Sustaining the Gains: Feasibility of Risk Financing for Education

Task 3 Report:
Feasibility of Political Risk Insurance for Education Systems

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Executive Summary

The GPE portfolio has significant exposure to a wide range of political risk related shocks. GPE has increased its support of fragile and conflict-affected countries (FCACs) since its 2011 restructuring. While in 2010 only 13 percent of total GPE funding distributions went to states affected by fragility and conflict, this increased to 52 percent in 2013. In 2014, 28 out of GPE’s 59 recipient countries were FCACs. 66 of the 89 countries eligible for GPE financing have had conflicts recorded in the UCDP database\(^1\) between 1989 and 2015. This policy stance towards politically unstable partner countries is a deliberate strategic point in GPE’s mission. In the GPE 2012-2015 Strategic Plan, support to education in fragile and conflict affected states was a top priority. It remains a priority in GPE 2020, the 2016-2020 strategic plan, which includes the goal of: “increased equity, gender equality and inclusion for all in a full cycle of quality education, targeting the poorest and most marginalized, including by gender, disability, ethnicity and conflict or fragility.” Working with FCACs makes identifying and responding to political risks and vulnerabilities a crucial and valuable step. This report will analyze the potential for risk financing mechanisms to mitigate the political risks associated with partnering with FCACs and support education in contexts of fragility.

GPE partner countries have a broad exposure to political risk. Political risk related shocks to the education sector include war, coups d’état, civil unrest, political instability, population displacement and refugee flows. For a more in depth analysis of political risk exposure across the GPE partner countries, please see Figure 2.2 in the Task 1 Report.

Political risks can be modeled. Although political risk is relatively unpredictable, this does not make it unmanageable, and there are several techniques that can be used to model it. The Oxford Analytica / Willis Towers Watson VAPOR (Value at Political Risk)\(^2\) system can be used to assess and compare exposure to a suite of political risks in individual countries, regionally or globally. Further, in collaboration with Willis Towers Watson, the Cambridge Centre for Risk Studies have developed a series of scenarios\(^3\) to illustrate the effects and issues of managing the risk from selected threats (including political risk related shocks), which could be used to deepen GPE’s understanding of its exposure to political risk.

The benefits of a risk modeled approach for GPE include developing an understanding of exposure and potential political risk related costs to enable contingency planning and a greater coordination of stakeholders. In developing scenarios, stakeholders would be incentivized to come together before the onset of a political shock. The quantification of risks through scenarios and modeling leads to the quantification of impacts and costs of political shocks. This quantification is what allows for the pre-positioning of finance, resulting in greater predictability of funding in shock contexts.

\(^1\) http://ucdp.uu.se/
\(^2\) See Annex 3 for a more detailed explanation.
\(^3\) These can be found online at http://cambridgeriskframework.com/downloads.
Political risk related impacts to the education sector are difficult to quantify with the available data. The best available comparable data to quantify shock impacts to the education sector is found in Post-Disaster Needs Assessments (PDNAs), which are mostly compiled for natural disasters. Further, out of the range of political shocks, conflict is the shock type with the best data as it relates to education. In order to build a risk financing mechanism, ‘value at risk’ must be quantified; and in order to quantify ‘value at risk’ quantitative data on education sector costs due to political shocks must be consistently collected.

A comprehensive and structured disaster risk management approach can build resilience for the education sector to external shocks. Political risk identification is inconsistent across the GPE portfolio. A structured risk management approach, which begins with data collection and results in the pre-positioning of finance and the coordination of planning, adds value by increasing the predictability of funding and ultimately reducing the impacts of shocks.

Adopting a risk sensitive finance strategy adds value for GPE and increases preparedness and response for political risk related shocks. One conclusion of this report confirms that political shock related risk transfer using the private insurance market is challenging to implement and ultimately not cost effective, given GPE’s current exposure. Nevertheless, adopting robust risk-sensitive financing mechanisms can provide the essence of insurance protection without the risk transfer to external parties.

This report recommends the development of an Accelerated Risk Financing Instrument that builds upon GPE’s current accelerated financing mechanism. The report outlines a framework, using an indexed approach to trigger a release of funds, to provide pre-positioned financing in the event of political risk related shock (here, hosting displaced populations). Using trigger based financing allows for quick financial flows, delivering enhanced preparedness and implementation to respond to shocks, as well as removing some of the operational and implementation challenges experienced under the current mechanism. This concept is expanded upon, outlining how GPE can scale this mechanism, adopting a portfolio approach to manage the political risk related shocks across their partner countries as consistent data is collected to create a comprehensive understanding of GPE’s political risk exposure.

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4 See Task 2 of this report for available data specific to the education sector.
1 Introduction

Building on the Policy Case laid out in Task 1 and the Task 2 Report ‘Applicability of existing Catastrophe Risk Models and Risk Transfer Programs to Education’, this report investigates the feasibility of risk financing for political risk in the education sector.

Political crises, from targeted violent attacks to large scale conflict, affect millions of school-aged children. The impacts of these crises are wide-ranging, and this report will examine the effects on educational outcomes and access to, and delivery of, education for the communities affected by political shocks. Political risk affects the education sector in the short and long term in a variety of ways, from infrastructure damage and reduction in school capacity to changes in educational demand and long-lasting reduction in educational attainment.

This report begins by discussing political risk related shocks, exploring the available data - and gaps - to identify the impacts of political risk perils relevant to the Global Partnership for Education (GPE) portfolio and business model. Given the focus on the particular dynamics of political and conflict-related situations, it will also discuss and clarify where assumptions need to be drawn. The political risk perils concerned include violent conflict, political crisis, civil strife and unrest, and macroeconomic shock. The feasibility of adopting a structured risk management and risk financing approach to each is considered.

Section 2 proposes a taxonomy of political shocks that disrupt the delivery of education. This section will explore the terrain of political risk and highlights relevant risk categories such as vulnerability to geopolitical conflict, political violence, and humanitarian crises. Further, it will undertake an initial analysis of GPE disaster exposure in this arena.

Section 3 examines risk transfer as a mechanism through which to mitigate GPE’s political risk exposure. An initial explanation of political risk insurance as it is currently applied to the private sector is outlined, and existing investment coverages are defined. Political violence cover, forced abandonment cover, and business interruption coverage are specifically suggested as already potentially applicable to the GPE case. By providing a detailed description of how financial markets manage political and conflict related risks, this section evaluates the value of risk management and risk transfer tools as well as areas of potential innovation using the methods currently employed by the private sector.

In section 4, limitations of the current private sector approach are raised with regards to its application to the GPE portfolio and the education sector in general. The benefits and drawbacks of either GPE or the partner country as the Insured are discussed. Further, the insurable interest in the GPE case departs from that of the private sector. The objective of political risk mitigation in the context of GPE’s mission is to protect the delivery of education and the associated infrastructure assets. Therefore, the entity affected by such events is the partner country itself rather than a traditional cross-border investor. In light of this inherent difference from traditional political risk transfer, possible insurable perils in the education sector are suggested.
Section 5 offers an overview of available data to support risk transfer mechanisms. We highlight the existence of qualitative empirical data, but comment on the lack of systematic and consistent quantitative data. While broad, high level analysis is possible, more rigorous data analysis is difficult due to gaps and limited availability of fine-grained information. This section details the costs to the education sector due to conflict, macroeconomic shock, and displacement and begins to identify what work GPE might need to undertake to fill some of the data gaps.

In section 6, a needs assessment for political risk is developed. Current GPE guidelines for Education Sector Plans (ESPs) recommend that partner countries examine vulnerabilities such as conflicts and economic crises as well as offer ways forward to overcome potential political constraints in the implementation of the ESP. We recommend that methods of identifying, monitoring, and understanding political and conflict risks are more consistently, systematically, and robustly built into planning, which will subsequently improve paucity of standardized data availability.

Section 7 provides an overview of risk methodologies. The possibility of modeling is discussed, with the example of the Willis Towers Watson VAPOR (Value at Political Risk) analytics product, which allows global companies to assess and compare the financial implications of exposure to a suite of political risk. Further, it discusses the possibility of parametric insurance for political risk and the importance of scenarios to any political risk methodology. This section will include options to operationalize a political risk financing solution including next steps to develop the framework to underpin a political risk financing mechanism.

