BUSINESS & PEACE REPORT 2021

PEACE: A GOOD PREDICTOR OF ECONOMIC SUCCESS

IEP

Institute for Economics & Peace

Quantifying Peace and its Benefits

The Institute for Economics & Peace (IEP) is an independent, non-partisan, non-profit think tank dedicated to shifting the world's focus to peace as a positive, achievable, and tangible measure of human well-being and progress.

IEP achieves its goals by developing new conceptual frameworks to define peacefulness; providing metrics for measuring peace; and uncovering the relationships between business, peace and prosperity as well as promoting a better understanding of the cultural, economic and political factors that create peace.

IEP is headquartered in Sydney, with offices in New York, The Hague, Mexico City, Brussels and Harare. It works with a wide range of partners internationally and collaborates with intergovernmental organisations on measuring and communicating the economic value of peace.

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Contents

Executive Summary

This report analyses the relationship between the economic performance of a country and its levels of peace. The major finding is that peace acts as a reliable predictor of a country's future performance for a number of macro-economic indicators. These insights can be used to better assess the investment potential of countries. This research can help the design of financial investment products that are likely to yield higher returns, produce more comprehensive country assessments for companies who are deciding where to invest and determine better future ESG outcomes.

Rather than asking what businesses can do for peace, this study differentiates itself by focusing on what peace can offer businesses. The Institute for Economics & Peace (IEP) sees this as an important, but missing step in business analysis. In order for the private sector to engage with peacebuilding, investors first need to see the benefits of peace to their investment decisions.

This work shows that economic performance can be predicted by movements in the same socio-economic developmental factors that affect peacefulness. These conditions are known as Positive Peace.

The global economic impact of violence was $14.4 trillion in 2020. This is broadly equivalent to the entire economy of China. If humanity were to reduce violence by ten per cent per annum, the savings of $1.4 trillion would broadly equate to adding an economy the size of Russia's or Brazil's every year to the global fold.

The burden of violence on an economy is self-evident. However, this report focusses on the converse perspective: countries that improve their underlying conditions, as gauged by IEP's measures of peace, create the potential for a significant peace dividend for business.

Countries that enjoy high levels of peace recorded GDP growth rates two percentage points higher than low-peace countries over the past sixty years. Greater peacefulness is associated with higher levels of business and technological innovation, higher worker productivity and less administrative red tape. Creditors are more likely to lend in high-peace countries, with many recording levels of credit to the private sector as high as 150 per cent of GDP, compared to 50 per cent for less peaceful nations.

In the nine years to 2019, the real GDP growth of a portfolio of nations performing well in IEP's measures of peace produced a 33 per cent higher return than the global average. The Positive Peace Index was the main factor used to forecast superior economic performance by nation states.

Using the same methodology, it was found that growth in corporate profits in countries improving in peace was 26.5 per cent higher than the global average over the past decade.

Other macro-economic factors that are important to business also showed similar superior performances. Some of the more significant findings include:

- *Less volatile inflation*. Countries improving in Positive Peace recorded inflation rates four times less volatile than those with deteriorating Positive Peace.

- *Lower interest rates*. Very high Positive Peace countries have interest rates ten percentage points per year lower than very low peace countries. The variability and unpredictability of interest rates is also lower among the most peaceful nations.

- *More robust consumption*. Household consumption in countries improving in Positive Peace grew by four per cent per year over the past decade — almost twice the rate of countries where Positive Peace deteriorated.

- *Higher rates of foreign direct investment*. The most peaceful countries receive FDI inflows of around three per cent of GDP per year. This compares with one per cent for the least peaceful countries.

These results underscore the role of IEP's measures of peace as an instrument to detect and forecast superior economic and investment performance. The reason for such superior returns lies in the relationship between the factors that create peace and those that create a robust business environment — they are the same.

