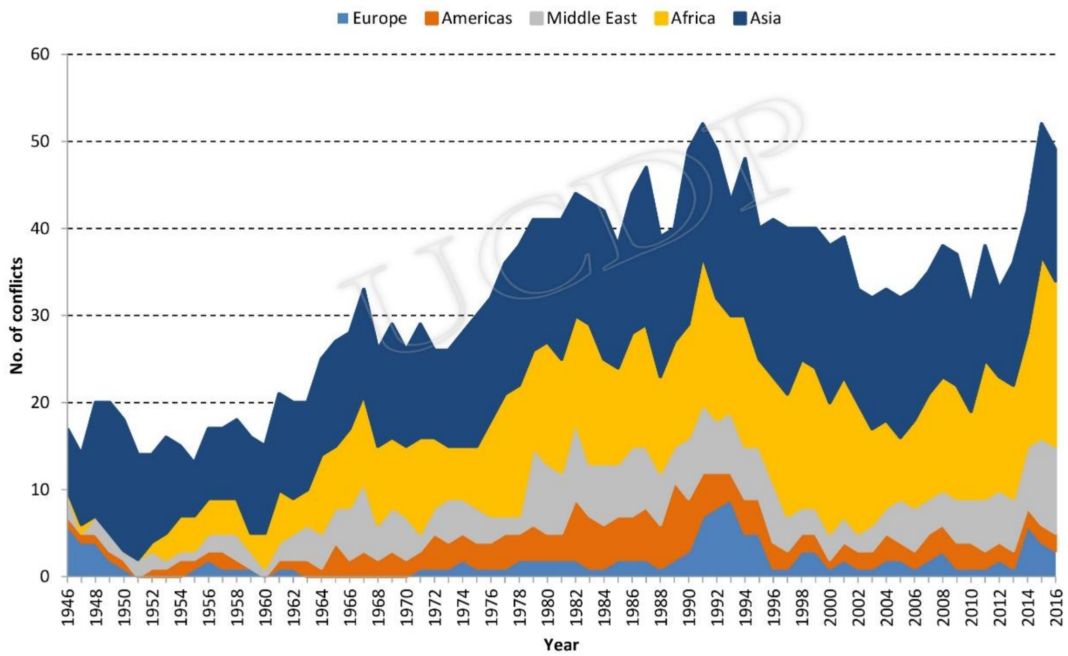
Other scholars are skeptical regarding the capacity of MNEs to advance the cause of human rights through corporate governance and CSR in particular, because of the factual evidence of complicity of large global corporations on human rights abuses, perpetuation of violent conflict and political violence in developed and developing countries such as in the cases already mentioned and because of the use of CSR as a business case and public relation tool (Blowfield and Frynas 2005, Gilberthorpe and Banks 2012). Moreover, on developing countries CSR initiatives are predominantly designed to respond to global performance standards and do not consider specificities of the social contexts in which they are implemented causing more harm than good, generating inequality, fragmentation, and social and economic insecurity (Gilberthorpe and Banks 2012).

Empirical findings do not propose a universal agreement over the impacts of CSR initiatives and their motivations. On the latter, Fiaschi et al. (2014) carried out an analysis on 60 BRIC large companies, and find support for the idea that these companies implement different kinds of CSR initiatives subject to different domestic pressures and may serve different legitimacy building strategies in host countries. On the impacts of CSR initiatives, Fiaschi et al. (2011) proposed an empirical analysis on 135 MNEs operating in several sectors over the period 1990-2006 and found that MNEs that have adopted CSR initiatives have higher probabilities of being involved in alleged human rights abuses, but such probability decreases over time, as they accumulate experience in CSR practices. Fiaschi and Giuliani (2012) studied 140 large advanced country corporations (e.g., US, Canadian, EU and Asian corporations, in 28 sectors) and found that there is a relationship between CSR and alleged human rights abuses, but that the nature of this relationship varies according to the severity of the abuse: CSR-adopter firms appear less likely to be involved than non-adopters in the worst of the abuses (i.e. jus cogens abuses), but more likely than non-adopters to be involved in other types of 'less severe' abuse (i.e. no–jus cogens abuses). Moreover, according to the empirical findings, over time, CSR adoption reduces corporate involvement in direct abuses allegedly committed by management, or by a subsidiary, but not indirect abuses allegedly committed by complicit third parties the production chain (e.g., suppliers).

### 1.4 Multinationals, violent conflict and peace

In the last half century, there has been a substantial increase of intrastate conflicts around the world, with an estimate of 20 million people to have died in civil wars. These conflicts are predominantly of minor intensity (less than 1,000 deaths), mainly located in the African and Asian regions (Table 1.2). Today there are around 50 active conflicts in the world. Concerning the level of peacefulness, globally, we assisted in the past years to a decreasing level of peacefulness.

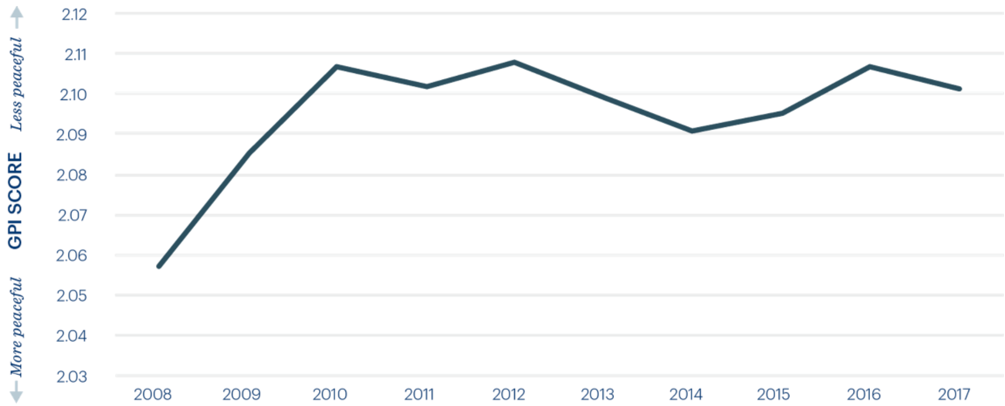
**Table 1.2.** Armed Conflict by Region, 1946-2016




*Source: UCDP 2017*

The recent release of the Global Peace Index 2018 revealed that the level of peacefulness deteriorated by 0.27% over the last year, with a sustained decline of peacefulness level over recent years. Syria, Afghanistan, South Sudan, Iraq and Somalia are the least peaceful countries in the world, characterized by high level of insecurity and Internally Displaced Persons (IDPs) (IEP 2018). Looking at the last decade (2008-2017), despite the slight improvement in peace, the world is still over 2% less peaceful than in 2008: the last decade has seen a historic decline in world peace. This interrupts the long-term improvements in peace since World War II.

**Figure 1.4.** Peace in the last decade - GPI 2008-2017




*Source: IEP 2017*

Given the increasing complexity of the international context in terms of decreasing relative peacefulness, MNEs engaged in international initiatives may find themselves in situations where they confront triggering situations or direct conflict at local level with communities or rebels. In such situations, MNEs might investigate measures to minimize investment risks and potential losses and, to some extent, when possible, to promote stability in countries where they operate.

At institutional level, the UN Security Council along with other international organizations (World Bank, UNCTAD) stresses the relevance of investment flows in conflict and post conflict zones for busting growth in the end. However little has been discovered on the long-term effect of the presence of FDI in conflict zones. Literature focuses mainly on the factors (institutions, natural resource abundance, and corruption, social and political context) influencing the inflow of investment from MNEs (e.g., Guerin and Manzocchi 2006, on democracy and economic reform) in conflict zones. The empirical evidence on the relation between FDI and conflict in host countries remains today inconclusive. For instance, some argue that FDI might improve international relations and reduce conflict risk (Polacheck et al. 2007), others underline that trade does not generate more domestic peace and FDI might create conditions conducive to political instability (Gissinger and Gleditsch 1999).

The impact of FDI in conflict torn countries needs to be therefore analysed quantitatively for a better understanding of the mechanisms through which investment inflows might affect communities. A better understanding of the relation among FDI inflows, conflict and peace in the country might contribute to the congoing debate on the role of the profit sector in the long-term process of peacekeeping and peacebuilding.

### 1.4.1 A business-conflict nexus?

Research on the determinants of FDI is increasing, given also the global attention to the role of the profit sector in the long-term development of developing countries. However, little is known about the impact of FDI on conflict, security and long-term peacefulness of the host countries. The attention has been so far focused on the so-called risk factors at political, economic and social level affecting the likelihood of investments from MNEs in developing countries, without a better understanding of the impact of these investments at community level. Although several studies analyse the causality nexus between FDI and economic growth, little has been said in terms of a more integrated approach on the impact of multinationals in host countries in relation to peace. This session presents an academic overview of streams relevant for the empirical analysis on the impacts of FDI in the level of peace at country level and globally, presented in Chapter 3 of the thesis.

Is there any link between the presence of MNE and the intensity of conflict? Academic researchers from diverse background (from international business and management to political science and development studies) bring inconclusive and conflicting results. From one side, several studies underline the negative impact of multinationals in host countries bringing conflict, from another side (in the economics domain: the economics of war), others suggest a positive impact in terms of increased economic opportunities leading to stability in host countries (or the economics of peace).

Looking at the different academic branches, from a social science or and economics perspective, the linkages between multinationals and conflict have predominantly been studied in natural resources related business in host countries characterised by abundance of minerals and oil through the lens of the resource curse. The resource curse (Auty 1993), or paradox of plenty, refers to a pattern whereby countries or regions rich in natural resources display poor economic growth and good governance than do countries with fewer resources (e.g. Collier and Hoeffler 1998, Gilberthorpe and Papyrakis, 2015, Sachs and Warner 1995, 2001). In natural resource abundant countries, when characterized by accrual and concomitant structural failures such as weak institutions and political instability, mineral rents tend to "hinder a transition to democracy" (Gilberthorpe and Papyrakis, 2015: 381-390) in terms of reduced public accountability (McFerson 2010, Ross 2001), and maintained authoritarian rule (Ross 2001 on oil exports and their antidemocratic effect). Companies in the extractive industries tend to operate in isolation and make little effort to engage positively with the local community (Blanton and Blanton 2009) and this may lead to conflict.

Hook and Ganguly (2000) documented through three case studies in the extractive industry (Shell in Niger Delta, Bougainville Cooper in Papua New Guinea, Freport McMoran in Indonesia) an exacerbation of conflict among already divided local communities due to the presence of MNEs.

Some other researchers studied more direct involvements of some companies with corrupted governments negatively affecting the local population. For instance, Frynas and Wood (2001) studied the Angola case where high competition for oil concessions led international companies seeking the favour of the Angolan governmental elite through dubious mechanisms such as charitable donations, weapons deals, and other forms of assistance, contributing to the erosion of the already weak state legitimacy, with negative impacts on the population in distress.

Not only academic research underlined existing linkages on multinational actors and conflict. Namely, the case of the Democratic Republic of Congo is the one where also the United Nations defined a relation among international companies, the elite in power and the continuation of the eastern conflict. Indeed, in 2001, a UN panel investigated on the illegal exploitation of natural resources and underlined that 'the role of the private sector in the exploitation of natural resources and the continuation of the war has been vital. A number of companies have been involved and have fuelled the war directly, trading arms for natural resources. Others have facilitated access to financial resources, which are used to purchase weapons. Companies trading minerals, considered by the Panel 'the engine of the conflict in the Democratic Republic of the Congo' have prepared the field for illegal mining activities in the country (UN 2001)'. Montague (2002) documented the deals on future gains over the extractive industries existing among mining companies and the rebel groups AFDL (Alliance of Democratic Forces for the Liberation of Congo) that later on took power in the DRC with Joseph Kabila Junior.

On the natural resource- conflict debate and the role of business in conflict, it is important to note that also resource scarcity may lead to conflict. To this regard, Richani (2005) analysed how MNEs contributed to the escalation of land conflicts, the transformation of the rural economy into a rentier economy with higher poverty for the local population and the prolongation of the conflict due to MNEs' financing the opposing parties in Colombia.

The implication at different levels of the Business in war refers to the concept of corporate criminal complicity. The issue of corporate criminal complicity in war have been discussed since the Nuremberg trials (the German Corporation 'Topf und söhne', see Van Baar et al. 2012), followed in the 1990s by cases in former Jugoslavia and Rwanda. Over the last decades NGOs and civil society members documented several cases of complicity in conflict-affected zones (see van Dorp 2004: 22) where lack of accountability and misconduct impacted negatively on increased or perpetuated violence in conflict prone zones.

In conclusion, over the role of business in conflict (creation, triggering or continuation), despite the lack of a universal agreement, the overview presented document different mechanisms through which business (especially in the extractive industries) may contribute to violent conflict: decisions on distribution of resources, displacement of local communities, environmental degradation, and labour and hiring practices (USIP 2012).

### 1.4.2 A business-peace nexus? The role of Multinationals as peacebuilders.

There is a growing interest in the role of the private sector in peace building and peacekeeping. This session will explore the different mechanisms through which international companies can contribute positively to Peace in host countries. To this regard, it is important to note that in this thesis the concept of Peace will be declined in Negative Peace and Positive Peace as for the definition given by Galtung (Galtung 1967) and by the Institute for Economics and Peace (2008). In particular, we define Negative Peace as 'absence of organized, collective violence'. For our purposes, we consider here the term violence to identify physical force and the efforts to cause bodily harm to other human beings (Galtung 1967). Positive peace can be defined as the long-term peace and, in the definition of IEP, it represents the attitudes, institutions and structures that, when strengthened, lead to a more peaceful society (IEP 2015). This session will present the academic overview on the contribution of Multinationals in peacebuilding and peacekeeping processes with a multidisciplinary perspective.

According to J. Nelson (2000), 'the private sector, ranging from large multinationals to informal micro-enterprises, has a role in contributing – both directly and indirectly – to the prevention and resolution of violent conflict. There is growing evidence that as market economies become more widespread and as business becomes a more central actor in societies around the world, the importance of this role is increasing'.

USIP (2012) proposes a basic conceptual model with five (5) areas where Multinationals *might* play a critical role in peacebuilding of the host countries in terms of i) economic activity ii) rule of law and international standards iii) corporate citizenship iv) Track Two Diplomacy and v) risk assessment and conflict sensitive analysis.

i. **Economic Activity**: providing economic opportunities and jobs in the conflict affected regions might decrease the potential for triggers in a divided society, under the circumstances of fair distribution of opportunities. This perspective is related to the 'Peace through Commerce' argument, mainly developed in the business and economic literature ranging from research on the cost of conflicts from a company perspective to the role of trade in peacebuilding.

Regarding the costs of conflict for companies, as in the definition provided by Davis and Franks (2014), it refers to any negative impacts on a company's tangible or intangible assets, including value erosion, from failing to avoid, mitigate or resolve conflict at an early stage. According to the research conducted by the two authors, the most frequent costs related to conflict with local communities arise from low productivity due to delay or shutdown while the greatest costs are related to the lost value of future projects and plans in the region because of conflict. As put by Wenger and Mockli (2003), companies have the means and the motivations to contribute and ensure the long-term effects of conflict prevention. The motivations come from the destructive internal costs related to a conflict for a company such as reputational damages, chances of kidnapping and exposure to political risks or they might rise from economic opportunities such as the opening of new markets and the promotion of economic activity. Empirical evidence supports the idea that trade promotes peace (Hegre et al. 2010). Indeed, 'when a war erupts, conflict diminishes bilateral trade that results in lost gains from trade for both nation. To prevent these potential gains from trade losses, trading nations become more cooperative, thereby decreasing the hostility between them ("opportunity cost" argument from Polachek and Xiang 2010)'. However it is important to note that each international company involved in a conflict prone country might react to conflict (and therefore peace) in different ways because of company specific characteristics, stakeholders profiles or conflict dynamics (Getz and Oetzel, 2009). The framework proposed by Getz and Oetzel (presented in Table 1.3.) provides a comprehensive overview on how MNEs can contribute to reduce conflict and increase the level of peacefulness in recipient countries, through unilateral or collective action and through direct or indirect action (e.g., with the adoption of independent certifications, providing services to peacekeepers, being an active part of general global multilateral agreements).

**Table 1.3.** Typology of firm responses to violent conflict

| | Unilateral action | Collaborative action |
|---|---|---|
| Indirect action | Independent certifications<br>Internal and supplier audits<br>Sensitive human resource policies<br>Lobbying belligerents' key stakeholders<br>Philanthropy | General global multilateral agreements (e.g., Global Compact, Caux Principles) |
| Direct action | Arbitration or mediation<br>Providing services to peacekeepers<br>Public condemnation of conflict-related activities<br>Withholding payments to those who facilitate conflict | Multitrack diplomacy<br>Conflict-specific global multilateral agreements (e.g., Kimberley Process; Voluntary Principles on Security and Human Rights |

*Source: Modified from Oetzel et al, 2007*

ii. **Rule of laws and international standards**: the adherence and respect of RoL and international standards along the supply chain values constitute a positive contribution from the multinationals to the host countries and globally. A champion of this is Mars incorporated, committed to certify its entire cocoa supply chain by 2020 as sustainable (Sustainable sourcing plan). Other positive contributions in the domain of the rule of law refers to the respect of working conditions' standards as defined by ILO, the respect of property and contract rights and the implementation of dispute resolution mechanisms to solve controversies among different stakeholders.

iii. **Corporate Citizenship:** Corporate citizenships refers to a commitment to ethical behaviour in strategy, operations, and culture (UN Global Compact, 2009) by the company in a specific context of intervention. All the activities of Corporate Social Responsibility refers to this area. Empirical analysis showed so far mixed results on the impact of CSR (and in a broader sense Corporate Citizenship) in promoting peace. In the Niger Delta for instance, several studies show the weaknesses of CSR policies (see Aaron 2012) and in particular how different CSR policies and practices contributed to the intensity and scale of the conflict between hosting communities and MNEs (Arron and Patrick 2014). Over time the adoption of CSR practices seems to have a positive impact on MNEs in terms of reduced allegations of human rights abuses but not for third parties involved along the value chains (i.e., suppliers, clients) (Fiaschi et al. 2011).

iv. **Track Two Diplomacy:** the private sector can contribute positively to conflict resolution processes by providing space of dialogue among the opposing parties or by campaigning for specific initiatives to create a common space for negotiation (see Pershka, 2011 for some case studies on South Africa, Northern Ireland and Sri Lanka and Lieberfeld 2002).

v. **Risk assessments and conflict sensitive analysis.** Companies working in complex and divided communities and/or in ongoing conflict evaluate ex ante the potential of their activities for the environment and for the communities. The Do No Harm approach developed by Anderson (1999) is, indeed, a tool for conflict prevention and conflict mitigation that bring positive outcomes to the entire community and the business involved.

### 1.4.3 Corporate Security Responsibility (CSecR)

Corporate Security Responsibility (CSecR) refers to the potential contribution of business corporations to the provision of the public good 'security' (Wolf et al. 2007) when operating in conflict zones. In recent years, a debate has arisen among practitioners and scholars on the role of corporations in conflict zones, not only as 'potential contributors to conflict and violence' but also as peace builders, looking at their potential in conflict prevention, peace-keeping and post conflict peace-building. As mentioned previously, the business-conflict nexus has been investigated largely and has been underlined that, given certain structural conditions, corporate involvement in conflict zones may contribute to fuel the violence in the region and/or to trigger conflict by financing conflict parties, trading conflict-relevant goods and/or exploiting regulatory gaps, in extreme cases also with the provision of private military personnel to combat (Avant 2005). However, the business-peace nexus can be also activated through the aforementioned channels described with the USIP framework. To this regard, MNEs may contribute to peace building process in conflict or post-conflict zones through the adoption of conflict sensitive CSR framework, though their understanding of conflict and corporate-conflict dynamics remains under-formulated and constrained by a lack of skills and experience (Nelson 2000). Companies can prevent potential triggers of conflict because of their presence in the field and mitigate the potential risks of violent conflict through the analysis of their potential impact at local level (Banfield et al. 2003). MNEs through conflict sensitive analysis of their operations can minimized harmful impacts and be part of a peace building process. For instance, companies in Northern Ireland, through the Future Ways program hosted by the University of Ulster in Northern Ireland, for instance intentionally hired half Catholics and half Protestants to let them work together and create a space of dialogue (Oetzel et al. 2010: 352).

On the motivations of promoting CSecR policies Rettberg (2016) identifies 3 different perspectives on the involvement of Business in Peace Process and Peacebuilding: (i) need, (ii) creed, (iii) greed. Business needs peace to solve issues related to its operational plans in conflict-prone zones and regains profitability. The creed motivation refers to the willingness of business actors to promote peace and positive change within the community, driven by ideology (i.e., religious or philanthropic values) or by consumer side pressures. Ultimately, the greed motivations relies on the profit maximization motives as in the tradition of Friedman (1970). Rettberg links the latter motivation to the Peace Dividend concept that, for the author, has a closed economic dimension on expectations from the companies of future economic returns from an investment in peace building and peacekeeping activities.

## 1.5 A case study: Conflict Minerals in the Eastern DRC, a Global Conflict

This research will explore the close relation between instability and trade in conflict minerals that characterizes the Eastern Democratic Republic of Congo (DRC). An analysis of the global supply chain of the conflict minerals will be presented. This analysis will be useful to understanding the different stakeholders involved in the process who contribute to the status quo of instability in the region. The research will also analyze the historical and social reasons of this situation, which are deeply interconnected to the economic interests of the different stakeholders. The research will consider the efforts made at the national and international level to undermine the illicit mineral trade and the instability in the Eastern DRC in general.

### 1.5.1 The Eastern DRC instability

The never ending conflict in the Eastern DRC has a significant degree of complexity that is rooted in the fight for land, regional supremacy and natural resources control. The instability of the region allows different stakeholders involved in the conflict to amass incredible amounts of money from illegal mining with appropriative methods. The natural trap one sees in the eastern part of the DRC one of its best examples. The relevant profits coming from the exploitation of the natural resources – diamonds, tin, tantalum, and tungsten among others – are divided among several actors: the rebel groups who control the mines, the traffic dealers, and all the actors involved in the supply chain of the trade, resulting in a vicious cycle where economic interest seems to be the driver that is fueling the instability and the insecurity of the region, at the expenses of the population and the environment.

#### 1.5.1.1 Historical context

The DRC has been the stage of several conflicts in the past, all interconnected by a thread of instability and weakness that dominate the country since the 19th century.

The history of the DRC cannot be described without considering the Belgium Colonization. The extractive institutions created during the colonization have contributed to define the current structure of the formal institutions and the inner characteristic of exploitation in the resource management.

King Leopold II defined the DRC as his personal property[7]. According to several experts, his regime is responsible for the death of ten million Congolese people (Hochschild 1998). Slavery and exploitation of natural resources (i.e. iron and rubber) were the main characteristics of his domination.

After the independence in 1960, the country has been characterized by instability, weak governance and complex relations with neighboring countries, interested in the natural resources wealth of the DRC. After the killing of Patrice Lumumba, in 1965 the Mobutu Sésé Seko era started, supported by the United States. Unfortunately, his dictatorship weakened a country already worn out by extractive colonialism. No investments in infrastructures, education, and health system were put in place or even planned. The complete government failure in terms of development policies and its authoritarian rules allowed Zaire (the former name of the DRC).to decay. Between independence in 1960 and the end of Mobutu's rule in 1997 the GDP of the country decreased by 65% (Gondola and Ch. Didier 2002). The weak central state, the inability to control all the provinces of the vast area of Congo, the weakened FAZ (*Forces Armées Zaïroises)*, in other terms, the collapse of a failing dictatorship created the conditions for considerable internal resistance to Mobutu's rule and the flourishing of several rebel groups, able to find refuge in Zaire's eastern provinces, far from the capital Kinshasa Opposition included leftists who had supported Patrice Lumumba as well as ethnic and regional minorities opposed to the dominance of Kinshasa.

The first Congo War (1996-1997) was a foreign invasion of Zaire. The invasion was led by Rwandan and Ugandan forces following the Rwandan genocide and the outcome of this War was the replacement of a decades-long dictator Mobutu with the rebel leader Laurent-Desiré Kabila. However, the new leader did nothing in terms of positive change for the population but it expelled the foreigner forces from the DRC in the desperate attempt to avoid a *coup d'état*. This short term action was successful but it contributed to enhance long lasting hostilities. Indeed, this event kicked off the Second Congo war the following year. The Second Congo War started in 1998. It has been characterized by the invasion of troupes of Uganda and Rwanda. This conflict devastated the country even more than the first one: the eastern part of the DRC where the rebels were localized paid the highest cost in terms of lives and internal displaced people. This war, called the Great War of Africa, represented the deadliest war in Modern African History; it involved eight African nations and 25 different armed groups. By 2008, the war and its aftermath had killed 5.4 million people, mostly from disease and starvation (Bavier 2008); it formally ended in 2003 when a transitional government took power, establishing a government of national unity led by Joseph Kabila[8], who signed the Pretoria Accord for the withdrawal of Rwandan forces occupying

[7] At the Berlin Conference of 1984-1985 the colonial nations of Europe committed the Congo Free State to improving the lives of the native inhabitants. From the beginning, however, Leopold essentially ignored these conditions and ran the Congo using a mercenary force for his personal gain.
[8] Son of Laurent Kabila assassinated in 2001.

eastern Congo and later became the President of the DRC with the completion of the 2006 general election. Kabila Junior, likewise his predecessors, demonstrated inability to cope with the complexity of the eastern region in terms of control and authority of the state and effective decentralization. Under these circumstances, the armed groups in the eastern zones continued to perpetuate any kind of violence against the civilians to maintain their control under the zone and continue their illicit but profitable traffic of minerals, whose the eastern Congo is rich.

Despite several critics of frauds and lack of credibility, the 2011 Election confirmed Kabila as President of the DRC with the 49 percent of the votes[9].

The lack of transparency and credibility exacerbated the weak leadership of the President Kabila. The last Report of the ICG concerning the situation in the DRC uses a very direct language to underline the incapacity of the Government in the resolution of the conflicts in this country and in general, to the management of several issues, such as the FARDC predatory behavior, the lack of authority of the Government, the decentralization's inefficiency. The Bosco Ntaganda's mutiny in April 2012 and the subsequent creation of the 23 March rebel Movement (M23) are a direct consequence of a complete failure of the Governance of Kabila (ICG 2012b). On April 2013, the unexpected occupation by the Mai Mai rebel group of Lubumbashi, the second largest city in the DRC, is another symptom of the complete defeat of the state (ICG 2013).

According to Billerbeck, Kabila faced a huge risk in terms of legitimacy in the North Kivu crisis. The death of his personal advisor Katumba (2012), for someone the hidden strategist of Kabila leadership, exacerbated the weakness of the President. Kabila did not have a clear plan upon important reforms on a number of essential issues, namely, the revision of the electoral commission, the revision of the mining code, the holding of provincial elections and the implementation of long-awaited projects to improve electricity supply in the country (Billerbeck 2012).

The elections of December 2018, with the victory of Felix Tshisekedi, were contested by many, including the National Episcopal Conference of Congo (CENCO), which had deployed 40,000 election observers (see Stearn 2019) but were confirmed by CENI (national election commission) and did not provide a clear response to the pressing social, economic, and political questions of the civil society. Today the country is without a clear leadership and under a humanitarian emergency with one of the worst epidemic of Ebola worldwide.

[9] The Official observers from the Carter Center reported weaknesses in the election process from the mismanagement of the results to the lack of transparency and organization in the rural zones (Kara 2011).

### 1.5.1.2 Positive economic growth and (under) development

Despite a failing state, according to the estimates of the World Bank[10], the future of the DRC in terms of aggregated economy seems to be favorable despite its high volatility, demand driven. After economic growth slowed to 2.8 percent in 2009 because of the effect of the global financial crisis on a natural resources driven economy, macroeconomic performance began to improve since 2010. Real GDP growth stayed at around 6.9 percent in 2011, driven mainly by the extractive industries' performance, boosted by increases in commodity prices. However, the countries lived then a recession during the period 2015-mid 2017 due to the decline in the global prices of its main export commodities. 2018 has represented a year of economic recovery for the country because of higher demand and prices on the international markets for copper and cobalt.

However, the absence of infrastructures, the lack of good primary and secondary education and the inexistence of a reliable health service are the main elements to consider in a life of deprivation for the majority of the population.

Not surprisingly, the DRC ranks 176 among the world's 187 countries in the Human Development Index. Poverty is widespread, with 73 percent of the population living with less than US $1.90 per day.

The economic recovery is explained by the exploitation of natural resources, abundant in the country, from which both the formal and informal economy of the DRC are highly dependent. However, the potential positive effect of the economic growth is not captured by the population because of lack of structural factors and basic needs responses. The economic growth is captured by the élite of the central state involved in the international trade of resources. Because of the ongoing conflicts with the rebels and the complete absence of any kind of basic services, the eastern DRC is living a humanitarian crisis since the first Congo war.

[10] World Bank (2019), data for the DRC, https://www.worldbank.org/en/country/drc/overview

#### 1.5.1.3 The Status quo in the Eastern Congo: fragility and violence

According to Montague (2002), "the international competition for scarce resources in general, and for coltan in particular, is a key factor in the lack of state stability and the continuation of war in the DRC." Indeed, the paradox of plenty in the Eastern DRC translates the presence of natural resources in source of fragility. The abundance of natural resources in a context of poverty is rarely a catalyst for prosperity. Poverty, weak governance, no institutions, impunity, corruption and FARDC (the national army) collusion created a violent status quo, where different militias (Appendix A) control the illicit traffic of minerals: the instability and the fragility are the perfect conditions to maintain the control on mines[11]. In conclusion, in a context of poverty and deprivation such as in the Eastern DRC the natural resources are the fuel of a vicious cycle of violence.

### 1.5.2 Significance and Structure of the Problem: roots and causes of the conflict

The situation in Eastern Congo is characterized by a created status of violence and uncertainty. With the current situation, there is no chance for the long term development of the region, divided as it is among rebels groups and the FARDC that are involved in the illicit traffic.

#### 1.5.2.1 Natural Resources Trap

**Coltan Belt**

Among other minerals, the sale of a mineral combination[12] called Coltan is particularly lucrative. Coltan is the name for columbo-tantalite mined in Africa. It is a crucial raw material for the production of modern electronics. World's largest reserves are in the Democratic Republic of Congo (Hayes and Burge 2003), and especially in the Eastern part of Congo, where a stretch of land rich in the mineral is occupied by armed groups. As already discussed, the coltan belt represents for the armed groups the main source of revenues for individual survival and for financing their actions as militias.

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[11] According to IPIS, in the Eastern DRC they are 200 mines. OF the 13 major mines identified, 12 are controlled by armed groups

[12] Columbium (also known as niobium) and tantalum together compose what is commonly known as coltan, an essential but rare mineral. Coltan in its raw form simply looks like black mud or sand. […]Once processed into capacitors, it conducts the electric charge in high-tech equipment ranging from cellular phones and computers to jet engines, missiles, ships, and weapons systems (Montague, 2002). When refined, it becomes tantalum.

Moreover, according to Montague, the main reason of the Rwanda and Uganda invasion in 2008 was the potential inclusion of this belt in their territories. The primary motivation for the second war was to gain control of the abundance of natural resources. Uganda and Rwanda played a large role in the creation of the Rally for Congolese Democracy, which had now spun off into several major rebel groups: RCD-Goma, RCD-Kisingani, and the Congolese Liberation Front (Montague 2002).