Section 8 offers recommendations for GPE’s approach to political risk. This section highlights the need for the adoption of risk-sensitive financing strategies and the benefit of embedding risk-sensitive frameworks to pre-position financing for political risk related shocks and encourage transparency and accountability.
2 Key Elements of Political Risk Insurance

There are several strategies that can be adopted to mitigate an entity’s exposure to political risk related shocks:

- Country partnerships: business relationships, develop local partnerships and encourage local procurement.
- Understanding the context: anticipate regulatory and policy change, adoption and implementation of robust legal frameworks.
- Risk transfer: political risk insurance.

GPE has strategies in place for each of the first two, which will be discussed in more detail later in the report. This section of the report will focus on the feasibility of risk transfer as an additional approach to help manage GPE’s political risk exposure.

2.1 Private Market Risk Transfer

Political risk insurance as traditionally defined is a risk transfer product taken out by entities to protect against named perils related to either their own trade income or the investments they have made. It is sometimes referred to as ‘investment insurance’. Political risk insurance covers the perils defined in Annex 1.2, such as confiscation, expropriation, inability to export, forced abandonment, political violence, and trade disruption.

2.2 Who is the Insured?

For political risk insurance, the traditional Insured is a business that has invested capital in a ‘host country’ (i.e. the country in which investment has been made), has assets in country, and has expected revenue from these activities.

2.3 Insurable Interest

The conventional interests of a typical insured are either:

- Money / assets lost by a confiscation;
- Costs of assets damaged or abandoned;
- Business interruption and extra expense from the ensuing physical damage to assets; or
- Cash trapped in the host country unable to be converted or transferred.
2.4 Duration of policies

Because this insurance’s intent is to provide confidence to cross border trade and investment, the policy terms are long in order to insure projects or investments with long time horizons. Policy terms in the public market can be as long as 20 years, whereas in the private market they tend to be shorter (upwards to 10-15 years with an average of 5). The value in such policy terms is to provide protection against the uncertain future of the host country compared to the annual policy term of traditional insurance.

2.5 Pricing

Each political risk insurance coverage is priced differently, and the rates can range from 0.3% to 3% (of the coverage limit) depending on the risk present in the countries where the business and investments are taking place. Rates are guaranteed for the policy period once bound, regardless of country risk deterioration. Further, the policy is non-cancellable by the underwriters, which can make it more expensive as underwriters will want to incorporate the high level of uncertainty. The extent to which risk transfer solutions would be cost efficient for GPE’s portfolio will be discussed in more detail below.
3 Shocks that Disrupt the Delivery of Education

3.1 Taxonomy of different forms of shock and disruption

As evidenced by Task 2, the management of risks originating from natural catastrophes is well-developed, and the frameworks employed by governments, institutions and individuals to understand, mitigate and transfer risk through insurance mechanisms are used widely. However, there are many other types of risks typically classed as ‘man-made,’ which shock the global system, for example, civil disorders, coup d’états and cross-border warfare. Whilst in recent years these shocks have been considered largely unpredictable, and therefore extremely expensive to manage and insure, developing research into these perils in collaboration with the insurance industry has allowed the adaptation of a systematic approach through modeling. Subsequently, the impacts of these risks are quantifiable, allowing comparison and the potential re/insurance pricing of exposure portfolios, as well as encouraging risk management and the creation of resilience to what was previously considered too uncertain.

This report will adopt the conceptualization of risks set out in the Cambridge Taxonomy of Macro-Threats, a framework for categorizing socio-economic threats and collecting structured data when discussing the potential shocks facing GPE’s portfolio, which introduces adoption of a modeling and scenario-based methodology. The Cambridge approach explicitly acknowledges that modern-day ‘global shocks’ or ‘macro-catastrophes’ have consequences that impact well beyond nation state borders.

By using categories of threat, it is possible to analyze the impact of shocks from a particular category both in scope and scale. Whereas other risk taxonomies focus on large scale political risk shocks such as civil strife and war, this methodology applies a ‘frequency and severity’ lens to understand the scale of political risk shocks (from localized riots to nuclear war) and the inter-relation of political risk shocks, such as a water shortage leading to regional resource conflict. The inter-relation of risks is examined in more detail in section 5.5.

http://cambridgeriskframework.com/taxonomy; detailed in full in Annex 2

A ‘threat’ is defined as a potential cause of a socio-economic catastrophe that would threaten human and financial capital, damage assets, and disrupt the systems that support our society, with an ability to impact on an international or global scale. (Cambridge Centre for Risk Studies, 2014)
3.2 Initial analysis of GPE disaster exposure

As detailed by the evidence base developed in Task 2, GPE’s country partners have significant vulnerabilities to natural hazard related disasters. Moreover, macro-level analysis identifies that more than fifteen partner countries are categorized as on ‘alert’ by the Fragile States Index\(^7\), and only four partner countries are considered stable.

GPE’s portfolio is evidently at risk, with a number of countries affected by full-scale conflict, in addition to facing significant uncertainty as to the stability and resilience to future political risk related shocks (Fund for Peace, 2014). 28 of the 89 countries eligible for GPE financing are classified as fragile and conflict-affected counties (FCAC) (World Bank, 2016). Whilst this report acknowledges that the drivers behind conflict and fragility are complex and increasingly inter-dependent, discussion here will focus on available quantitative data to demonstrate that where these political risk related shocks occur, education systems, and thereby access and attainment, are affected.

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\(^7\) The Fragile States Index is based on the 12 primary social, economic and political indicators of the CAST methodology which was developed by the Fund for Peace for assessing the vulnerability of states to collapse. It measures this vulnerability in pre-conflict, active conflict and post-conflict situations.
4 Implications for the Education System

4.1 Ex ante risk reduction techniques

Political risk insurance, like natural disaster insurance, creates an evidence base for investment in *ex ante* risk reduction and mitigation efforts as cost effective in reducing the size and scope of a disaster (both in monetary terms and in affected people, see Task 2). Concrete measures can include improving construction building codes to withstand the hazard (wind, earthquake shaking, etc.); establishing proper early warning (where possible) and post-disaster communications; and supporting *ex ante* preparations for any population in the event’s expected footprint (again where possible).

In the case of political risk related shocks, there are steps that can be taken to reduce and mitigate loss:

- Risk mapping to establish where inherent risks exist within the GPE portfolio. It is important to note that risk mapping for the peril of political risk is not a static condition. Whereas in natural disaster risk mapping risk zones are generally permanent (or quasi permanent other than material geological or climatological changes), in political risk, a country can be very stable today and overnight a coup d’état or revolution can suddenly transform it into a war zone. Risk mapping must be used in conjunction with ongoing threat analysis. This process must include deeper inquiry with local stakeholders taking an inventory of underlying societal tensions as well as considering those of neighboring regions, as there are frequently spill-over effects.

- Contingency planning to continue the delivery of education in event of a political risk related shock. GPE are already working to mitigate losses to education outcomes through contingency planning. In 2015, during the Ebola emergency in Sierra Leone, funds were used to support emergency education delivery through radio and television programming.

In the GPE context, the objective of political risk insurance would be to protect the delivery of education and the associated investments made, in such as in school buildings, materials, and teacher training. As it is currently structured, the entity affected by such events appears to be the partner country, which is inherently different from a traditional cross-border investor. If the partner country was the Insured, it would therefore not be suitable to seek confiscation insurance, as they are themselves the entity in control of that peril (with the exception of a coup d’état whereby the regime is replaced). The same moral hazard is true where there is a currency inconvertibility concern, since a number of education budget and procurement plans are priced in US Dollars because the government is the budget owner. Cross-border trade perils are also eliminated, since these do not appear applicable to the subject at hand.

What would apply to this case is to insure either partner countries, GPE, or implementation partners against:

- Assets from physical damage caused by political violence – rebuilding or repurposing properties and other physical assets.

- Forced abandonment of the assets from violence in the territory - where GPE and implementing partners must abandon their programs and incur additional costs of moving staff.
Extra expense cover for the incurred additional costs to continue operating (perhaps from a neighboring village, state, or country), the purchasing of supplies, or the payment of teachers’ salaries to continue educational services.