Some of these factors are the functioning of certain aspects of government, levels of corruption, the distribution of wealth, human capital and access to critical information. For example, the Positive Peace Pillar *Free Flow of Information* is not only critical for an informed populace, but also helps with market integration due to greater availability of information on prevailing prices. *Good Relations with Neighbours* helps in keeping tariff levels low, which is crucial for the efficient allocation of inputs available to the economy. Greater *Acceptance of the Rights of Others* and *Equitable Distribution of Resources* increase the economic participation of marginalised groups, in turn lifting their purchasing power as well as lessening civil unrest. Progress in *Well-Functioning Government* and *Low Levels of Corruption* improve the everyday lives of citizens, but also reduce the cost of regulatory compliance for businesses and guarantee the enforcement of contracts. These are examples of the benefits to peace and business from improvements in the same underlying social factors.

During the onset of the COVID-19 pandemic and the global recession in 2020, 255 million full-time jobs were lost. However, among high-income countries and countries belonging to the BRICS group, nations that operated with high levels of Positive Peace had the enabling environment to protect their workforces from the worst impacts of the pandemic. Total working hours in countries with high levels of Positive Peace fell by less than seven per cent in 2020 relative to the previous year. In contrast, countries with lower levels of Positive Peace saw reductions of up to 23 per cent.

IEP has developed a framework to measure peace in an objective, transparent and auditable way. It has been tested and progressively fine-tuned over time. A country's progress in this framework is associated with increased peacefulness, but also with superior financial returns, outcomes on ecological measures, wellbeing and happiness surveys, and gauges of resilience and adaptability.

Peace is also a good predictor of future environmental, social and governance (ESG) performance. Two of the world's leading ESG measures are the Morgan Stanley Investment Management (MSIM) and the BNY Mellon indexes. The MSIM is significantly correlated with Positive Peace with a coefficient of 0.84, while the BNY's is correlated at 0.91. Positive Peace, as a measure of a country's social system resilience, tends to change slowly. However, improvements or deteriorations tend to be self-reinforcing, with these cycles lasting for multiple years. Therefore, Positive Peace is a reliable predictor of future ESG performance.

Economic performance and peace are often mutually reinforcing. That is, better economic performance assists in building peace and vice-versa. Together they can form a virtuous cycle. Similarly, a worsening performance in peace hinders economic growth, thus forming a vicious cycle. The economy and peace can therefore be thought of as a system that can move in either a beneficial or destructive direction. Identifying tipping points within this system, positive and negative, is of obvious interest to business and the broader community.

IEP's work is used by many financial benchmarking products. For example, IHS Markit — a finance and business research house with global reach — uses the GPI as a gauge for the level of peace of countries on multiple ethical investment indices. The London School of Economics (LSE) worked with IEP to explore the challenges of measuring corporate impacts in fragile and conflict-affected environments. The Positive Peace framework is also being used to assess regions with favourable economic climates and investable markets by the ECP Global Positive Peace Growth Fund.

This report focuses on trends leading to 2019 to avoid the distortionary effect of the COVID-19 pandemic of 2020 and 2021. The objective is to study the long-term systemic relationships between peace and favourable business environments, which are likely to resume once the present disruption abates. However, chapter three develops an analysis of some challenges and opportunities for a post-pandemic recovery.

Business leaders work to build-up their client base, workforce, goodwill, intellectual property and physical assets, while employees also dedicate their time and effort to contribute to corporate success. Furthermore, financiers risk their capital to support business growth and legislators and regulators set up the ground rules to guarantee institutional stability and equality of opportunity. However, a key contribution often goes ignored. The condition of a society that guarantees that workers are safe and healthy to perform, that the integrity of physical assets and infrastructure is preserved, that contract terms are upheld, that households are prosperous and feel safe to support consumption, that specialists have the resources to innovate, that entrepreneurs feel secure to establish new ventures. This contribution is the peace dividend, without which the other efforts would not bear fruit.

Analysis of the links between business and peace, through the lens of Positive Peace, offers the business community a new way of assessing the risk of investments and identifying the potentially large opportunities that exist in under-examined countries.