**3Ts – tin, tantalum, tungsten and gold**

The Eastern Congo has huge reserves of tantalum, as already underlined (the tantalum is the Coltan refined) but also of tin and tungsten, important minerals in the electronics industry and gold. Below the DRC mineral supply at global level:

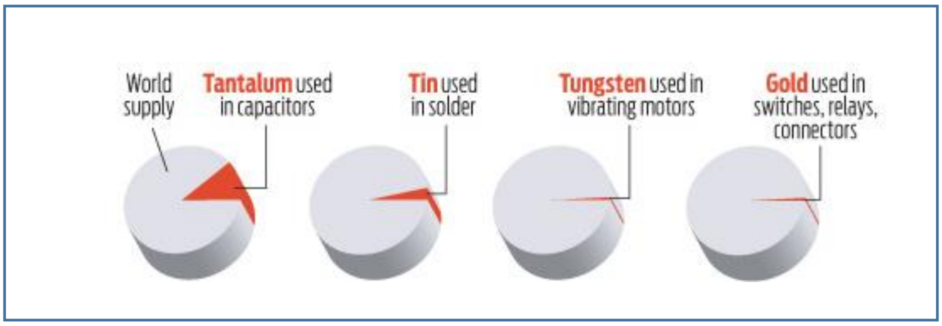


**Figure 1.5.** DRC mineral supply at global level

*Source: Unites States Geological Survey*

1.5.2.2 Weak Governance and Rent-Seeking

According to Collier (2007), a natural resources trap exists under defined conditions linked to natural endowment (the presence of natural resources and geography) and structural factors such the bad institutions, extreme poverty, no state legitimacy, weak governance, bad neighbors. Under these conditions, resources make conflict for the resources more likely. Considering the case of the Eastern Congo (Appendix B), it is clear that the structural conditions of the natural resources curse are verified. The complete collapse of the state, the huge responsibility of the government in maintaining the current situation, the absence of a concrete plan to gain a control of the zone and bring security for the population are, among others, the causes of the violent status quo.

Moreover, the lack of legitimacy of the Kabila government and the uncertain results of the last election with Tshisekedi have a huge impact in the peacebuilding process because of the past failures of the Congolese leader Kabila to implement any kind of signed agreement for peace in the Great Lake region.

For example, considering the last agreement, signed on February 24, 2013 in Addis Ababa, Ethiopia, the expectations are mixed in light of the bad leadership of Kabila. After almost three months of talks between the International Conference on the Great Lakes Region (ICGLR), the Southern African Development Community (SADC), the African Union (AU) and the United Nations (UN), the framework agreement was signed by Angola, Burundi, the Central African Republic (CAR), Congo, the DRC, Rwanda, South Africa, South Sudan, Uganda, Tanzania and Zambia.

This peace initiative provides another important opportunity for countries to work collaboratively for peace and stability in the Great Lakes region and especially in the Eastern Congo, however, the real challenge now will be the implementation of the framework by the DRC (see paragraph III).

#### 1.5.2.3 The Congo connection: the global supply chain of conflict minerals

In the definition of this complex situation, it is important to consider the macro level of analysis of the problem in order to better understand why this conflict is a global conflict.

The DRC supplies minerals used to produce industrially important elements in the modern electronics industry and in other important industries. In particular the electronics industry and the aerospace industry consume approximately 75 percent of globally produced tantalum, whose the eastern DRC is rich. As described below, six main steps characterize the supply chain of the conflict minerals, from the eastern Congo the minerals are transported to refiners and smelters in East Asia and Europe and then, entering the licit trade one time processed and finally sold to consumers.

At local level, the minerals are collected in Bukavu and Goma (M23 occupation on December 2012) and then exported illegally in Rwanda and Uganda principally. Once the coltan is sold onto international markets it is impossible to trace it from the end product back to the mines.

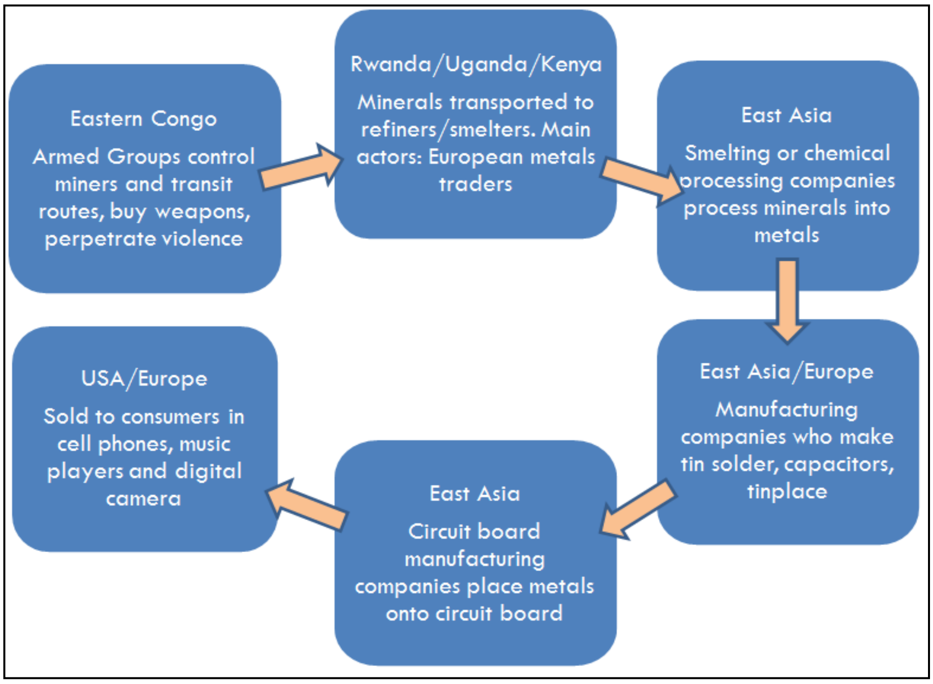


**Figure 1.6.** Conflict Minerals Global Value Chains

*Source. Elaborations of the author*

The global supply chain is a useful tool to better understand also the diversity of the interests involved in the natural resources exploitation in the Eastern Congo.

Different stakeholders are involved in the conflict minerals issues:

Local stakeholders

- Congolese Population
- Congolese Government
- FARDC (National Army)
- Miners
- Armed group localized in the Eastern Congo
- Local companies involved in the transportation/collection of the minerals
- Exporters

Regional and Global stakeholders

- Foreign countries involved in the process (Rwanda, Kenia, Uganda, Malaysia, Germany, USA). Three international corporations refine 80 percent of the ore: the US Cabot Corporation, German H. C. Stark; and the Chinese Ningxia Corporation. Both Cabot and Stark have announced that they will not use DRC coltan, following the UN Security Resolution (2008) in conflict minerals from DRC (UNSC 2008).

- Foreign countries – importers of minerals: Europe (Germany, Switzerland, Netherlands), USA and China. China is now the primary consumer of DRC's coltan, accounting for 80 percent of its exports in 2008, with some DRC coltan found in materials processed in Kazakhstan (Nathan and Sarkar 2011).
- Final consumers of electronics industry.

The conflict in the eastern Congo is definitely a global conflict where several players have mainly economic interests. In this context, the Congolese population is suffering for human rights violations and any kind of relative and absolute deprivation. According to Amnesty International, "under the pretext of fighting their opponents, all parties to the conflict are killing, looting, and extorting on a massive scale and subjecting the entire population to terror and misery. (Amnesty International 2000)."

### 1.5.3 Policy recommendation towards conflict transformation

The chronic instability of this country is clearly in favor of the maintenance of the status quo. The Global Peace Index ranks the DRC in the 154th position among 158 countries, and governmental actions (with international support) have to be implemented for the improvement of the DRC. On-going conflicts and instability, high rates of crime and an estimated 2.1 million displaced people and refugees are the disastrous consequence of decades of misrule in DRC

This instability is given by years of civil war and has its deep roots in the colonization era, with the definition of the DRC a *royaume personnel* of Leopold II and the organization of the DRC, with the implementation of extractive institutions. However, Kabila failed in his policy because he has not proposed a clear program of reforms in terms of infrastructures and institutions.

Structural factors such as the extent of the territory (two-thirds of the European Union), the lack of communications and the dispersion of the population in remote areas caused several problems in terms of governmental control upon the different districts.

DRC is a fragile post-conflict country with enormous needs for reconstruction and economic growth, but within the context of a severely constrained fiscal space and weak institutions. As already stated, the humanitarian crisis remains a major concern in many of the more unstable parts of the eastern Congo, where the conflicts have had an impact on the population, causing high rates of sexual violence, impunity and migration. The sense of insecurity and economic instability became a "natural" element in the life of Congolese people in the conflict zone.

What can be done about the resource curse? A comprehensive approach has to be undertaken to address the root causes of the instability in the Eastern Congo. Three different levels of intervention have to be developed in order to proceed towards a successful conflict transformation[13].

### 1.5.3.1 Local Intervention

The local intervention has to be focused on two important priorities: security and development. In the first stage of intervention, the program should focus its attention to protect the civilians, recreate the structural factors for economic and social development and develop the infrastructures in the zone in order to enhance economic activities (multiplier effect).

**Security**

The Congolese military suffers from weak command and control, widespread corruption, haphazard administration, poor operational planning, limited training and equipment, and questionable military capability. The occupation of Goma by the M23 has been an example of its weaknesses. Therefore, it is necessary to define a program of capacity development, serious training and fair retribution for the FARDC localized in the zone.

The MONUSCO[14], the UN peacekeeping mission in the DRC should improve its collaboration with the national army to help the FARDC develops their skills.

This program should consider also that the FARDC are in certain circumstances the perpetuators of violence and human rights abuses towards the population and they are deeply involved in the illicit traffic of minerals. It could be helpful to restore the sense of the state and the legitimacy of the state through the development of inter-community reconciliation and local justice mechanism.

Finally the implementation of a comprehensive counter-insurgency strategy against the rebels has to be defined in collaboration with the UN and the neighboring countries. The last peace agreement signed is aimed to improve the relations among neighboring countries towards a peace building process.

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13 See Appendix C and D. They present a visual and synthetic idea of the integrated approach discussed.

14 On March 28, the UN Security Council approved the resolution 2098 (2013) enabling offensive combat force to neutralize and disarm Congolese rebels, foreign armed groups (Intervention Brigade). http://www.un.org/News/Press/docs/2013/sc10964.doc.htm

**Development**

A development plan for the region has to be established. The plan should have short and long term objectives, including a serious public investment in infrastructures and power supply.

According to the Ouayoro (2013), the DRC has a potential in terms of unmatched regional advantage in agriculture that could be addressed with a serious development policy of agriculture enforcement (entitlement, infrastructures, technology, and raw materials).

The job creation is one of the parameters to consider for a successful development policy in the eastern DRC where the risk of youth bulge is high.

**Good Institutions**

A third element to be considered is the *conditio sine qua non* the local intervention could be effective: good institutions are the key element for the implementation of any kind of policy in a complex situation such as described for the DRC.

The challenges for the government are huge and it is important to consider the role of partners like the IMF and the World Bank not only as advisors in the designing of the program but also in the implementation of the program. Changing the minds and the hearts of corrupted and demotivated institutions is the bottleneck of the local intervention. In this context, the Congolese leadership should promote important reforms in the administrative and in the justice system. As already discussed, the current political situation, after the elections of December 2018, put the country in an even deeper political instability that could undermine the potential of this integrated approach.

#### 1.5.3.2 Regional Responsibilities

The signed *Peace, Security and Cooperation* Framework asks for the general collaboration of all the parties not to interfere in internal affairs of neighboring countries. This is an important step towards collaboration and coordination among the countries of the Great Lakes Region.

The framework signed is an important opportunity towards a system of peace and security in the Great Lakes Region. However, according to Zounmenou, the framework is too vague and lacks of a concrete plan of actions. Moreover, the multilateral agreement does not specify clearly the leadership of the framework, the timing and the mandate of the military deployment, and the role of the UN's Stabilization Mission in the DRC (MONUSCO) (Zounmenou 2013).

With these premises, the framework seems to be a broad first attempt to bring together at the same table very different countries with different interests.

Congolese government should improve bilateral relations with Uganda and Rwanda, trying to reach a consensus on an exit strategy for the Ugandan and Rwandan rebels in the eastern Congo.

As showed by the signature of this agreement, the actions of the UN in this specific period of time could have a positive impact in the development of a new collaborative approach among Kampala, Kinshasa and Kigali. However, without their sincere engagement, the framework agreement yet again raise hopes while failing to promote the much-needed peace and stability in the eastern DRC (Zounmenou 2013).

#### 1.5.3.3 Global Actions

**Multinationals and consumers**

The third level of intervention refer to the global actions that stakeholders involved in the supply value chain of Conflict Minerals could identify that would help push for accountability along the supply chain.

International Solidarity campaigns towards accountability along the supply chain are a powerful tool to advance recognition upon this global conflict.

Some international non-profit organizations such as the Enough Project and Search for Common Ground (SFCG) are promoting different approaches to tackle the problem along the supply chain. SFCG has a local approach, promoting awareness among the miners and the local traders about the effect of conflict mining (first steps of the supply chain); the SFCG project aims to empower communities in denouncing human rights abuses along the supply chain in the DRC and Rwanda, and to claim the right to protection[15].

The approach of Enough Project is different, advocating at a global level for concrete actions toward accountability within the supply chain. Enough Project, whit its initiative "Raise Hope for Congo" is promoting accountability, asking the big companies like HP, SanDisk, among others, to trace, audit and certify the minerals used in the production of their outputs for the final consumers, having a strict control on their suppliers (the smelters).

[15] SFCG, Democratic Republic of Congo, SFCG addresses conflict mining at the local level, http://www.sfcg.org/programmes/DRC/DRC_conflictmining.html

According to the Enough Project, smelters are the key chokepoint in the supply chain for conflict minerals because, for the most part, they know precisely where they source their minerals from. There are only a limited number of smelters (some 200-300 globally), compared with tens of thousands of mines and electronics supply companies, so more transparent smelters is critical to solving the conflict minerals problem going forward (Lezhnev 2013).

The campaign of Enough Project aims also to create awareness among the final electronics under the powerful idea that "We must raise our collective voice as consumers and demand conflict-free electronics. By pressuring electronics companies to remove conflict minerals from their supply chains, we can help remove fuel from the fire in Congo". For instance, the organization created the Conflict Minerals Company Rankings[16] where the electronics consumer can choose among the electronics companies according to their compliance to accountability principle of conflict free products and ask for direct action in conflict-free initiatives in schools, universities, companies. Enough is also advocating for a commitment of the US government. Recently the Director of Enough, John Prendergast, testifies for Congo at the Senate Foreign Relations Subcommittee on African Affairs, asking for US government to play a more important role in the peace building process in the eastern region through a "greater attention from senior policymakers, a step-change in diplomatic engagement in the region, and concentrated focus on areas of U.S. leverage, especially efforts to transform the trade in natural resources from a driver of violence into a catalyst for regional peace (Maze 2013)".

**Value Chain Governance**

Another important factor to consider in the definition of global actions to solve the Congo Crisis is the development of a Value Chain Governance. The Global e-Sustainability Initiative (GeSI) and the Electronic Industry Citizenship Coalition (EICC)[17], including 40 global electronic companies are good initiatives in the business world to underline the importance of social responsibility towards a conduct code for doing business linked to the mineral extraction (among their activities: traceability with finger printing, conflict free smelters). Another interesting initiative is the EITI, the Extractive Industries Transparency Initiative, a coalition of governments, companies, civil society groups, investors and international organizations, working in the domain of the supply chain governance, fixing global standard ensuring transparency of payments from natural resources.

[16] Raise Hope for Congo, 2012 Conflict Minerals Company Rankings, http://www.raisehopeforcongo.org/companyrankings
[17] http://www.eicc.info/initiatives02.shtml

**Governments**

The global actions that have been considered up to now could improve the traceability of the minerals, but they do not impact positively the livelihood of the Congolese people, but could actually lead to a loss in job opportunities if the traceability activities would be developed along the value chain. In the short-medium term, the measures aimed to stop the trafficking of Conflict Minerals would deteriorate the living conditions of the miners for instance (in relative terms) unless a sustainable alternative development program in the Region will be developed. Again, the role of the national government is critical here to complement the global actions of corporations and final consumers.

Because of the weaknesses already underlined in the current leadership of the DRC, the role of the regional unions (AU, ICGLR, SADC) and international organization should be prominent in collaboration with the newly elected President for the definition and implementation of a conflict sensitive development program.

In this direction, the AU's New Partnership of African Development (NEPAD) has recently adopted the Natural Resources Charter[18] as a flagship program for natural resource management in the region and it developed a capacity building program in support of African Governments (Nepad 2012:35).

#### 1.5.3.4 Effective trade legislation (Enforcement)

**Dodd Frank Regulation**

In July 2010, the American government passed financial reform legislation, the Dodd-Frank Wall Street Reform and Consumer Protection Act. Section 1502 of this Act calls on the American Securities and Exchange Commission (SEC) to regulate the minerals trade and make the sector more transparent. SEC formulated rules that require companies to disclose the origin of their minerals through due diligence over the supply chain.

Several critics followed this law. The most important one in terms of accountability is that the SEC disclosure does not ban or penalize the use of conflict minerals. According to the section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act, 'the exploitation and trade of conflict

[18] The Natural Resource Charter (NRC) sets out guidelines on how to manage natural resources sustainably. It provides guidance to wealthy resource-rich countries too. The Charter recognizes that policy decisions must depend on a country's political, economic and cultural setting. The authors of the NRC form an independent, non-political body. The NRC approach is appreciated by the International Monetary Fund (IMF), the World Bank, the African Development Bank (ADB) and the African Union (AU).

minerals originating in the Democratic Republic of the Congo is helping to finance conflict characterized by extreme levels of violence in the eastern Democratic Republic of the Congo, particularly sexual- and gender-based violence, and contributing to an emergency humanitarian situation therein […] (Dodd Frank Law: 838)'. If companies discover they have been sourcing conflict minerals from DRC or adjoining countries, they can continue to do so (ICG 2012a); however, they must submit a "conflict minerals report" to the SEC and thus make public their imports.[19]." As for the other global interventions, this regulation is a good start for clean up the supply chain from a macro level perspective, however, it's urgent an alignment of the local institutions, otherwise, this law could have in the future a very negative effect on the livelihood of the population, as occurred in 2011, when President Kabila banned on exploitation and exportation of Minerals for six months, without any considerations upon the survival of the miners, who de facto, migrated and shifted in the illegal mines.

**European legal framework and the Raw Material Initiative**

The European Union did not have a law such as the Dood Frank law until May 2017 when there has been the adoption of the EU conflict minerals regulation (Regulation 2017/821). After the Dood Frank, the European Parliament asked the Commission (EC) to develop a European version that has been shared and discussed in the EU trilogue. Previously, in February 2011 the EU presented its Communication "Tackling the challenges in commodity markets and on raw materials". Echoing its 2008 Raw Materials Initiative launched, the EC called for action under three pillars: fair access to raw materials from international markets, sustainable supply from European sources, and efficient use of resources, promotion of recycling.

As underlined by Vircoulon, the EC has an important role to play within the framework of the Cotonou Agreement[20] and within the European Union/African Union institutionalized dialogue. This dialogue will be an opportunity to address previously taboo subjects: the demilitarization of mining sites, the fight against corruption, smuggling, and the failure of mining reform in the Congo (Dood Frank Law 2010). Vircoulon argued also that, with this regulation, the real goal of the EU framework "should not be to simply follow Dodd-Frank or 'Europeanise' it. The EU's version should go further by addressing

[19] According to the SEC, "The Conflict Minerals Report would include a description of the measures the issuer had taken to exercise due diligence on the source and chain of custody of its conflict minerals, including a certified independent private sector audit of the Conflict Minerals Report that identifies the auditor and is furnished as part of the Conflict Minerals Report

[20] "The Cotonou Agreement is the most comprehensive partnership agreement between developing countries and the EU. Since 2000, it has been the framework for the EU's relations with 79 countries from Africa, the Caribbean and the Pacific (ACP)". Development and Cooperation - Europeaid http://ec.europa.eu/europeaid/where/acp/overview/cotonou-agreement/

the weaknesses of the American act — complementing regulation by the market with a political and developmental approach that is currently lacking (Vircoulon 2011).”

The EU conflict minerals regulation de facto followed the scheme of the Dodd Frank Regulation in the USA, proposing that EU importers of conflict minerals (3TG) need to comply with, and report on, supply chain due diligence obligations if the minerals originate (even potentially) from conflict-affected and high-risk areas such as the DRC. It will apply across the EU on 1 January 2021. The European Commission (2017) estimates that approximately 880,000 EU-based companies are operating in manufacturing sectors and potentially working with tin, tantalum, tungsten and gold. Around 600 to 1000 EU importers will be directly affected and 500 smelters and refiners will be indirectly affected by the EU Conflict Minerals Regulation.

Despite several critics from the civil society on the 2021 adoption of the regulation and on the necessity of more stringent measures, the regulation represents a positive step forward. Interestingly the promulgation and implementation of such types of regulation caused in the mining sites side effects. In the DRC, the coltan mining decreased at the expenses of artisanal minerals livelihood. To this regard, it is important at international and local level to mitigate the potential side effects of such measures for the most vulnerable of the global chains by promoting alternative programs of development in the zones affected.

### 1.5.4 Peace Building: local, regional and global collaboration

The integrated approach (Appendices C and D) proposed is challenging because of the structural weaknesses at the local level (current leadership among others). However, the agreement signed on February 203 represents the first step of a complex process of peacebuilding and conflict transformation. The integrated approach is the correct answer of the national government and international community to address the root causes of the conflict in the Eastern Congo. The different levels (local, national, regional and international) need coordination to be effective in the definition of the program and in the implementation of the program, with a long-term perspective.

In practical terms, the creation of a taskforce with sub-groups for specific topics (development, security, diplomacy, negotiation, legislation, conflict transformation) could be an effective way to at least design the integrated approach recommended. The taskforce would have the important role of conjunction among the different actors that have different expertise and interests. For instance, the creation of a new legislation regulating the conflict mineral trade would be leaded by experts in international trade in conjunction with peacekeepers, human rights experts and development experts, in order to avoid or at least limit the side effect seen for the Dood Frank Law. (Miners' livelihood) and avoid distortion of competition in the international trade market.

Finally a conflict transformation is possible in the DRC only by addressing first the governance issues, particularly feasibility, reliability and security problems.

The Global Conflict has to be addressed with local, regional and global interventions coordinated and interconnected. Despite its weaknesses, the national government should be the leader of the theory of change for the Eastern Congo, advised by the international community and by the regional unions in a collaborative process. Within this framework, the role of Multinationals in guarantying the traceability of the minerals and the accountability of their suppliers is fundamental for a successful result.

## 1.6 Conclusion

GVCs are complex systems characterized by specific production and consumption model, a certain degree of geographical fragmentation, and a governance structure that regulates the different relations among the actors involved. Lead firms within global chains may coordinate and influence the system. As showed with the extractive industry case the lack of transparency over contracts and transnational operations may lead to predatory behaviors from actors of institutions.

Literature on GVCs and current efforts at institutional levels from G20, OECD, UNCTAD, WTO and the World Bank Group underline the need for a better understanding of the implications of MNEs behaviors on sustainable development, in the framework of the 2030 Agenda. Moreover, the impact of GVCs in relation to trade, growth, development, job creation and the distribution of value-added along GVCs should be further analyzed (OECD 2014) to avoid negative impacts. In this regard, internal governance among firms, private actors and external governance from governments and transnational institutions need to be analyzed towards an integrated framework, to minimize negative effects on the social, economic and environmental aspects of our global system. Mitigation measures need to be undertaken to avoid net negative impact on the most vulnerable. A better understanding of the mechanisms of transnational governance over the different global value chains is crucial to avoid harm in case of negative shocks in countries characterized by weak structures (Keane 2012). At macro level, in such an interconnected world, countries need to better understand their position within GVCs to reap the full benefits of the system and minimize its drawbacks (e.g., increasing dependency).

MNEs, major players of GVCs and normally lead companies in the chains, play a critical role in host countries' development, countries where, through foreign investment, affiliates, suppliers and their final markets, MNEs operate. Through the study of the literature and its empirical findings, the impacts of foreign MNEs in host countries have been analyzed and disentangled, with a focus on the different dimensions of development: economic growth, technological advancement, human capital, institutional governance and the environment. Developmental and Institutional effects of MNEs (thought FDI) are country specific and linked to the developmental stage of the recipient country. It is not possible to conceive a universal agreement upon MNEs impacts over host countries, beyond anecdotal cases, because of the heterogeneity of the findings. This heterogeneity is given by the effects of FDI projects that are channeled by the endowments and capabilities a country has, which in turn are associated with its development stage (Pineli et al 2019). Mediating factors such as the level of human capital, the capacity of institutions and the presence or not of a developed financial market, influence the potential impacts of FDI in host countries.

On the ethical behaviors of MNEs along their global value chains, scholars studied the impact of corporate social responsibility over protection from human rights abuses, environmental disasters and betterment of the security and working conditions of the employees. Although evidence do not point into a unique direction in terms of effectiveness of CSR, findings suggests that at least in the long run the adoption of CSR framework by MNEs has positive effects over human rights protection (Fiaschi and Giuliani 2012). However, the debate over motivations and effectiveness of CSR is still ongoing. The case of Niger Delta studied by Ite (2004) underlines how CSR policies undertaken by Shell might be ineffective in terms of poverty alleviation without a comprehensive developmental program from the Nigerian government.

In the last part of the chapter a focus upon the contribution towards violent conflict and peace by MNEs is given. Empirical evidence shows that MNEs have the potential to contribute both to conflict and peace, basically according to their motivations and structural dimensions of the host country where foreign investment is directed. On the business-conflict nexus, scholars bring inconclusive and conflicting results. Some scholars underline the negative impact of multinationals in host countries in terms of creation, perpetuation or triggering of violent conflict via specific mechanisms such as rent seeking, environmental degradation and corruption. Other underline how MNEs can be agent of change by putting in place effective strategy of Corporate Security Responsibility in conflict zones. On the role of MNEs as potential peacebuilders, USIP (2012) proposes a basic conceptual model with five (5) areas where Multinationals *might* play a critical role in sustainable peace of the host countries in terms of i) economic activity ii) rule of law and international standards iii) corporate citizenship iv) Track Two Diplomacy and v) risk assessment and conflict sensitive analysis.

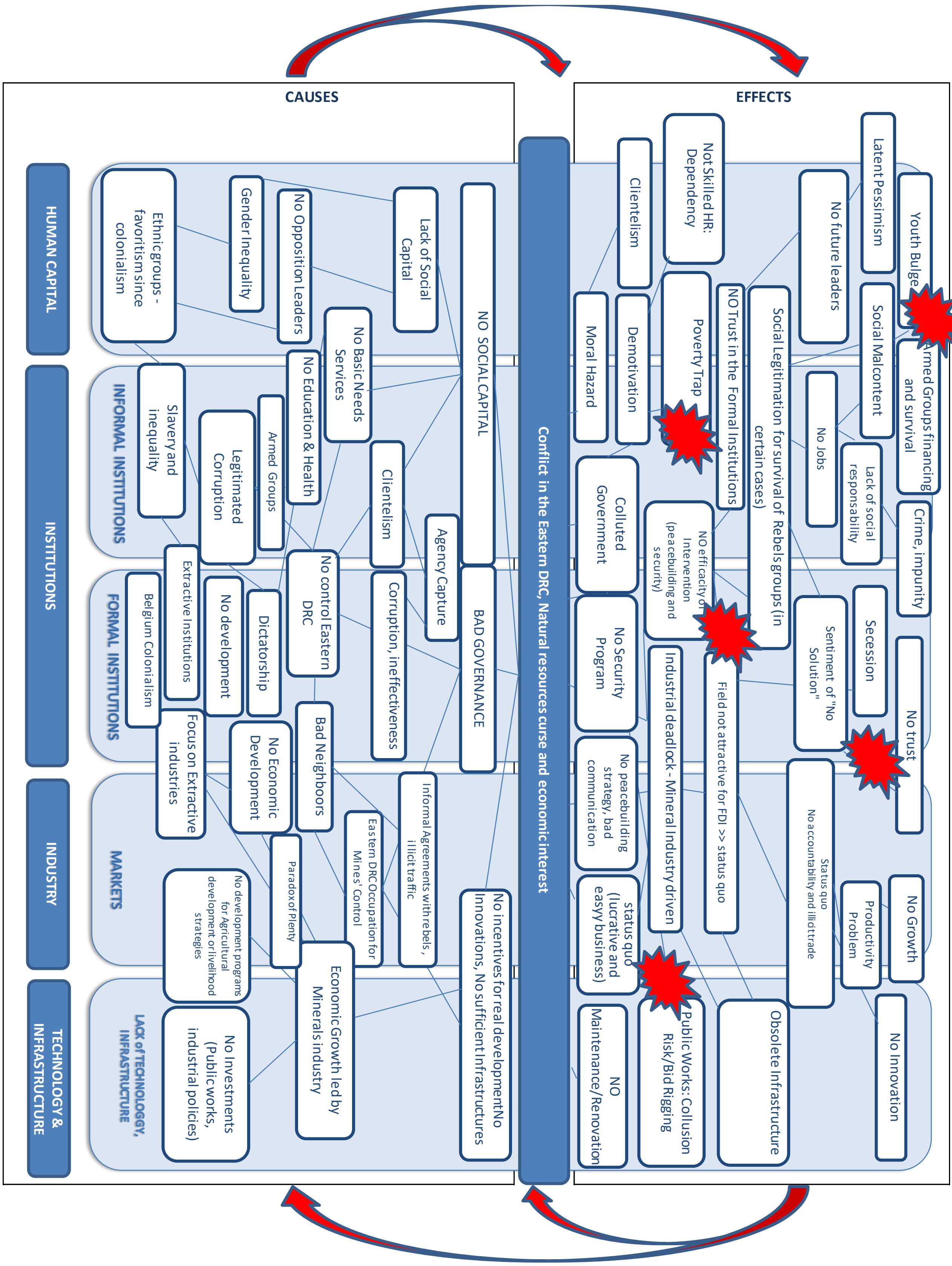
## Appendix to Chapter 1

## Appendix A – Rebels Groups

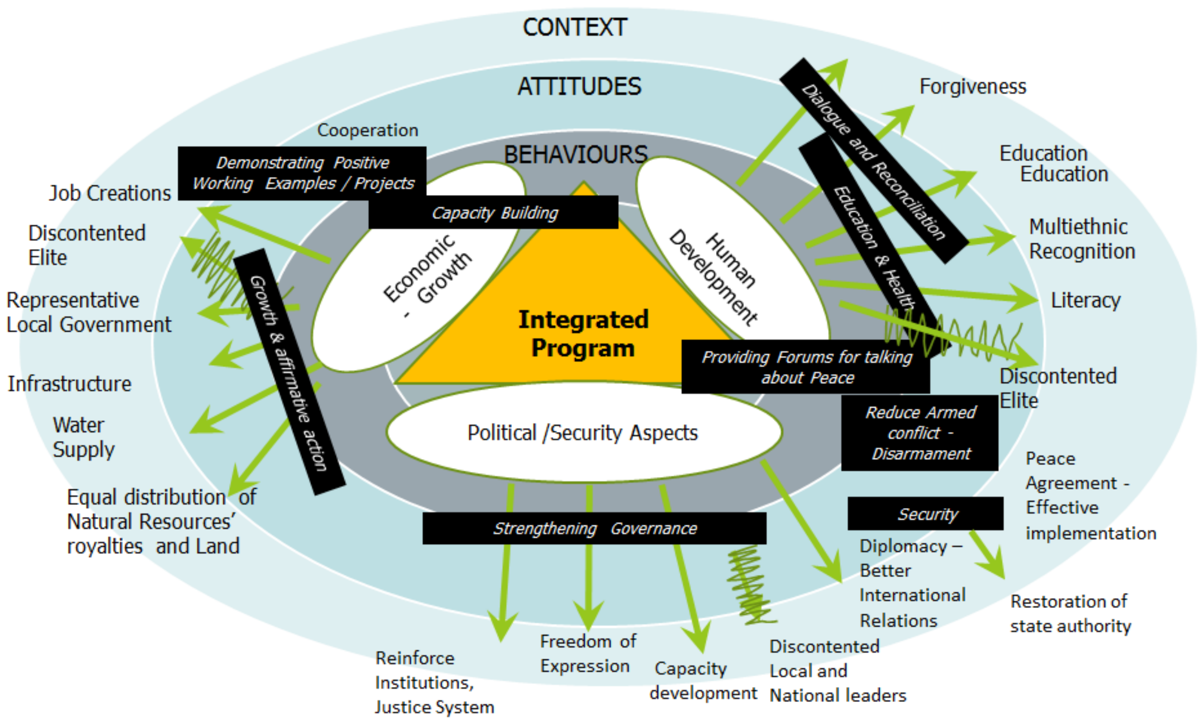
| ARMED GROUPS - Fragmentation and Diversity | |
|---|---|
| ***Group*** | |
| ADF | Allied Democratic Forces |
| APCLS | Alliance of Patriots for a Free and Sovereign Congo |
| BDK | Bundu dia Kongo |
| CNDP | National Congress for the Defense of the People |
| | |
| FAPC | People's Armed Forces of Congo |
| FDLR | Forces Democratiques de Liberation du Rwanda |
| FLOT | Front contre l'occupation tutsie |
| FNI | Front for National Integration |
| FRPI | Patriotic Force of Resistance in Ituri |
| M23 | March 23 Movement |
| | |
| | Mai-Mai / Mayi-Mayi |
| MLC | Mouvement de liberation congolais |
| MRC | Congolese Revolutionary Movement |
| RCD | Rassemblement congolais pour la democratie |
| UPC | Union of Patriotic Congolese |

*Source:* *Global Security.org*

## Appendix B – Problem Tree – Micro-level analysis (DRC and neighboring countries)



## Appendix C – Conflict Transformation and Impact Mapping for Peace




Fischer S. et al (2000), *Working with Conflict: skills and strategy for action, Palgrave Macmillan*

**Appendix D – Integrated Peace Building Strategy**

- **Local Intervention**
  - Security Reform
  - Conflict Sensitive Development : Public Works, Job Creations, Health and Education
  - Institutions: good governance and leadership
  - Justice system

- **Regional Collaboration and International Solidarity**
  - Personal responsibility
  - Corporate ethics - Corporate Social Responsibility
  - Value chain governance
  - The Natural Resource Charter
  - Partners for alternative development initiatives

- **Effective legislation (Enforcement)**
  - Common legal platform against the conflict minerals trafficking

- **Peace Building : local, regional and global collaboration**
  - Dialogue with the neighboring countries
  - Disarmament
  - Inter-community reconciliation
  - Justice and impunity
  - ICC

Chapter 2.