Business interruption due to the political risk shock; however, there is not a loss of profit per se in the education sector. That said, business interruption does occur for political risk shocks to the education sector where the business of providing education is interrupted. It should be noted that business interruption is very difficult to quantify. This will be discussed in more detail below.

4.2 Moral hazards

As mentioned previously, man-made disasters offer an added dimension of complexity when compared to natural perils. We have discussed the inability to cover confiscation because an entity would essentially be insuring against themselves. But even with just covering political violence, forced abandonment and the ensuing business interruption and extra expense, the complex question still arises as to the extent that a government is complicit in the shock. Typically, governments are not the insured for political risk transfers, as in essence it is insuring against a conflict in which the government may be party and could benefit from a payout against a claim. In addition, providing additional funding to Governments in the midst of war or civil unrest can unleash negative, unintended consequences. It is difficult to ensure the additional resources would be routed to education rather than being misappropriated for another purpose, for example, supplementing military budgets.

Moreover, private market political risk policies are usually required to remain confidential in order to reduce the possibility of opportunistic behavior on behalf of any government complicit in the creation of a political risk shock which would trigger a claim on an insurance policy.

4.3 What’s different about natural disaster risk vs. political risk related shocks?

A further exploration of the differences between natural disasters and political risks can inform the direction of recommended solutions. Natural disasters are created by force majeure natural events, whereas civil unrest is man-made. Further, evaluating natural disaster risk has the benefit of experience, and a probabilistic approach can be employed to analyze the risk and efficiently manage vulnerabilities to increase resilience.

Inherently, political risk is more difficult to map, mitigate (especially if the conflict it protracted), and ultimately insure or risk finance as the volatility is too high for the private market without incurring a moral hazard.

Should GPE wish to pursue the development of risk transfer for political risk, the below conclusions will need to be considered as controlling factors.
4.3.1 Modalities

When transferring risk for natural disasters (whether through public or private markets) the modality best evidenced is at the sovereign level. The moral hazard as explained above demonstrates that for the transfer of political risks, especially to the private market, governments (i.e. developing partner countries) are unlikely to be the Insured. Instead, GPE could look to develop a portfolio approach to cover their risks. The duration of political risk insurance, as opposed to the usual one-year policy cover in the case of natural disaster risk, also allows for a longer-term view of the risk (this was one of the challenges identified in Task 1).

4.3.2 The Insured

As put forth by this analysis, at present the Insured is interpreted to be the GPE Partner Country itself, since it is the partner country that has an interest in its own education services. This falls outside the traditional structure of investment insurance, firstly because there is no cross-border investment. Secondly, since the government cannot confiscate its own equity (except for the case of rebels seizing and occupying, or commandeering government assets which may be possible to be covered under political violence as the ‘disappearance of assets’ rather than confiscation by the de facto government if they are in de facto control of the country or a region thereof), confiscation cover is likely to be inappropriate.

Therefore, a suggested exploration is to look at a structure in which GPE itself is the Insured. Without that potential structure, the confiscation perils are out of the realm of feasibility, and instead we look at political violence cover, forced abandonment cover, and ensuring business interruption and extra expense related to these covers.

4.3.3 Insurable interests

As GPE aims to strengthen education systems in developing countries, the recovery of its invested capital from political risk shocks takes less priority than the effective delivery and access to education by its developing country partners. Therefore, traditional political risk insurance coverages are likely to be unsatisfactory (to make a claim and subsequently withdraw from activities in the country affected by shock is highly undesirable) and, given the geographies involved, very expensive.

Given the nature of GPE’s business model and objectives, a number of products, such as confiscation, are extraneous and will not be considered further here. The data available as to losses and indicators will elaborate further on where the most efficient gains in risk financing can be achieved. That said, some elements of political risk cover are relevant and can be explored independent of the private market (providing the essence of the protection without the risk transfer to external parties). The types of cover that GPE may wish to consider will be highly context specific, for example, extra expense cover or asset protection.
4.3.4 Value at risk

As already discussed in Task 1, there is widespread agreement that natural catastrophes and political violence events have severe impacts on the education system in affected countries, resulting in both direct and indirect consequences.

Traditionally, historical claims data shows that prolonged political risk shocks are low frequency but high severity. Whilst the risk transfer premium can be significant, when the political risk event does occur, the value of the loss far exceeds the premiums paid over the intervening time making it a cost-efficient use of capital. That said, protracted crises, e.g. in Somalia and Libya, can result in 100% loss of ‘investment value’ as defined under a Political Risk Insurance Policy. As highlighted above, risk transfer may not be a cost-effective solution for GPE; however, the methodologies that underpin them to understand and manage risk are highly relevant.

For GPE, the methodology for assessing the value at risk is very different from in the private market, as the driving motivation is to prevent an interruption to the education system (service). Therefore, any methodology and associated mitigation must be shown to increase resilience in the provision of educational services. Furthermore, we understand that GPE are not concerned with recovering their investment.

To that end, the method of assessing political risks as currently utilized by the insurance market would be a useful tool to understand and potentially foresee which regions and countries would be more likely to have a political event that would have the potential to interrupt the provision of educational services in that region and additionally affect the neighboring regions and countries through the displacement of populations.
5 Data

5.1 Data availability

In order to draw appropriate conclusions as to the efficiencies of risk financing for political risk related shocks, it is necessary to undertake a systematic analysis of the available data.

The impacts of political shocks on education are all too evident and have been systematically recorded; however, much of the decades-worth of data and analysis has been qualitative, and there is an extensive data gap with an absence of substantive and comparable quantitative figures.

In recent years, however, efforts by a number of international organizations and experts have made gains to redress this knowledge gap. Organizations such as UNESCO, UNICEF and the GCPEA have moved the dial, pursuing a quantitative approach to address both the human and financial costs of conflict on education.

The outputs from Task 2 demonstrate the value in using modeling approaches to quantify losses to the global education system. Adopting a probabilistic approach to hazards and vulnerability in order to quantify loss for natural catastrophes is well understood. Whilst the approach could be adopted for political risk related shocks, these datasets have not yet been created by the public or private sectors. In order to make recommendations about where the most value in risk financing may lie, this section undertakes a systematic review of the available data, identifying both the gaps and useful progress and approaches being developed.

5.2 Costs

In evaluating the feasibility of risk financing for different types of shocks, the sum insured must be quantifiable. The impacts of political shocks on education can range from straightforward physical damage to education sector assets, quantified as a monetary cost to the sector, to decreases in educational demand, quantified in terms of out-of-school children. Insurance mechanisms calculate the recoverable ‘value at risk’ in monetary terms in order to arrive at a sum insured. This section will focus on the impacts (in an effort to quantify the costs) of three different types of political risk in the education sector: conflict, macroeconomic shock, and displacement.

5.2.1 Conflict

In order to develop a robust analysis for better risk management of the impacts of conflict on education, an understanding and quantification of direct consequences, for example, school closure, death and injury to teachers and property damage is needed, as these are spends which could be met by employing alternative risk financing strategies.\(^8\) Moreover, an understanding of how the education sector is impacted by qualitative impacts of conflict such as fear and recruitment to armed forces is also necessary to

\(^8\) For a more expansive analytical framework for shock impacts on education beyond conflict, refer to Figure 3.1 in Task 1 Report
ascertain if these additional costs are able to be quantified, and therefore, mitigated by a risk financing strategy.

Direct costs due to conflict are some of the most straightforward political shock costs to the education sector, and therefore are considered as a useful indicator to consider the feasibility of risk financing for political risk related shocks for the purpose of this section. They are largely similar to the costs of natural disaster shocks and include the costs of rebuilding and replacing physical infrastructure (e.g. school buildings and learning materials) and human capital costs (such as replacing teachers).

Further, as outlined in Task 1, gaps in education provision due to conflict incur the long-term socioeconomic costs of reduced educational attainment. However, those long-term costs are not costs to the education sector specifically, but rather larger social costs, so while they support the need for the management of political shocks, they are not considered part of an insurable sum. The cost of reduced education outcomes are social costs of the education system failing, however they are not costs to the sector, and are therefore not recoverable using insurance. Additionally, conflict causes fear and the recruitment of children into the armed forces, which can reduce the supply of education by causing teachers to flee as well as reducing educational demand and keeping children out of school.