Key Findings

- Positive Peace and the Global Peace Index can be analysed together to predict future economic outperformance.
- Countries that have very high levels of peace recorded two percentage points per annum higher GDP growth than countries with very low peace over a sixty-year period to 2019.
- In the nine years to 2019, the real GDP growth in the Positive Peace portfolio was 33 per cent higher than the global average.
- Using the same methodology, real corporate profits of countries improving in Positive Peace outgrew global averages by 26.5 per cent in the last ten years.
- Countries with good performance in the Positive Peace Index recorded inflation rates four times less volatile than those with deteriorating levels of Positive Peace.
- Very high Positive Peace countries have interest rates ten percentage points per year lower than very low peace countries. The variability and unpredictability of interest rates is also lower among the most peaceful nations.
- Banks provide credit to the private sector of up to 150 per cent of GDP in the most peaceful high-income countries. In less peaceful countries this proportion is around 50 per cent.
- The most peaceful countries receive FDI inflows of around three per cent of GDP per year. This compares with one per cent for the least peaceful countries.
- The World Bank's Ease of Doing Business research is strongly correlated with the Global Peace Index. The higher a country's level of peace, the easier it is to resolve disputes, settle insolvencies and enforce contracts.
- The global economic impact of violence was $14.4 trillion in 2020. This is broadly equivalent to the entire economy of China. If humanity were to reduce violence by ten per cent per annum, the savings of $1.4 trillion would equate to adding an economy of the size of Russia's or Brazil's every year to the global fold.
- Nations with higher levels of Positive Peace were better able to shield their labor markets from the worst effects of the lockdowns and recessions. This is consistent with the view of Positive Peace as a gauge for resilience in socio-economic systems.
- Countries belonging to the high-income and BRICS groups that show lower levels of Positive Peace recorded larger reductions in total hours worked in 2020. High Positive Peace counties recorded reductions of less than seven per cent, while low Positive Peace countries recorded up to 23 per cent.
- Positive Peace is an accurate predictor of future ESG outcomes for sovereign nation state classifications, given the robust links between the Positive Peace Index and ESG measures.
- The correlation coefficient between the Positive Peace Index and ESG scores compiled by Morgan Stanley Investment Management (MSIM) is 0.84, and by BNY Mellon is 0.91.
- Positive Peace trends indicate that the sovereign markets most likely to improve from their current ESG standings in the future are Georgia, Lithuania, Armenia, Kosovo, Bhutan, the United Arab Emirates, South Korea, Malaysia and Kazakhstan.

1 Business and the Peace Dividend

Key Findings

- Countries which have very high peace recorded two per cent per annum higher GDP growth than countries with very low peace over a sixty-year period to 2019.
- The World Bank's Ease of Doing Business scores are strongly correlated with the Global Peace Index.
- Higher levels of peacefulness are statistically associated with higher levels of innovation, with better performances for trademark applications, university collaboration and more research in business.
- The higher a country's level of peace, the easier it is to resolve disputes, settle insolvencies and enforce contracts.
- Not only does productivity increase with peace, but also productivity growth increases with peace. Violence erodes physical assets and infrastructure and increases the costs of workforce turnover and absenteeism.
- Greater peacefulness is statistically linked with higher availability of credit to the private sector. Creditors are more likely to lend in high peace countries, with many achieving levels of credit to the private sector as high as 150 per cent of GDP.
- The factors that lead to peace are also those that create efficient and transparent institutions. Thus, greater peacefulness is associated with more efficient regulation of the private sector and more effective enforcement of contracts.
- The global economic impact of violence was $14.4 trillion in 2020. This is broadly equivalent to the entire economy of China. If humanity were to reduce violence by just 10 per cent per annum, the savings of $1.4 trillion would equate to adding an economy of the size of Russia's or Brazil's every year to the global fold.