## Towards a measure of Peace

Can we measure Peace? What are the main factors affecting the level of peacefulness in a certain territory and globally?

In the present chapter, I provide the theoretical foundations and methodological approaches used to answer to these crucial questions.

In the first part of the chapter, considerations over the concepts of Conflict, Violence, Armed Conflict, War and Peace will be presented in a multidisciplinary perspective. The ultimate goal of this session is to present the relevant theories and definitions to introduce the indexes presented in the second part of the chapter, the Global Peace Index (GPI) and the Positive Peace Index (PPI).

The Institute for Economics and Peace[21] developed two main indicators to measure what Johan Galtung[22] defines Negative and Positive Peace, respectively: the GPI and the PPI. These indexes contribute to advance in the field of peace studies on the measurement of the peacefulness at global and country level, they are necessary for empirical research and useful in monitoring and reporting the dynamics of peace in a short and long-term perspective.

[21] The Institute for Economics and Peace (IEP) is a global think thank and research institute dedicated to developing metrics to analyze peace and its main factors. Founded in 2007 By Steve Killelea, IEP has been recently ranked in the top 15 most impactful think tanks in the world on the Global Go To Think Tank Index. Its most important outputs in terms of research are the Global Peace Index Report, The positive Peace Index report and the Global Terrorism Index report

[22] Johan Vincent Galtung is a Norwegian sociologist and mathematician. He is considered the father of the discipline of peace and conflict studies. He was the main founder of the Peace Research Institute Oslo (PRIO) in 1959.

## 2.1 The conceptual framework for measuring Peace

### 2.1.1 From Conflict to Peace

Both the GPI and the PPI are built upon the concepts of Conflict, Violence and Peace. A taxonomy on these concepts will be provided in the following sub-sessions, in light of the diverse definitions and interpretations given by scholars from the different disciplines, to better understand the conceptual and then methodological approach used to construct the indexed object of the analysis.

#### 2.1.1.1 Conflict and its economic causes

Conflict, in its broadest definition, 'is a relationship between two or more parties (individuals or groups) who have, or think they have incompatible goals' that may clash (Mitchell 1981). Conflict has the potential for either a great deal of destruction or much creativity and positive social change (Kriesberg, 1998). According to Simmel (1950), conflict is a fundamental social process that can be functional or dysfunctional, with a positive or negative change of the status quo, on the basis of internal (strictly related to the parties involved) and external structural factors and actions (the context, mediation). Webel writes (2007:8):

> conflicts appear historically inevitable and may be socially desirable if they result in personal and/or political progress. Conflicts may, perhaps paradoxically, promote and increase peace and diminish violence if the conflicting parties negotiate in good faith to reach solutions to problems that are achievable and tolerable, if not ideal.

Cooperation and Harmony (as developed by Galtung in his vision upon Positive Peace) may lead to positive outcomes out of a conflict, in a process of elicitive conflict transformation (Lederach 1995).

Three main factors seem to underline conflict: interdependence, differences in goals, and differences in perceptions (Wall, 1985). It becomes violent when there are not adequate channels for dialogue (lack of mediation), leading to a disagreement between the parties, when grievances are not addressed in a proper (just) way or when instability, injustice and fear in the community appear. Under these circumstances violent conflict may occur. The manifestation of violence in a certain conflict differs according to the social context and associated dynamics.

In Figure 2.1. the process of conflict is depicted through the relationship among specific variables in the framework proposed by Schmidt and Kochan (1972). In the development of conflict, the concurrent presence of perceived goal incompatibility and perceived opportunity for interference may lead to dispute. Goals represents future positions that a unit wishes to occupy (Boulding 1962), influenced by motivational forces (or causal factors motives as in Simon 1964), given a specific situation and context. In presence of high incompatible goals, the degree of interdependency among units and the extent to which contestable resources have to be shared among units may lead to conflict. The scholars confirmed with their research that conflict is not a factual event, but a phenomenon characterized by intrinsic dynamics, given the presence of the threefold aforementioned factors. It is important to note that the two or more parties involved in the conflict process can be individuals, groups of people, states or groups of states.

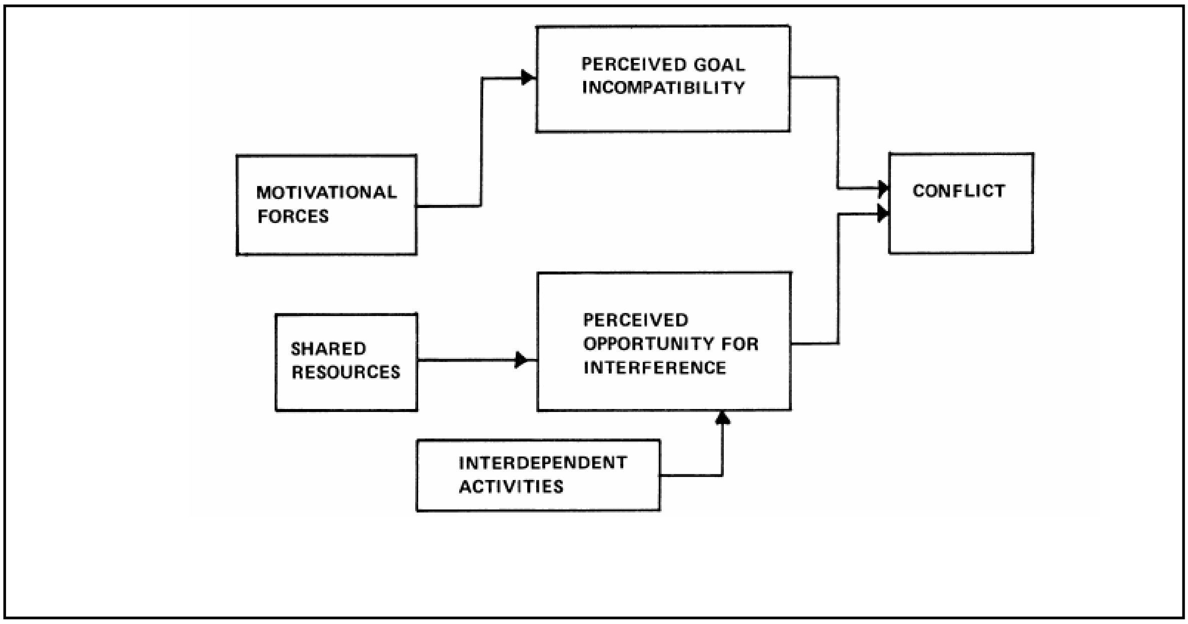



**Figure 2.1.** The Process of Conflict

*Source. Schmidt & Kochan (1972: 363)*

One of the most prominent definitions of conflict asserts that 'social conflict is a struggle between opponents over values and claims to scarce status, power and resources (Coser 1956:8). This definition is in line with the distinction made by one of the early theorists of conflict, Katz (1965), on three types of conflict: i) economic conflict, ii) value conflict and iii) power conflict.

*Economic conflict* involves competing interests towards scarce and economically valuable resources and it relates to a zero-sum game where each party intends to maximize his own interest at the expense of the other party involved in the conflict. A *value conflict* refers to incompatibility in ways of life, ideologies, attitudes and behaviors, the preferences, principles and practices that people believe in. Each party involved in the conflict asserts the rightness and, automatically, its (perceived) superiority over the other party (individuals, groups, nations). The theory on New War (Kaldor 2013) relates to the use of ideology and 'rightness' of the value conflicts, as identified by Katz. *Power conflict* refers to the quest for dominance of one party over the other (individuals, groups or nations) in terms of influence exerted in the relationship and the social and political settings. It occurs whenever one or both parties attempt to control each other and take a power approach to the relationship. As for the economic conflict, the power conflict is a zero-sum game with a winner and a loser identified. Power conflicts can occur between individuals, between groups or between nations, whenever one or both parties. As stated by Pruitt and Kim (2004), the essential nature of a conflict situation is easily understood in terms of the difficulties involved in meeting everyone's aspirations simultaneously.

It must be noted that most of the conflicts are not of a pure type but involve a mixture of sources and causes. Conflicts are multi-factorials in the real world. However, it is important to construct conflict analysis on the different theoretical strands to better understand the dynamics, the nature and the motives of such complex phenomena. Given the multi-casual nature of conflicts, (rarely a conflict is mono-causal given also the time span), it is important to define major links over the different causes of conflicts to better understand how to act towards conflict resolution. The most frequent underlying causes of conflict have been identity (e.g., disputes on religion, linguistic differences), scarce resources and control over natural resources (e.g., water, land, oil), economic, strategic (i.e. to gain an economic or geopolitical advantage) or political motives (e.g., change in the form or leadership of the government or the party in power). In the following session, a specific focus will be given to the economic causes of violent conflict.

## Economic model of continuing conflict

In 1988 Hirshleifer structured an analytical theory of conflict based on a two-party rational self-interested agent's interaction and decision making on productive activities (peaceful production and exchange) or unproductive activities (appropriative efforts to generate income). Pareto provided the first dichotomist definition of activities as follow:

> The efforts of men are utilized in two different ways: they are directed to the production or transformation of economic goods, or else to the appropriation of goods produced by others[23].

Productive activities are activities directed to the production or transformation of economic goods whilst the unproductive activities refers to the appropriation of goods produced by others. The first are beneficial for the society as a whole in terms of welfare creation and development while the latter are detrimental for the society as a whole because they destroy value, using resources and implying de facto a distributional choice over resources. Development and wealth creation occur when the net economic outcomes from productive and unproductive activities are positive. Vice versa, detrimental phenomena occur when the weight of unproductive activities and their outputs outmatches the productive ones. To this regard, the presence of predatory sectors in a society defines ex ante (predictive power) its future in terms of producer or predator country (Mehlum et al. 2003).

In the Hirshleifer model, a general-equilibrium steady state model, parties (individuals, groups or nations) can choose to allocate resources on activities of (i) production of goods or (ii) appropriation of what the other party produced (or, in case of invasion, the defense of the produced goods) to acquire income. The second set of activities on appropriation comprises rent-seeking competitions and all activities whose aim is control over resources: attempts to profit by robbery, confiscatory redistribution or coercive encroachment are examples of appropriation. Hirshleifer states that both productive and appropriative activities can be remunerative for the parties who take advantage by using a certain set of resources for productive or appropriative initiatives. According to that, the model is built on a (a) resource partition function, (b) a social production function, (c) a combat power function, and (d) an income distribution in the presence of conflict between two rational and self-interested agents (Table 2.1.).

The resource partition function defines how the opponents divides their respective endowed resources $R_i$ in contestable productive efforts or appropriative efforts ($F_i$ and $G_i$). The social production function refers to the opponents productive efforts $F_i$ respect to the overall social aggregate of

[23] Quoted in Hirshleifer (1988).

contestable income *I*. In the combat power function the technology of conflict is introduced as the relation between appropriative inputs (e.g., investment in the Defense in the case of nations) and outputs (incomes or assets gained or lost). The technology of conflict depicts how resources determine appropriative success which is defined in terms of a larger proportion of the social contestable aggregate income produced as a whole for one party or the other. The degree of success is defined by the proportions $p_i$ in which the income is divided and it is related to the difference in magnitudes of the resources committed by each opponent. The income distribution equation refers to the income realized by each opponent according to the social aggregate income *I* and $p_i$, the relative appropriative success.

**Table 2.1.** Functions of the Hirshleifer model

(a) Resource partition function

$\Theta\ (F_i, G_i) = R_i$
Simple example : $F_i + G_i = R_i$
$F_i$=contestable productive effort, $G_i$=appropriative effort, $R_i$=exogenous constant

(b) Social production function

$I = \Omega\ (F_1, F_2)$
Simple example: $I = F_1 + F_2$
Generalization: $I = (\alpha_1 F_1 + \alpha_2 F_2)^g$
$\alpha_i$=productivity coefficient, g=index of returns to scale

(c) Combat product function

$p_i = \Phi_i(G_1, G_2)$
simple example: $p_1 = G_1/(G_1+G_2)$
The combat product function defines how the resources devoted to combat readiness determine appropriation as measured by the proportions $p_i$: $(p_1+p_2=1)$ in which the social total income is divided.

(d) Income distribution function

The income realized by each party will depend on I, the social total income and their respective appropriative success
$I_i = \Psi\ (I, p_i)$

*Source*:. *Hirshleifer (1988)*

Looking at the dynamics of conflict in terms of decision-making process, given certain social and technological initial endowments, the opponents make decisions over the allocation of endowments with the consequent distribution of a joint final output, the social aggregate income *I*. According to the model, the relative allocation of resources devoted to productive versus unproductive activities defines (i) the aggregated income, when looking to the relative allocation of resources to production and (ii) the distribution of that income among the parties when considering the relative allocation of resources to appropriation and their magnitude. The final output of the interaction among parties in terms of aggregate and distributed income is defined by the technology of conflict in place for each party.

Hirshleifer model on continuing conflict provides important insights on how parties interact both productively and conflictually towards a shared outcome. In the Combat Power Function, the introduction of the technology of conflict measuring the magnitude of resources allocated allows to better understand why it is not always true that 'the rich gets richer and the poor gets poorer' at the end of a conflict. Under Cornot conditions, Hirshleifer demonstrated that even in the case of substantial asymmetry in the initial resource endowments of the counterparts (i.e., in case of one party being the rich and the other being the poor), the poorer individual, group or nation may devote a relative larger amount of resources to appropriative activities, ending up as well of as its initially richer contendent. This might be because the poorer party perceives his opportunity-cost very low (the party has "nothing to lose" as explained by Caruso, 2010b) and dedicated a larger relative proportion of his initial endowments to coercive efforts.

Another important conclusion from the Hirshleifer framework on conflict is about the importance of the technology used by the contendents. In presence of asymmetry in conflict technologic capabilities (relation between inputs-armies, guns, lawyers and outputs – income or resources gained or lost) of the parties, dominance of the stronger party characterizes the conflict dynamics, with little or no space for cooperation among the parties. The output of the interaction and the ultimate allocation of resources depends largely the conflict technology of the parties.

**The economic causes of violent conflict**

Economists and social science academics investigated in more details the economic causes of conflicts with a focus on violent conflicts since the mid-90s.One of the most influential studies on the subject has been developed by P. Collier and A. Hoeffler in 1998. They investigated the underlying economic variables of civil wars in terms of their duration and probability of occurrence. They found that initial income, the amount of natural resources, and initial population size are significant and strong determinants of civil wars in the frame of the utility functions of rebels, when the expected benefits of the rebellion overweight the respective costs. In particular, higher per capita income reduces the duration of civil war and the probability of its occurrence, highlighting that civil wars are phenomena predominantly related to low incomes countries. In particular, for the amount of natural resources, the effect on civil wars is non monotonic: the endowment of natural resources initially increases the duration and the risk of civil war but then reduces them. As explained by Caruso (2017:60), this might be due to the higher revenues from the large endowments managed by the Government to prevent rebellions.

In 2002, Collier and Hoeffler proposed an analysis of conflict in sub-Saharan Africa with an econometric model to predict the probability of a civil war to be initiated in a 5-year period. The results of the analysis confirmed the findings of the previous work on income, with the addition that the income growth rate represents also a significant determinant of civil war: higher growth reduces the risk of conflict. Among the interpretations of this finding, there might be a higher absorption of young workers as labor force in the job market (substitution effect) and/or a lower level of grievance perception by the population, given the booming period. Moreover, a third economic characteristic at country level plays an important role in predicting a rebellion: the level of primary commodity exports (i.e., oil, diamonds, metals, food, and beverages), although the relation is non-monotonic as showed in the case of abundance of natural resources in the previous study. Beyond a peak of 26% (Primary Commodity Exports/National Income) - a relative high level of primary commodity export dependence - , the risk of civil war declines. This might due to the higher revenues for the Government partly devoted to containment activities versus the rebel groups.

In 2004, Collier and Hoeffler undertook a more specific study of conflict analysis in terms of greed (i.e., economic motivations) and grievance (i.e., socio-political motivations such as inequality, lack of political rights, or ethnic or religious divisions in the society, perceived or actual injustice). In 2002 they affirmed that the economic circumstances explained the higher insurgence of conflict in Africa rather than the social structure (Collier and Hoeffler 2002:14, 25) and this finding (the greed over grievance argument for conflict) has been confirmed by the 2004 study, having the greed features higher explanatory power than the grievance ones (grievance motivation is consistent only if widespread and common across societies and times). In their work, the authors identify main factors influencing the opportunity of rebellion, the first being the availability of finance in terms of primary commodity exports and diasporas. Commodities may increase the opportunities for extortion (and secession) by rebel groups and corruption at government level while Diasporas (through the financing of rebel groups) increase the risk of rebellion renewal. The cost of rebellion is the second factor influencing opportunity: low foregone earnings (captured in the model by male secondary male enrollment, per capita income and growth rate) increases the risk of rebellion. A third aspect to be considered as explanatory of conflict is rebel military advantage in terms of population dispersion (while mountainous terrain and social fractionalization were weaker explanatory variables of conflict). Interestingly, time (since the last conflict in the country), an intangible asset with an economic value, does have effects on conflict in terms of healing process, however delayed somehow by diaspora financing.

Other studies analyzed implications of economic instances over conflict insurgence. A strand of the literature investigates the link between civil conflict and commodity prices. Brukner and Ciccone (2010) looked at the likelihood of civil war in Sub-Saharan Africa following a preliminary factual evidence from Burundi, Rwanda, and Uganda, the three Sub-Saharan African countries most dependent on coffee exports that experienced civil wars in 2000, 2001 and 2002 respectively in after the drop of international coffee prices by over 50% between 1997 and 2000. They found a robust effect of commodity export price downturns. In particular, they found that between 1981 and 2006, a 20% drop in countries export price indices raised the probability of civil war outbreak by around 2.8 percentage points. Angrist and Kugler (2008) investigates the Colombian case, looking at the different municipalities characterized by the production of coca. They found that the exogenous upsurge of coca prices and consequent higher cultivation impacted in a modest manner the economic gains in rural areas ( via higher employment opportunities for teenagers and self-employment earnings), where the coca is harvested but contributed to increased violence in those areas where combatants (Militia) capture the eventual gains via rent-seeking. Dude and Vargas (2013) analyzed how a variation of international prices of coffee and oil affected the likelihood of armed conflict in Colombia. They then extended their analysis to other agricultural and natural resource sectors. Interestingly their findings suggest that price shocks affect conflict in different ways depending on the type of commodity (agricultural – labor intensive or natural resource – no labor intensive). In particular, falls in coffee prices lowered wages and increased violence in municipalities cultivating more coffee where the labour shifted towards appropriation because of a lower opportunity cost to enter a guerrilla. On the contrary, a rise in oil prices increases violence according to the rapacity effect (higher gains from appropriation).

Abundance of natural resource constitutes the focus of many studies aimed at understanding the link between conflict and natural resource; those studies investigate some of the different dimensions of the natural resource curse literature where resources are associated with (i) slower economic growth, (ii) violent civil conflict, (iii) undemocratic regime types and institutional failures.

The following session of the paragraph will be dedicate to investigate in particular the contribution from the resource curse literature on peace studies.

The empirical evidence of the studies on the aforementioned three dimensions appears to be mixed and with little convergence (Brunnschweiler and Bulte 2009), mainly due to (i) data collections, proxies used and statistical methodology, (ii) the complex set of direct and indirect mechanisms linking resources and conflict (from economic rational and capture to surviving and coping strategy in case of resource scarcity), (iii) the high complexity of the phenomenon object of analysis - the civil conflict – where social, economic and political factors may concur and interact one another in the different phases of it.

The term resource curse was introduced by Richard Auty in 1993 to describe how countries rich in mineral resources were unable to use that wealth to boost their economies and how, counter-intuitively, these countries had lower economic growth than countries without an abundance of natural resources. Natural resources endowments impede rather than further balanced and sustainable development. The resource curse, or paradox of plenty, refers therefore to a pattern where countries or regions rich in natural resources display poor economic growth (Auty 1993). Sachs and Warner (1995, 2001) contributed also to the debate on economic growth and natural resource abundance confirming a negative relation between natural resource intensity and subsequent growth.

Further studies contribute to link the natural resource curse to institutional failures (bad governance) and civil war respect to countries with fewer resources. In natural resource abundant countries, when characterized by accrual and concomitant structural failures such as weak institutions and political instability, mineral rents tend to 'hinder a transition to democracy' (Gilberthorpe and Papyrakis 2015: 381-390) in terms of reduced public accountability (McFerson, 2010), and maintained authoritarian rule (Ross 2001, on oil exports and other mineral exports and their antidemocratic effect). In their seminal work on the economic causes of conflict, Collier and Hoeffler (1998) found four variables as significant determinants of duration and probability of civil wars: *per capita* income in terms of opportunity cost of rebellion, natural resource endowments, population number and its degree of polarization. In particular, natural resources endowments have a non-monotonic effect on civil wars: initially they tend to increase the duration and the risk of civil wars but then they reduce it, presumably because of the higher financial capacities of the government to defend the states with higher defence budgeting. The authors further investigated the relation between natural resource abundance and civil wars in 'Greed and Grievance in Civil War', where primary commodity exports (proxy for natural resources) increase the risk of conflict, given the opportunity of extortion that rebel groups may capture. Availability of finance seems to be a key factor for conflict. Indeed, also donations from Diasporas play a role in terms of conflict renewal according to the study. Moreover, the cost-opportunity of rebellion is per se another economic cause of conflict: low foregone earnings (proxied with male secondary education enrolment, per capita income, growth rate) may lead to conflict.

Fearon (2005) argued on the findings of Collier and Hoeffler with regards to the rebel financing argument and the primary commodity export dependence on civil war onset. Reframing the initial model on a country-year format (instead of a 5 year clustering), he found little impact of primary commodity exports on civil war outbreaks. Moreover, the proxy for natural resources of Collier and Hoeffler counted only for agricultural – cash crops – and oil industries where the control over aggregated and large funds seems to be impossible (or at least not so common) in the hands of fragmented rebel groups that should have the control over the distributional or production chains at national level. In his research, he argued that oil exporters are more disposed to conflict, given a low state institutional capability.

Humprey (2005) disentangled the mechanisms that underlie the resource-conflict link. Dependence on primary commodities (agricultural, oil or mineral commodities) are relevant in terms of conflict onset because of a lack of proper industrial diversification. Moreover, he supported the Hoeffler focus on institutions where natural resources revenue may weaken state structures and/or induce grievances rather the greed argument of fighting over future resource rents from rational agents – the rebels - by Collier and Hoeffler.

Moreover, Brunnschweiler and Bulte (2009) disputed the natural resource abundance argument by using a resource wealth indicator as a proxy for the natural resource abundance: a stock variable capturing the discounted values of future rents from natural resources. They tested whether resource abundance affects conflict directly or indirectly – via income or resource dependence and they found the resource wealth being an exogenous variable in conflict regressions. Resource abundance has a negative and indirect relation with the onset of civil war in a country because of the income effect related to future rents. Indeed, history matters in conflict analysis: peace and war occurrences contribute to the creation of a resource dependence. For the authors, 'resource-rich countries have on average a lower propensity to enter a civil war, but countries that do end up with civil strife (possibly even resource poor ones) will experience increasing dependence on the primary sector'. Their findings are consistent with the resource scarcity argument (Homer-Dixon 1999) rather than the abundance one in driving conflict.

Another important contribution to the debate is the one by Esteban, Morelli, and Rohner (2015) on key variables of mass killings. In their work, the authors utilized the definition of mass killings as 'killings of substantial numbers of human beings, when not in the course of military action against the military forces of an avowed enemy, under the conditions of the essential defenselessness and helplessness of the victims'.

As aforementioned, empirical findings do not present a conclusive direction over the debate on resource-conflict link and in general over the economic causes on conflict because of (i) the challenges mainly given by the concurrent socio economic and political elements characterizing a conflict: relevant context conditions may affect (e.g., mitigate or exacerbate) the recourse/economic variables-conflict link (ii) the different statistical methodologies, definitions and proxies of economic related variables.

On the first point mentioned, Basedau and Wegenast (2009) attempted to summarize the different factors affecting the resource-conflict link between resource specific features and non – resource specific features such as relations with identity group, geographical and social factors, demography and the institutional capacity of the governmental actors that may affect the likelihood of conflict (Table 2.2.).

**Table 2.2.** Relevant context conditions of the Resource Conflict Link

| | Resource specific | Non-resource specific |
|---|---|---|
| **National** | -Type(s) of resource(s)<br>-Degree of dependence<br>-Degree of abundance<br>-Location of resources within the country<br>-Technical modes of extraction ('lootability')<br>-Resource sector management (e.g., tax base, distribution and use, ownership structure). | -Socio-economics<br>-Demographics (e.g., 'youth bulge')<br>-Geographics (e.g., 'rough terrain')<br>-Intergroup relations (social, ethnic /tribal, religious)<br>-Sub-state actors (parties, civil society)<br>-Efficiency and legitimacy of institutions (including security and defense sector)<br>-Behavioral patterns of elites<br>-General political culture (attitudes and ideologies) |
| **International** | -Geographical dispersion of resource (across borders, regionally, globally)<br>-External use of the resource rents<br>-Dynamics and actors in international demand (price developments, consumers structure, involved MNEs)<br>-International governance of the resource sector | -Relations with neighboring countries, regional and global powers<br>-Interdependence of the country (economic/political)<br>-General conflict potential in the region (spillover effects)<br>-Regional and international governance/system |

*Source. Elaboration from Basedau and Wegenast (2009:41)*

Non-resource specific factors concur together with the paradigm of resource abundance to conflict outbreak potential and, once the conflict is started, contribute to its intensity and duration. As showed in Table 2.2, different types of factors at national and/or international level may concur in conflict dynamics. Moreover, these factors present different degree of interdependency, increasing the complexity of conflict analysis: resource and non-resource specific conditions are likely to interact one another, with respective influences. For instance, under conditions of abundance of natural resources and lack of diversification (i.e., lack of institutional strategic vision), the economy of a state is expected to be resource dependent, with wealth mainly derived from resource income, highly volatile to international marketplaces (i.e., international commodity pricing system and marketplace governance). These economic features might increase the likelihood of conflict outbreak, if in presence of highly polarized identity groups, under the risk of political and institutional capture. In such a scenario, on the contrary, the presence of strong institutions and the existence of structural conditions may prevent the country from conflict.

### 2.1.1.2 Violence

Violence consists of actions, words, attitudes, structures or systems that cause physical, psychological, social or environmental damage and/or prevent people from reaching their full human potential' (Fisher et al. 2000: 4). It can assume different forms and modalities and it involves not only the behavior of individuals or groups but also attitudes and the structural context of societies. : it can be direct, (physical, based on killing, beating,…or psychological, based on values, attitude and feelings) inflicted on individuals, groups, or nations (personal violence) or it can be structural as an indirect or impersonal form of violence that inflicts suffering due to harmful social, political, or economic systems (Wagner 1988).

As shown in Table below, we can summarize the manifestations of violence in three macro categories: Direct physical violence, Cultural and Symbolic violence and Structural or Institutional violence.

**Table 2.3.** Types of Violence

| **Type of Violence** | **Examples** | **Prevention/Mitigation measures** |
|---|---|---|
| 1) Direct physical violence | Killing, beating, intimidation, torture, rape… | Action: violence reduction to promote "negative peace". |
| 2) Cultural and symbolic violence | Attitudes, feelings, values (hatred, fear, mistrust, racism, sexism, intolerance) | Initiatives to change attitudes to promote "positive peace". Important for understanding the roots of conflict |
| 3) Structural or institutional violence | Context, systems, structures (discrimination in education, employment, health care, globalization of economies, denial of rights & liberties, segregation…) | Initiatives to change context to promote 'positive peace'. Important for understanding the conflict's structures & dynamics |

*Source. Author's elaboration*

Violence, differently from conflict, represents always a dysfunctional and detrimental process characterized by physical, psychological, social or environmental damage and therefore by the destruction of capital for the society as a whole.

Schematically, in the following table the different forms of violence along with specific types of strategies for violence prevention and/or mitigation are presented.

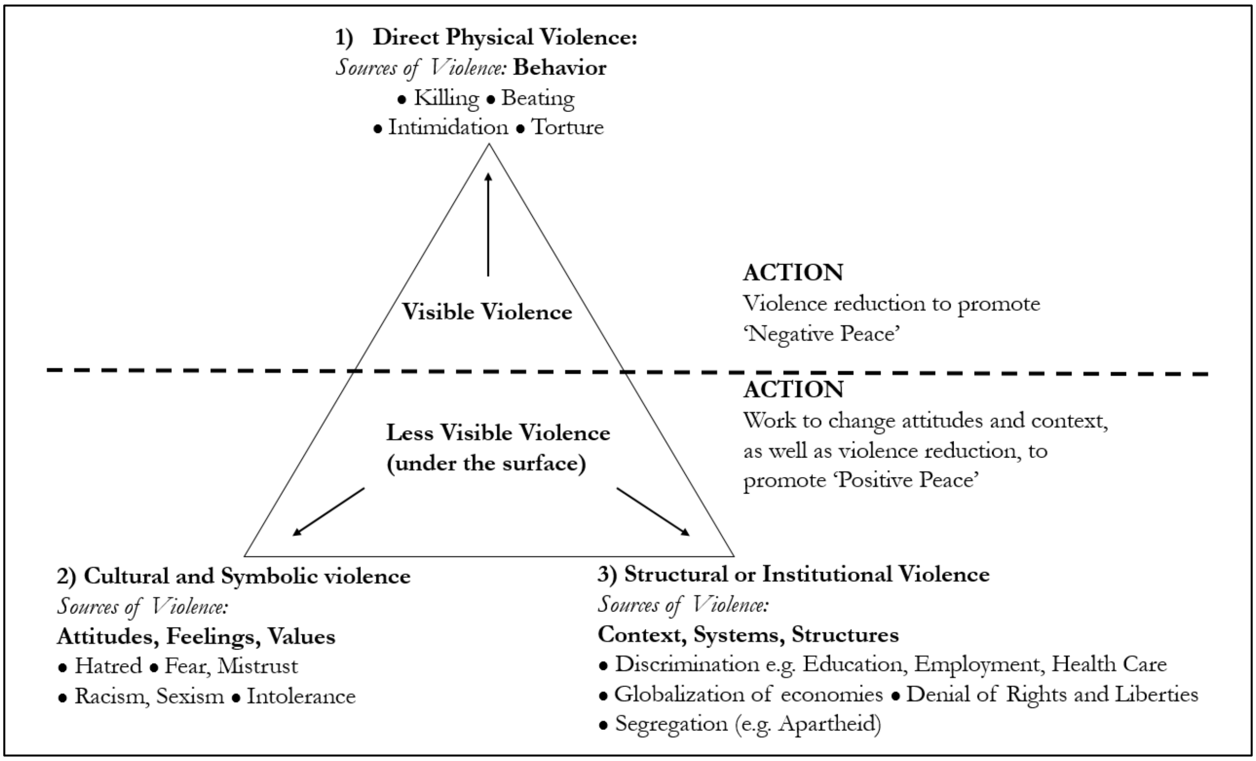



**Figure 2.2.** Types of Violence according to Behavior, Attitude and Context

*Source. Elaboration from Fisher et al. (2000)*

### 2.1.1.3 Violent conflict

If violence occurs, conflicts become violent; armed conflicts, if characterized by the use of armed forces between the two parties. The first attempt to categorize the different types of violent conflict was possible through the initiative of Singer and Small at the University of Michigan, with the Correlates of War project (CoW), founded in 1963. The CoW project collected in a systemic way scientific knowledge on war and allowed to advance in the field of conflict analysis: the main dataset of this initiative is the CoW war data, with data on conflicts from 1816 to 2007. In their seminal book 'The Wages of War' (1972: 8), Singer and Small established a standard definition of violent conflict as a dispute in which at least one of the combatant parties is a state, and there are at least one hundred battle related deaths. In recent years, other scholars and research institutes have reviewed the definition of armed conflict. For instance, the Uppsala Conflict Data Program (UCDP) defines armed conflict as 'a contested incompatibility that concerns [a] government or territory, or both, where the use of armed force between two parties results in at least twenty-five battle related deaths. Of these two parties, at least one has to be the government of a state' (Wallensteen and Sollenberg 2005: 635)

Conventionally, armed conflicts are grouped into three main categories according to the number of battle related deaths: '(i): minor armed conflicts, in which the battle-related deaths during the course of the conflict are below 1000; (ii) intermediate conflicts, in which there are more than 1,000 battle-related deaths recorded during the course of the conflict, and in which between 25 and 1,000 deaths have occurred during a particular year; and (iii) wars, in which there are more than 1,000 battle-related deaths during one particular year.'(Wallensteen & Axell; cit. De Goor, 1996:3).