Fear often contributes directly to the greater gender disparities for education enrollment in conflict-affected environments. Increased fear of sexual and gender-based violence often results in girls being kept at home and away from school (UNESCO, 2015). Data collected in Tajikistan has identified that girls suffer greatest due to safety concerns when returning to school following a conflict (Shemyakina, 2006). It is also worth noting that fear can affect the provision of education by decreasing the supply of teachers. For example, teachers in Cote d’Ivoire fled the north of the country due to conflict in 2002, incurring the human resource cost of replacing them (Global Coalition to Protect Education from Attack, 2014).

The conscription or recruitment into armed groups is a further direct impact of conflict that affects education (UNESCO, 2011). While fear affects both genders with a more significant long-term impact on girls, boys are far more likely to be recruited to armed forces (Verwimp and Van Bavel, 2012). For example, following the genocide in Rwanda, males in non-poor households felt the shocks most acutely (Akresh and Walque, 2008) due to the direct impact of recruitment into conflict. When children are recruited, it deprives them of education and decreases societal education outcomes.

Fear and recruitments are impacts that are difficult to quantify as costs to education where they affect the demand for education rather than the supply. The cost of replacing teachers is a quantifiable human resource cost borne by the education sector, but the cost of decreased educational attainment due to children being out-of-school is a social cost borne by the larger society. In other words, fear and recruitment impact the users of the education system to diminish overall societal educational outcomes, rather than impacting the delivery system itself. Although these costs would not contribute to an insurable sum for the education sector, the education system’s resilience to political shocks must be understood.

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9 For a quantification of these costs, refer to Annex 4 of Task 1
10 As was discussed in Task 1 of this report, the long-term socioeconomic costs of disruptions to educational provision are substantial compared to the short and medium-term costs of rebuilding after a shock. The long-term costs of decreased demand for education will correspond to the long-term costs of gaps in education provision (supply); and, therefore, the broader socioeconomic costs of fear and recruitment can be captured in a quantification of the long-term socioeconomic costs of reduced educational outcomes.
from both a supply and demand side, and increasing resilience to fear and recruitment is therefore part of the risk management needs of the education sector.

### 5.2.2 Macroeconomic shocks

Costs to the education sector resulting from macroeconomic shocks are difficult to measure due to inconsistent data, which will be discussed in section 5.4. Furthermore, macroeconomic shocks do not directly impact the education sector, since their impacts are delivered through decisions taken with regard to budget allocations. What is clear, however, is that macroeconomic shocks affect GDP and, therefore, overall public expenditure, which often results in less funding for education. Further, many GPE partner countries’ education sector plans specifically highlight the risk posed to sustaining education budgets by macroeconomic shocks, which suggests that, although there is not rigorous independent data to corroborate, there is a cost to education from this type of political risk related shock. Education sector budgets provide the quantification of value at risk which is susceptible to macroeconomic shock.

### 5.2.3 Displacement

Displacement, from the perspective of the displaced people’s country of origin, can be considered an indirect impact of first order political shocks such as conflict or natural disasters such as drought. When considered from the perspective of the host country, however, displacement constitutes a distinct political risk shock type.

The costs of displacement to the education sector are borne on both the supply and the demand side of the education system. On the supply side, displacement can result in a lack of teachers in the displaced population’s place of origin, which incurs the human resource cost of replacing them. In the host location, on the other hand, the impact of displacement is an unexpected increase in educational demand. The host country therefore incurs the additional cost of providing education for those displaced pupils. This report will explore the possible risk financing tools that can be employed to pre-plan for this demand shock through the pre-positioning of funds to be ‘triggered’ in the event of a mass movement of people.

### 5.2.4 Cost examples

<table>
<thead>
<tr>
<th>Shock</th>
<th>Type of cost</th>
<th>Example of cost(^{11}) (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conflict</td>
<td>Rebuilding of destroyed schools</td>
<td>$35,000-$4.8 million</td>
</tr>
<tr>
<td></td>
<td>Repairs to damaged school buildings</td>
<td>$13,000-$380,000</td>
</tr>
<tr>
<td></td>
<td>Replacement of learning materials and equipment that were destroyed or looted</td>
<td>$5,000--$30,000 per school(^{13})</td>
</tr>
<tr>
<td></td>
<td>Rehabilitating schools after military use</td>
<td>~$64,500(^{15}) per school</td>
</tr>
</tbody>
</table>

\(^{11}\) Example of cost range per unit as found in Task 1, refer to Task 1 Annex 4 for method of estimation.

\(^{12}\) Range based on school construction estimates for Pakistan in Jones and Naylor (2014) and World Bank PDNA estimates for the Seychelles.

\(^{13}\) Range based on World Bank PDNA school repair cost estimates data for Myanmar and Fiji.

\(^{14}\) Range based on generic estimate from Jones and Naylor (2014) and estimates for Syria in Ndaruhytse and West (2015).

\(^{15}\) Cost estimation for primary schools in South Sudan (South Sudan Education Cluster, 2012).
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mediation to end school occupation</td>
<td>$1,000-$2,000 of staff time</td>
<td></td>
</tr>
<tr>
<td>Training of new teachers to replace those that left the teaching workforce due to death, disablement, trauma, displacement and recruitment to armed groups etc.</td>
<td>$300-$8,825 per teacher(^{16})</td>
<td></td>
</tr>
<tr>
<td>Pensions for teaching force due to disablement, trauma etc.</td>
<td>No estimation available</td>
<td></td>
</tr>
<tr>
<td>Compensation to teachers or their families due to death, disablement, trauma etc.</td>
<td>No estimation available</td>
<td></td>
</tr>
<tr>
<td>Breakdown of systems</td>
<td>$2,000 per MoE office</td>
<td></td>
</tr>
<tr>
<td>Loss of key personnel and records</td>
<td>$500 per staff member lost</td>
<td></td>
</tr>
<tr>
<td><strong>Macroeconomic Shock</strong></td>
<td>Reduced government revenues/education spending</td>
<td>Up to total education budget</td>
</tr>
<tr>
<td><strong>Displacement (country of origin)</strong></td>
<td>Training of replacement teachers</td>
<td>$300-$8,825 per teacher(^{19})</td>
</tr>
<tr>
<td></td>
<td>Breakdown of systems</td>
<td>$2,000 per MoE office</td>
</tr>
<tr>
<td></td>
<td>Loss of key personnel and records</td>
<td>$500 per staff member lost</td>
</tr>
<tr>
<td></td>
<td>Foregone tuition/school fees due to school closure, student absence, etc.</td>
<td>$0.75-$3.80 per student per lost teaching day(^{17})</td>
</tr>
<tr>
<td><strong>Displacement (host country)</strong></td>
<td>Provision of school structures</td>
<td>$1,420 per 42 sq. m shelter, for temporary structure</td>
</tr>
<tr>
<td></td>
<td>Provision of learning materials</td>
<td>$4 per pupil, share of school-in-a-box</td>
</tr>
<tr>
<td></td>
<td>Training of additional teachers</td>
<td>$300-$8,825 per teacher(^{19})</td>
</tr>
<tr>
<td></td>
<td>Provision of teacher stipends</td>
<td>$234-$2,600 per teacher, per annum</td>
</tr>
</tbody>
</table>

**Table 5.1** The costs of political shocks to education\(^{18}\).

Examples of these costs will be outlined below as losses to the education sector in order to give an indication of calculating value at risk.

\(^{16}\) Range based on estimates from the DRC in Jones and Naylor (2014) and from Syria in Ndaruhutse and West (2015).

\(^{17}\) Range based on daily fee at Omega Schools (low fee private schools) in Ghana and the maximum monthly fee that can be charged by private-subsidised schools in Chile.

\(^{18}\) For examples of cost ranges for these costs, see Annex 4 in Task 1.
5.3 Quantifying losses from conflict

5.3.1 Industry claims paid

Global loss data for political risk related shocks is published by the insurance industry where risks are covered by policies. Lloyd’s of London selectively publishes its data for Political Violence (loss of assets) claims as does the Berne Union. Of the total claims of US$2.8 billion paid under the four risk codes (aircraft war, contract frustration, credit insurance and political), US$681 million (~25%) were for political risk related claims (Berne Union, 2016). Table 5.2 provides a breakdown over the past 5 years for political violence claims.