INTRODUCTION

This report assesses the relationship between peace and the macro-economic conditions that are favourable for business. The analysis finds that on average, societies that are more peaceful substantially outperform those that are less peaceful on a range of factors that underpin a robust business environment. This finding is also true when analysing the socio-economic factors that build and sustain peaceful societies, known as Positive Peace. These factors can be used to predict superior future economic performance.

Violence is undesirable due to the humanitarian and psychological burden it imposes on individuals, households and communities. In addition, research demonstrates that peace and stability are fundamental conditions for businesses and communities to thrive.

This chapter assesses the relationship between peacefulness and business activity from two angles. Firstly, it highlights the correspondence between economic income and peace, as measured by the Global Peace Index (GPI). Economic income is the direct result of business activity and as such is a reliable measure of success in the corporate, small and medium enterprise (SME) and unincorporated business sectors. These findings are discussed in the section Business and the Peace Dividend. Secondly, the section Relationship between Peace and Business Conditions directly addresses the impact of peacefulness on operating conditions such as worker productivity, financing, innovation and regulation.

The analysis focuses on high-income countries, using country classifications defined by the World Bank, but it also covers emerging nations using other measures important for business success. Investors and businesses tend to see the high-income countries as desirable investment destinations given their stable political and economic scenarios and the high level of technical innovation. However, opportunities also exist with less developed countries that have superior performance on Positive Peace.

The analysis uses data up to 2019 and therefore does not cover the COVID-19 pandemic. This is because the objective is to identify long-term relationships without distortions from the economic shock of 2020 and 2021.

BUSINESS AND THE PEACE DIVIDEND

Although the thrust of this report explains the broad effects of violence on business, it is advantageous to review the literature on war and its effects on the economy. Some observers have proposed that conflict and war may spur technological advances and even promote short-term spurts of economic growth in countries not directly affected by the destruction. For instance, gross domestic product (GDP) in the United States (US) grew at an annualised rate of around eight per cent immediately prior to World War II. But, buoyed by the war effort, this rate jumped to 17 per cent per year between 1941 and 1943.[1] Others argue that a war effort may boost the economy by promoting activity in the military industrial complex, which may eventually trickle through to the rest of the economy.

However, these views usually focus on a few variables and do not take into account other important conditions. For example, while GDP did grow during the World War II, US government debt increased to record levels. A more systemic, or holistic, assessment clearly shows that the physical and psychological damage caused by conflict will far outweigh possible benefits accruing to specific sectors or regions. In addition to the short-term destruction, conflict brings negative medium-term to long-term consequences that will continue to weigh down on economic prosperity even many decades after guns fall silent. In one example, researchers from the Institute for the Study of Labour found that the losses and trauma from World War II were still negatively affecting health, aging and retirement outcomes in some European countries as late as 2009.[2]

The full impact of conflict cannot be captured with the same conventional methods that measure economic activity. In a recent paper, researchers from the Cato Institute concluded that "careful measurement of war in the context of a large data set indicates that *war is not good for business*. In addition to the loss of lives and destruction of physical and human capital ignored by national income accounting, and the mistreatment of the cost of war as a positive value by national income accounting, the tendency is for war to reduce GDP per capita as measured. Countries that suffer from war *underperform in terms of production* and also *underperform in terms of consumption*".[3]

The same rationale applies to violence caused by high levels of criminal activity or political turmoil. The physical damage is immediate and highly disruptive, but in addition, the long-term negative psychological, health and attitudinal impacts will suppress socio-economic development for generations.