Another way to describe the type of armed conflict is through different level of intensity: from low intensity conflict (more than one hundred death) to high intensity conflict: more than one thousand deaths with the incurring of a war in the case of a state-based conflict.

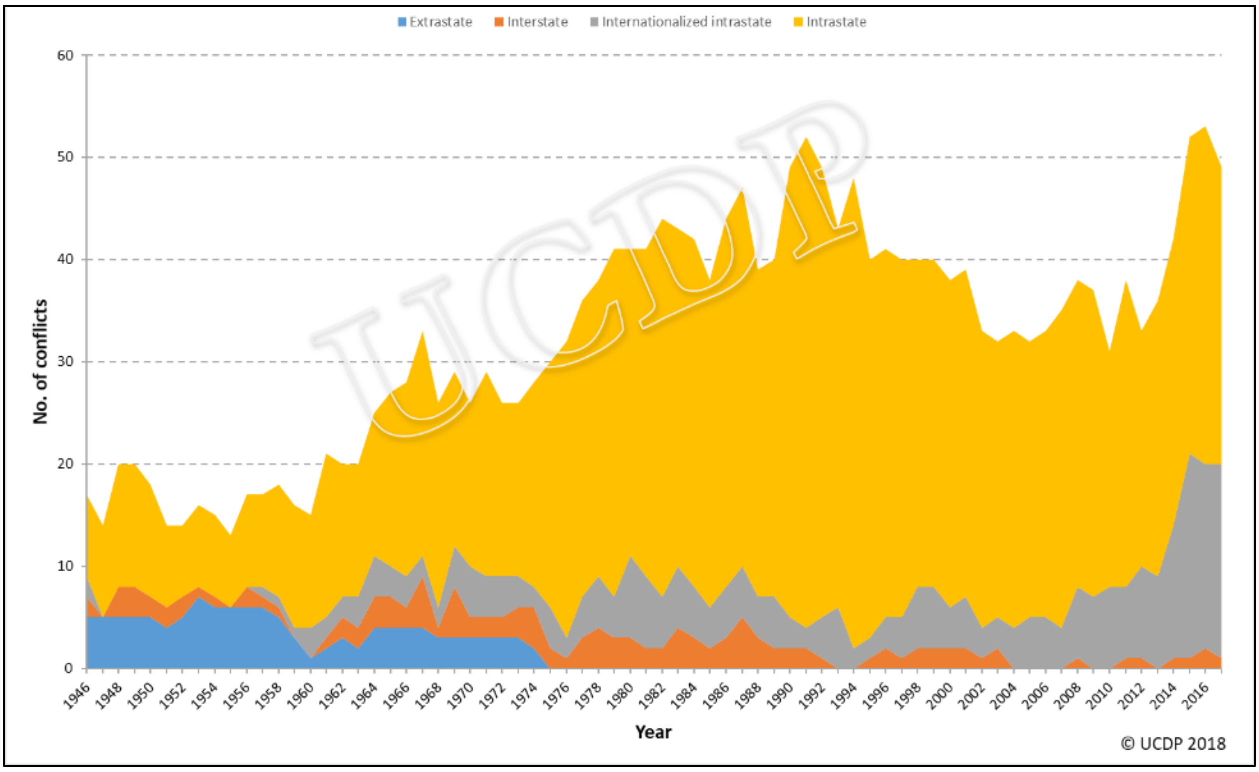



**Figure 2.3.** Number of Armed Conflicts by type of conflict, 1946-2017

*Source. UCDP 2018*

According to the most recent data on conflicts provided by the Uppsala Conflict Data Program (UCDP), last year was one of the most violent years since the Cold War, with an increase of non-state armed conflicts from 62 in 2016 to 82 in 2017 (Dupuy et al. 2018), representing an important threat for the global peace along with the internationalized intrastate conflicts (Figure 2.3.). The number of casualties in conflicts declined overtime, with the majority of them occurring in the Middle East (mainly Syria) and in the Sahel region.

### 2.1.2 The economic impact of Violence

There have been several attempts to measure the economic impact of Violence. For the purpose of this research, the one developed by the Institute for Economics and Peace will be discussed in details in this session.

#### 2.1.2.1 The economic cost of violence and its multiplier effect

IEP developed a methodology to estimate the impact of violence by considering the cost of violence to the global economy, with calculations that capture the economic impact of thirteen different types of violence, as categorized by the research unit of IEP and a multiplier effect applied to the direct costs. The cost of violence refers to the direct and indirect costs (e.g., military expenditure, costs for incarceration, see Table 2.4.) while the economic impact of violence consider also a multiplier effect related to the direct costs of violence that depicts additional expenditures flow on in the economy from violence containment expenditure. In case of lower violence perceived in the community, 'individuals would spend less time and resources protecting themselves against violence and contribute more to the wider economy as a consequence of lower levels of injury and death (IEP 2013) '.

The logic used by IEP to structure its methodology is based upon the concept of 'violence containment' spending. IEP defines violence containment spending as 'economic activity that is related to the consequences or prevention of violence where the violence is directed against people or property' (IEP 2013). Therefore, it refers to the direct and indirect costs of violence, considering also an economic multiplier of the direct costs related to the prevention and the management of violent facts at national level. Public and private financial resources are used to prevent and alleviate violent actions instead of being invested in productive activities for the society as a whole, such as public infrastructures, education, health sectors. Violence represents one of the most pressing negative externalities for our society for its direct consequences and also for the opportunities lost in long-terms investments on more impactful development dimensions. In addition to direct costs, violence (from individual homicides to mass killings) has also indirect costs related to the community affected by it in terms of increased morbidity, higher mortality and human depletions of social networks. The multiplier factor captures the potential but lost value of the 'trapped economic activity that would be unleashed by reductions in violence' (IEP 2013: 23).

Different approaches have been so far developed to disentangle the cost of violence related to specific categories of violent-related occurrence (i.e., civil war:, homicides:, terrorism:, violent crime), without a comprehensive vision over the total cost and impact of violence as a whole in the society. IEP attempt is to provide this vision with a clear and defined methodology on calculations over direct costs and indirect costs related to prevention, protection and consequences of violent phenomena. In particular, IEP researchers identified 13 categories related to violence relevant for the scope: the

In the table below the list of categories considered for the calculation is presented. For each category IEP researchers estimate the relative cost by using governmental and international data on specific events (i.e., number of homicides) with a relative unit cost estimated for each type of violence.

**Table 2.4.** IEP Violence-related categories of 'costs'

| **Category** | **Description** |
| --- | --- |
| **Deaths from internal conflict** | Costs of battle-related deaths that have occurred as a consequence of conflict internal to the country |
| **Deaths from external conflict** | Costs of battle-related deaths that have occurred as a consequence of conflicts that a country is engaged in outside the country. |
| **Violent crime** | Total estimate of the cost of serious physical attacks on individuals. Excluding indecent/ sexual assault; threats and slapping/punching. |
| **Military expenditure** | Government expenditure on the military |
| **IDPs and Refugees- counts** | The budgetary costs of refugees and internally displaced persons (IDPs) for the United Nations High Commissioner for Refugees (UNHCR). Costs borne by countries are not included |
| **Homicides** | The number of homicides at national level |
| **Internal security** | Government expenditure on internal security personnel, such as internal security officers, all costs related to incarceration, judicial systems and police |
| **Incarceration** | Costs attributable to the world's jailed population |
| **Private security** | Estimates of amount of expenditure on security personnel employed by private bodies, such as security guards employed by business |
| **Terrorism** | The economic impact of deaths, injuries, asset damage and ransom payments that occur as a consequence of terrorism |

| | |
|---|---|
| GDP **losses from conflict** | Total impact of conflict as a consequence of GDP reductions in countries currently in conflict |
| **Fear from Violence** | The average annual economic cost of individuals being in fear of violence |
| **UN Peacekeeping** | Total cost of UN peacekeeping missions around the world |

*Source. Author's elaboration from IEP (2013)*

The comprehensive view over violence related costs provides an economic argument for the potential economic benefits of working towards Peace, with investment on productive activities whose funds are now diverted to violence containment. A decrease in violent phenomena may bring direct and indirect economic effects. Direct benefits refers to gains arising from the violence and its destructive power over human and environmental stocks. Additionally, a decrease in violence may lead to lowering the cost of prevention and management of negative events in terms of resources dedicated to military, justice, incarceration procedures, assurance plans, destroyed infrastructures, trauma healing and medical related expenses. Indirect benefits may arise from the investments on more productive and impactful activities and from the flow-on effects of the activities trapped in the violence vicious cycle. Reduction in violence leads to Peace Dividend in terms of accrued positive value for the society.

2.1.2.2 The economic impact of violence today

According to IEP (2019), the global economic impact of violence is USD 14.1 trillion PPP in 2018, equivalent to 11.2 per cent of global GDP or USD 1,853 per person.

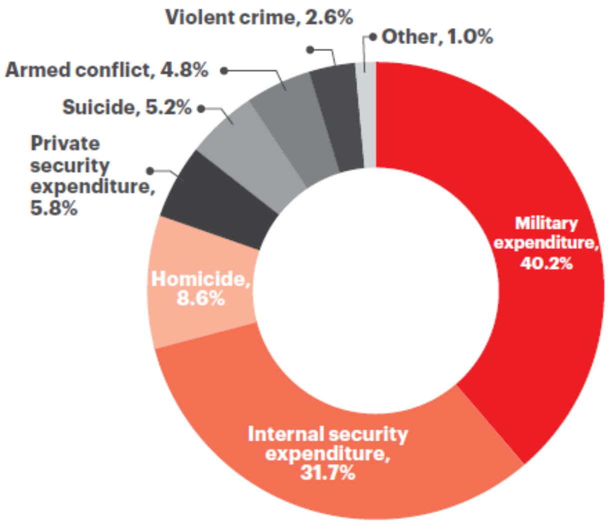



**Figure 2.4.** Breakdown of the global economic impact of violence, 2018

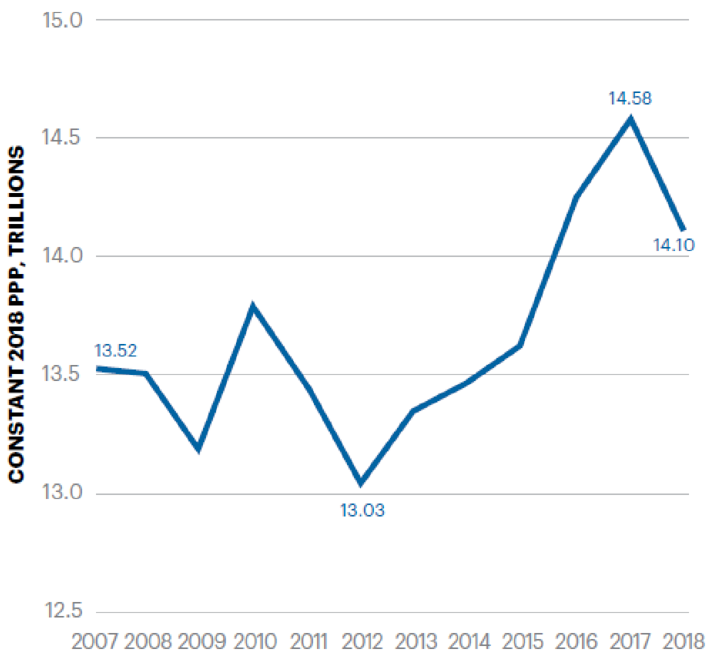



**Figure 2.5.** Trend in the Global Economic Impact of Violence, USD trillions PPP, 2007-2018

*Source. IEP 2019a*

The largest component of the impact is represented by the military expenditure, at USD 5.7 trillion PPP, or 40 percent of the total economic impact of violence, followed by internal security (31.7%) and Homicides (8.6%).

For the first year since 2012 we experience a decrease in the economic impact of violence. Looking at the violence impact composition, the decrease is related to a decline in the costs related to Armed Conflict, following improvements in Colombia, Ukraine, Iraq and Syria (with the defeat of ISIL). The relative reductions of Armed Conflict related activities brought, as a domino effect, decline in costs relative to IDPs and terrorism (IEP 2019a: 60).

The countries with the highest levels of economic impact of violence are mainly characterized by armed conflict, large amounts of IDPs, high levels of interpersonal violence, or large militaries. Syria is the country with the highest impact of violence, representing the 67% of its GDP, followed by

Afghanistan (47% GDP) and Central African Republic (42% GDP).

At regional level, as showed by the graph below, there are substantial differences in the composition of the economic impact of violence mainly related to military expenditures, violent crime, homicides and suicides: for instance, in the MENA region military expenditures arise till the 59 per cent of the total impact while in Latin American and Caribbean region they represent the 8 per cent.

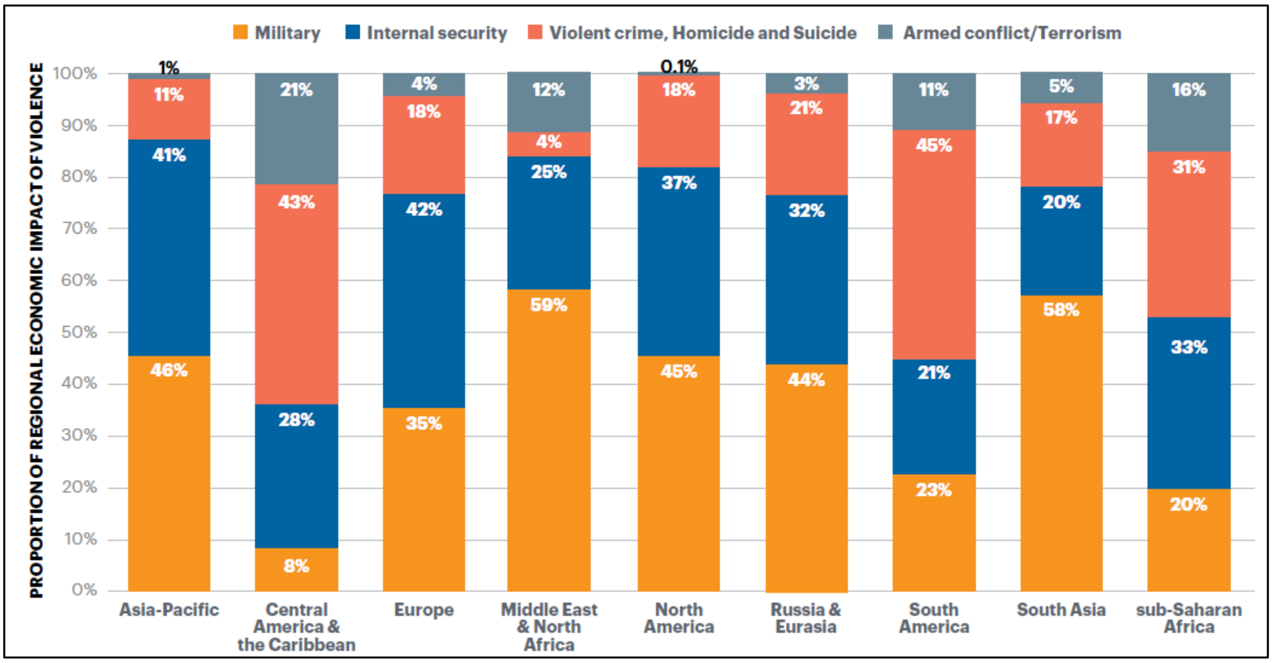



**Figure 2.6.** Composition of the regional economic impact, 2018

*Source.* *IEP 2019a: 63*

### 2.1.3 Negative Peace and Positive Peace

Peace is a comprehensive and multidimensional concept that needs to be further investigated in light of its importance for the construction of the indexes used in the research.

Violence as stated before can be divided in two main categories, direct and structural. Similarly, Peace can assume (at least) a twofold connotation, referring to the concepts of Negative Peace and Positive Peace, as discussed by Galtung in his seminal work 'Theories of Peace' (1967: 12). These two meanings of Peace relate to different status where nations or groups interact in a given environment. In particular, Negative Peace refers to the absence of organized, collective violence. As stated by Galtung, however, a system characterized by Negative Peace for years could be possible, but not necessarily desirable except for the absence of violence per se. This is due to the fact that a system with absence of violence but presence of 'severe forms of inequality, subservience and exploitation is [not] really fruitful' (Galtung 1967: 14) for the community and the environment. At intra and inter-national levels, there are other values important for the long-term resilience of a community that should be taken into consideration in a wider vision upon the concept of Peace. Peace should not be basically linked to the absence of violence, in these terms as the opposite of armed conflict or fear of violence but it should take into consideration other elements, values conducive to a more just and equal society. Galtung reminds some important features of positive outcomes present in a society, which are, among others: '(i) Presence of cooperation, (ii) Freedom from fear (iii) Freedom from want (iv)Economic growth and development (v) Absence of exploitation (vi)Equality (vii) Justice (viii)Freedom of action (ix) Pluralism (x) Dynamism' (Galtung 1967: 14).

Positive Peace refers to a longer view upon a society (nation or groups) in which a set of consensual values are defined and can flourish. According to the definition of IEP, Positive Peace refers to the attitudes, institution and structures that lead to mutual cooperation and benefit and help society move away from violence. Apart from the absence of violence, Positive Peace is related to a set of other societal dimensions to be considered for each country and globally that, on a continuum, sustain more peaceful and resilient societies. These dimensions, or pillars of Positive peace, are determinant for the long-term peace and stability of a nation and they constitute the foundations of our formal and informal institutions. Among these factors there are a well-functioning government, an equitable distribution of resources among the members of the country, free flow of information, good relations with neighbors, high level of human capital, acceptance of the rights of others, low level of corruption and sound business environment (Figure 2.7.). The pillars are interdependent and interconnected. For instance, high level of corruption are associated with low level of human capital in 80% of the countries analyzed (IEP 2019b:3).

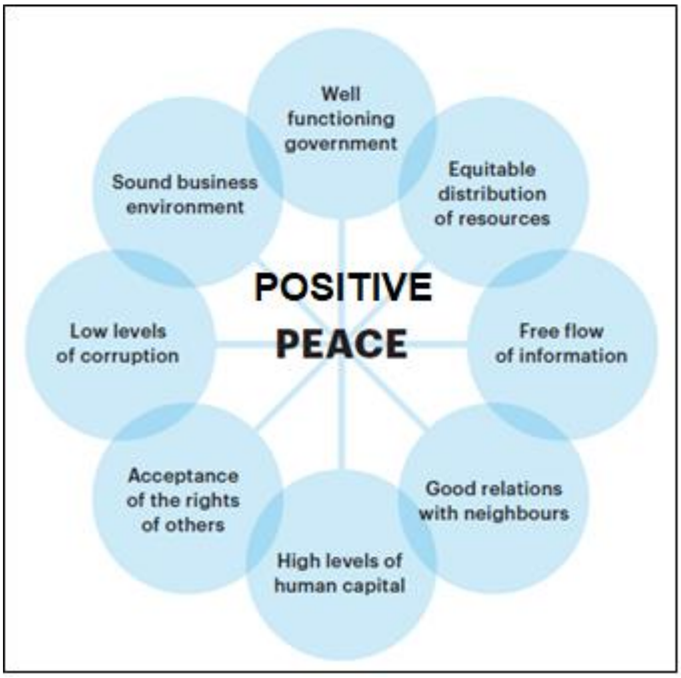



**Figure 2.7.** The 8 pillars of Positive Peace

*Source. IEP 2019b*

Factors related to the respect of human rights, the pursue of justice, human interaction, conflict management and holistic wellbeing of humankind are crucial to move from the dichotomy between Peace as absence of violence and Conflict in the academic discussions and operationally. With an integrated approach to Peace, the United Nations also refers to Peace as a multidimensional concept of (Positive) peace in terms of absence of war, stability, security, development, justice and human rights (UN 2010).

### 2.1.4 Peace Economics

Walter Isard is considered the father of Peace Economics. According to Isard (1994), Peace Economics

> is generally concerned with: (1) resolution, management or reduction of conflict in the economic sphere; (2) the use of economic measures and policy to cope with and control conflicts whether economic or not; and (3) the impact of conflict on the economic behavior and welfare of firms, consumers organizations, government and society. Central to the field are: analyses of conflicts among nations, regions and other communities of the world; measures to control (deescalate) arms races and achieve reduction in military expenditures and weaponry; and programs and policies to utilize resources thus released for more constructive purposes

Peace Economics studies, therefore, inter and interstate conflicts among different actors (from firms to government and society) with the ultimate goal to contribute to the conflict resolution process via means such as economic measures and policy. Caruso (2010a) builds on the broad definition of Peace Economics by Isard linking the very meaning of the discipline with the classical distinction between productive and unproductive activities in economics where their relative side has impacts on the long-term prosperity and governance of the societies and the interaction between these two non-mutually exclusive and sometime overlapping behaviors.

Peace Economics regards the study of the relations and interaction between productive and unproductive activities, with the main concern being conflict resolution and peace creation. Other disciplines focus their attention to conflict analysis, however with different perspectives. Peace Economics differs from Defense economics since the latter is mainly focused in the identification and implementation of efficient conditions for military spending, weapons contracting, recruitment of military labor, and allocation of resources in war. Peace Economics primary refers to the reduction of defense spending, conflict prevention and diplomacy as means to less potential conflict outbreak.

Moreover, the promotion of peace is the ultimate goal of Peace Economics respect to a more narrowed vision of Defense economics, related to resource efficiencies and conflict management per se. Another field of study on peace refers to Peace Studies, whose founding father is considered Galtung. Peace Studies presents a conception of violence broader respect to the Peace economics perspective and related not only to the presence of conflict but also referring to structural violence, human rights abuses, environmental degradation and all other aspects affecting harmfully a certain group of persons. On the contrary, Peace economics maintains a strong emphasis on the economic aspects of conflict, with a more focused vision upon conflict prevention and resolution (Anderton and Carter 2007).

## 2.2 The methodological approach for measuring Peace

In this session of Chapter 2 the methodological approach for Peace measuring will be presented referring mainly to the Global Peace Index and the Positive Peace Index.

### 2.2.1 Global Peace Index

Negative peace is the conceptual foundation of the Global Peace Index (GPI or the Index). However, referring to the initial definition of it discussed earlier in the chapter, it should be noted that IEP considers a more comprehensive notion of Negative peace, referring to it in relation to the 'absence of violence' and 'absence of fear of violence'. This definition takes into consideration the absence of interstate violence or wars but also the absence of violence that affects the way people live their lives. The IEP definition takes into account not only the security of states but also interpersonal security.

GPI is a ranking of 163 countries and territories according to their relative states of negative peace. It covers 99.7 per cent of the world's population. It allows an assessment of peace on a continuum – countries can be very peaceful, moderately peaceful and not very peaceful according to the GPI level measuring the state of peace on three thematic domains: the level of Societal Safety and Security; the extent of Ongoing Domestic and International Conflict; and the degree of Militarization.

The index is developed by IEP, it is guided and overseen by a panel of experts, and includes data collected and collated by the Economist Intelligence Unit[24]. The 12th edition of the Global Peace Index was released in June 2018 (it reflects data from March 2017 to March 2018).

Figure 2.8 shows the global state of Peace in 2018, with countries in orange and red less peaceful than countries in yellow and green. Globally, 2018 GPI deteriorated respect to the 2017, being the fourth consecutive year of decline in peace, with 71 countries that became more peaceful and 92 that deteriorated their GPI. At regional level, Europe and North America become less peaceful, with 23 out of 36 countries in Europe deteriorating in 2018; Sub-Saharan Africa was home to four of the five largest improvements in peacefulness while South Asia had the largest regional improvement and South America had the largest regional deterioration. Among them, Syria, Afghanistan, South Sudan, Iraq and Somalia are the least peaceful countries while Iceland, New Zealand, Austria, Portugal and Denmark are the most peaceful countries in the world (IEP 2018).

GPI is a composite index that refers to twenty-tree indicators all weighted on a 1-5 scale. The indicators are comprised in three macro areas: (i) ongoing domestic and international conflict (e.g., number of deaths from conflict, intensity of organized internal conflicts), (ii) societal safety (e.g., number of refugees and IDPs, impact of terrorism, homicide and incarceration rates) and (iii) security, and militarization (e.g., military expenditure, number of armed service personnel, ease of access to small weapons).

As a composite index, the GPI allows to summarize a complex and multidimensional concept such as Negative Peace. It facilitates comparisons on main trends in a definite and systemic way and can be used as a monitoring and evaluation tool, to promote also accountability at national level and at international level. Moreover, it is easier to be presented to a wider audience and can be used for advocacy purpose at the policy making level (e.g., towards more funding in peacebuilding and peacekeeping). However, it is important to underline that, as a composite index, it might be misleading if the main trends over the indicators are not well analyzed in details and could lead to simplistic conclusion.

The indicators depict both external and internal factors related to peace and conflict in a given country (e.g., presence of internal vs international conflict). The internal factors have a greater impact (are weighted more heavily) on the final score respect to the external factors, according to a decision made by an Expert Panel that 'peace is felt first at home'. Indicators are both quantitative and qualitative. As for the latter, the Economist Intelligence Unit country analysts provide a score for the qualitative evaluations. For the quantitative indicators, data are sourced from a range of international organizations

[24] The Economist Intelligence Unit (EIU) is the research and analysis division of The Economist Group and the world leader in global business intelligence.

such as the International Institute of Strategic Studies, the Stockholm International Peace Research Institute, various UN entities, and peace institutes.

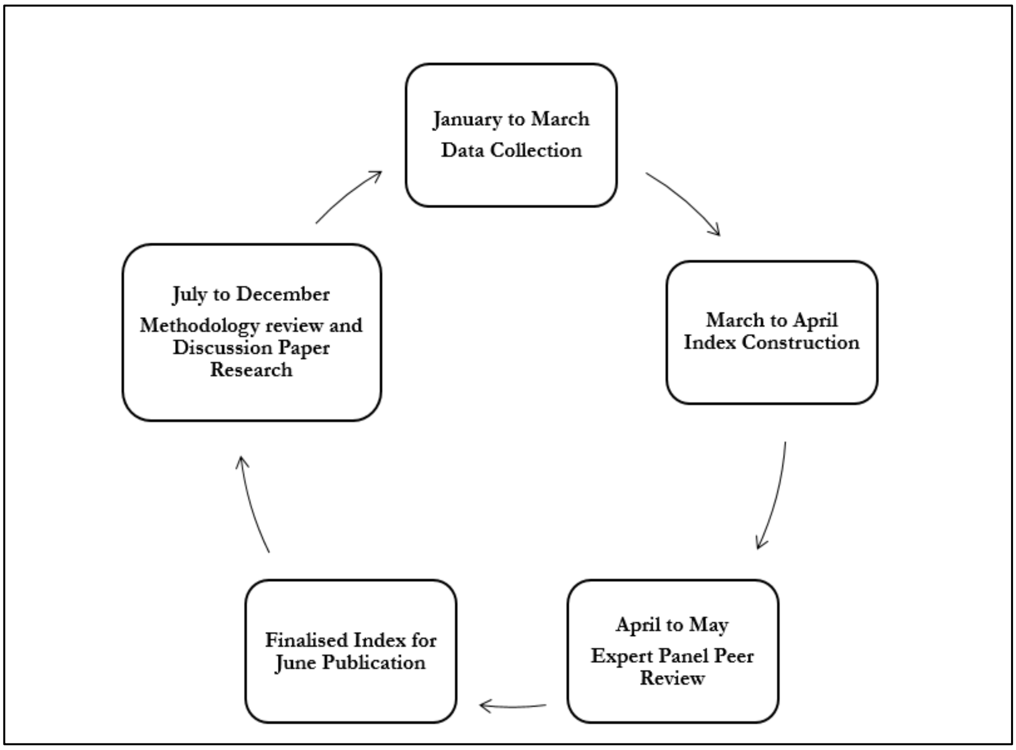



**Figure 2.8.** Process of Development of the GPI

*Source.* *GPI 2016*

Considering the data collection and index creation time frame (Figure 2.8.), all data are collected from January to March of each year with a 2 month period for the index construction, followed by the expert panel review and the subsequent publication in June. Between July and December of each year, reviews and discussions over the report and the index are conducted to restart the data collection process the year after.

Once all data for each indicator are analyzed and coded, countries are scored on a scale of one to five, with one being the most peaceful and five the least.

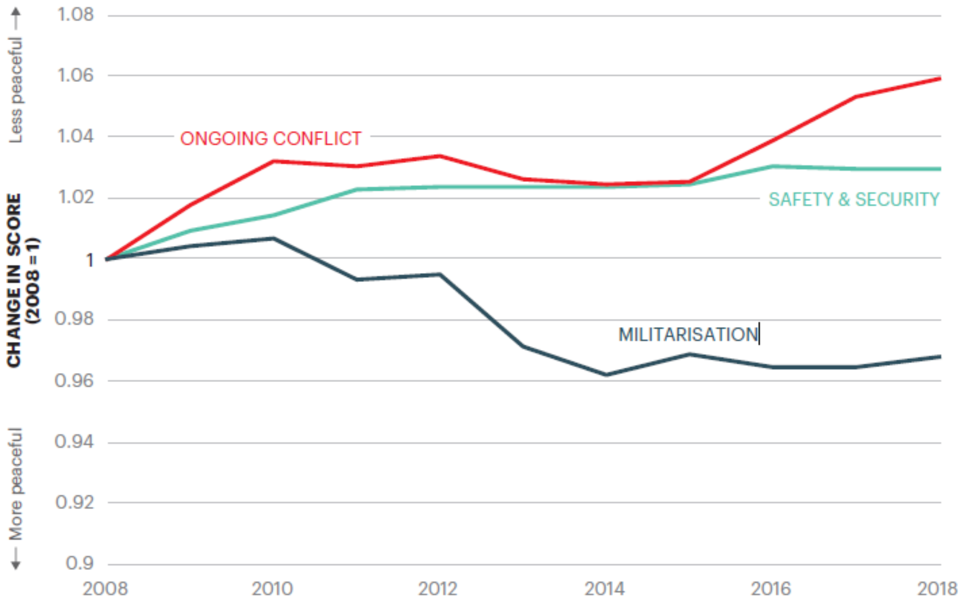



**Figure 2.9.** Indexed trend in peacefulness by domain, 2008 to 2018

*Source. IEP 2018: 28*

As aforementioned, the 23 indicators fall into three main categories: (i) ongoing domestic and international conflict, (ii) societal safety and security, and (iii) militarization. As showed in Figure 2.10 the three domain of Peace have been characterized by different trends over 1 years. In particular, while there has been a deterioration in peace over the domain ongoing (domestic and international) conflict, over the years the average country score on militarization improved by 3.17 per cent, largely driven by reduction in military spending and the size of the armed armies in many countries. In the following sessions, a description of the indicators for each category will be presented.