<table>
<thead>
<tr>
<th>Year</th>
<th>Political Violence Claims</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>US$91 mn</td>
</tr>
<tr>
<td>2012</td>
<td>US$43 mn</td>
</tr>
<tr>
<td>2013</td>
<td>US$37 mn</td>
</tr>
<tr>
<td>2014</td>
<td>US$46 mn</td>
</tr>
<tr>
<td>2015</td>
<td>US$48 mn</td>
</tr>
</tbody>
</table>

Table 5.2 A breakdown of claims paid for political violence year on year.

The headline figures are substantial, indicating the scale of the problem and also showing the market capacity for the transfer of political risks as these are claims paid sums. Whilst the methodologies employed in the underwriting process are effective for creating greater resilience to political risk shocks, claims quanta data as published may be less valuable to understanding these risks. As previously mentioned, political risk policies are confidential, published claims data is only top-line, and so it is not possible to draw comparisons for possible payouts against GPE’s possible losses. Please see Annex 3 for the requirements to file a request for a non-binding indication for political risk insurance.

5.3.2 Death and injury (human capital losses)

Building on the substantive data evidenced under Task 2, this report has worked to quantify the losses to the GPE developing partner countries from conflict. Breaking down the macro data by state-based conflict, non-state conflict and one-sided violence, a global dataset containing 128,264 events (excluding Syria) between 1989 and 2015 was created. As the only available proxy, the number of deaths was used to set a measure of intensity for these events.

Between 1989 and 2015, there were 1,898,724 fatalities due to conflict. 82% (1,562,937) of these fatalities occurred in GPE countries, comprising 66 out of the total 116 conflict affected countries. As with state level fragility, this conflict dataset provides a view at the global level but unfortunately lacks the sufficient detail to apply this more specifically to direct impacts on the education sector, e.g., deaths of school-age children. Moreover, given that the impacts of conflict on the education sector are highly context specific, without sufficient indicators from this dataset on school access and attainment, robust assumptions cannot be drawn to structure any risk transfer solutions because the value at risk to GPE’s portfolio is unknown.

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19 Relevant GPE country data was extracted from the UCDP Conflict Encyclopedia (UCDP database).
5.3.3 Examples of direct losses due to direct attacks on education

Data at a country level, developed through case studies looking at direct shocks on the education sector from targeted attacks provide indications of the value at risk (Table 5.3).

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Damage and destruction of learning materials</td>
<td>US$4 mn</td>
<td>US$0.29 mn</td>
<td>US$4.5 mn</td>
<td>US$104 – US$264 mn</td>
</tr>
<tr>
<td>Replacement of lost teachers</td>
<td>US$2,100</td>
<td>US$20,000</td>
<td>US$115,020</td>
<td>US$2-$6 mn</td>
</tr>
<tr>
<td><strong>Total Cost</strong></td>
<td><strong>US$24 mn</strong></td>
<td><strong>US$5.3 mn</strong></td>
<td><strong>US$28 mn</strong></td>
<td><strong>US$1.1 – US$3 bn</strong></td>
</tr>
<tr>
<td><strong>Source</strong></td>
<td>(Jones and Naylor, 2014)</td>
<td>(Jones and Naylor, 2014)</td>
<td>(Jones and Naylor, 2014)</td>
<td>(Mizunoya, 2015; Ndaruhutse and West, 2015; Save the Children, 2015)</td>
</tr>
</tbody>
</table>

**Table 5.3** Direct cost of targeted attacks on education.

Here, examples of capital costs from targeted attacks on the education system, including rebuilding schools, replacing furniture, and restocking teaching materials, are outlined. In addition to the capital costs are human resource spends, e.g., training new teachers to replace lost teaching force. The capital losses above would be covered under a political violence policy as physical damage to assets caused by war, and the human resource cost would be covered under an extra expense cover. The most recent *Education Under Attack* report (Global Coalition to Protect Education from Attack, 2014) details further examples of available data. Table 5.4 illustrates available data on infrastructure losses.

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20 Direct costs result from targeted attacks where the education system and school are specifically targeted in conflict.
<table>
<thead>
<tr>
<th>Time period</th>
<th>Country</th>
<th>Schools Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012-2013</td>
<td>Central African Republic</td>
<td>&gt;100</td>
</tr>
<tr>
<td>2010-2011</td>
<td>Côte d’Ivoire</td>
<td>~500</td>
</tr>
<tr>
<td>2012-2013</td>
<td>Mali</td>
<td>~130</td>
</tr>
<tr>
<td>2009-2012</td>
<td>Nigeria</td>
<td>69</td>
</tr>
</tbody>
</table>
| 2011-2012    | South Sudan         | (school used by military) 34
| 2009-2011    | Yemen               | 461              |

Table 5.4 Schools affected by conflict, Source: Global Coalition to Protect Education from Attack (2014).

While this table provides some examples of past impacts of conflict, the lack of consistent finer grained detail highlights the lack of quantitative data available with regard to education sector losses. Further, where ‘value at risk’ is to be quantified, while examples of past losses can illustrate potential future losses, the inclusion of the country studies above simply provides an illustrative example of how direct losses as impacts from conflict can be quantified in order to create a ‘sum insured’ value for each country. The unit costs from Task 1, multiplied by the quantities required and the collected exposure data could provide a figure for GPE’s ‘sum insured’ for these countries. GPE could replicate this approach by ensuring that these costs are provided in each partner country’s ESP to begin to quantify the respective value at risk. GPE has already undertaken these valuations in some of their early recovery and coordination work.

Creating this full data set, combined with exposure data, would ensure that GPE would have the requirements to explore the financial incentives for different risk transfer mechanisms.

5.4 Displacement

Displacement is often considered an acute impact of conflict or another direct shock event. This report considers displacement as it constitutes a distinct political shock with distinct impacts on education. The number of school-age children affected is substantial, and addressing the needs of refugees is the biggest challenge facing the international community (Figure 5.1).

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21 The cost of rehabilitating a primary school in South Sudan after a period of military use was approximately US$64,500 (South Sudan Education Cluster, 2012)
22 UN reported
23 GPE’s ‘Work in Conflict-affected and Fragile Countries’ brochure
24 As mentioned above, the explicit moral hazard of having country partners as the Insured would suggest that this exercise at a GPE Portfolio level would be the most appropriate.
Of the 50 million children who are displaced (either internally or across borders), 28 million are displaced due to conflict; 10 million are children, with 98,400 children being classified as unaccompanied and separated children (UN High Commissioner for Refugees, 2016). More than half of the 16.1 million refugees worldwide under UNHCR’s mandate are children, and six million are of primary and secondary school age. 3.7 million displaced children are not attending school. Whilst numbers vary, analysis identifies that average duration of exile has varied between 10 and 15 years since the late 1990s (World Bank, 2016). For many, that is their education plus a significant proportion of their productive years. Seven countries - Chad, DRC, Ethiopia, Kenya, Lebanon, Pakistan and Turkey - host over half of the refugee children who are out of school, and five of these countries are part of the GPE portfolio (UN High Commissioner for Refugees, 2016).

Only fifty percent of refugee children have access to primary education. The access gap increases with age, with eighty-four percent of non-refugee adolescents attending lower secondary school compared to twenty two percent of refugees of the same age.

Education provision for refugees is predominantly funded through emergency humanitarian budgets, which have short time scales for planning and implementation and ever diminishing funds (see the Task 1 Report). Proactive countries such as Cameroon, Chad, Niger, Pakistan and South Sudan are working to
include refugee children into national development plans and educational planning. Given that a number of GPE partner countries are hosts to a significant number of out of school children, more can be done to ensure that these communities' educational needs are met. A possible risk financing solution to the problem of displacement in the education sector is discussed in section 7.2.

5.5 Macroeconomic shocks

5.5.1 Impact on education budgets

Macroeconomic shocks refer to any disturbance in the economy due to internal or external factors. These shocks are mostly unpredictable and come without any signal and affect almost all the major macroeconomic totals (aggregates) of an economy, such as inflation, price levels, rate of growth, national income, gross domestic product (GDP) and changes in unemployment. Macroeconomic shocks are generally driven by supply, such as shortages and surpluses, rather than demand, such as consumer spending decisions. The extent to which macroeconomic shocks affect the provision on education is a challenging question to analyze and quantify given the paucity of available data.