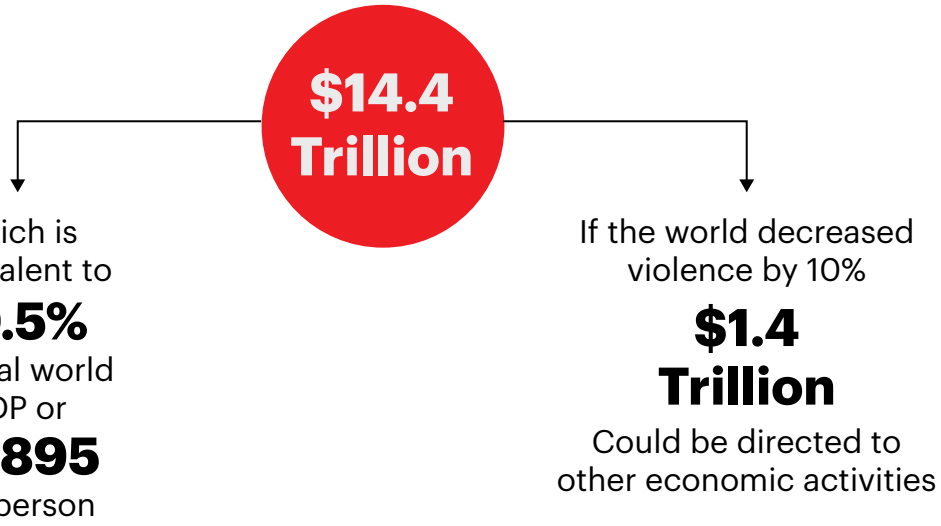
Cost of violence to the global economy

In an attempt to shed light on losses due to violence, IEP estimates the global economic impact of violence is at $14.4 trillion in 2020 (Figure 1.1).[4] This number is broadly equivalent to the entire economy of China. The estimate includes the costs of conflict, crime and expenses involved in maintaining security apparatuses around the world. If humanity were to reduce violence by a mere ten per cent per annum, the savings of $1.4 trillion would equate to adding an economy the size of Russia's or Brazil's every year to the global fold.

FIGURE 1.1

Global cost of violence, 2020

Violence detracted $14.4 trillion from the global economy in 2020, broadly equivalent to the entire economy of China.



Source: IEP

Links between peace and favourable business conditions

As demonstrated in Figure 1.2, the connection between peace and a favourable business environment occurs through multiple channels:

- Firstly, violence directly lowers economic productivity due to incapacitated workers and damaged or destroyed physical capital.
- Secondly, the energy, time and effort required to rebuild an eroded human and physical capital base could be more productively employed in the generation of new ideas, new technologies, new businesses and products.
- Thirdly, the instability and insecurity created by fear of violence suppresses household consumption, as individuals curtail demand to save for future negative contingencies. The savings resulting from this process are not fully re-applied into the economy, being instead kept idle or remitted abroad.
- Fourthly, fear of pervasive violence and loss of capital, reduces tolerance of risk and the willingness of firms to invest in new capacity or products.
- And finally, the need to finance a large security apparatus means that public funds are diverted away from more useful applications such as health, education or business stimulus packages; it also means that government tax burdens on the private sector and households tend to be higher than under more peaceful conditions.

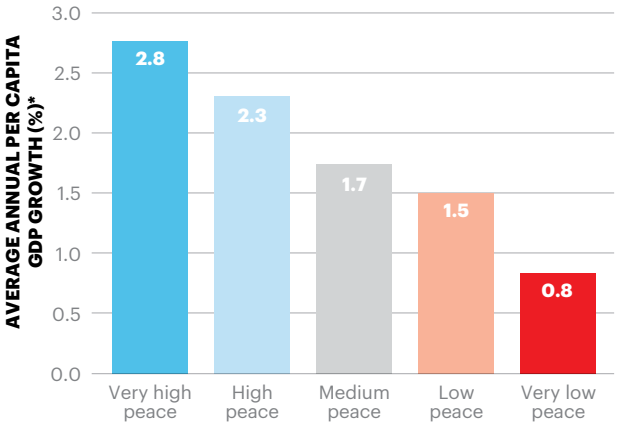
Over the years, IEP has developed multiple frameworks to measure peace in an objective, transparent and auditable way. This framework, summarised in Box 1.1, was designed and progressively fine-tuned following academic research and practitioner insights into the field of peacebuilding and socio-economic development. This approach is guided by an independent panel of experts and has been the linchpin of IEP's collaboration with organisations such as the United Nations, The Organisation for Economic Cooperation and Development, the European Union and the Commonwealth.