### 2.2.1.1 Ongoing domestic and international conflict.

This category presents 6 indicators (3 of internal peace, 3 of external peace) that provide information on the presence of ongoing domestic and international conflicts linked to the country object of analysis.

**Table 2.5.** GPI indicators of Ongoing domestic and international conflict

| Indicator | Description | Source |
|---|---|---|
| **1.Number and duration of internal conflicts** | Measure of the number and duration of interstate armed conflicts, internal armed conflict (civil conflicts), internationalized internal armed conflicts, one-sided conflict and non-state conflict occurring within a specific country's legal boundaries. | Uppsala Conflict Data Program (UCDP), University of Uppsala, Sweden and the Centre for the Study of Civil War at the International Peace Research Institute Oslo (PRIO) |
| **2.Number, duration and role in external conflicts** | Measure of the number and duration of extraterritorial conflicts (internationalized internal armed conflicts and interstate armed conflicts.) a country is involved is involved as an actor outside its legal boundaries. | Uppsala Conflict Data Program (UCDP), University of Uppsala, Sweden and the Centre for the Study of Civil War at PRIO (International Peace Research Institute Oslo); |
| **3.Number of deaths from organised external conflict** | Fatality statistics relate to military and civilian lives lost as a direct result of an armed conflict. | UCDP; University of Uppsala, Sweden; Centre for the Study of Civil War at PRIO |
| **4.Number of deaths from organised internal conflict** | Fatality statistics relate to military and civilian lives lost as a direct result of an armed conflict within the legal boundaries of a state. | International Institute for Strategic Studies (IISS) Armed Conflict Database |
| **5.Intensity of organised internal conflict** | Qualitative assessment by EIU on the intensity of conflicts within the country, ranked from 1-5 (no conflict to severe crisis) | Qualitative assessment by Economist Intelligence Unit analysts |
| **6.Relations with neighbouring countries** | Qualitative assessment by EIU of the intensity of contentiousness of neighbors, ranked from 1-5 (peaceful to very aggressive) | Qualitative assessment by Economist Intelligence Unit analysts |

*Source*. *IEP 2018:82-89*

### 2.2.1.2 Societal safety and security

This category presents 10 indicators providing information on the level of societal safety and security for each territory.

**Table 2.6.** GPI indicators of Societal safety and security

| Indicator | Description | Source |
|---|---|---|
| **1. Level of perceived criminality in society** | Assessment of the level of perceived criminality in society, ranked from 1-5 (very low - The majority of other citizens can be trusted; very low levels of domestic insecurity.- to very high-distrust in other citizens) by the EIU's | Qualitative assessment by EIU |
| **2.Number of refugees and displaced people as a percentage of the population** | Refugee population by country or territory of origin plus the number of a country's internally displaced people (IDPs), as a percentage of the country's total population. | *UNHCR Statistical Yearbook* and the Internal Displacement Monitoring Centre (IDMC) |
| **3.Political instability** | Assessment of political instability ranked from 0 to 100 (very low to very high instability) by the EIU, based on five questions. This indicator aggregates five other questions on social unrest, orderly transfers, opposition stance, excessive executive authority and an international tension sub-index. Country analysts assess this question on a quarterly basis. The score provided for 16 March 2017 to 15 March 2018 is the average of the scores given for each quarter. | Qualitative assessment by EIU |
| **4.Political Terror Scale** | Measure of the levels of political violence and terror that a country experiences in a given year based on a 5-level "terror scale" originally developed by Freedom House. The data used in compiling this index comes from the yearly country reports of Amnesty International and the US Department of State's Country Reports on Human Rights Practices. | Gibney, Mark, Linda Cornett, Reed Wood, Peter Haschke, Daniel Arnon, and Attilio Pisanò. 2017. The Political Terror Scale 1976-2016. Date Retrieved, from the Political Terror Scale website: http:// www.politicalterrorscale. org. |
| **5.Impact of terrorism** | Count of Terrorist incidents as "intentional acts of violence or threat of violence by a non-state actor." | Global Terrorism Index (IEP) |
| **6.Number of homicides per 100,000 people** | Quantitative, total number of penal code offences or their equivalent, minor road traffic and other petty offences excluded, brought to the attention of the police or other law enforcement agencies and recorded by one of those agencies. | United Nations Office on Drugs and Crime (UNODC) Surveys on Crime Trends and the Operations of Criminal Justice Systems (CTS); EIU estimates |

| | | |
|---|---|---|
| **7.Level of violent crime** | Assessment of the likelihood of violent crime ranked from 1 to 5 (very low to very high) by the EIU's Country Analysis team based on the question, "Is violent crime likely to pose a significant problem for government and/or business over the next two years?" Country analysts assess this question on a quarterly basis. | Qualitative assessment by EIU |
| **8.Likelihood of violent demonstrations** | Assessment of the likelihood of violent demonstrations ranked from 1-5 (very low to very high) based on the question, "Are violent demonstrations or violent civil/labour unrest likely to pose a threat to property or the conduct of business over the next two years?" On a quarterly basis, the final score is an average of each quarter | Qualitative assessment by EIU |
| **9.Number of jailed population per 100,000 people** | Quantitative indicator based on estimates of the national population | World Prison Brief, Institute for Criminal Policy Research at Birkbeck, University of London |
| **10.Number of internal security officers and police per 100,000 people** | Quantitative, it refers to refers to the civil police force. Police means personnel in public agencies whose principal functions are the prevention, detection and investigation of crime and the apprehension of alleged offenders. It is distinct from national guards or local militia. | UNODC CTS; EIU estimates |

*Source. IEP 2018: 82-89*

#### 2.2.1.3 Militarization

The degree of militarization in a territory depict the level of investment in defense and security for each country. It considers also the commitment of the nation to UN peacekeeping operations.

**Table 2.7.** GPI indicators of Militarization

| Indicator | Description | Source |
|---|---|---|
| **1.Military expenditure as a percentage of GDP** | Quantitative, it refers to the Cash outlays of central or federal government to meet the costs of national armed forces—including strategic, land, naval, air, command, administration and support forces as well as paramilitary forces, customs forces and border guards if these are trained and equipped as a military force. | IISS, Military Balance |
| **2.Number of armed services personnel per 100,000 people** | Active armed services personnel comprise all service men and women on full-time duty in the army, navy, air force and joint forces | IISS, Military Balance |
| **3.Volume of transfers of major conventional weapons as recipient (imports) per 100,000 people** | Measures the total volume of major conventional weapons imported by a country between 2013 and 2017, divided by the average population in this time period at the 100,000 people level | Stockholm International Peace Research Institute (SIPRI) Arms Transfers Database |
| **4.Volume of transfers of major conventional weapons as supplier (exports) per 100,000 people** | Measures the total volume of major conventional weapons exported by a country between 2010 and 2014 divided by the average population during this time period. Major conventional weapons include: aircraft, armored vehicles, artillery, radar systems, missiles, ships and engines. | SIPRI Arms Transfers Database |
| **5.Financial contribution to UN peacekeeping missions** | The indicator calculates the percentage of countries' "outstanding payments versus their annual assessment to the budget of the current peacekeeping missions" over an average of three years. | United Nations Committee on Contributions; Institute for Economics and Peace |
| **6.Nuclear and heavy weapons capabilities** | The indicator is based on a categorized system for rating the destructive capability of a country's stock of heavy weapons. | IISS, Military Balance; SIPRI and Institute for Economics and Peace |
| **7.Ease of access to small arms and light weapons** | Qualitative indicator, assessment of the accessibility of small arms and light weapons (SALW), ranked from 1-5 (very limited access to very easy access) by EIU. | Qualitative assessment by Economist Intelligence Unit analysts |

*Source. IEP 2018: 82-89*

#### 2.2.1.4 Technical issues encountered and limitations of the index

For the construction of the GPI researchers and experts face some technical challenges.

The first major challenge is data availability. Data on some dimensions of violence such as the domestic violence are particularly difficult to collect. Moreover, challenges in terms of data coverage over the majority of territories and adequate series contributed to the selection of indicators in each domain that guaranteed adequate coverage and time series. Another important issue related to the construction of the composite index is the weighting. The panel of experts determined via a normative arbitrary setting the weights of each indicator.

In terms of limitations of the GPI, national average may hide regional variations, bringing to simplistic and/or false conclusion over a nation versus a specific zone. Moreover, due to data availability limitations, the GPI do not provide any information on the dynamics of peace and gender, tribal (ethnic), religious or cultural groups. Finally, the GPI has been constructed to give a snapshot on the status quo of the country in terms of peacefulness as per the concept of Negative Peace. However, it has to be reminded that a broader concept of peace should be embraced, especially at policy making level: the concept of Positive Peace, looking at actions made at country level for promoting institutional building and social norms to sustain peace in the long-run.

### 2.2.2 Positive Peace Index

The Positive Peace Index (PPI) is the indicator built by IEP to describe the evolution on the Positive Peace worldwide.

#### 2.2.2.1. Pillars of Positive Peace and relative indicators

PPI is built upon the Positive Peace framework of IEP on the eight pillars of Positive Peace, that refer to critical dimensions to build and sustain good institutions and structures, resilience and long term peace in more cohesive societies. According to the eight dimensions identified on the basis of socio-economic features - factors statistically significantly associated with Global Peace Index – that characterized the most peaceful countries on the world, IEP researchers structured PPI collecting data on these dimensions. These factors (or pillars of Positive Peace) are multidimensional and interact in complex ways, providing a set of interesting findings on the potential for Peace (or, conversely the likelihood of conflict). PPI constitutes therefore a baseline measure of a country in terms of building and sustaining peace and wellbeing of its society.

PPI covers 163 countries with time series from 2005 to 2017. It is a composite index of 24 indicators, presented in the following paragraphs, according to the Pillars of Positive Peace. Each indicator is scored between one to five: one as the most and five the least positively peaceful. Moreover, each indicator presents a weight between 0.2 and 0.5 according to its correlation with GPI score: the stronger, the higher the weighting and thus its contribution to the PPI, as a higher contributor to negative peace.

### Well-functioning government

This pillar refers to the quality of public and civil service delivery, political stability and the rule of law in each country. It comprises three indicators: (i) democratic political culture, (ii) Government effectiveness, and (iii) rule of law, as detailed in the table below.

**Table 2.8.** Indicators of well-functioning government - IEP

| Indicator | Description | Source | Weight (% of the PPI) |
|---|---|---|---|
| **1.Democratic political culture** | Measures whether the electoral process, civil liberties, functioning of government, political participation and culture support secular democracy. | Economist Intelligence Unit, Democracy Index | 4.49% |
| **2.Government Effectiveness** | Reflects perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. | World Bank | 5.24% |
| **3.Rule of law** | Reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. | World Bank | 5.45% |

*Source.* *IEP 2018: 68*

### Sound Business environment

This pillar refers to the economic conditions and formal institutions that support the business environment and the development of the private sector. It comprises of three indicators: (i) Business Environment, (ii) Index of Economic Freedom, (iii) GDP per capita. Economic productivity and business competitiveness are associated with peaceful societies.

**Table 2.9.** Indicators of Sound Business environment - IEP

| Indicator | Description | Source | Weight (% of the PPI) |
|---|---|---|---|
| **1.Business environment** | Measures a country's entrepreneurial environment, its business infrastructure, barriers to innovation, and labour market flexibility | Legatum Institute | 4.69% |
| **2.Index of Economic Freedom** | Measures individual freedoms and protection of freedoms to work, produce, consume, and invest unconstrained by the state. | Heritage Foundation, Index of Economic Freedom | 4.28% |

| | | | |
|---|---|---|---|
| **3.GDP per capita** | GDP per capita | World Bank | 4.07% |

*Source. IEP 2018: 68*

## Low level of corruption

Corruption at institutional level represents a factor that can lead to distrust and civil unrest. In presence of political capture of rents by political elites the delivery of basic services may be compromised, with negative consequence for the population in terms of basic needs and public service delivery. This pillar comprises 3 indicators: (i) Fractionalized elites, (ii) Perception of corruption score, (iii) Control of corruption, as detailed in the table below.

**Table 2.10.** Indicators of Low level of corruption - IEP

| Indicator | Description | Source | Weight (% of the PPI) |
|---|---|---|---|
| **1.Fractionalised Elites** | Measures the fragmentation of ruling elites and state institutions along ethnic, class, clan, racial or religious lines. | Fund For Peace, Fragile States Index | 5.03% |
| **2.Perception of corruption score** | Scores countries based on how corrupt the public sector is perceived to be. | Transparency International, Corruption Perceptions Index | 5.38% |
| **3.Control of corruption** | Captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption. | World Bank, World Governance Indicators | 5.31% |

*Source. IEP 2018: 68*

## High level of Human Capital

This factor refers to one of the most important drivers of sustainable development and peace building: Human Capital. A high level of human capital contributes to the development of knowledge within a country and is crucial long term mitigation and adaptation measures in case of external shocks. It comprises of three indicators: (i) secondary school enrolment, (ii) Global Innovation Index, (iii) YDI, the Youth Development Index score.

**Table 2.11.** Indicators of high level of Human Capital - IEP

| Indicator | Description | Source | Weight (% of the PPI) |
|---|---|---|---|
| **1.Secondary school enrolment** | The ratio of children of official school age who are enrolled in school to the population of the corresponding official school age. | World Bank | 3.58% |
| **2.Global Innovation Index** | The Global Innovation Index (GII) aims to capture the multi-dimensional facets of innovation and provide the tools that can assist in tailoring policies to promote long-term output growth, improved productivity, and job growth. | Cornell University | 4.55% |
| **3. Youth Development Index overall score** | The YDI measures the status of 15-29 year-olds in according to five key domains: Education, Health and Well-being, Employment, Civic Participation and Political Participation. | Commonwealth Secretariat | 4.27% |

*Source. IEP 2018: 68*

### Free Flow of Information

One important factor in building peace is represented by the free flow of information in terms of openness and info dissemination and exchanges for citizens, while being free from restrictions or censorship. This factor comprises 3 indicators: (i) freedom of the press, (ii) mobile phone subscription rate, (iii) world press freedom index. The study of these indicators provide a basis to understand if in a country, media are independent or not, if the access to information is possible and how well the citizens are informed.

**Table 2.12.** Indicators of free flow of information - IEP

| Indicator | Description | Source | Weight (% of the PPI) |
|---|---|---|---|
| **1. Freedom of the Press Index overall score** | A composite measure of the degree of print, broadcast, and internet freedom. | Freedom House | 4.27% |
| **2. Mobile phone subscription rate** | Number of mobile phone subscriptions per 100 inhabitants. | ITU | 2.13% |
| **3. World Press Freedom Index overall score** | Ranks countries based on media pluralism and independence, respect for the safety and freedom of journalists, and the legislative, institutional and infrastructural environment in which the media operate. | Reporters without borders | 3.72% |

*Source. IEP 2018: 68*

## Good Relations with neighbors

This factor reflects the quality of relation of the country with neighboring countries. Good relations with neighbors are associated with more peaceful societies, political stability and business environment prone to Foreign Direct Investments.

**Table 2.13.** Good relations with neighbors - IEP

| Indicator | Description | Source | Weight (% of the PPI) |
|---|---|---|---|
| **1.Hostility to foreigners** | Measures social attitudes toward foreigners and private property. | EIU | 4.62% |
| **2. Number of visitors** | Number of visitors as per cent of the domestic population. | EIU | 2.34% |
| **3. Regional integration** | Measures the extent of a nation' s trade-based integration with other states. | EIU | 4.20% |

*Source.* *IEP 2018: 68*

## Equitable Distribution of Resources

Equity in distribution of health care, education, income and the degree of social mobility within a society describe how if the country treats equally its citizens. More peaceful countries presents more equitable distribution of resources within the population.

**Table 2.14.** Indicators of equitable distribution of resources - IEP

| Indicator | Description | Source | Weight (% of the PPI) |
|---|---|---|---|
| **1.Inequality adjusted life expectancy** | The HDI life expectancy index adjusted for inequality scores countries based on average life expectancy and the degree of inequality in life expectance between groups. | UNDP, Human Development Index | 3.79% |
| **2.Social mobility** | Measures the potential for upward social mobility based on the degree to which either merit or social networks determine an individual's success. | Institutional Profiles database | 3.65% |
| **3. Poverty gap** | The mean shortfall from the poverty line at $2 per day PPP (counting the nonpoor as having zero shortfall), expressed as a % of the poverty line. | World Bank | 2.27% |

*Source.* *IEP 2018: 68*

## Acceptance of the Rights of Others

This factor defines the level of tolerance in a country among different socio-economic, religious groups. It refers to formal and informal norms related to the respect of human rights of different groups.

**Table 2.15.** Indicators of Acceptance of the rights of others - IEP

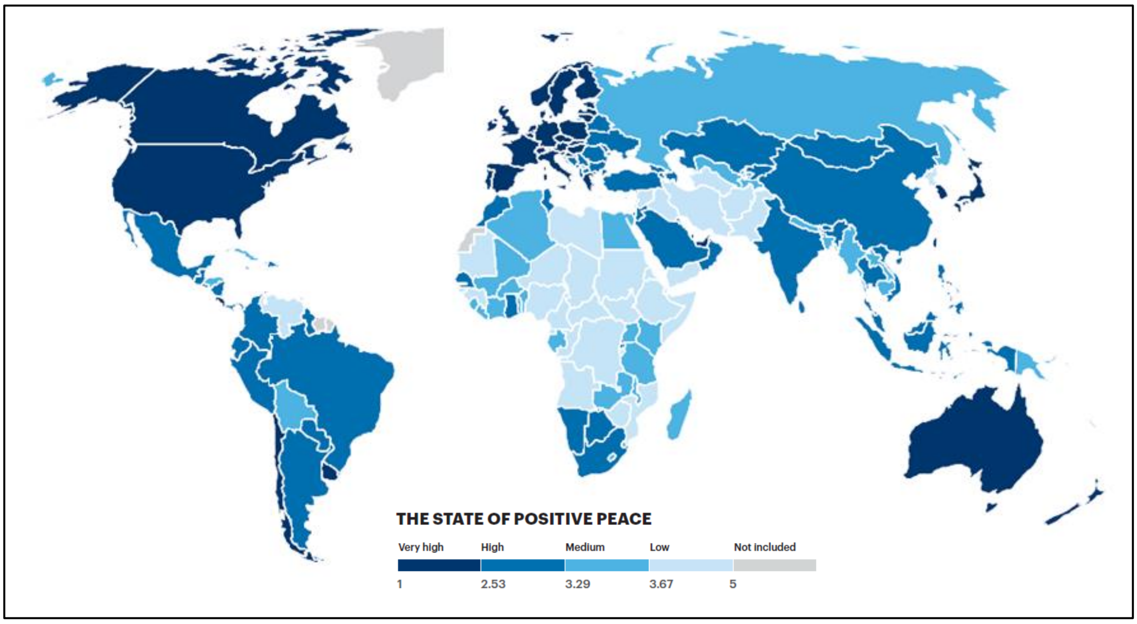
| Indicator | Description | Source | Weight (% of the PPI) |
|---|---|---|---|
| **1.Empowerment index** | An additive index using indicators of freedom of movement, freedom of speech, workers' rights, political participation, and freedom of religion. | CIRI, Human Rights Dataset | 3.31% |
| **2.Group Grievance Index** | Measures the extent and severity of grievances between groups in society, including religious, ethnic, sectarian and political discrimination and division. | Fund For Peace, Fragile States Index | 4.76% |
| **3.Gender Inequality** | The Gender Inequality Index (GII) reflects women's disadvantage in three dimensions: reproductive health, empowerment and the labour market. | UNDP, Human Development Index | 4.48% |

*Source. IEP 2018: 68*

2.2.2.2 2018 Positive Peace Index Ranking

According to the last report on PPI in 2018, there has been globally an improvement in terms of Positive Peace worldwide. Sweden, Finland and Norway have the highest level of Positive Peace while Yemen, Central African Republic and Somalia score the lowest PPI. The table below shows countries with their relative state of Peace, from very high to low. Europe remains the most peaceful region while the Middle East and North Africa is the least peaceful one.

**Figure 2.10.** Positive Peace Index 2018 - IEP




*Source. IEP 2018: 17*

Eurasia, Russia, South-Asia and Asia Pacific scored the largest improvements while North America, along with the Middle East and North Africa, deteriorated its Positive Peace due to low performance in Acceptance of the Rights of Others, Equitable Distribution of Resources and Free Flow of Information. Despite Europe is by far the most peaceful regions, some of its countries experienced deteriorations in their respective PPI scores due to the rise of populist movements (IEP 2018: 33).

#### 2.2.2.3 Trend in Positive Peace

Positive Peace improved over the past twelve years: PPI has been characterized by a positive variation of 2.4% since 2005, with an even evolution in recent years.

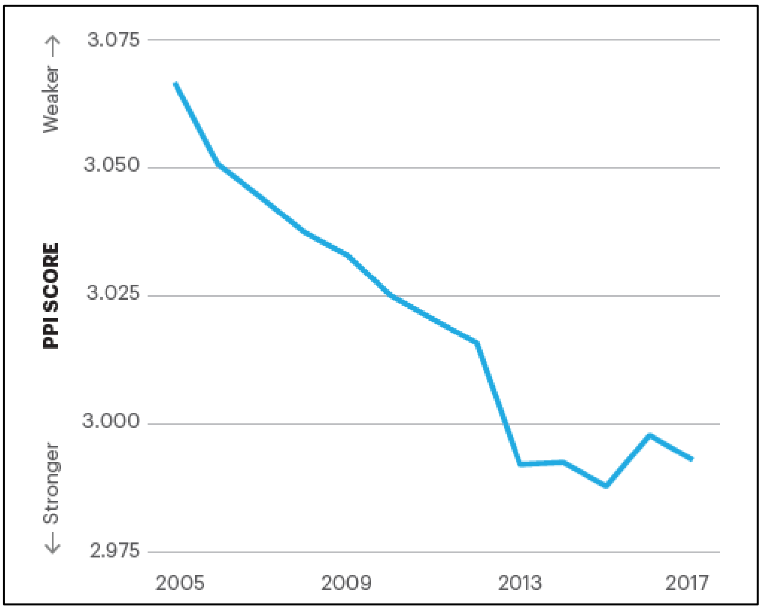



**Figure 2.11.** Trend in the global average PPI score, 2005-2017

*Source.* *IEP 2018: 18*

Since 2013, the global improvement of peacefulness is uneven at regional level, with the consequent increase of peace inequality.

The even progress is due to differentials in variation of four pillars, namely (i) Free Flow of Information, (ii) Equitable Distribution of Resources, (iii) Low Levels of Corruption and (iv) Acceptance of the Rights of Others. Low level of corruption is the only pillar deteriorated since 2005 (Figure 2.12).

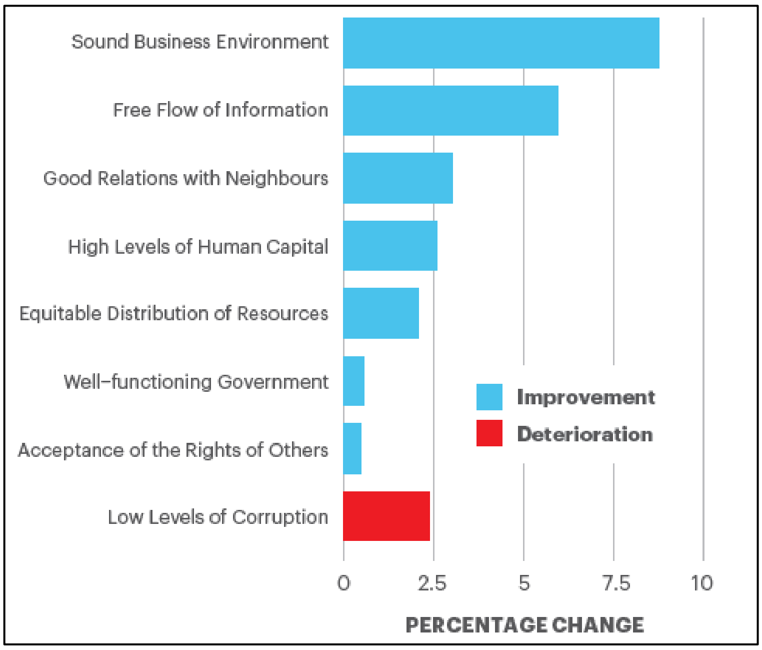



**Figure 2.12.** Percentage change in Positive Peace Pillars, 2005 - 2017

*Source. IEP 2018: 18*

#### 2.2.2.4 Technical issues encountered and limitations of the index

Technical issues and limitations of the Positive Peace Index have to be considered.

As for the GPI, data coverage represents a major challenge for PPI. In the case of PPI the weighting system is derived from statistical correlation between each indicator and the GPI, in this case the researchers determined via a statistical setting the weights of each indicator. However, in principle, this is a subjective decision.

In terms of limitations of the PPI, as a composite measure, it summarizes complex and multidimensional issues, facilitating comparison over the 'big picture' at global, regional and/or country-level and the risk, on the policy making side, it's oversimplification of the PPI intrinsic complexities.

### 2.2.3 On other Peace Measurements and proxies

#### 3.2.3.1 SDG16 on Peace, Justice and Strong Institutions

The Goal 16 of the 2030 Agenda on Sustainable Development adopted by 193 United Nations member states in September 2015 refers to Peace, Justice and Strong Institutions (UN General Assembly 2015). SDG16 defines as primary goal for sustainable development to 'promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels'.

SDG16 defines 12 targets (i.e., objectives for each member state to reach by 2030) and 33 related indicators on direct violence, drivers of violence, governance, and justice. It provides therefore, as in the case of GPI and PPI, an integrated framework of analysis where each factor (in this case in a policy-making perspective, each target) is connected with the others.

**Table 2.16**. SDG16 targets and Indicators

| Target | Description | Indicator |
|---|---|---|
| **16.1** | Significantly reduce all forms of violence and related death rates everywhere | 16.1.1<br>Number of victims of intentional homicide per 100,000 population, by sex and age<br>16.1.2<br>Conflict-related deaths per 100,000 population, by sex, age and cause<br>16.1.3 |

| | | |
|---|---|---|
| | | Proportion of population subjected to physical, psychological or sexual violence in the previous 12 months<br>16.1.4<br>Proportion of population that feel safe walking alone around the area they live |
| **16.2** | End abuse, exploitation, trafficking and all forms of violence against and torture of children | 16.2.1<br>Proportion of children aged 1-17 years who experienced any physical punishment and/or psychological aggression by caregivers in the past month<br>16.2.2<br>Number of victims of human trafficking per 100,000 population, by sex, age and form of exploitation<br>16.2.3<br>Proportion of young women and men aged 18-29 years who experienced sexual violence by age 18 |
| **16.3** | Promote the rule of law at the national and international levels and ensure equal access to justice for all | 16.3.1<br>Proportion of victims of violence in the previous 12 months who reported their victimization to competent authorities or other officially recognized conflict resolution mechanisms<br>16.3.2<br>Unsentenced detainees as a proportion of overall prison population |
| **16.4** | By 2030, significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets and combat all forms of organized crime | 16.4.1<br>Total value of inward and outward illicit financial flows (in current United States dollars)<br>16.4.2<br>Proportion of seized, found or surrendered arms whose illicit origin or context has been traced or established by a competent authority in line with international instruments |
| **16.5** | Substantially reduce corruption and bribery in all their forms | 16.5.1<br>Proportion of persons who had at least one contact with a public official and who paid a bribe to a public official, or were asked for a bribe by those public officials, during the previous 12 months<br>16.5.2<br>Proportion of businesses that had at least one contact with a public official and that paid a bribe to a public official, or were asked for a bribe by those public officials during the previous 12 months |
| **16.6** | Develop effective, accountable and transparent institutions at all levels | 16.6.1<br>Primary government expenditures as a proportion of original approved budget, by sector (or by budget codes or similar)<br>16.6.2<br>Proportion of the population satisfied with their last experience of public services |
| **16.7** | Ensure responsive, inclusive, participatory and representative decision making at all levels | 16.7.1<br>Proportions of positions (by sex, age, persons with disabilities and population groups) in public institutions (national and local legislatures, public service, and judiciary) compared to national distributions<br>16.7.2 |

| | | |
|---|---|---|
| | | Proportion of population who believe decision-making is inclusive and responsive, by sex, age, disability and population group |
| **16.8** | Broaden and strengthen the participation of developing countries in the institutions of global governance | 16.8.1<br>Proportion of members and voting rights of developing countries in international organizations |
| **16.9** | By 2030, provide legal identity for all, including birth registration | 16.9.1<br>Proportion of children under 5 years of age whose births have been registered with a civil authority, by age |
| **16.10** | Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements | 16.10.1<br>Number of verified cases of killing, kidnapping, enforced disappearance, arbitrary detention and torture of journalists, associated media personnel, trade unionists and human rights advocates in the previous 12 months<br>16.10.2<br>Number of countries that adopt and implement constitutional, statutory and/or policy guarantees for public access to information |
| **16.A** | Strengthen relevant national institutions, including through international cooperation, for building capacity at all levels, in particular in developing countries, to prevent violence and combat terrorism and crime | 16.A.1<br>Existence of independent national human rights institutions in compliance with the Paris Principles |
| **16.B** | Promote and enforce non-discriminatory laws and policies for sustainable development | 16.B.1<br>Proportion of population reporting having personally felt discriminated against or harassed in the previous 12 months on the basis of a ground of discrimination prohibited under international human rights law |

*Source. UN stat platform*

## Conceptual and Operational Challenges for SDG16 measurement and monitoring

The achievement of the SDG16 requires a systemic approach characterized by actions in different domains, namely: rule of law, prevention and resolution of violent conflict, corruption, political participation, discriminations, human rights, institutional capacity. The multidimensional and complex framework with initiatives to be undertaken in a coordinated and strategic way in these diverse and interlinked domains represents itself a challenge for the achievement of SDG16, with actions from different institutions and stakeholders at different timing (Garofalo et al. 2017).

The measurement and monitoring of SDG16 achievements year by year, country by country seem a true challenge in terms of data availability and coverage. Technical challenges on Data availability and reliability might represent obstacles to reporting progress. As underlined by IEP (2016), many National Statistical Offices (NSOs) do not possess statistical capacity and resources to ensure the indicators' measurement and monitoring, with the risk by SDG16 to be captured by a capability trap. Moreover, technical challenges derive from the lack of official common indicators on the majority of the targets. According to the last report of IEP on SDG16 measurement, out of 23 SDGs indicators, only 9 have official common indicators, 13 could be resumed from proxies (as provided by IEP) and 1 (Country Voting Rights in International Organizations) does not present nor an official indicator neither a proxy (IEP 2019b:9).

If at institutional level there is a lack of official data and statistical capacity (IEP 2016:2), third party organizations already active in data collection and analysis on the aforementioned domains are playing an active role as independent verification and maybe, in the future, additional support for NSOs (e.g.; IEP, Small Arms Survey, the World Justice Project, Transparency International, the Oslo Peace Research Institute, Uppsala University, Pathfinders). Initiatives such as the 'Voluntary Supplemental Indicators for Goal 16 on inclusive, just and peaceful societies' organized by the Community of Democracies with the UN Development Programme and the Open Government Partnership and SDG16 data initiative (SDG16 DI), a collective initiative by a consortium of fourteen organizations (including PRIO and IEP), are responding to the challenges aforementioned in the implementation and monitoring of SDG16 targets and respective indicators. In the next paragraph analysis from SDG16 DI focused on the implementation and open tracking of the progress on peace, justice and strong institutions globally will be considered.

**SDG 16 outlook**

According to the last report of the SDG16 DI, efforts towards SDG16 targets remain limited globally, with alarming trends. The report looks at progress towards more (i) peaceful, (ii) just, (iii) inclusive societies at global level. In particular:

(i) On peaceful societies: in 2018 the world experienced an growth in global homicide rates and the highest number of armed conflict since 1946, 53

(ii) On just societies: one in three countries' rule of law score declined in the last year, with deteriorations in the areas of fundamental rights and constraints on government powers by the greatest number of countries

(iii) On inclusive societies: the acceptance and integration of migrants remain on of the main challenges towards more inclusive societies. As the case studies show, 'the countries that offer a path to citizenship for asylum seekers and refugees tend to be more inclusive politically, being that citizenship is the main precondition to gaining the right to vote. Countries that do not offer a clear path to citizenship often end up with communities of refugees who are stranded in legal limbo, unable to engage politically with their host country, or their country of origin (SDG16 DI 2018:19)'.