It is clear that macroeconomic shocks, both negative and positive have an impact upon a country’s GDP, which represents the monetary measure of the market value of all final goods and services produced over a period, usually annually. An example of such an impact occurred in Nigeria (Figure 5.2) when GDP fell 15% from an all-time high of US$574 billion in 2014 to US$490 billion in 2015 following the dramatic fall in global oil price from highs around US$100 per barrel in 2014 to US$43 per barrel in 2015 (World Bank, 2017). This shock was of a similar magnitude to that felt by Nigeria from the global financial crisis of 2007/08 resulting from the US sub-prime mortgage crisis, when GDP dropped by 17%. The vulnerability of the Nigerian economy from over-dependence on crude oil exports was augmented by mid-2008 with impacts to the capital market, banking sector, foreign exchange earnings and balance of payments, as well as the real sector which produces goods and services.

![Figure 5.2](GDP_Nigeria)  
However, such negative impacts from macroeconomic shocks are not consistent with data representing government allocation of expenditure on education budgets, nor is there any reliable data to better understand how these impact governments’ funding of education.

For example, the World Bank dataset on education spending (as a percentage of GDP or total government expenditure) has significant gaps in data collection by both country and date for a number of GPE partner countries. No such data is available for Nigeria.

Figure 5.3 shows Pakistan GDP from 2004 to 2014, which saw a drop of 2% in 2008 from the global credit crunch, partially due to over-reliance on textile exports and declining consumer confidence and aggregate consumption across industrialized trading partners. The black dashed line represents a counter-factual ‘business as usual’ for Pakistan’s GDP in the absence of the credit crunch and the area under this line bounded by observed GDP represents ‘GDP@risk’, monetary market value which has been lost. Comparison of this GDP trend with education expenditure in Pakistan for the same period (Figure 5.4) shows a much more severe impact with an initial 9% drop as a percentage of total government expenditure in 2008, followed by subsequent falls for the next 3 years and plateauing out at 11%. A breakdown of education costs during this period is provided in Table 5.5.

<table>
<thead>
<tr>
<th>Cost (USD): 2009 - 2012</th>
<th>Average Annual Cost (USD)</th>
<th>Cost as % of Education Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital cost</td>
<td>$28.1 m</td>
<td>$7.0 m</td>
</tr>
<tr>
<td>Human resource cost</td>
<td>$73.2 m</td>
<td>$18.3 m</td>
</tr>
<tr>
<td>Total cost</td>
<td>$101.4 m</td>
<td>$25.3 m</td>
</tr>
</tbody>
</table>

Table 5.5 Pakistan education costs.

![Figure 5.3](image.png)

Figure 5.3 Pakistan: GDP. Source: World Bank.
5.5.2 Impact on other political risk related shocks

Whilst a direct causal link between macroeconomic shock and education budget spend is challenging to identify due to limited data availability, the potential for macroeconomic shocks to have an impact on stability in a country has been quantitatively investigated, as by Cambridge Centre for Risk Studies. Figure 5.5 shows a causality matrix between primary triggers and consequential threats, for a range of risks which have been modelled by disaster scenarios. For example, a macroeconomic event such as a price shock has strong potential to trigger subsequent social unrest. Similarly, drought has a strong potential to trigger subsequent price shocks. This matrix is generic for all countries but could be made bespoke either by country or income group classification.

5.5.3 Diversion to income-generating activities

One possible consequence of macroeconomic shock, children being diverted to income-generating activities, has a crucial impact on the education sector. Children are taken out of school to work due to household income shocks as a result of larger macroeconomic shocks and conflict (Justino, 2010), affecting the demand for education and decreasing educational outcomes. Foregone education due to the diversion to income-generation is not an impact exclusive to political risk events; however, it is important to note that conflict, macroeconomic shock, and other political risk factors can contribute to an increase in out of school children due to this diversion.
5.6 Data considerations

The impacts of violent conflict are challenging to compare as historical data has been collected and aggregated using different methodologies. There is an absence of quantitative data on the impacts of political risk shocks which affect GPE partner countries. Where data does exist, it concentrates on direct impacts, for example, rebuilding schools and deaths of children and, crucially, it does not take into account impacts on the education sector due to collateral damage, for example, unintended targeting by military, or indirect impacts (loss of assets), for example, children being diverted into income generating activities (business interruption).

Building on the data gathered through the ESP and evaluation process, GPE can create a catalogue of data required to inform political risk models (see VAPOR requirements in section 7.1). Upscaling GPE’s operational risk framework with systematized data collection could provide an initial data set to begin to fill the gaps. Whilst there is a demonstrable lack of data on effective risk management frameworks for countries affected by political risk shocks, if GPE invested in acquiring the data required, there would be an opportunity for GPE to engage with a market seeking innovative new clients and engagements.
6 Development of Needs Assessments

6.1 Requirements

As part of the good practice espoused in the ESP Guidelines, analysis of political constraints to ESP implementation including political risk related shocks and sensitivity analysis of the threats and vulnerabilities in each country is recommended. This is to inform preparedness, prevention and risk mitigation measures that strengthen the resilience of the education system at all levels within the national context. It should be noted that the more volatile the context, the greater the need for an understanding of the drivers and nature of conflict and how these may affect the provision of education to children. These analyses are also recommended to ensure that GPE’s own operational processes remain robust.

In order to achieve such an understanding and to implement realistic and effective scenario building (see risk methodologies below) and risk mitigation measures, it is vital that a set of approaches and tools are applied consistently in order to identify, monitor, and understand the political and conflict risks, the effects (positive and negative) of the program upon those who connect and divide in society, and to inform appropriate program adjustments.

GPE guidelines and strategy state that GPE provides support in an efficient, consistent and equitable way (Global Partnership for Education, 2013). Employing risk sensitive frameworks throughout the planning and response cycle is essential for developing partner countries to build resilience which should be taken into any post-shock phase.

6.2 Approaches and solutions

The steps outlined below identify initial approaches recommended by this report for GPE to take with the intention of building on GPE’s Operational Risk Framework. These steps would add to the existing framework, which could then be shaped or developed through discussion with their developing partner countries from planning through to response and rebuild.25

- Initial review of the political and security sources, collation, processes and tools of analysis deployed at country partner level.

- Creating a systematized political and security risk identification and monitoring system incorporating input from national and regional sources to ensure that conflict-sensitive threat and vulnerability analysis is conducted in a consistent and timely manner across the GPE portfolio.

- Recommendations on and (if requested) provision of continuous monitoring and review of politics and security in targeted high-risk territories.

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25 Willis Towers Watson has deep experience, in Special Contingency Risks Ltd., of successful conflict sensitive analysis and programming for the UN, DFID, GIZ, the World Bank and a number of I/NGOs and local partners. These skills have played a part in successfully bridging strategic planning and field implementation in a number of countries. Indeed the approaches pioneered by SCR staff members have now been adopted by UNDP, DFID and GIZ in their Risk Management Offices.
- Capacity-building assistance in political and security scenario-building and trigger identification techniques.

- The production of strategy and plan for the integration of ‘Do No Harm’ and other conflict sensitive contextual analysis tools and principles, such as GPE’s own, across the organization in order to inform periodical Program Management Board risk reviews.

- Advice on country-specific mitigation strategies prior to and during crisis.

### 6.3 Value-added

The consistent and systematic application of context-driven political and security analysis and mitigation will:

- Allow GPE and partner countries to demonstrate that it is fulfilling its duties in the identification of, deflection, and response to risk through consistent and actionable political and security risk management.

- Bring early warning of conflict and security risks.

- Allow the building of likely scenarios to be monitored.

- Inform risk mitigation measures such as political and partner influence, interventions and community messaging.

- Reduce the chances of the program itself exacerbating conflict.

- Increase the resilience of GPE, its reputation and its funds to political risk related security shocks.

The analysis of current trends and thoughtful hypotheses for overcoming financial, technical, and political constraints to effective implementation are not present in ESPs. Including potential loss values promotes strong ownership by key stakeholders in the needs assessment process. Moreover, adopting this approach for a needs assessment will provide for robust approaches to monitoring and evaluation.