Peace is intrinsically linked with favourable economic and business conditions. On average, countries that enjoy higher levels of peace have observed growth rates in per-capita income over three times as high as those of the least peaceful countries (Figure 1.3).

FIGURE 1.3

GDP growth by level of peacefulness, 1960–2019

Countries with very high levels of peace achieved on average over three times higher per-capita GDP growth compared to the least peaceful countries.

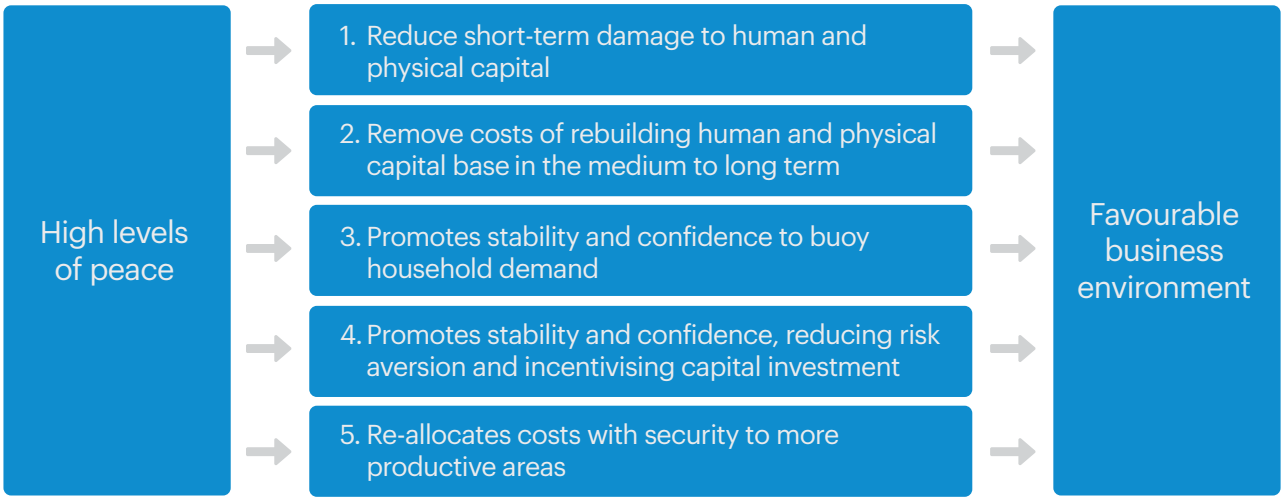


Source: IEP, World Bank
Note: *Constant 2010 US dollars

FIGURE 1.2

The relationship between peace and favourable business conditions

The positive influences that create high levels of peace also create favourable environments for business and manifest in multiple ways.



BOX 1.1

Measuring peace

IEP has developed two main frameworks to measure peace:

- **Actual Peace** is defined as the *absence of violence or the fear of violence* and is measured by the Global Peace Index (GPI). This is a 'negative' concept and is also known as negative peace, as it is defined by an absence or non-existence of something. The GPI is constructed with indicators of violence such as crime rates, number of violent demonstrations, militarisation, suppression and many others.
- **Positive Peace** is defined as the *attitudes, institutions and structures that create and sustain peaceful societies*, and is measured by the Positive Peace Index (PPI). This is a positive aspect of peace because it highlights the necessary ingredients for stable, productive and beneficial relationships among individuals and groups. The PPI is constructed with indicators of socio-economic, administrative and institutional development.

The GPI is produced annually by IEP and ranks 163 independent states and territories according to their level of peacefulness. It stands as the world's leading measure of global peacefulness and is composed of 23 qualitative and quantitative statistical indicators from respected sources. It was developed with the oversight of an independent panel of experts and encompasses 99.7 per cent of the world's population.