#### 3.2.3.2 SDG16+

The Sustainable Development Goal 16+ (SDG16+) has been developed by a group of researchers from academia, international organizations and practitioners from civil society organizations. The aim of SDG16+ is to track the progress on other SDG targets that are linked to the achievement of peace, justice and inclusive societies with a more holistic approach over Peace. The SDG16+ represents a specific framework on Negative and Positive Peace, with twenty-four additional targets (from seven other SDGs), for a total of thirty six targets and fifty-six indicators. Peace as a multidimensional phenomenon requires an integrated approach, with different actions in the domain of SDG1, SDG4, SDG5, SDG8, SDG10, SDG11, SDG17. In the following Table Targets and respective indicators will be presented.

**Table 2.17**. SDG16+ targets and Indicators

| Target | Description | Indicator | No official indicator or proxy |
|---|---|---|---|
| **1.b** | Create pro poor and gender sensitive development strategies | 1.b.1 Social Spending | |
| **4.5** | Eliminate Education Disparities | 4.5.1 Parity indices for Education | |
| **4.7** | Promote Sustainable Development | 4.7.1 Education on Human Rights and Fundamental Freedom | x |
| **4.a** | Ensure inclusive and effective education facilities | 4.a.1 Education Access and Facilities | |
| **5.1** | Ends all forms of discrimination against females | 5.1.1 Non-discrimination Against Females | |
| **5.2** | Eliminate all forms of violence against females | 5.2.1 Women Subjected to Violence by a Current or Former Intimate Partner<br>5.2.2 Women Subjected to Violence by Persons Other Than an Intimate Partner | |
| **5.3** | Eliminate harmful child practices | 5.3.1 Child Marriage<br>5.3.2 Female Genital Mutilation/Cutting | |
| **5.5** | Equal opportunities for women | 5.5.1 Gender Equality in Government<br>5.5.2 Gender Equality in Managerial Positions | |

| | | | |
|---|---|---|---|
| **5.c** | The promotion of gender equality | 5.c.1 Monitoring of Gender Equality | x |
| **8.5** | Full, Fair and productive employment | 8.5.1 Wages of Female and Male Employees<br>8.5.2 Unemployment Rate | x |
| **8.7** | Eradicate forced labor, modern slavery and human trafficking | 8.7.1a Child Labour<br>8.7.1b Non-fatal Occupational Injuries<br>8.8.2 Higher Levels of Economic Productivity Through Diversification, Technological Upgrading and Innovation | |
| **8.8** | Save and secure working environments | 8.8.1 Fatal Occupational Injuries<br>8.8.1b Non-fatal Occupational Injuries<br>8.8.2 Higher Levels of Economic Productivity Through Diversification, Technological Upgrading and Innovation | <br><br>x |
| **10.2** | Social, Economic and Political inclusion of all | 10.2.1 Social, Economic and Political Inclusion of All | |
| **10.3** | Ensure equal opportunity and and reduce inequalities of outcome | 10.3.1 Ensure Equal Opportunity and Reduce Inequalities | |
| **10.4** | Adopt Fiscal, Wage and Social protection Policies | 10.4.1 Labour share of GDP | |
| **10.5** | Improve the regulation and monitoring of financial markets | 10.5.1 Regulated Financial Markets | |
| **10.6** | Country representation in the global institutions | 10.6.1 Country Voting Rights in International Organisations | |
| **10.7** | Facilitate Orderly, safe and responsible mobility of people | 10.7.1 Country Voting Rights in International Organisations<br>10.7.2 Well-managed Migration Policies | x<br><br>x |
| **11.1** | Access to safe and affordable housing and basic services | 11.1.1 Population Living in Slums | |
| **11.2** | Access to safe, affordable, accessible and sustainable transport systems | 11.2.1 Access to Public Transport | x |
| **11.3** | Inclusive and sustainable urbanization | 11.3.1 Inclusive and Sustainable Human Settlement Planning and Management<br>11.3.2 Civil Society Participation in Urban Planning | x<br><br>x |
| **11.7** | Access to safe, inclusive and accessible public spaces | 11.7.1 Access to Safe, Inclusive and Accessible Public Spaces | x |
| **17.1** | Strengthen domestic resource mobilization to improve domestic capacity | 17.1.1 Total Government Revenue as a Proportion of GDP<br>17.1.2 Domestic Budget Funded by Domestic Taxes | |
| **17.10** | Promote multilateral trade | 17.10.1 Worldwide Weighted Tariff Average | |

*Source. UN stat platform*

**Conceptual and Operational Challenges for SDG16 measurement and monitoring**

As for the SDG16, there are challenges in terms of data availability and coverage. For 24 of the 44 indicators data sources are identified by the IAEG and the Global SDG Indicators Database on SDG indicators. For other indicators it is possible to use proxies identified by SDG DI or IEP. As described by IEP (2019b), the Institute can report on 44 of 56 indicators sourced either from IAEG and the Global SDG Indicators Database or by proxy. For the remaining 12 indicators no official sources or proxies are present (see the indicators with 'x' in the table).

### 2.3 Peace Dividend

This paragraph focuses on the concept of Peace Dividend, with a first detail on the economic perspective of it, followed by an analysis of the implications of Peace Dividend respect to Defense investments as productive versus unproductive activities and the mechanisms interlinking Peace and Sustainable development, resilience and climate change. The ultimate scope of this paragraph is to underline how investments in Peace through the pillars of peacekeeping and peacebuilding have a multiplier and positive effect in terms of progress in its broader conception (i.e., Economic, Social and Environmental).

#### 2.3.1 The value of Peace. An economic perspective and the conversion argument

> Every gun that is made, every warship launched, every rocket fired, signifies in a final sense, a theft from those who hunger and are not fed, from those who are cold and are not clothed. The world in arms is not spending money alone. It is spending the sweat of its laborers, the genius of its scientists, the hopes of its children.
>
> Dwight D. Eisenhower, President of the United States, 16 April 1953[25]

The concept of Peace Dividend has been firstly used to express the benefits from lower investment in defense and the conversion of military production in civilian production. As in the words of Michael D.Intriligator (1996), the reduction of defence budget can be seen for its important impacts in the society as an investment process, from unproductive towards productive activities. It is important to underline that, as per an investment, in the short term, an adjustment period should be considered in light of the initial costs related to redirecting human and capital resources in other productive areas. In the short term, unemployment and conversion costs are part of the investment equation of the Peace Dividend that will bring benefits in the medium and long run. Intriligator analyzes the types of cost related to the conversion process in terms of (i) human resources, armed forces personnel and defense plant workers, to be redirected to the labor market and (ii) capital, including military bases and equipment to be transformed and redirect to civilian production. These costs should be taken into consideration in terms of policy making with detailed programs of education and professional reconversion for the human capital involved and sustainable plan of reconversion for the 'hard' capital. In a broader perspective and

[25] Vignard K. (2003)

taking into consideration also the IEP methodology on the cost of violence, the economic benefits deriving from the reallocation of resources from guns (defense industry) to butter (productive activities in the economy) will allow to free and develop more on the stock of human capital (human capital accumulation), reduction of violence (and its multiplier effect) and use of capital for more sustainable and productive market activities.

Linking the peace dividend with the Negative Peace measurement of IEP, the GPI, it is worthy to note that the GPI includes the militarization domain that affects negatively the absence of violence or fear of violence. On the contrary, productive activities towards peace (i.e., financial contributions to UN peacekeeping forces) are rated positively in the GPI. In the next session a detailed description of 'peace productive activities' will be presented with the introduction of the Peacebuilding Nexus.

### 2.3.2 The Peacebuilding Nexus

Peacebuilding initiatives aim to prevent, reduce, transform conflict and support people to recover from violence in all forms. As underlined by Schirch (2006), peacebuilding pursues a just peace, under the recognition that justice pursued violently may contribute to more injustice and human rights violations, and that peace without justice is unlikely to be sustainable in the long term. Under the umbrella of Peacebuilding, there are therefore very different types of activities with the involvement of a diverse set of stakeholders.

Intent of this paragraph will be to present a Peacebuilding framework with a focus on the economics of Peacebuilding to better understand the potential of Peace Dividend. A particular attention will be given to peacekeeping activities for conflict resolution.

#### 2.3.2.1 A Peacebuilding Framework

After the Cold War, the collapse of state institutions in several nations, from Cambodia to Mozambique, required the formulation of integrated intervention of peacebuilding. Different types of peacebuilding activities come together to sustain a 'Space for Peace', as defined by Doyle and Sambanis (2000) in their Peacebuilding triangle (Figure 2.13.). An effective peacebuilding strategy should respond to the local hostility, taking into consideration both the international and the national capacity and political will for peacebuilding activities. A persuasive peacebuilding framework should consider these three dimensions of political space or capacity for building peace. The three dimensions identified interact each other in forging the potential for peace. For instance, a lower degree of international capacity diminishes the triangular space for peace with a higher level of local hostility and lower local capacity for change.

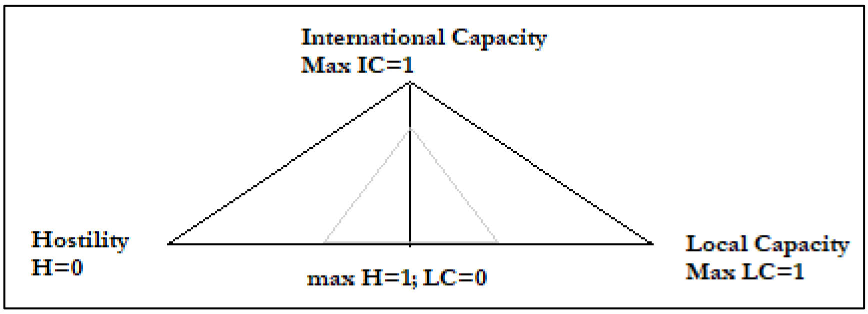



**Figure 2.13.** The Peacebuilding Triangle

*Source. Doyle and Sambanis (2000): 782*

International peacebuilding is divided in four major types of mandated interventions: (i) monitoring or observer missions, (ii) traditional peacekeeping, (iii) multidimensional peacekeeping, (iv) peace enforcement. In monitoring or observer missions, the external actor, with the agreement of the host government, monitors the truce and observes the peace process with the presence in the field of military and civil servants. Traditional peacekeeping operations (PKOs) involve the deployment of military units and civil officers to facilitate the settlement of a peace agreement. Principal operational military measures in traditional peacekeeping refer to the creation and occupation of a buffer zone with the provision of basic humanitarian services such as in the case of Cyprus with the United Nations Peacekeeping Force in Cyprus, UNFICYP, from 1964. Other activities include the monitor of the voluntary withdrawal of the armies by the ex-combatants in the context of demobilization and disarmament of military forces (i.e., DRR), the support in the exchange of prisoners of war, the support to repair local infrastructure and cleared minefields. PKOs are possible on the basis of the consent of the parties in conflict and in reference to the Chapter 6 of the UN Charter on peaceful settlement of disputes.

The third type of international peacebuilding, the multidimensional peacebuilding, refers to a broader strategic plan of peace operations in the area in conflict, it requires the consent of the parties in conflict and it comprises second generation of PKOs, following the guidelines of UN Boutros Boutros - Ghali report of 1992, with the introduction of a broader concept of peacebuilding as 'action to identify and support structures, which will tend to strengthen and solidify peace in order to avoid a relapse into conflict'. According to the context and situational analysis, it may include traditional PKOs and also programs for capacity development at economic and institutional level (e.g., economic reconstruction, reform of the police, army, and judicial system; elections). The operations coordinated by the United Nations Mission in Kosovo (UNMIK) are an example of multidimensional peacekeeping. Under the coordination of UNMIK activities of humanitarian assistance, civil administration, democratization and institutional building, reconstruction and economic development were implemented by international partners (UNHCR, OSCE and EU) in the area (Oguz 2016). In case of Peace enforcement actions, military intervention is authorized under the Chapter 7 of the UN Charter on enforcement of UN decisions, without the necessity of consent of the parties to guarantee public order by force. An example of Peace enforcement has been the UN intervention during the Gulf War to force Saddam Hussein's Iraqi army from Kuwait (Wedgwood 2003).

In the peacebuilding dimension of international peacekeeping other actors are crucial: International No Profit Organizations providing support in terms of humanitarian assistance and sustainable development and bilateral aid from country specific initiatives may support the peace process in post conflict areas within this paradigm.

Local capacity represents a crucial part of the peacebuilding nexus. Conditions of socio-economic underdevelopment, weak institutions and high corruption affect negatively the expected outcome of peacebuilding activities, being obstacles towards just peace. Conversely, a civil society participating in peace process dialogue and advocating for human rights respect may support the construction of positive peace. That is why the second generation of peacekeeping operations required an integrated approach to peace, with activities to rebuild the economic and institutional systems of the country, with a more collaborative approach with local institutions and civil society.

#### 2.3.2.2 The economics of Peacekeeping

For its contribution to global peace, Peacekeeping activities are considered activities that contribute to the production of conflict prevention, enabling global peace, an international public good to be benefitted by different actors, at global, regional or local level (Morrissey et al., 2002).

Khanna, Sandler and Shimizu (1998) described peacekeeping with a more general view as a 'joint model for which multiple goods or joint goods are derived from the activity'. These goods might include purely public benefits but also contributor-specific benefits as in the case of an international recognition as a global peace contributor (e.g., Norway). On the supply side, private interests such as corporate investment protection in the area may represent incentives for disproportioned participation in peacekeeping activities by one country. Conversely, other countries with lower or null participation may benefit from the peacekeeping operations without costs. In the case of UN peacekeeping missions, nations' contributions rely on fixed rules (e.g., % GDP), in other cases (i.e., NATO), burden sharing and free riding may occur because of rich nations disproportioned burden on peacekeeping. The authors further analyzed the willingness and the incentives for a nation to participate into a PKOs with a theoretical model where a unitary actor, n-nation, maximizes its utility function, allocating money between peacekeeping contributions and all the other activities. The findings of the study confirmed that for the major peacekeeping contributors between 1976 and 1996, the presence of country-specific benefits and a country's trading activity are determinant of peacekeeping contributions (Khanna et al. 1999). Interestingly, the prime determinant of the contribution is the sum of the contributions from the other countries (i.e., spillins). This result on spillins was confirmed also by another analysis conducted by Gaibulloev, Sandler and Shimizu (2009) for UN and non – UN peacekeeping contributions whereas for non UN peacekeeping also contributions country specific interests in the conflict region are determinant. Among the country specific interests, trade and FDI concerns concur to influence peacekeeping contributions. Bove and Elia (2011) examined country voluntary contribution in terms of personnel contribution to UN and non-UN missions (e.g., African Union, European Union, ad hoc coalition). They found that the comparative advantage in manpower measured by the number of personnel in the armed forces and their remuneration is a determinant of personnel contribution along with the international security threat. On the supply side, according to the empirical evidence, country specific interests seem to play a fundamental role in decision making relative to peacekeeping contributions in terms of financials and/or personnel. To this regard, the particular interests of the peacekeeping contributors led critical observations on the real commitment towards peace and the effectiveness of these interventions in conflict torn countries. While some researches confirm the important contribution of peacekeeping operations in the stabilization of peace with lower probability of conflict recurrence (Fortna 2004), effective conflict containment (Beardsley and Gleditsch 2015), more (perceived) security (Dorussen 2014), economic positive impact (Caruso et al. 2014), skepticism remains. In particular, critics arise from authors such as Paris (2002) on the inappropriate liberal approach for democracy and peace from wealthy countries to the poorest and institutional weakest countries in a sort of '*Mission Civilisatrice'*. Moreover, the evidence presented by Diehl (1988) on six cases on peace operations - the Suez Crisis (UNEF I), the Yom Kippur War (UNEF II); the United Nations Operations in the Congo (ONUC); the United Nations Peacekeeping Force in Cyprus (UNFICYP); the United Nations Interim Force in Lebanon (UNIFIL); and the Multinational Force of American, British, French, and Italian troops stationed in Beirut (MNF) – was not convincing in terms of international peacekeeping effectiveness. As stated by Diehl: 'peacekeeping is successful only when all parties wish to stop fighting. Peacekeeping forces can do certain things (remain neutral) to ensure that desire for peace continues. Nevertheless, peace- keeping will fail or be severely damaged if peace is not initially desired by all parties (1988: 503)'. The lack of knowledge of the context by the personnel deployed in the conflict field seems to put at risk the operations and the effectiveness of the peacekeeping operations also. Auteserre (2008) in the case of the Democratic

Republic of Congo underlined the lack of comprehensive programs addressing local violence by Diplomats and UN staff, more focused instead on humanitarian aid and macro issues such as elections. Bove and Ruggeri (2019) findings suggest that cultural distance in terms of religion, geography and language is associated with higher levels of battle deaths and violence against civilians.

As argued by Gizelis and Benson (2019), it might be necessary a more nuanced examination of peacekeeping effectiveness: according to the different empirical research, peace operations seem to affect different types of violence within conflicts with different types of peaceful outcomes. The empirical findings suggest that overall peacekeeping operations contribute to progress in Negative Peace in terms of life saving and, consequently, decrease of the number of deaths in the battle field (Gizelis et al. 2016) but findings remain mixed on Positive Peace and advancement on political, economic and social rights of the population. Unfortunately, the recurring episodes of violence and exploitation by peacekeepers to the most vulnerable targets of the population, women and children, undermine trust in their actions towards positive peace at local level in terms of human rights respect and civilians' protection (Karimand Beardsley 2017).

Chapter 3

# Inward FDI and Peace: a panel cointegration analysis

## 3.1 Introduction

In this chapter an empirical investigation about whether attracting higher amounts of FDI induces a higher peacefulness in a country is conducted. We merge information on the value of (greenfield and M&A) inward FDI with those on the Global Peace Index for the period 2008-2017 and we use unit root and panel cointegration techniques to assess the short and long-run causality between inward FDI and negative peace. Our results show that attracting and accumulating higher stocks of greenfield FDI per capita helps improving the level of peacefulness in a country, but only in the long run. However, a higher level of peacefulness also helps countries attracting more FDI, implying a relationship of mutual causality between the two variables. We also find that the effect of inward greenfield FDI is stronger in certain regions of the world, like Asia, Eastern and Western Africa, Northern and Southern Europe. Differently, we find that the impact of inward M&A per capita is not robust to cross-sectional dependence.

The dynamics of Negative and Positive Peace[26] worldwide are complex and difficult to disentangle, they represent one of the grand challenges (Ferraro et al. 2015) for which experts, scientists, civil society and policy makers are called to act in their respective domains with proper research, advocacy and policy actions. As underlined in the previous chapters, one of the main actors of this grand challenge is represented by the profit sector, in particular by MNEs, non-state actors with investments globally and embedded in global value chains.

MNEs *might* play a critical role in peace building of the host countries in terms of i) economic activity ii) rule of law and international standards iii) corporate citizenship iv) Track Two Diplomacy and v) risk assessment and conflict sensitive analysis (USIP 2012). The adherence and respect of rule of law and international standards (i.e., working conditions, environmental impact assessments) along the global value chains contribute positively to the social upgrade of the production and consumption chains. A

[26] The concept of Peace used here is declined in Negative Peace and Positive Peace as for the definition given by Galtung (Galtung 1967) and by the Institute for Economics and Peace (2008). Negative Peace is defined as 'absence of organized, collective violence' whereas Positive peace has a longer perspective in time and refers to 'the attitudes, institutions and structures that, when strengthened, lead to a more peaceful society (IEP 2015)'.

commitment to ethical behaviour in strategy, operations, and culture (UN Global Compact, 2009) by MNEs may represent a step forward in the development of a more sustainable approach within GVCs However, to this regard, as underlined in Chapter 1, empirical evidence showed mixed results on the impact of CSR (and in a broader sense Corporate Citizenship) in conflict reduction or escalation (Arron and Patrick, 2014), in promoting peace (Aaron 2012 for Niger Delta case) and respect of human rights (Fiaschi et al., 2011). Another mechanism for peacebuilding might be the so-called Track Two Diplomacy, when MNEs create a space of dialogue among opponents for conflict mitigation (Pershka 2011, Lieberfeld 2002) or activate Corporate Security Responsibility (CSecR) measures (Wolf et al. 2007). Moreover, in terms of risk mitigation and better collaboration with the local communities, conflict sensitive analysis with the adoption of the Do No Harm approach may help in the creation of peaceful dialogue and collaboration with the locals, avoiding conflicts. MNEs may prevent conflict triggers by mitigating the risks of violent conflict through the analysis of their potential impact at local level (Banfield et al. 2003, Oetzel et al. 2010).

Policy makers, think tanks and International organizations (e.g., USIP 2012, World Bank 2011, World Trade Organization 2003, CDA and PRIO collaborative project in Miller et al. 2019) underline the potential role of MNEs, trade and investment flows as contributors to peace and conflict reduction. To this regard, WTO defined ten benefits of the trading system and the very first one is that 'the system helps to keep the peace' since the GATT/WTO system put in place is a 'confidence builder' among governments respect to protectionist initiatives and this supports cooperation among nations and conformity by all with the agreements and committed negotiated. Moreover, disputes are handled constructively and peacefully on the basis of trade agreements, representing an effective conflict resolution tool (World Trade Organization 2003: 4).

Looking in particular to foreign investments in host countries characterized by fragile and conflict affected situations (FCS), World Bank estimates that current FDI flows are well below their potential in fragile and conflict affected situations (FCS) as showed in Figure 3.1. and represents a limitation (in potential) of the positive effects to the whole community of the host country. This is mainly due to caution of investors who concentrate their interests in a limited number of capital intensive sectors (with limited job creations) given the wide range of adverse market conditions and context risks. WB, acknowledging the importance of these flows in conflict prevention, mitigation and peace building, asks for sound Market-creating investment climate reforms by national governments (World Bank 2011: 154).


**Figure 3.1.** Actual and potential FDI flows to FCS

*Source World bank 2011: 138*

They promote international and national strategy to increase the inflows of foreign capitals for peace. This view, however, does not have a complete alignment with the ongoing debate over the business-conflict and the business -peace nexus at academic level. Indeed, there is not a universal consensus over the facts and mechanisms through which foreign investments might play a role in host countries on conflict and peace dynamics. The thesis of the liberal peace proposed by International organizations and policy makers has been subject to debate and criticism too. According to some, under certain structural conditions, MNEs in conflict zones may have contributed to fuel the violence in the region and/or to trigger conflict by financing conflict parties, trading conflict-relevant goods and/or exploiting regulatory gaps, in extreme cases also with the provision of private military personnel to combat (Avant 2005). On economic integration, Keshk et al. (2004) and Kim and Rousseau (2005) simultaneously considered the reciprocal effects of trade and conflict and found that the apparent positive benefits of commerce disappear when the effect on conflict is considered. Hegre et al. (2010) proposed a review over the studies of Keshk et al. (2004) and Kim and Rousseau (2005) by incorporating a gravity model in the conflict analysis with the exogenous factors of nations' sizes and the distance separating them, since both trade and conflict are influenced by these two dimensions (Boulding 1962). The authors concluded that the pacific benefits of interdependence are present when considered those factors.

As discussed in the previous chapters, different academic branches study the nexus business-conflict and business-peace with inconclusive and/or conflicting results. Economic studies on MNEs and FDI have so far mainly focused on the factors influencing the inflows of investment from MNEs such as the level of institutions, corruption, natural resource abundance, the social and political context (e.g., Guerin and Manzocchi, 2006, on democracy and economic reform). On the relationship between

MNEs and conflict, the literature focused extensively on natural resources in terms of their scarcity (e.g., Richani 2005 for the Colombian case of conflict escalation in the presence of MNEs), the resource curse (Auty 1993) and the relations between natural resource abundance and economic growth (e.g., Collier and Hoeffler, 1998, Sachs and Warner, 1995, 2001), political instability and democracy (Gilberthorpe and Papyrakis, 2015), public accountability (McFerson, 2010; Ross, 2001), and maintained authoritarian rule (Ross, 2001 on oil exports and their antidemocratic effect) with focus on specific sectors, predominantly the ones related to the extractive industries where conflict risk might be present for the type of the activities and the little engagement of corporations with the community (Blanton and Blanton 2009, Hook and Ganguly 2000). Other researchers investigated the direct involvement of some companies with corrupted governments with negative impacts for the local community and weakened institutional legitimacy (e.g., Frynas and Wood 2001 on the Angola case in the oil industry).

In particular, on political stability, the majority of the studies indicate a tendency that political risk (e.g., rebellions, riots, governmental takeover of property.) impacts the decision whether to invest or not in a particular location (Dunning, 1993; Dupasquier and Osajwe 2006, Enders and Sandler 1996).

However, quantitative research on the relationship between economic interdependence and conflict largely concentrates on trade ties as an indicator for economic integration (e.g. Russett and Oneal, 2001; Reed 2003), whereas few studies examined the effect of FDI on conflicts (Bussmann 2010). Given the increasing volumes of FDI, it is valuable to better understand the relationship between FDI and conflict: from one side, FDI might play a role in conflict reduction and peace building, and from the other side, conflict might play a role in disrupting not just trade flows (Long 2008) but also foreign direct investments.

The nexus among FDI, conflict and peace need to be further investigated empirically. Indeed, the empirical evidence on the direct relationship between FDI and conflict and/or peace in host countries remains today inconclusive. Some argue that FDI might have a positive impact in terms of international relations and conflict risk reduction (Polacheck et al. 2007, Polacheck and Sevastianova 2012). Li (2008) shows that FDI flows and dyadic militarized disputes are negatively correlated. According to Gartzke and Li (2003a) and Gartzke, Li & Boehmer (2001), FDI are significantly related to a smaller probability of an onset of military conflict. In a monadic conflict model, Souva and Prins (2006) assert that economic interdependence, in terms of trade and foreign investment, reduces a state's propensity to initiate militarized disputes. However, not all analysis test reverse causality of conflict on FDI. Bussmann (2010) found that foreign investments (flows and stock) reduce the risk for a conflict onset and, testing reverse causality, found also that the breakdown of a conflict reduce FDI inflows and stock.

Others underline, instead, negative effects of foreign investments, conducive to political instability (Gissinger and Gleditsch 1999). Between these two opposite views, more nuanced views affirm that foreign investment reduce the likelihood of civil wars (or civil war prevalence) but not their onset in terms of actors' decisions about starting civil wars (Barbieri and Reuveny 2005).

According to the proponents of the first view, the positive impacts of foreign activities for the local community might be possible through different channels. The first channel is through development as 'deterrent' of rebellion and instability. Fearon and Laitin (2003) counter among the causes of civil war poverty along with institutional weakness with respect to religious or ethnic differences. Poor economic opportunities in the country make the life of a rebel attractive to young men that build up or join guerrilla groups.

On the economic causes, Polacheck and Xiang (2010) verified the commercial peace argumentations and the opportunity cost of conflict for trading nations. According to their findings, trading nations become more cooperative to minimize the potential lost gains from trade in case of conflict. By creating higher interdependence among countries, mutually trade benefits discourage states to conflict. The opportunity cost of conflict for a country is too high when its private economic agents maintain an extensive exchange of goods and capital with agents from the other country and potential opponent party (Russett and Oneal 2001, Oneal et al. 2003, Oneal and Russett 1999). Although these studies refer to economic interdependency through the analysis of trade of goods and not FDI, they are an important reference for this study the aim of which is to verify if the opportunity cost of conflict holds also in the case of FDI. The thesis of liberal peace finds one of its structural pillars in the cost-benefit analysis that in the studies aforementioned considers the governmental level decision process. However, it is worthy to note also that, in the domain of international business management, at micro level (MNEs focus), strategic decisions might consider the same type of cost benefit calculations, taking into consideration the potential benefits for investments from the supply or the demand side (i.e., factors of productions, the size and the potential for development of the local market) and the potential costs, referring to the political, social and environmental risks associated with the country. Interestingly, if we look at the Doing Business 2019 Report of the World Bank, that is considered by many the first reference for economic and risk assessment of the investment decision making, its scoring for the trading across border consider the presence of conflict in a potential trading country: if an economy has no formal, large-scale, private sector cross-border trade taking place as a result of government restrictions, armed conflict or a natural disaster, it is considered a "no practice" economy (World Bank 2019a: 110), as is evident from this that the liberal peace argument rests on the assumption that conflict reduces economic interactions.

Another potential channel of impact for FDI is by reducing income inequality. Reuveny and Ly (2003) studied the effects of economic openness and democracy on income inequality measured with a comprehensive Gini coefficient data set over the period 196-1996 on 69 countries. They found that trade reduce income inequality while foreign direct investments actually increase income inequality.

Other researchers focused their attention on the institutional impacts of FDI with conflicting findings. Demir (2016) analyzed the effects of bilateral FDI flows (North- South, South- South flows) on institutional development gaps between home countries and host recipients between 134 countries, during the period 1990–2009. He found that institutional development effects of FDI flows are not statistically significant in any direction, North-South or South-South while the aggregated South-South FDI inflows influence negatively host country institutions. Conversely, Antonietti and Mondolo (2018) analyzed the effects of inward FDI on 127 countries over a period of 22 years and found that FDI improve the average quality of institutions in recipient countries for factors such as political stability, regulatory quality and the rule of law and when host countries are developing or transition economies . Reed (2003) underlined another important channel through which economic interaction might play a role in lessening the probability of conflict onset. According to his findings, trade enhances information transmission towards a more balanced information structure among trading nations and mitigates the effect of uncertainty, leading to an enhanced probability of settlement short of militarized conflict.

A better understanding of the impact of foreign investments in host countries as a contributor or detractor of negative peace is necessary and a quantitative analysis will allow to depict mechanisms through which investment inflows might affect communities.

On a macro and policy making level, a clearer vision on the relationship between FDI inflows conflict and peace will be a valuable contribution on the current debate over role played by the profit sector in the long-term process of peacekeeping and peacebuilding.

The purpose of the analysis that follows is to advance the understanding of MNEs actions in conflict reduction and peacebuilding. We would like to offer new empirical evidence that may help answering fundamental questions as (i) Are FDI related to a higher propensity and intensity of conflict? (ii) Which are the mechanisms linking FDI to the state of peacefulness/conflict of a country? (iii) How negative Peace impacts FDI? And more with a policy making perspective: (iv) how do businesses respond to conflict dynamics, what do they bring, and how can they support the development of the local communities towards more peaceful and resilient societies? (v) are FDI a force for Peace?

To investigate these questions, we considered a dataset including information on Greenfield and M&A investments worldwide over a 10-year period, from 2008 to 2017 from FDI Markets and UNCTAD and the level of peacefulness for each country with the Global Peace Index, from the Institute for Economics and Peace, for the 2008-2017 period.

Our findings will contribute to the academic debate on the medium and long-term relationship between FDI and negative peace and to the potential impact of FDI and MNEs in host countries to shade light on the role of MNEs in contributing to the negative peace of recipient countries.

On the basis of mechanisms discussed above, we test for two hypothesis.

(i) FDI increases the level of peacefulness in the host country. The economic, developmental and social impacts of these investments positively contribute to the negative peace of the recipient country in the short and long-term.

(ii) Peace increases FDI. This study tests whether the liberal peace proposition holds when considering foreign investments as indicator of economic interdependence.

## 3.2 Research Design

### 3.2.1 Data and variables

To test our hypotheses, we merge information from three data sources. Data on peacefulness come from the Global Peace Index (GPI) provided by the Institute for Economics & Peace (IEP). The IEP is an independent, and non-profit, think thank headquartered in Sydney, Australia, aimed at measuring the economic peacefulness of countries and relating it to business and prosperity (http://economicsandpeace.org). From 2008 onwards, relying on the work of a pool of experts, the IEP collects reliable information on peacefulness for 163 countries, covering almost the entire living population in the world, and using secondary data coming from different data sources (see 2.2. for details on the GPI measurement). GPI score is based on 23 qualitative and quantitative indicators, providing a measure of a country's level of *negative peace*, which corresponds to the absence of violence or of the fear of violence. The final score is the outcome of three thematic domains: the extent of *Ongoing Domestic and International Conflict*, the level of *Societal Safety and Security*, and the degree of *Militarization* (IEP 2018).