### 6.4 Integrated needs assessments

Increasingly, a Damage and Loss Assessment (DaLA) Methodology is used to conduct needs assessments in areas affected by political risk related shocks. This is a flexible tool which can be adapted to specific disaster types and requirements of ownership by governments. The DaLA approach bases its assessments on the overall economy of the affected country and uses the national accounts and statistics of the country government as baseline data to assess damage and loss. It also factors in the impact of disasters on individual livelihoods and incomes to fully define the needs for recovery and reconstruction (GFDRR, 2017).

Moreover, damage is quantified as the replacement value of totally or partially destroyed physical assets and losses in economic flows that arise from the temporary absence of the damaged assets. Measurements of the resultant impact on post-disaster macroeconomic performance, with special reference to economic growth / GDP, the balance of payments and fiscal situation of the Government are

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26 GPE’s principles build on the OECD’s principles.
also quantified. These metrics can be refined to focus on damage on the education sector both direct (rebuilding schools) and indirect (reduced economic spending on education).

GPE could consider building on this methodology, and the approaches listed above, to develop a robust needs assessment process, which would incorporate the requirements for both natural catastrophes and political risk related shocks within the same framework. Acknowledging that these perils are frequently related, where a natural hazard leads to a political risk shock, a complete understanding of these needs together compounds the benefits of assessing each separately. Understanding natural hazard and political risks together, with a structure in place to adopt a long-term view of the risk, is inherently valuable. Similarly, by adopting a flexible framework, GPE can support partner countries and their context specific requirements whilst creating and, in a number of cases enhancing, the data needed for an effective and efficient response.
7 Risk Methodologies

GPE partner countries must address preparedness, prevention, and risk mitigation and, through the ESP process, use a risk methodology sensitive to the partner country context. This includes an analysis of vulnerabilities including both natural hazards and political risks.

The insurance industry has built a number of risk methodologies to assess political risk related shocks (building on the expertise developed from natural catastrophe modeling approaches) that are relevant to the challenges faced by GPE partner countries.

7.1 Modelling

7.1.1 VAPOR

The standard methodology for assessing political risk is often a traffic light system which is out of date from the moment it is published, due to the dynamic nature of the risk. Any standardized methodology such as this is completely insufficient for GPE and therefore utilizing a more sophisticated methodology based on the principles of natural catastrophe modeling will provide a greater indicator of the likelihood of a political risk event creating an interruption to the education system in a GPE partner country.

The Oxford Analytica / Willis Towers Watson VAPOR (Value at Political Risk) system allows organizations to assess and compare the implications of exposure to a suite of political risks – in individual countries, regionally or globally – using an interactive online tool that is updated quarterly to reflect geopolitical events. The VAPOR model covers six political risk perils across eleven industry types in over 160 countries.

The following VAPOR outputs can help GPE’s partner countries understand their vulnerabilities to political related shocks:

- Frequency assessments
- Vulnerability assessments
- Confidence assessments

For GPE’s partner countries, confidence assessments could provide a useful high-level tool for preparedness as they ask whether the society in question is subject to any potential foreseeable contingencies that might alter political risk conditions.

Past is not necessarily prologue in political risk, so a simple assessment of the historical trend – or of current conditions – would often not provide a complete picture of political risk related shocks.

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27 See Annex 43 for a more detailed explanation.
The information requirements for VAPOR modelling of a GPE country education sector, with budget broken down on a country by country basis as a starting point, would be the following:

- Security arrangements at each of the school locations
- Exact location of each ‘investment’ (so each school or administrative building)
- Value of each ‘investment’ per country
- Tenor of the ‘investment’
- Taxes or royalties payable
- Details of any special dispensations received from the government
- Details of any disputes with the government

### 7.1.2 Political risk scenarios

In collaboration with Willis Towers Watson, the Cambridge Centre for Risk Studies have developed a series of scenarios\(^{28}\) to illustrate the effects and issues of managing the risk from selected threats (including political risk related shocks), including developing a standard process for specifying and analyzing scenarios for use as stress tests.

Adopting a risk-informed, scenario based approach in conjunction with the modeling of political risk related shocks is particularly relevant when considering the GPE portfolio, where the quality of probabilistic data may not provide the full picture of future risks.

### 7.2 Development of parametric models for political risk related shocks

One key outcome from this report is to explore the possibility of parametric insurance for political risk related shocks. The development of parametric insurance and creation of indexes for political risk shocks is nascent, and a transaction has not yet been conducted (to the best of our knowledge). Given the inherent moral hazard of a traditional indemnity based approach of risk transfer for GPE’s portfolio, adopting a parametric insurance approach where GPE holds the risk at a portfolio level (either on behalf of, or for the benefit of partner countries) provides an opportunity to create robust risk transfer mechanisms with pre-defined claims payouts reaching affected communities whilst building transparency and delivering money rapidly.

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\(^{28}\) These can be found online at http://cambridgeriskframework.com/downloads.
GPE guidelines outline a number of situations where adapted operational modalities will be considered, including:

- Coup d’état.
- Large-scale violence or armed conflict within the country.
- Large-scale emergencies as defined by UNOCHA (Global Partnership for Education, 2013).

Further discussions with partner countries could look to develop the above indicators as trigger scenarios in order to create an index where the above event would be seen to trigger a pre-determined pay-out, much like the structure developed below in relation to refugees (this is expanded upon in the Task 2 Report).

Box 7.1 uses Chad as an example to outline a potential parametric risk transfer mechanism to support education provision to displaced communities.

**Box 7.1 Risk Financing: Education for displaced communities in Chad**

GPE’s portfolio of countries makes traditional risk transfer mechanisms such as indemnity insurance challenging. The absence of sufficient data to understand the possible losses from a political risk related shocks as well as the moral hazard of insuring governments contribute to the difficulties. However, the development of parametric insurance could provide a basis to explore a risk financing mechanism which enhances risk management as well as governance mechanisms to build resilience for the GPE portfolio.

GPE currently has an established framework for engaging in contexts of political risk related emergencies, such as the displacement of people, which offers a platform upon which to build a risk financing structure. GPE’s support in emergency contexts has three main components:

- Accelerated financing;
- Transitional Education Plans; and
- The Operational Framework for Effective Engagement in Fragile and Conflict-affected States.

Most applicable to the development of a parametric risk transfer mechanism is the accelerated financing component, which could be further enhanced by adopting a risk financing approach.

In 2016 Chad received a US$ 6.9 million grant through GPE’s accelerated financing to respond to the influx of large numbers of refugees and returnees fleeing violence from nearby states (Global Partnership for Education, 2016).

The Chadian experience provides one example of integrating refugee communities into the national education plan and curriculum. The education needs of a refugee community apply additional pressure on the host government, including meeting the additional costs of a sudden increase in demand for education (see section 5). For Chad, the effort to accommodate displaced people included supporting school feeding, dignity kits for girls, civics education, classroom construction, water and sanitation needs in schools, in-service teacher training, textbook distribution, and literacy for out-of-school youth. It also resulted in the training of Sudanese refugees as teachers (with enrollment in a national teacher training institute) and more than 250 Chadian teachers being relocated to support the education of the refugee community.
There were some limitations to the Chad program (and its possible replicability) as well as some ongoing challenges, which can be separated into two distinct categories—those relating to the finance mechanism and those relating to program implementation.

**Timing**

For a country or state to be eligible for accelerated financing from GPE it must satisfy three criteria:

a) eligible for education sector program implementation (ESPIG) grant funding;

b) affected by a crisis for which a humanitarian appeal has been launched and published by the UN Office of Coordination for Humanitarian Affairs, with education as a part of that appeal; and

c) able to demonstrate that GPE funds will not displace government and/or other donor funds, but will be additional to other resources.

Following confirmation of eligibility, the GPE partner country enters a 7-step process, including the appointment of a Managing Entity to manage the funds, whilst also developing a proposal based on an emergency needs assessment.

GPE’s accelerated financing mechanism is indeed rapid in its design; however, it relies on the timing of a number of independent variables, such as UNOCHA’s appeal process, and GPE’s own internal decision-making, which can impact upon the overall timeframe of response, as was the case in Chad.