The GPI is comprised of three domains, with each measuring a different aspect of actual peace in a country. The first domain, *Ongoing Domestic and International Conflict* assesses a nation's involvement with external or internal conflicts and wars. *Militarisation* gauges a country's military build-up. And *Societal Safety and Security* assess the degree of harmony or discord within a country. For the GPI and for each of these domains, a score close to 1 indicates high levels of peace and scores closer to 5 indicate low levels of peace.

The PPI measures the level of Positive Peace in 163 countries. It is composed of 24 indicators grouped into eight areas known as the Pillars of Positive Peace. Each of the 24 indicators was selected based on the strength of its statistically significant relationship with the GPI. For a detailed explanation of the GPI and PPI results and methodologies, and to explore the interactive map of global peace, visit **www.visionofhumanity.org**.

The benefits that businesses and the economy in general enjoy in high-peace environments can be considered a peace dividend. In this report this term refers to the efficiencies that accrue to businesses and the economy by operating in regions with high levels of peace and high levels of Positive Peace.

The peace dividend embodies what peace can do for business, but it also constitutes the rewards that justify businesses actively promoting peace.

Income and safety

The link between violence and economic prosperity is particularly evident when assessed through the relationship between per capita GDP and the GPI *Safety and Security* domain. The correlation coefficient between the two variables is -0.69, denoting a statistically robust relationship (Box 1.2 and Figure 1.4). This means that high levels of peace are statistically associated with greater levels of income.

This relationship changes according to the different levels of income. Among high-income countries — following the widely used World Bank classification framework — the relationship is particularly robust. The World Bank classifies all countries with a per-capita gross national income of US$12,536 or more in the 2021 fiscal year as high income.[5]

BOX 1.2

Relationships between variables

Relations between two variables are measured by the correlation coefficient, which ranges from zero to one. When the two variables are not correlated across the group of countries in analysis, they measure closer to zero. When the two variables are essentially identical, they measure closer to one. In general, when the coefficient is below 0.2, the two variables are considered unrelated to one another. Beyond this value, the relationship is said to be statistically significant, that is, movements in one variable are associated with similar movements in the other. Coefficients above 0.5 usually indicate more robust relationships. A negative coefficient implies an inverse relationship, that is, one variable rises as the other falls. Correlation means the variables move together, in the same or opposite direction but it says nothing about the causes of this co-movement.

FIGURE 1.4

Income and safety, 2019

The relationship between greater income per capita and higher levels of peace is observed for high-income countries, according to the World Bank's classification.

Source: IEP, World Bank

RELATIONSHIP BETWEEN PEACE AND BUSINESS CONDITIONS

The business sector is one of the segments of society that benefits the most from peacefulness. This is because of the efficiencies, stability and predictability brought about by low levels of crime and socio-political turmoil. The 'ease of doing business' indicator compiled by the World Bank suggests that countries that have the most favourable environments for business are also the most peaceful nations according to the GPI (Figure 1.5).

This relationship arises because the fundamental underpinnings of benign business conditions are closely associated with peacefulness. These underpinnings are discussed below.

Worker productivity

Peace is an essential societal attribute supporting the wellbeing and productivity of workers. As discussed above, violence erodes physical assets and infrastructure, undermines investment in health and education and increases the costs of workforce turnover and absenteeism.

Reflecting this, measures of worker productivity are correlated with the GPI *Safety and Security*, as per Figure 1.6. Greater levels of peacefulness are associated with higher worker productivity as gauged by the International Labour Organisation (ILO), with a correlation coefficient of -0.56. This relationship indicates that in approximate terms, for a 1-index-point improvement in the GPI *Safety and Security* (for example, the score decreasing from 2.5 to 1.5) real output per worker would increase by almost $50,000 per year.