The first captures countries' involvement in internal or external conflicts. More in detail, the index measures the: (i) number and duration of internal conflicts, (ii) number of deaths from external organized conflict, (iii) number of deaths from internal organized conflict, (iv) number, duration and role in external conflicts, (v) intensity of organized internal conflicts, and (vi) relations with neighboring countries.

The second is built on the following information: (i) level of perceived criminality in society; (ii) number of refugees and internally displaced people (as a share of their population), (iii) political instability, (iv) political terror scale, (v) impact of terrorism, (vi) number of homicides per 100,000 people, (vii) level of violent crime, (viii) likelihood of violent demonstrations, (ix) number of jailed persons (per 100,000 of people), (x) number of internal security officers and police per 100,000 people.

The third, instead, relies on the following data: (i) military expenditure (as a share of GDP), (ii) number of armed services personnel per 100,000 people, (iii) volume of imports of major conventional weapons (per 100,000 people), (iv) volume of exports of major conventional weapons (per 100,000 people), (v) financial contribution to UN peacekeeping missions, (vi) nuclear and heavy weapons capabilities, and (vii) ease of access to small arms and light weapons.

GPI indicators are weighted and combined into a single overall score. The system of weights is defined by the pool of experts: each sub-indicator is assigned a weight on a scale between 1 and 5 and then two sub-component weighted indices are extracted from all the indicators, i.e. a measure of internal and of external peace. To build the final score, a weight of 60% is assigned to internal peace, and 40% to external peace. Finally, a series of robustness tests confirm that the GPI is robust to alternative weighting schemes, reaching the level of absolute robustness of the UN Human Development Index (See Chapter 3 of this thesis for further details).

It is important to note again that the GPI captures the level of negative peace of a country: therefore, the higher the score, the lower its peacefulness, and vice versa. Between 2008 and 2017, the GPI ranges between 1.366 (Czech Republik in 2016) and 3.698 (Iraq in 2008). For the following empirical analysis, we transform the index in natural logarithm (*ln*GPI) and we restrict the sample only to developing and transition economies, following the UN classification: we finally obtain a balanced panel of 123 countries and 10 years, for a total amount of 1,230 observations. Figure 3.2. shows the evolution of the average *ln*GPI between 2008 and 2017 in the selected sample.

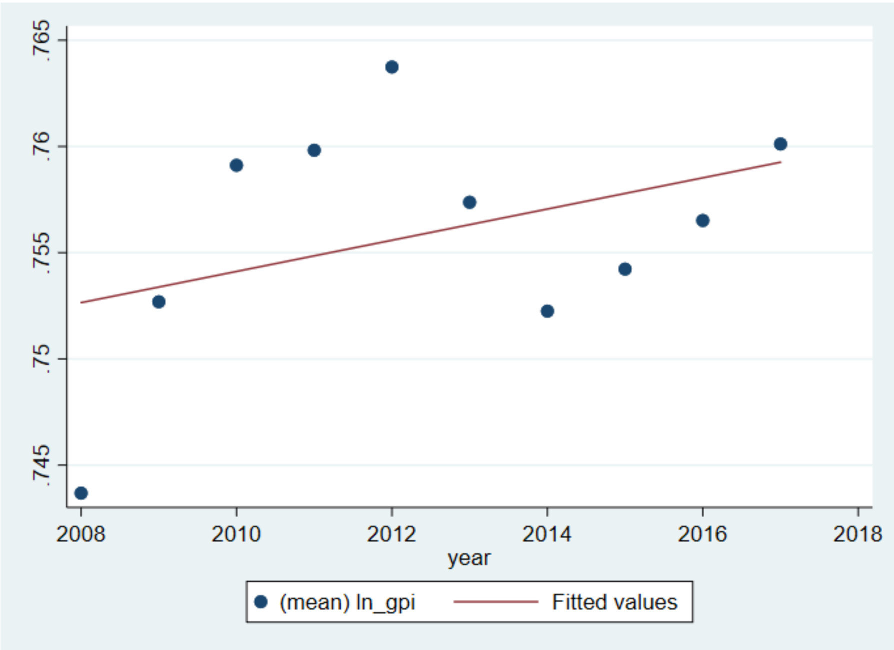



**Figure 3.2.** The evolution of the GPI between 2008 and 2017

*Source: authors' elaborations on IEP data.*

According to IEP (2018), in the last ten years, the average level of global peacefulness has deteriorated by almost 2.4%. Since 2014, the index has steadily worsened. A number of different explanations can be provided for this trend: the intensification of conflicts in Middle East and Eastern Europe, increased terrorism, increasing number of refugees, as well as a deterioration of the international relations between Europe, the US and China. The deterioration of the index has involved 92 countries on 163 (56%), particularly concentrated in Africa, Middle East and Eastern Europe.

Surprisingly, the worsening of the global peacefulness is not driven by militarization (which, instead, improved between 2008 and 2017), but, rather, by an increase of conflicts (particularly by the impact of terrorism) and a reduction of safety and security. Figure 3.3. compares the trends of the three sub-indicators between 2008 and 2017 in the selected sample of countries.

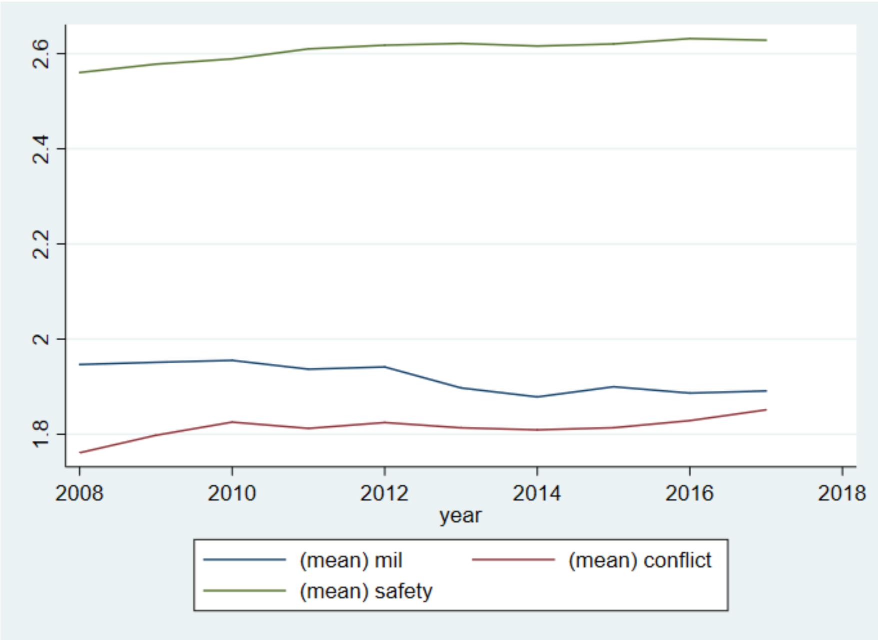



**Figure 3.3.** The evolution of the three GPI domains between 2008 and 2017

*Source: authors' elaborations on IEP data*

At the geographical level, the most peaceful countries are located in Europe, Oceania and North America, like Iceland, New Zealand, Austria, Portugal, Denmark and Canada, whereas the least peaceful ones are Syria, Afghanistan, South Sudan, Iraq, Somalia, Yemen and Libya. Interestingly, Russia is ranked 154 on 163, i.e. one of the least peaceful countries in the word, while the US are ranked 121 and the United Kingdom 57 (IEP, 2018). Figure 3.4. shows the geography of the GPI in 2018: countries in red are the least peaceful, countries in green represent the most peaceful, while countries in orange and yellow are assigned intermediate levels of the GPI.

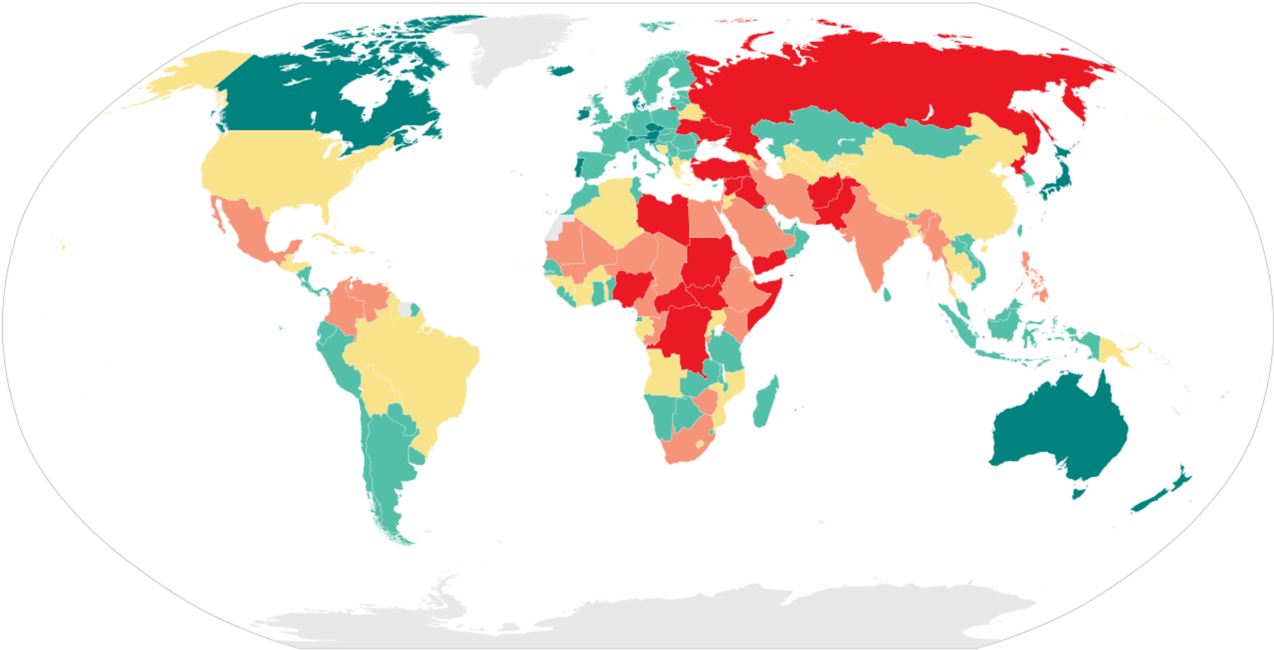


**Figure 3.4.** The geography of the GPI, 2018

Source: https://en.wikipedia.org/wiki/Global_Peace_Index#/media/File:Global_Peace_Index.svg

Data on Negative Peace are merged with data on foreign direct investments (FDI) coming from the Annex Tables of the World Investment Reports provided by UNCTAD (https://unctad.org/en/Pages/DIAE/World%20Investment%20Report/Annex-Tables.aspx).

We collect information on yearly stocks of inward FDI (in millions of US dollars), restricting the period to 2008-17. According to UNCTAD, these data correspond to the sum of the value of the share of capital and reserves, including retained profits, attributable to the parent company and the net indebtedness of its affiliates. Approximately, this corresponds to the accumulated value of past FDI flows. To normalize the variable across countries, we divide it by total resident population, and we obtain a measure of inward FDI stock per capita. We chose population, and not GDP, as the denominator to avoid potential correlation with our dependent variable, that would make the relationship between economic complexity and FDI endogenous by construction. Finally, we transform it in natural logarithms (*ln*FDIPOP).

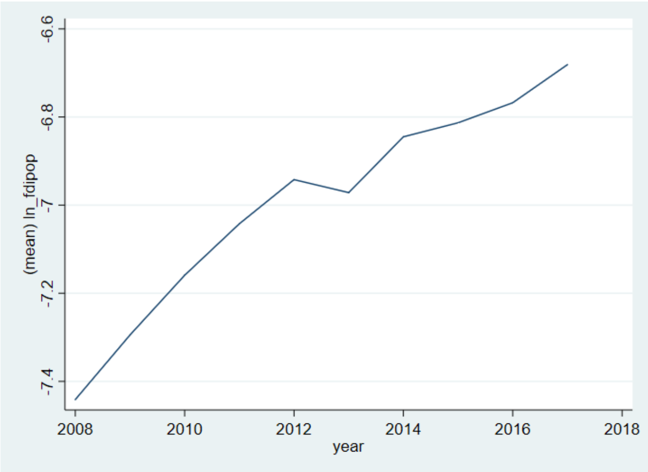
We also consider the value of inward announced greenfield FDI (in millions of US dollars) between 2008 and 2017 available on the UNCTAD website and coming from FDI Markets, and the value of net cross-border mergers and acquisitions (M&A) by country of seller, available from UNCTAD cross-border M&A database[27]. While the former represents new investments (i.e. new plants, new activities)

[27] This information is available for only 115 countries.

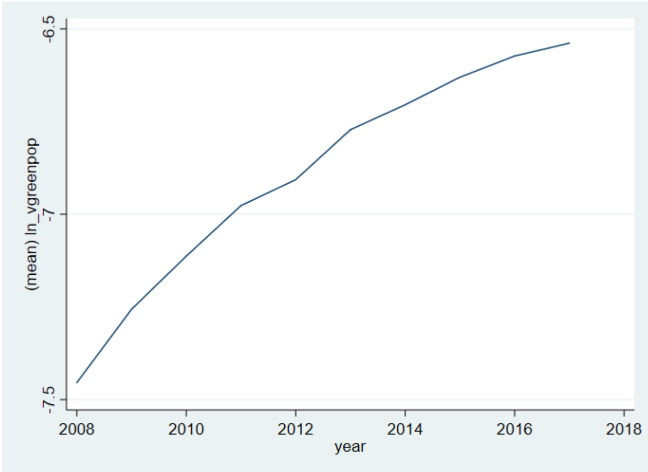
that a developing country attracts from scratch, the latter captures change in ownership, and possibly of control and management, in existing activities. To build the corresponding stocks, we simply sum the value of incoming greenfield FDI and M&A flows by country and year. In addition, to account for the size of the recipient country, we divide both variables by the corresponding stock of resident population, and then we proceed with the logarithmic transformation (*ln*GFDIPOP and *ln*M&APOP). Figure 3.5. shows the evolution of the three FDI (in logs) variables between 2008 and 2017.

**Figure 3.5.** The evolution of inward FDI stock and greenfield FDI stock between 2008 and 2017

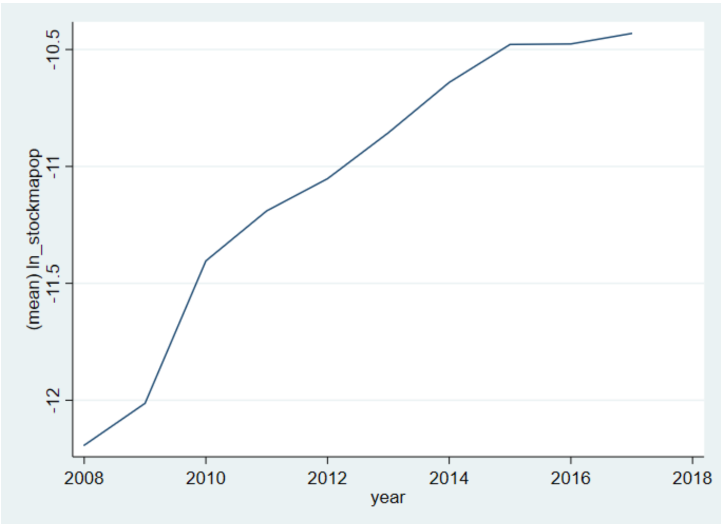
*ln*FDIPOP




*ln*GFDIPOP




*ln*M&APOP




*Source: authors' elaborations on UNCTAD data.*

We also collect a set of information on countries' characteristics that we use as controls in the relationship between inward FDI and economic peacefulness. Data on these variables come from the World Development Indicators (WDI) provided by the World Bank (http://datatopics.worldbank.org) and concern:

(i) the average yearly GDP per capita growth rate (GROWTH), as proxy for the speed of economic growth of a country;
(ii) the average yearly growth rate of population living in urban areas (URBAN), taken as a proxy for urbanization;
(iii) the employment share in agriculture (AGRIEMP), to measure the degree of development of the country;
(iv) the number of submissions to broadband on resident population (BROADBAND), to capture access to internet, digital technologies and information;
(v) the net birth rate (BIRTH), computed as the difference between the birth and the death ratio of population, which approximates the general state of the living conditions in a country[28];
(vi) mineral rents (as a share of GDP), computed as the difference between the value of production at world prices and the total costs of production (MINERAL) for tin, gold, lead, zinc, iron, copper, nickel, silver, bauxite, and phosphate, to address the contribution of natural resources management;
(vii) trade openness (TRADE), given by the sum of the values of imports and exports on GDP
(viii) education (EDUCATION), given by the enrollment share to primary school;
(ix) inflation (INFLATION), computed from the yearly GDP deflator.

All these variables are transformed in natural logarithm[29] except GROWTH, URBAN and INFLATION that include negative values. Table 3.1. provides the main summary statistics for all the variables (before the logarithmic transformation) while Table 3.2. shows their pairwise correlations (after logarithmic transformation).

[28] In alternative, we also considered life expectancy at birth. The results of the econometric analysis do not change if we use this variable instead of, or in addition to, the net birth rate.

[29] Variables $x$ that include the value of zero in their domain are transformed as $\ln(x+1)$. In the M&A variable, we replaced the negative values and the zeros with the value of 0.00001, which corresponds to the value of 1 US dollar.

**Table 3.1.** Summary Statistics

| Variable | Source | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| GPI | IEP | 2.168 | 0.435 | 1.366 | 3.698 |
| FDI/POP | UNCTAD | 0.004 | 0.015 | 3.85e-10 | 0.229 |
| GFDI/POP | UNCTAD | 0.003 | 0.005 | 1.54e-06 | 0.048 |
| M&A/POP | UNCTAD | | | | |
| GROWTH | WDI | 0.021 | 0.060 | -0.622 | 1.230 |
| URBAN | WDI | 0.0259 | 0.020 | -0.051 | 0.157 |
| AGRIEMP | WDI | 0.336 | 0.233 | 0.001 | 0.919 |
| BROADBAND | WDI | 0.061 | 0.083 | 0 | 0.412 |
| NETBIRTH | WDI | 3.422 | 1.616 | 0.581 | 8.303 |
| MINERAL | WDI | 0.021 | 0.049 | 0 | 0.466 |
| TRADE | WDI | 0.844 | 0.444 | 0.002 | 4.416 |
| EDUCATION | WDI | 0.878 | 0119 | 0.368 | 0.999 |
| INFLATION | WDI | 0.064 | 0.096 | -0.365 | 0.954 |

**Table 3.2.** Correlation matrix

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. *ln*FDI/POP | 1 | | | | | | | | | | | |
| 2. *ln*GFDI/POP | 0.84 | 1 | | | | | | | | | | |
| 3. *ln*M&APOP | | | 1 | | | | | | | | | |
| 4. GROWTH | -0.05 | -0.05 | | 1 | | | | | | | | |
| 5. URBAN | -0.36 | -0.030 | | -0.10 | 1 | | | | | | | |
| 6. *ln*AGRIEMP | -0.73 | -0.66 | | 0.11 | 0.28 | 1 | | | | | | |
| 7. *ln*BROADBAND | 0.65 | 0.58 | | -0.02 | -0.55 | -0.66 | 1 | | | | | |
| 8. *ln*NETBIRTH | -0.36 | -0.26 | | -0.05 | 0.69 | 0.24 | -0.67 | 1 | | | | |
| 9. *ln*MINERAL | -0.07 | -0.07 | | 0.08 | 0.13 | 0.21 | -0.19 | 0.12 | 1 | | | |
| 10. *ln*TRADE | 0.42 | 0.46 | | -0.03 | -0.08 | -0.30 | 0.31 | -0.17 | 0.05 | 1 | | |
| 11. *ln*EDUCATION | 0.28 | 0.28 | | 0.06 | -0.36 | -0.39 | 0.38 | -0.21 | -0.13 | 0.05 | 1 | |
| 12. INFLATION | -0.19 | -0.20 | | 0.07 | 0.03 | 0.09 | -0.13 | 0.04 | 0.06 | -0.14 | -0.02 | 1 |

### 3.2.2 Econometric strategy

To analyze the long-run relationship between inward FDI and peace, we adopt the following econometric strategy. First, we test for the (non) stationarity of the two variables. From Figures 3.2. and 3.4., it is reasonable to assume that both variables are characterized by a stochastic trend, or unit root, which means that they are non-stationary. If this is the case, we proceed testing for their panel cointegration. If both variables share a common stochastic trend, then their linear combination is stationary, or I(0), so that their relationship in the long-run is not spurious. On the contrary, if GPI and FDI are driven by two separate non-stationary, or I(1), processes, then any of their linear combination will also be non-stationary, denoting a spurious relation.

The basic equation that we use for the analysis is the following:

$$(1)\ lnGPI_{it} = \beta lnFDI_{it} + \mu_i + \gamma f_t + \epsilon_{it}$$

where the subscripts *i* and *t* represent country and time period, respectively; *FDI* is our variable of inward (greenfield or M&A) FDI per capita; unobserved country-specific fixed effects are represented by the term $\mu_i$, while $f_t$ controls for year-specific common effects, like the business cycle, the economic crisis and other macroeconomic shocks. Finally, the parameter $\beta$ represents the elasticity of GPI with respect to inward FDI, and $\varepsilon$ is the stochastic error term. Again, in order for equation 1 to be non-spurious, both *ln*GPI and *ln*FDI must be non-stationary and cointegrated.

Three additional important properties follow from cointegration: the robustness to omitted stationary variables, the invariance to model extensions, and the absence of non-stationary measurement errors in our two main variables of interest (Stock, 1987; Herzer and Donaubauer, 2018). The first property implies that if a relevant, but stationary, variable is omitted from the regression (i.e. from equation 1), then this variable would not enter the error term and would not induce any residual non-stationarity. The second property means that the cointegration between GPI and FDI is not affected by the inclusion of additional regressors in equation 1. The third property means that if there is a stationary measurement error in GPI and/or FDI, this does not bias the results. Indeed, in case of the presence of a non-stationary measurement error, the cointegration test would fail to reject the null hypothesis of no cointegration; if, instead, GPI and FDI are cointegrated, this means that we can exclude the presence of a non-stationary measurement error.

As a robustness test, in the following analysis, we extend equation 1 to the additional set of control variables on countries' characteristics described in Session 3.1.

Once testing for panel cointegration, we proceed estimating the long-run relationship between GPI and inward FDI. To do this, we use the panel dynamic ordinary least squares (DOLS) approach proposed by Kao and Chang (2000), which provides consistent results in small samples and is robust to endogeneity bias and serial correlation. We also test for the presence of cross-sectional dependence and we provide robustness estimates using the common correlated effects mean-group (CCE-GM) estimator developed by Pesaran (2006).

We further check for the heterogeneity of our results by re-estimating equation separately for each region of the world.

The next step involves testing the direction of causality between the GPI and inward FDI. Although cointegration implies that a non-spurious long-run relationship exists between the two variables (i.e. that there exists Granger causality in at least one direction), this does not necessarily identifies the direction of temporal causality. To test for this, we use a panel vector error correction model (PVECM) approach, and we provide a series of tests on the long-run Granger causality (or weak exogeneity), the short-run Granger causality and the general (short and long-run) causality (or strong exogeneity) of our two main regressors.

#### 3.2.2.1 Unit root tests

The first step of our econometric analysis is testing for the presence of a unit root in our focal variables. Although the so-called first-generation panel unit root tests are a common practice, they are also sensitive to the presence of cross-sectional dependence that emerges because of the existence of common shocks within groups of observations or because of spillovers across countries. The asymptotic convergence to normal distribution of the estimators of the first-generation panel unit root tests is based on the assumption that all the units of the panel are independent; therefore, if cross-section dependence exists, these first-generation tests are not reliable. To avoid this problem, we use a second-generation panel unit root test developed by Pesaran (2007), based on the Im, Pesaran and Shin (2003) unit root test.

To detect the presence of a unit root the following equation is estimated:

$$(2)\ \Delta y_{it} = \beta_i y_{it-1} + \gamma_i \overline{\Delta y_{it}} + \delta_i \overline{y_{it-1}} + \mu_i + \varepsilon_{it},$$

which consists in extending the individual augmented Dickey-Fuller (ADF) regressions with the cross-sectional means of the lagged levels and first differences of the individual regressor *y* (i.e. *ln*GPI, *ln*FDIPOP, *ln*GFDIPOP and *ln*M&APOP respectively) that are used as proxy for the unobserved common factors. The null hypothesis is that $\beta_i=0$, which is tested by averaging the $t_i$ statistics corresponding to $\beta_i$ in equation 2 (Pesaran, 2007; Burdisso and Sangiacomo, 2016). The alternative hypothesis, instead, is that $\beta_i<0$ for $i=1,2,\ldots,M$ and $\beta_i=0$ for $i=M+1, M+2,\ldots, N$ (with M<N).

The test is called the cross-sectional Im, Pesaran and Shin (CIPS) test and is based on the null hypothesis that the variable under investigation has a unit root. We first test for the presence of a unit root in our focal variables in levels, and then in their first-differences. If the test does not reject $H_0$ when variables are in levels, but rejects it when they are in first-differences, then we conclude that they are integrated of order 1, i.e. non-stationary.

Table 3.3. shows the results of the CIPS test for the GPI and the two FDI variables. Due to the limited amount of years available, we restrict the number of lags to 1[30], and we include a linear trend and an intercept.

**Table 3.3.** Panel unit root test

| | *Pesaran (2007) panel unit root test* | | | |
|---|---|---|---|---|
| | *ln*GPI | *ln*FDIPOP | *ln*GFDIPOP | *ln*M&APOP |
| CIPS | -2.589 | -2.181 | -2.501 | -2.335 |
| | Δ*ln*GPI | Δ*ln*FDIPOP | Δ*ln*GFDIPOP | Δ*ln*M&APOP |
| CIPS | -3.131*** | -2.276 | -2.873** | -2.822* |
| | | $\Delta_2$*ln*FDIPOP | | |
| | | -2.494 | | |
| | | $\Delta_3$*ln*FDIPOP | | |
| | | -3.530*** | | |

Notes: all the tests include a linear trend and an intercept. The number of lags is set to 1. The relevant 10%, 5%, and 1% critical values are, respectively: -2.73, -2.83 and -3.03 with an intercept and a linear trend, and -2.21, -232 and -2.53 with an intercept only. *** significant at 1% level; ** significant at 5% level.

The results reveal that the GPI is I(1): the CIPS test does not reject the null hypothesis for *ln*GPI, and rejects it at 1% level for Δ*ln*GPI. Differently, we find that *ln*FDIPOP is integrated of order 3, as the test does not reject the null hypothesis for *ln*FDIPOP, but rejects it at 1% level only for $\Delta_3$*ln*FDIPOP. Instead, the stock of inward greenfield FDI per capita, and the stock of M&A per capita are non-stationary, i.e. I(1)[31].

Since the cointegration analysis requires both variables to be I(1), we choose *ln*GPI, *ln*GFDIPOP and *ln*M&APOP, restricting the analysis on the separate role of inward greenfield FDI and inward M&A on economic peacefulness in developing and transition economies.

30 Results do not change if we increase the number of lags to 2.

31 We also test for the non-stationarity of the number of inward greenfield projects per capita (in natural logarithm). The CIPS test rejects $H_0$ (at 1% level) when the variable is in levels, and at 5% when it is in first-difference, making us concluding that it is I(0). The flows of inward FDI are also a stationary I(0) variable.

#### 3.2.2.2 Cointegration tests

The second step in our empirical analysis is assessing whether *ln*GPI and *ln*GFDIPOP, or *ln*M&APOP, are cointegrated. To check for this, we employ three panel cointegration tests. Unfortunately, the limited amount of years available prevents using the second-generation panel cointegration test developed by Westerlund (2007)[32]. Therefore, we use the first-generation panel cointegration tests proposed by Kao (1999), Pedroni (1999) and Westerlund (2005).

All these tests share the common null hypothesis of absence of cointegration, while the alternative hypothesis is that variables are cointegrated in all panels. The Pedroni and Westerlund tests can also test for the alternative hypothesis that variables are cointegrated only in some of the panels (i.e. countries).

The Kao (1999) test starts from the following regression model:

$$(3)\ lnGPI_{it} = \beta lnFDI_{it} + \gamma_i + e_{it}$$

where *ln*FDI replaces, respectively, *ln*GFDIPOP and *ln*M&APOP, the term $\gamma_i$ represents panel-specific fixed effects and $\beta$ is the regression coefficient, or cointerating vector, assumed to be the same for all panels/countries. Moreover, no deterministic trend is included. The Kao test is based on five statistics, with three of them (the DF, modified DF and unadjusted DF) relying on a standard Dickey-Fuller equation like the following:

$$(4)\ \hat{e}_{it} = \rho \hat{e}_{it-1} + \nu_{it}$$

where $\varrho$ is the common auto-regressive parameter of the estimated residuals. The remaining two (the augmented DF and the unadjusted modified DF) are based on the following augmented Dickey-Fuller equation:

$$(5)\ \hat{e}_{it} = \rho \hat{e}_{it-1} + \sum_{j=1}^{p} \rho_i \Delta\, \hat{e}_{it-1} + \nu_{it},$$

with $p$ being the number of lagged differenced estimated error terms. All the tests are obtained by testing for a unit root in the estimated residuals from equation (4) or (5), and all the five statistics converge asymptotically to a normal distribution $N(0,1)$.

Differently from Kao (1999), the Pedroni (1999) test relies on the following regression model:

$$(6)\ lnGPI_{it} = \beta_i lnFDI_{it} + \gamma_i + e_{it},$$

[32] All the elaborations are made using the software Stata 15.1. The user-written *xtwest* command requires at least twelve years available if we include both an intercept and a linear trend, but we have only ten years available. Therefore, we use the tests included in the command *xtcointtest*.

where the regression coefficients, or cointegrating vector, is panel-specific and a deterministic trend can be included. The test is obtained testing for a unit root in the estimated residuals from the augmented Dickey-Fuller equation (5), where the parameter $\varrho$ is now panel-specific (i.e. $\varrho_i$). Three tests are available: the Phillips-Perron, the modified Phillips-Perron, and the augmented Phillips-Perron. All the three statistics, once standardized, converge to $N(0,1)$.

Finally, the Westerlund (2005) test assumed panel-specific regression coefficients, as in equation 6, and the variance-ratio statistic is computed by testing for the presence of a unit root in the predicted residuals using the Dickey-Fuller equation (4). As stated before, the null hypothesis of no cointegration is tested against the alternative that some panels are cointegrated, or that all panels are cointegrated. The statistics, once standardized, converge to $N(0,1)$. Panel-specific fixed effects and a linear trend can be included. Table 3.4. shows the results of all the cointegration tests.

**Table 3.4.** Panel cointegration tests

| | *ln*GFDIPOP→ *ln*GPI | | *ln*GPI → *ln*GFDIPOP | | *ln*M&APOP→ *ln*GPI | | *ln*GPI → *ln*M&APOP | |
|---|---|---|---|---|---|---|---|---|
| *Kao test* | Statistic | p-value | Statistic | p-value | Statistic | p-value | Statistic | p-value |
| Modified DF test | 3.801 | 0.000 | 3.064 | 0.001 | 5.596 | 0.000 | 3.056 | 0.001 |
| DF test | 1.739 | 0.042 | -0.783 | 0.217 | 4.011 | 0.000 | -1.089 | 0.138 |
| Augmented DF test | -2.683 | 0.004 | -0.805 | 0.210 | -0.202 | 0.420 | 2.494 | 0.006 |
| Unadjusted modified DF test | 1.726 | 0.042 | 1.970 | 0.024 | 2.049 | 0.020 | -1.638 | 0.004 |
| Unadjusted DF test | -0.235 | 0.407 | 1.753 | 0.040 | 0.081 | 0.468 | -5.743 | 0.000 |
| *Pedroni test* | | | | | | | | |
| Modified Phillips-Perron test (same $\varrho$) | 3.826 | 0.000 | 4.017 | 0.000 | 2.961 | 0.000 | 3.857 | 0.000 |
| Modified Phillips-Perron test ($\varrho=\varrho_i$) | 8.190 | 0.000 | 8.144 | 0.000 | 7.093 | 0.000 | 7.930 | 0.000 |
| Phillips-Perron test (same $\varrho$) | -11.17 | 0.000 | -11.09 | 0.000 | -11.24 | 0.000 | -11.66 | 0.000 |
| Phillips-Perron test ($\varrho=\varrho_i$) | -11.82 | 0.000 | -10.54 | 0.000 | -10.64 | 0.000 | -12.35 | 0.000 |
| Augmented Phillips-Perron test (same $\varrho$) | -11.70 | 0.000 | -7.914 | 0.000 | -11.49 | 0.000 | -16.14 | 0.000 |
| Augmented Phillips-Perron test ($\varrho=\varrho_i$) | -11.21 | 0.000 | -7.609 | 0.000 | -12.76 | 0.000 | -21.20 | 0.000 |
| *Westerlund test* | | | | | | | | |
| Variance ratio ($\varrho=\varrho_i$) | 4.625 | 0.000 | 9.661 | 0.000 | 4.137 | 0.000 | 5.991 | 0.000 |
| Variance ratio (same $\varrho$) | 1.983 | 0.024 | 1.794 | 0.036 | 1.491 | 0.068 | 2.396 | 0.008 |

Notes: the number of lags is set to 1. In the Kao test, there is no linear trend. In the Pedroni and Westerlund tests we include both panel-specific intercepts and a linear trend.