Moreover, the mechanism relies upon the creation and enhancement of coordinated relationships to generate the proposal for implementing the emergency assistance plans based on a needs assessment, demonstrate that GPE funds will not displace government or other donor funding, and develop a high level operational plan with indicative budgets and activities.

**Implementation**

There are some challenges with implementing the plan to address need in Chad, which may have an impact on educational outcomes. Currently in Chad, 90,000 Sudanese refugee children are being served by only 62 schools (UN High Commissioner for Refugees, 2016). Additionally, the student to teacher ratio has been identified as the cause of low numbers of children progressing from primary (64 percent enrollment) to secondary education (39 percent enrollment). UNHCR have identified a lack of funding for books, classroom refurbishment, and the building of schools as key barriers (UN High Commissioner for Refugees, 2016).

UNICEF are the implementing partner for the accelerated financing grant in Chad, however, a number of operational challenges have led to significant delays in paying additional staffing resources as well as governance changes so educational accountability is under scrutiny. Whilst beyond the control of GPE, implementation delays affect the education outcomes of the grant and may have been avoided if plans were positioned upon pre-agreed relationships and roles.
Accelerated Risk Financing Instrument

By highlighting the challenges that Chad faces as the host of a refugee community, the section below outlines how incorporating robust risk financing could significantly enhance GPE’s accelerated financing mechanism as a response to political risk related shocks resulting in refugee flows. GPE’s Accelerated Risk Financing Instrument is outlined below:

Risk information

The need for consistent data concerning political risk related shocks has been discussed (see section 5). Building on this data collection with regard to forced displacement, a set of pre-defined triggers relating to the movement of people can be established. These can be set at levels which all parties agree and would reflect the host government’s capacity.

Given this instrument is unlikely to use the private market, these triggers would only need to be agreed between the grantor and recipient and could be agreed during ESP preparation. A benefit of adopting pre-defined triggers is the mitigation of moral hazard associated with shifting education funds from one country to another. Moreover, the availability of a trigger-based instrument in political risk shock contexts could provide confidence for the host country that funds will be deployed which can overcome policy priority concerns. The presence of this index could provide a baseline dataset to be improved as more events take place, encouraging the collection of systematic risk information.

Based on triggers, GPE could engage the international community, through the education cluster, to create a set of contingency plans to address the context specific needs before they arise. These contingency plans would involve host governments, LEG, the Education Cluster and pre-identified implementation partners so that rapid response can be mobilized, removing the sudden need to establish and coordinate these relationships post-event.

Cost of capital

A trigger based finance instrument designed to deliver on needs pre-identified by accelerated financing risk modeling could significantly reduce the ultimate cost of capital. As outlined in Task 2, the cost-benefit analysis of pre-positioned financing is significant. GPE’s accelerated finance model currently requires an integration into the traditional humanitarian financing appeals (ex post), which can slow the flow of aid to education and reduce cost-efficiencies. Moreover, as outlined by Task 1, post-event financing of disasters does not prioritize educational needs.

Timeliness

Rapid deployment of this financial instrument, delivered through the GPE implementation partner would streamline the GPE process to reduce the current timescales of 4-8 weeks (which are already quicker than the international aid system) to 14 days for the transfer of funds. Prior contingency planning would result in the possibility of almost immediate implementation.

This trigger based approach could also remove delays relating to policy decisions of the host government to request assistance from GPE. Moreover, the process of contingency planning would avoid delays, as external actors would be in country and ready to implement.

Discipline

This risk financing instrument, relying on an index with contingency plans in place, could increase transparency and discipline (see Task 2 for ARC benefits). Moreover, it could allow the instrument to be replicated across the GPE portfolio by incorporating a consistent risk discipline to reduce needs as opposed to an ad hoc approach.
Ownership

The clarification of the risk ownership to provide education for refugees is one of the most significant obstacles to addressing the need, and it must be adopted, as in the case with Chad. Forced displacement shifts the risk from affected governments (e.g. FCAS) to the conflict-affected communities unless this risk is adopted by host governments. Ultimately, given GPE’s mandate to fund the provision of education, in the displacement context, risk can be mitigated by facilitating the recognition of risk ownership back at the government level.

Contingency planning with a defined set of triggers can clarify ownership. For Chad, the ownership sits with the Ministry of Education, and the response is deployed through an implementing partner, UNICEF. In other cases, for example the Rohingya refugee community in Bangladesh, international partners could initially own the risk, avoiding the perception of diverting host country funds and instead, supplementing them (UN High Commissioner for Refugees, 2007).

Accelerated Risk Financing Instrument – Scaled

GPE’s risk financing strategy could be further scaled up to address more political risk related shocks, moving beyond refugee flows as triggers and developing an index capable of triggering a number of responses; for example, a global price shock trigger could be developed as political risk data is collected by partner country ESPs and monitored on an ongoing basis.

GPE could move beyond the limitation of a 20% draw down, as currently structured, and establish a risk sensitive financing approach that resembles a political risk captive – i.e. creating a bespoke insurance vehicle held for the benefit of GPE’s partner countries. Whilst a change in current institutional arrangements may be required, GPE could consider adopting such a portfolio approach to manage the political risk of all of their partner countries, providing the essence of the protection of a risk transfer mechanism without the actual risk transfer to external parties.

Moreover, by virtue of having this transparency and accountability structure in place, GPE could adopt a formalized role to receive international funding to provide education for refugees (see Madsbjerg, 2016), addressing the issues of scale needed to respond to the displacement of people on an international level, while also creating robust mechanisms, which could attract additional international donor resources.
8 Recommendations

This report set out to explore the feasibility of risk financing for political risk in the education sector and concludes with the following recommendations:

**A comprehensive and structured disaster risk management approach is needed to build resilience for the education sector to political risk related shocks. This effort must begin with data.** This report undertook an analysis of the available data to understand the exposure of GPE partner countries to the full spectrum of political risk related shocks as identified under the adopted risk taxonomy. The data currently available is inconsistent, and often absent. To develop a more rigorous understanding of the GPE portfolio’s political risk profile, data collection is a priority. Education sector plans offer an opportunity to collect consistent and specific political risk data at the country level.

**Political risk related shocks can be understood using catastrophe modeling techniques and scenarios.** GPE’s portfolio of developing partner countries is at risk from political related shocks, with a number of countries affected by full-scale conflict. GPE faces significant uncertainty as to the stability and resilience of the education sectors of partner countries to political risk related shocks. GPE can look to utilize a number of risk methodologies to assess political risk related shocks – building on the expertise developed from natural catastrophe modeling approaches – that are relevant to the challenges faced by partner countries, including risk modeling and scenario planning to reduce risk and mitigate loss.

**Risk financing is feasible for political risk related shocks where costs to the education system can be quantified.** Political risk insurance creates an evidence base for investment in *ex ante* risk reduction and mitigation efforts as a cost-effective method to reduce the size and scope of a disaster, where the size of losses can be quantified. While losses to the education sector due to natural disasters are quantified in PDNA reports, these reports are not currently carried out for political shocks. In order to increase the predictability of post-shock funding, impacts, costs, and needs must first be quantified; without an idea of ‘value at risk,’ it is unclear how to adequately pre-position finance. Education sector plans offer an opportunity to develop more consistent data on unit costs, and we recommend that data be collected on losses to the education sector due to political shocks going forward.

**An Accelerated Risk Financing Instrument provides a risk sensitive mechanism to respond to political shocks.** Whilst parametric insurance does not currently address political risk related shocks, the development of transparently defined triggers to inform an index of political shocks can be undertaken by GPE. GPE’s existing accelerated financing mechanism used in Chad could be developed to pre-position funding in the case of forced displacement, ensuring that pupils maintain access to education regardless of nationality. This would be replicable in other political crises and would build in the governance to reduce the needs and timescales post-shock. Further, the use of triggers builds in transparency and efficiency, which goes towards solving the problem of the unpredictability of funding shock events. Ultimately, GPE can leverage their innovative risk finance approaches to demonstrate increased transparency and accountability, inviting additional funds from donors.
References


South Sudan Education Cluster (2012). Occupation of Schools by Armed Forces (Briefing note 071211).

UN High Commissioner for Refugees (2007). Bangladesh: Analysis of gaps in the protection of Rohingya refugees.