Almost all the tests show that *ln*GPI is cointegrated both with *ln*GFDIPOP and with *ln*M&APOP, i.e. the corresponding statistic rejects $H_0$ at 1%, 5% or 10% level. This means that economic peacefulness and inward FDI are linked by a non-spurious long-run relationship. In addition, this means that there is no (non-stationary) measurement error and that their relation is not affected by the exclusion of relevant, stationary, variables.

Table 4 shows also the cointegration tests for the reverse regression, where *ln*GPI is used to predict *ln*GFDIPOP or *ln*M&APOP. Again, almost all the tests reject the null hypothesis, and so we conclude that, in the long-run, inward greenfield FDI per capita, or inward M&A per capita, is also affected by the level of economic peacefulness of a country.

#### 3.2.2.3 The long-run relationship between FDI and economic peacefulness

As a third step, we estimate the long-run cointegration relationship between *ln*GPI and *ln*GFDIPOP (*ln*M&APOP) using the DOLS approach developed by Kao and Chang (2000). We estimate the following DOLS regression:

$$(7)\ lnGPI_{it} = \beta lnFDI_{it} + \mu_i + \gamma f_t + \sum_{j=-p}^{p} \lambda_{ij} \Delta lnFDI_{it} + u_{it},$$

where *ln*FDI stands for, respectively, *ln*GFDIPOP and *ln*M&APOP, $p$ represents the number of lags, that we set equal to 1 because of the limited amount of years available, and where we include a linear time trend and a series of panel-specific intercepts.

As a robustness check, to allows the slope coefficients to vary between countries, we also estimate equation 7 using the DOLS group-mean estimator (DOLS-GM) provided by Pedroni (2001). In this case, we estimate a series of separate country-specific DOLS regressions, and we average the individual coefficients to produce one single final impact.

To further control for unobserved common factors and mitigate potential cross-sectional dependence, we also subtract the cross-sectional mean from each regressor. However, despite demeaning the data over the cross-sectional dimension and in each period is the most common practice, this technique implies that the potential impact of the common factors is the same across the countries, which cannot be the case. To further test for the presence of cross-sectional dependence, we use the CD test proposed by Pesaran (2004). Under the null hypothesis of absence of cross-sectional dependence, the CD test takes the residuals of the DOLS regression and estimates their pairwise correlation. The statistic is normally distributed: a rejection of the null hypothesis is the sign of the presence of cross-sectional dependence across panels. In this case, the DOLS estimated coefficients can be biased and we proceed estimating the common correlated effects mean-group (CCE-GM) estimator proposed by Pesaran (2006).

The CCE-GM model treats the unobserved common factors using the averages of the dependent variables ad of the regressors for each period *t*, as follows:

$$(8)\quad lnGPI_{it} = \beta_i lnFDI_{it} + \delta_i \overline{lnFDI_t} + \lambda_i \overline{lnGPI_t} + \mu_i + \gamma f_t + u_{it}.$$

The overall impact of *ln*GFDIPOP (or *ln*M&APOP) on *ln*GPI is obtained by averaging the heterogeneous coefficients $\beta_i$ across countries. We also make the regression robust to the presence of outliers in the means of the parameter coefficients. Table 3.5. shows the results of the estimation of the DOLS equation 7. Columns 1 to 4 refer to an equation where the main regressor is *ln*GFDIPOP, while Columns 5 to 8 to a specification with *ln*M&APOP.

**Table 3.5.** The long-run relationship between GPI and inward FDI: DOLS estimates

| DepVar: *ln*GPI | (1) DOLS | (2) DOLS | (3) DOLS-GM | (4) CCE-GM |
|---|---|---|---|---|
| *ln*GFDIPOP | -0.068*** | -0.030*** | -0.020*** | -0.044** |
| | (0.000) | (0.007) | (0.002) | (0.021) |
| Demeaned data | No | Yes | Yes | No |
| $R^2$ | 0.279 | 0.028 | | |
| CD test | 42.14*** | 13.20*** | | -1.23 |
| N. countries | 123 | 123 | 123 | 123 |
| N. obs. | 861 | 861 | 861 | 1230 |
| DepVar: *ln*GPI | (5) DOLS | (6) DOLS | (7) DOLS-GM | (8) CCE-GM |
| *ln*M&APOP | -0.025*** | -0.006** | -0.040*** | -0.004 |
| | (0.003) | (0.003) | (0.002) | (0.002) |
| Demeaned data | No | Yes | Yes | No |
| $R^2$ | 0.169 | 0.010 | | |
| CD test | 26.77*** | 6.97*** | | -1.59 |
| N. countries | 115 | 115 | 115 | 115 |
| N. obs. | 805 | 805 | 805 | 1150 |

Notes: DOLS: pooled DOLS estimator developed by Kao and Chiang (2000); DOLS-GM: group-mean panel DOLS estimator developed by Pedroni (2001); CCE-GM: common correlated effects mean-group estimator developed by Pesaran (2006). All regressions include panel-specific intercepts (i.e. fixed effects), one lag and one lead. The CCE-GM regression is obtained using the *robust* option. CD is the cross-sectional dependence test proposed by Pesaran (2004).
*** significant at 1% level; ** significant at 5% level.

Results in Column 1 show a negative and highly statistically significant impact of lnGFDIPOP on *ln*GPI. In our setting, this means that a 10% increase in the inward greenfield FDI stock leads, on average, to a 0.7% improvement in the economic peacefulness of a country. Results in Column 2, however, reveal that such an estimated coefficient is upward biased when we de-mean our regressors to control for cross-sectional dependence: in this case, the elasticity of *ln*GPI with respect to *ln*GFDIPOP reduces to -0.030. The estimated coefficient further decreases to -0.020 when we use the DOLS-GM estimator. However, both in Column 1 and in Column 2, the CD test strongly rejects the null hypothesis of absence of cross-sectional dependence: therefore, results in the first three columns should be treated with caution, as it can be affected by unobserved common factors that are not singled out by de-meaning the regressors. For this reason, we also provide the CCE-GM estimates in Column 4, which confirm those in Columns 1-3. Still, attracting and accumulating greenfield FDI from foreign investors leads to a higher economic peacefulness in a country, i.e. to a lower negative peace. As expected, the CD test in Column 4 now does not reject the null hypothesis of no cross-sectional dependence.

In addition, when we run the individual country DOLS estimates[33], we find that the amount of negative estimated coefficients of *ln*GFDIPOP on *ln*GPI are the majority (60%), from which we argue that the average negative coefficient found in Columns 1-3 is not driven by few large negative outliers, but by the majority of the countries. For all these reasons, we consider our DOLS estimates robust to outliers and cross-sectional dependence.

A similar scenario emerges in Columns 5-8. Again, the DOLS estimates show a positive and significant (at 1% level) impact of inward M&A per capita on economic peacefulness (that corresponds to a negative estimated coefficient): in this case, the elasticity of lnGPI with respect to *ln*M&APOP ranges between -0.006 (with de-meaned data) and -0.025 (no de-meaned data). The DOLS-GM estimate in Column 7 confirms this result. However, the CD tests again rejects the null hypothesis of no cross-sectional dependence, and so we re-estimate the relation using the CCE-GM estimator. Results in Column 8 now show a negative but not statistically significant coefficient of our inward M&A-FDI per capita. Therefore, the results in Column 5 to 7 can be biased by cross-sectional dependence and should be treated with caution. In the following, we choose to focus on inward greenfield FDI only.

[33] Not reported here but available upon request.

#### 3.2.2.4 Heterogeneity

We now check for the robustness of our results to different specifications of the GPI variable, to the inclusion of additional controls and to different geographical contexts.

As described in Section 3.1. and in Chapter 2 of this thesis, the GPI index summarizes three domains: ongoing domestic and external conflicts, societal safety and security, and degree of militarization. We now estimate equation 7 using DOLS and replacing the dependent variable by its three components (transformed in natural logarithm and de-meaned): *ln*CONFLICT, *ln*SAFETY and *ln*MIL. Results of the DOLS estimates are shown in Table 3.6.

**Table 3.6.** DOLS estimates between inward greenfield FDI per capita and the GPI components

| DepVar | (1)<br>*ln*CONFLICT | (2)<br>lnSAFETY | (3)<br>lnMIL |
|---|---|---|---|
| *ln*GFDIPOP | -0.050*** | -0.007 | -0.055*** |
| | (0.014) | (0.008) | (0.007) |
| Demeaned data | Yes | Yes | Yes |
| $R^2$ | 0.024 | 0.002 | 0.069 |
| N. countries | 123 | 123 | 123 |
| N. obs. | 861 | 861 | 861 |

Notes: DOLS: pooled DOLS estimator developed by Kao and Chiang (2000). All regressions include panel-specific intercepts (i.e. fixed effects), one lag and one lead. *** significant at 1% level.

Interestingly, we find that the long-run impact of inward greenfield FDI on the overall economic peacefulness passes through a reduction of domestic and international conflicts and of the degree of militarization, whereas no significant effect is found on societal safety and security. In the long-run, attracting and accumulating larger stocks of greenfield FDI helps countries reducing the intensity, the duration and the number of domestic or external conflicts, and reducing the military expenditures as well as weapons trade.

Despite the cointegration between lnGPI and lnGFDIPOP excludes the possibility to have omitted (stationary) variables, we also include in our regression a series of variables that capture country-specific characteristics that can affect economic peacefulness without being necessarily related to inward FDI. Following the literature on the determinants of peace, or conflicts (references here), we include the following variables: (i) the average yearly GDP per capita growth rate (GROWTH), as proxy for the speed of economic growth of a country; (ii) the average yearly growth rate of population living in urban areas (URBAN), taken as a proxy for urbanization; (iii) the employment share in agriculture (AGRIEMP), to measure the degree of development of the country; (iv) the number of submissions to broadband on resident population (BROADBAND), to capture access to internet, digital technologies and information; (v) the net birth rate (BIRTH), computed as the difference between the birth and the death ratio of population, which approximates the general state of the living conditions in a country[34]; (vi) mineral rents (as a share of GDP), computed as the difference between the value of production at world prices and the total costs of production (MINERAL) for tin, gold, lead, zinc, iron, copper, nickel, silver, bauxite, and phosphate, to address the contribution of natural resources management; (vii) trade openness (TRADE), given by the sum of the values of imports and exports on GDP; (viii) education (EDUCATION), given by the enrollment share to primary school; (ix) inflation (INFLATION), computed from the yearly GDP deflator. All these variables are transformed in natural logarithm except GROWTH, URBAN and INFLATION that include negative values, and de-meaned to mitigate cross-sectional dependence.

The table below shows the results of the DOLS estimates. Throughout all the six specifications, we find that the estimated coefficient of *ln*GFDIPOP remains significant at 1% level and stable around an average value of -0.03, implying that our previous results are robust to the inclusion of additional controls. Interestingly, we observe that peacefulness improves the lower is the growth rate of GDP per capita, the higher is the urbanization rate, and the higher is the share of population with access to broadband and digital technologies. No robust significant effect is found for the other regressors.

**Table 3.7.** DOLS estimates with additional control variables

| DepVar: lnGPI | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| *ln*GFDIPOP | -0.027$^{***}$ | -0.029$^{***}$ | -0.044$^{***}$ | -0.034$^{***}$ | -0.027$^{***}$ | -0.024$^{**}$ |
| | (0.007) | (0.007) | (0.008) | (0.007) | (0.008) | (0.008) |
| GROWTH | 0.212$^{***}$ | 0.216$^{***}$ | 0.228$^{***}$ | 0.233$^{***}$ | 0.077 | 0.189$^{*}$ |
| | (0.059) | (0.055) | (0.056) | (0.053) | (0.097) | (0.103) |
| URBAN | | | -0.007$^{*}$ | -0.008$^{**}$ | -0.017$^{***}$ | -0.018$^{***}$ |
| | | | (0.004) | (0.003) | (0.004) | (0.004) |
| lnAGRIEMP | | | -0.032 | -0.047$^{*}$ | -0.020 | -0.022 |
| | | | (0.023) | (0.021) | (0.044) | (0.044) |

[34] In alternative, we also considered life expectancy at birth. The results of the econometric analysis do not change if we use this variable instead of, or in addition to, the net birth rate.

| | | | | | | |
|---|---|---|---|---|---|---|
| lnBROADBAND | | | -0.161 | -0.267** | -0.586*** | -0.591*** |
| | | | (0.129) | (0.122) | (0.134) | (0.134) |
| lnNETBIRTH | | | -1.102*** | -0.171 | 0.312 | 0.461 |
| | | | (0.346) | (0.335) | (0.369) | (0.370) |
| lnMINERAL | | | -0.143 | -0.153 | 0.035 | 0.013 |
| | | | (0.173) | (0.162) | (0.195) | (0.194) |
| lnTRADE | | | | -0.003 | -0.035 | -0.024 |
| | | | | (0.010) | (0.024) | (0.024) |
| lnEDUCATION | | | | | -0.000 | -0.002 |
| | | | | | (0.066) | (0.066) |
| INFLATION | | 0.009 | | | | -0.020 |
| | | (0.035) | | | | (0.042) |
| Demeaned data | Yes | Yes | Yes | Yes | Yes | Yes |
| $R^2$ | 0.064 | 0.090 | 0.145 | 0.111 | 0.225 | 0.242 |
| N. countries | 123 | 119 | 123 | 120 | 55 | 54 |
| N. obs. | 861 | 833 | 861 | 840 | 385 | 378 |

Notes: DOLS: pooled DOLS estimator developed by Kao and Chiang (2000). All regressions include panel-specific intercepts (i.e. fixed effects), one lag and one lead. *** significant at 1% level; ** significant at 5% level; * significant at 10% level.

Finally, we re-estimate equation 7 for different geographical contexts. Specifically, we pooled the available countries in the following sixteen regions of the world, identified by the UN geoscheme: Caribbean, Central America, Southern America, Central Asia, Eastern Asia, South-Eastern Asia, Southern Asia, Western Asia, Northern Africa, Eastern Africa, Middle Africa, Western Africa, Southern Africa, Northern Europe, Eastern Europe and Southern Europe. In this way, we can observe whether the DOLS results achieved in Table 5 are homogeneous across the world or depend on the region of the country. Table 8 shows the results of the individual DOLS regressions.

**Table 3.8.** Region-specific DOLS estimates

| Dep. Var. lnGPI | | | |
|---|---|---|---|
| *Area* | $\beta$ | N. obs | $R^2$ |
| Caribbean | -0.015 | 28 | 0.290 |
| | (0.013) | | |
| Central America | 0.008 | 49 | 0.045 |
| | (0.013) | | |
| South America | -0.015 | 70 | 0.010 |
| | (0.022) | | |
| Central Asia | -0.066*** | 35 | 0.221 |
| | (0.025) | | |
| Eastern Asia | -0.125*** | 21 | 0.675 |
| | (0.028) | | |

| | | | |
|---|---|---|---|
| Western Asia | -0.021<br>(0.070) | 105 | 0.001 |
| South-Eastern Asia | -0.023**<br>(0.008) | 70 | 0.164 |
| Southern Asia | -0.111***<br>(0.022) | 49 | 0.432 |
| Northern Europe | -0.136***<br>(0.029) | 21 | 0.496 |
| Eastern Europe | -0.086<br>(0.054) | 70 | 0.019 |
| Southern Europe | -0.086***<br>(0.027) | 28 | 0.327 |
| Northern Africa | 0.196**<br>(0.087) | 49 | 0.166 |
| Eastern Africa | -0.031***<br>(0.010) | 91 | 0.088 |
| Western Africa | -0.043***<br>(0.014) | 105 | 0.113 |
| Middle Africa | -0.012<br>(0.049) | 49 | 0.009 |
| Southern Africa | -0.027<br>(0.019) | 28 | 0.039 |

Notes: DOLS: pooled DOLS estimator developed by Kao and Chiang (2000). All regressions include panel-specific intercepts (i.e. fixed effects), one lag and one lead. *** significant at 1% level; ** significant at 5% level; * significant at 10% level.

We find that the negative and significant long-run effect of *ln*GFDIPOP holds in many regions of the world, like Central, Eastern, South-Eastern and Southern Asia, Eastern and Western Africa, Northern and Southern Europe. We do not find any statistically significant effect in the three American regions, in some African regions, as well as in Eastern Europe and Western Asia. North Africa, instead, is the only region where we find a positive and significant coefficient, implying that inward greenfield FDI contribute to deteriorate the level of economic peacefulness.

#### 3.3.2.5 Long-run causality

We now turn to the issue of long-run causality, which can run from inward FDI to GPI, from GPI to inward FDI or in both directions. Despite cointegration suggests that there must be (Granger) causality in at least one direction, it does neither indicate the direction of such a causality nor whether it is a short or a long-run causality. To test for this, we use a panel vector error correction model

(PVECM) which uses the long-run cointegration regression (DOLS) coefficient to compute the lagged error correction (EC) term.

Specifically, we use the pooled mean-group (PMG) estimator developed by Pesaran, Shin and Smith (1997, 1999), which starts from the following autoregressive distributive lag (ARDL) dynamic panel specification:

$$(9)\ lnGPI_{it} = \sum_{j=1}^{p} \lambda_{ij} lnGPI_{it-j} + \sum_{j=0}^{q} \delta_{ij} lnGFDIPOP_{it-j} + \mu_i + \epsilon_{it},$$

where *i* represents the country, *t* the years, $\delta$ is the coefficient of our FDI variable, $\lambda$ is a scalar, $\mu_i$ captures the panel-specific fixed effects, and $\varepsilon$ is the stochastic error term. Since *ln*GPI and *ln*GFDIPOP are I(1) and cointegrated, it is possible to define an error correction model where their short-run dynamics are affected by the deviation from the long-run equilibrium. The EC term represents the error-correcting speed of adjustment term to the long-run equilibrium: if this term is zero, then no long-run relationship exists between the two variables in the chosen specification. On the contrary, if the estimated coefficient of the lagged EC is significant, and negative, then we conclude that the two variables show a return to their long-run equilibrium and are affected by a causal relationship.

The PMG estimator allows estimating the ECM including country-specific intercepts (i.e. fixed effects), short-run coefficients and error terms, while the estimated long-run coefficient is equal across panels. To estimate the parameters, the model uses the maximum likelihood method[35].

The short and long-run causality between GPI and FDI can be assessed in the following way. First, we estimate two equations, one where $\Delta$*ln*GPI is the dependent variable and $\Delta$*ln*GFDIPOP the main regressor, and one where $\Delta$*ln*GFDIPOP is the dependent variable and $\Delta$*ln*GPI the main regressor. Second, we look at the estimated coefficient of the lagged EC terms in each equation: if it is not statistically different from zero, the regressor is weakly exogenous in the selected equation and there is no long-run Granger causality between the two variables. On the contrary, if such a coefficient is statistically different from zero, then it is possible to identify a long-run Granger causality between

[35] We use the *xtpmg* package developed by Blackburne III and Frank (2007) for Stata, with one lag length.

the two variables in the direction suggested by the regression. This also means that, if the coefficient is different from zero in both equations, the long-run Granger causality runs in both directions. Moreover, we can perform a short-run causality test looking at the estimated coefficient of the lagged explanatory variable in each equation: if this is zero, it means that the explanatory variable does not Granger cause the dependent variable in the short run.

Third, we test for the strong exogeneity of our variables testing the joint significance of both the lagged differenced explanatory variable (i.e. $\Delta ln\text{GFDIPOP}_{it-1}$ in the $\Delta ln$GPI equation and $\Delta ln\text{GPI}_{it-1}$ in the $\Delta ln$GFDIPOP equation) and the lagged EC term. If the test does not reject the null hypothesis of strong exogeneity (i.e. that the two estimated coefficients are jointly not statistically different from zero), then we conclude that the explanatory variable under investigation does not Granger cause the dependent variable, neither in the short nor in the long run (Herzer and Donaubauer, 2018). Table 3.9. shows the PVECM estimates.

**Table 3.9.** PVECM estimates

| Dep. Var. | (1)<br>$\Delta ln$GPI | (2)<br>$\Delta ln$GFDIPOP |
|---|---|---|
| $\Delta ln$GFDIPOP | $-0.092^{***}$ | |
| | (0.000) | |
| $\Delta ln$GPI | | $-0.106^{***}$ |
| | | (0.030) |
| EC | $-0.441^{***}$ | $-0.212^{***}$ |
| | (0.033) | (0.016) |
| Demeaned data | Yes | Yes |
| N. countries | 123 | 123 |
| N. obs. | 1107 | 1107 |

Notes: $^{***}$ significant at 1% level.

Results in Column 1 not only confirm the negative and strongly significant effect of inward greenfield FDI per capita on the GPI, but also confirm the negative and significant coefficient of the EC term.

However, the same results emerge also in Column 2, where $\Delta ln$GFDIPOP is used as dependent variable, implying a mutual long-run causal relationship between FDI and economic peace in the full sample of countries. This scenario is confirmed in Table 10, where we directly test for the weak and strong exogeneity of the two variables and for short-run Granger causality. Interestingly, we do not find evidence of a mutual short-run relationship: in both equations, the estimated coefficient of the lagged explanatory variable is not statistically different from zero, implying absence of a Granger causality in the short-run in both directions[36].

The fact that, in both equations, the estimated coefficient of EC is strongly different from zero implies a mutual Granger causality in the long run. In addition, since the estimated coefficients of EC and of the explanatory variable are jointly different from zero in both specifications implies that the two variables do Granger cause each other even in the short run.

**Table 3.10.** Short and long-run causality tests

| | |
|---|---|
| Dependent variable: ΔlnGPI | |
| *Weak exogeneity test* | |
| Coeff EC = 0 | 174.36*** [0.000] |
| *Short-run Granger causality test* | |
| Coeff Δ*ln*GFDIPOP=0 | 0.55 [0.458] |
| *Strong exogeneity test* | |
| Coeff EC= coeff Δ*ln*GFDIPOP = 0 | 174.4*** [0.000] |
| Dependent variable: Δ*ln*GFDIPOP | |
| *Weak exogeneity test* | |
| Coeff EC = 0 | 167.06*** [0.000] |
| *Short-run Granger causality test* | |
| Coeff Δ*ln*GPI=0 | 1.11 [0.293] |
| *Strong exogeneity test* | |
| Coeff EC= coeff ΔlnGPI = 0 | 173.6*** [0.000] |

Notes: *** significant at 1% level.

The fact that the relationship between the economic peacefulness of a country and its stock of inward greenfield FDI holds only in the long-run is not surprising: indeed, the accumulation of FDIs

[36] The absence of a short-run Granger causality is also confirmed when we estimate the relationship between GPI and inward greenfield FDI using panel vector autoregressive regressions (PVAR) with a GMM approach to instrument endogenous variables (u to three years lag). In all the specifications (not reported here but available upon request), the estimated coefficients of the lagged explanatory variable is never statistically significant, implying again that, in the short-run, the two variables do not affect each other.

is a process that requires time and experience *per se*, and their potential impact on aggregate variables like those that contribute to economic peace can take years to materialize.

### 3.3 Conclusion

In this paper we assess the long-run relationship between the stock of inward FDI (greenfield and M&A) per capita and the level of peacefulness of a country. Merging data from different data sources, we use a series of unit root and panel cointegration tests to assess the non-stationarity of the two variables and the nature of their linkage in the long-run. Then, we estimate their long-run relation using the dynamic OLS and we test for the direction of their temporal causality using a panel vector error-correction model approach.

The results show that inward greenfield FDI and peacefulness are linked by a mutual, non-spurious, relation in the long run, whereas we do not find any significant relation in the short-run. DOLS estimates reveal that a 10% increase in the stock of inward greenfield FDI per capita leads to an average 0.3-0.4% decrease in the negative peace index, i.e. an improvement in the global economic peacefulness of a country. However, a higher level of GPI also leads to a higher stock of inward greenfield FDI, implying a virtuous circle between the two. Moreover, we also find that the effect of greenfield FDI on peace is particularly strong in certain regions of the world, like Eastern, South-Eastern and Southern Asia, Eastern and Western Africa, as well as in the Baltic republics and in Southern Europe. For what concerns inward M&A per capita, the results are in line with those concerning greenfield FDI, but are not robust to cross-sectional dependence. The DOLS elasticities, however, are lower than those of inward greenfield FDI.

The first policy implication is that attracting new investments from foreign multinationals is one of the tools for reducing the level of violence, conflict and militarization, thus improving the general degree of peacefulness of a country. Multinational enterprises, through greenfield FDI, act not only as agents of structural change (Neffke et al., 2018), but also as agents of institutional change (Antonietti and Mondolo, 2018).

However, the fact that we find a robust mutual relationship means that improving the country level of peace provides a more reliable and stable business environment for attracting the location of activities from foreign investors. This finding is in line with the empirical evidence provided by IEP on Positive Peace: higher level of positive peace lead to better economic opportunities for the country in terms of economic growth. Conflict reduction, a lower militarization and higher social security at community level should be therefore three domains for policy makers to implement a security policy effective also to stimulate inflow of FDI from foreign investors.

## Appendix to Chapter 3

### Appendix E - Table A1. Country list, by region

| *America* | | |
|---|---|---|
| *Caribbean* | *Central America* | *Southern America* |
| Dominican Republic | Costa Rica | Argentina |
| Haiti | El Salvador | Bolivia |
| Jamaica | Guatemala | Brazil |
| Trinidad and Tobago | Honduras | Chile |
| | Mexico | Colombia |
| | Nicaragua | Ecuador |
| | Panama | Paraguay |
| | | Peru |
| | | Uruguay |
| | | Venezuela |
| *Asia* | | |
| *Central Asia* | *Eastern Asia* | *Western Asia* |
| Kazakhstan | China | Armenia |
| Kyrgyz Republic | Mongolia | Azerbaijan |
| Tajikistan | South Korea | Bahrain |
| Turkmenistan | *South-Eastern Asia* | Georgia |
| Uzbekistan | Cambodia | Iraq |
| *Southern Asia* | Indonesia | Jordan |
| Afghanistan | Laos | Kuwait |
| Bangladesh | Malaysia | Lebanon |
| India | Myanmar | Oman |
| Iran | Philippines | Qatar |
| Nepal | Singapore | Saudi Arabia |
| Pakistan | Thailand | Syria |
| Sri Lanka | Timor-Leste | Turkey |
| | Vietnam | United Arab Emirates |
| | | Yemen |
| *Europe* | | |
| *Northern Europe* | *Eastern Europe* | *Southern Europe* |
| Estonia | Belarus | Albania |
| Latvia | Bulgaria | Bosnia Herzegovina |
| Lithuania | Czech Republic | Croatia |
| | Hungary | Slovenia |
| | Moldova | |
| | Poland | |
| | Romania | |
| | Russian Federation | |
| | Slovak Republic | |
| | Ukraine | |

| *Africa* |
|---|
| *Northern Africa* |
| Algeria |
| Egypt |
| Libya |
| Morocco |
| Sudan |
| Uganda |
| Zambia |
| Zimbabwe |
| *Western Africa* |
| Benin |
| Burkina Faso |
| Cote d'Ivoire |
| Ghana |
| Guinea |
| Gunea-Bissau |
| Liberia |
| Mali |
| Mauritania |
| Niger |
| Nigeria |
| Senegal |
| Sierra Leone |
| The Gambia |
| Togo |
| Tunisia |
| *Eastern Africa* |
| Burundi |
| Djibouti |
| Ethiopia |
| Kenya |
| *Middle Africa* |
| Angola |
| Cameroon |
| Central African Republic |
| Chad |
| Democratic Republic of the Congo |
| Equatorial Guinea |
| Gabon |
| *Southern Africa* |
| Botswana |
| Lesotho |
| Namibia |
| South Africa |
| Madagascar |
| Malawi |
| Mozambique |
| Rwanda |
| Somalia |
| Tanzania |

## Final remarks

The role of Multinationals in the global economy and their effects on host development, human rights, conflict and peace are still highly debated and there is no universal agreement upon their net aggregated impacts, whether negative or positive, in the short and long run. Undoubtedly, MNEs appear to be prominent actors of the global governance framework and they can play a critical role in long term evolution of the communities where they operate through their affiliates, suppliers and clients in relation to sustainable development, negative and positive peace.

This thesis attempted to unpack the different dimensions of influence of MNEs in host countries, detailing macro and micro impacts on FDI recipient countries. Drawing from management sciences, political science, and economics, an interdisciplinary approach has been taken to disentangle MNEs effects on different dimensions characterizing host countries: economic growth, institutions, environment, human rights, conflict onset and propensity, peace.

The empirical findings reviewed reveal a lack of conclusive agreement upon the positive or negative role of MNEs in GVCs, on people and planet. Mediating factors pertaining at the stage of development of the countries play an important role in challenging MNEs impacts on sustainable development and, ultimately, on peace globally. Need, creed and greed motivations channel the introduction of corporate social responsibility and corporate security responsibility framework in MNEs operations, in developing countries and conflict-prone environments.

The new empirical evidence provided in Chapter 3 on the role of MNEs (through FDI) in the negative peace provides supportive evidence, on one side, on the potential of MNEs as peacebuilder actor in the long run, and, on the other side, on the importance of peace in recipient countries to attract foreign investment.

In terms of Policy recommendations, firstly, new investments from foreign multinationals might be one of the channel of a more integrated Peace Policy for reducing the level of violence, conflict and militarization at domestic level and improving the degree of peacefulness of a country. Moreover, the presence of a robust mutual relationship between inward greenfield FDI and Negative Peace reveals that improving the country level peacefulness provides a more reliable and stable business environment for foreign private investments. A second policy recommendation relates to the importance of investment in peacekeeping and peacebuilding activities at local level with an integrated approach, taking into consideration all the actors involved in potential conflict or ongoing conflict.

Multinationals benefit from a peaceful environment and they can effectively foster peace through their operations with proper CSR and CSecR framework in place. However, looking at the globalized ties with suppliers and customers under the perspective of global value chains, human rights abuses and environmental disasters caused by market pressures indicate the impellent necessity for better (effective) traceability and monitoring measures of working conditions, security and environmental protection initiatives that should be considered in a normative rather than voluntary manner as suggested by Ruggie (2007, 2008) on the human rights side.

The normative efforts put in place by the international organizations and at national level by governments have demonstrated the importance of the legal framework for the contrast of illicit practices from natural resource management to human resources management (e.g., Dodd Frank Regulation and International Framework agreements). However, the recent approval at European level of a more stringent regulation for conflict minerals and the strong opposition by European business through an important lobbying show that even if all the actors involved in the grand challenges of today world for peaceful, resilient and just societies know what should be done in terms of normative and behavioral measures, the *leit motiv* of Friedman (1970), 'The social responsibility of business is to increase its profits' is still there for many. Hopefully, today several MNEs' leaders are committed towards a new model of shareholder value (Business Roundtable 2019). 181 chief executives of the main business organizations in the US signed a statement on the Purpose of a Corporation where standard of corporate responsibility shifted from (just) shareholders to all stakeholders, in the most comprehensive sense of the term, including customers, employees, suppliers, and communities, with the development of ethical supply chains, investments in employees and support the local communities. Their motivations are mixed between creed and greed (survival in a changing world), nevertheless this is an important step forward towards proper and just global value chains management. Would this be sufficient to respond to the global challenge of Peace in the long run? Unfortunately it is not, given the complexity of the phenomena concurring. Only a multi-level and comprehensive governance of balanced powers among business operators, illuminated policy makers and representatives of all the different instances of the society could advance sustainable peace as showed in the Peace Transformative Process proposed with the case of Eastern Congo and the Coltan belt.

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