Of note, the best representation of the relationship between productivity and peace is non-linear, reflecting the complex systemic characteristic of a social group. At the less peaceful end of the sample, the curve is flatter, which means that improvements in peace are met with small gains in productivity. This is the case for countries such as Bahrain (BHR), Trinidad and Tobago (TTO), Uruguay (URY), Saudi Arabia (SAU) and others. In contrast, at the high-peace end, the curve is steeper, which means that improvements in peace are associated with larger gains in productivity. This is the region of countries such as Singapore (SGP), Japan (JPN), Denmark (DNK), Norway (NOR) and others.

This indicates that not only does productivity grow with peace, but the rate at which productivity grows also increases with

FIGURE 1.5

Ease of Doing Business, correlation with the GPI, all countries, 2019

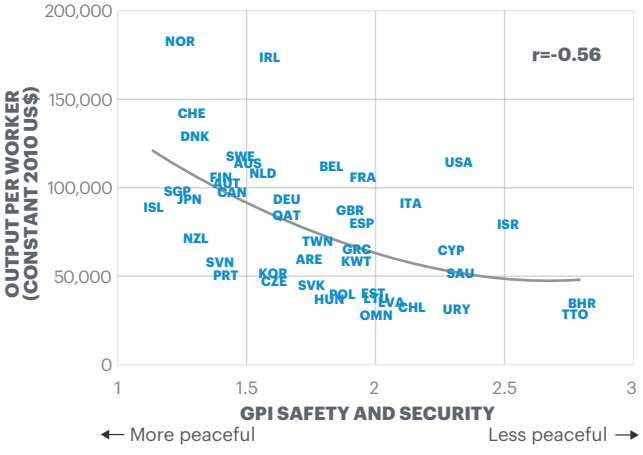
Countries that fare the best in the GPI are also those with the most favourable business environments.

Source: IEP, World Bank Doing Business Program

FIGURE 1.6

Productivity and safety, high-income countries, 2019

The non-linear relationship indicates that not only does productivity increase with peace, but also productivity growth increases with peace.



Source: IEP, ILO

peace. One of the findings from IEP's work is that societies operate as systems and that there are positive tipping points. Productivity and per capita income both display the properties of tipping points. As peace increases from low levels, the gains in productivity are small until a particular point is reached after which small changes in peace result in big increases in productivity and per capita income.

As the country improves its GPI score, it gets easier to increase productivity. Productivity leads to prosperity which in turn — if well distributed — tends to reduce crime and inter-group tensions. This demonstrates the capacity that socio-economic systems have of engaging in virtuous cycles of ever increasing peace and productivity.

These non-linear outcomes or virtuous cycles are characteristics of socio-economic systems. Some details on systems thinking are found in Box 1.3.

BOX 1.3

Systems and systems thinking

Societies and their economies are too complex to be fully described by the traditional approach of cause-and-effect research. This approach tries to identify single causes to specific measured effects or events. Instead, IEP sees the socio-economy as a system where components mutually act on each other, and the workings of the whole are more complex than the simple sum of the parts. This approach provides a new interdependent framework and holistic methodology to the study of peace and societal development.

Some of the properties of social systems are:

- **The system is a *whole***. It cannot be reduced to its parts as individually they will have different patterns of behaviour.
- **The system has *intent and encoded norms***. The intent of a system is its objective or purpose, as for example the intent of the health system is to preserve the health of a population through the efficient use of resources. Encoded norms are the formal or informal social rules that citizens must observe to interact within society.
- **The system is *self-regulating***. It aims to maintain a steady state by stabilising itself through feedback loops. The system adjusts to create balance between inputs, outputs and internally coded requirements so as to maintain homeostasis (equilibrium).
- **The system may observe *virtuous* and *vicious cycles***. Self-regulation opens the possibility that social systems could enter virtuous and vicious cycles. In the former, improvements in peace nudge societies towards greater stability and prosperity which in turn will further reduce violence. In the latter, the feedback loop operates in the opposite direction, with increases in violence destabilising society and reducing prosperity, spurring further violence.
- **The system is *self-modifying***. When there is a persistent mismatch between inputs and its intent, the system searches for a new pattern by which it can function. This creates differentiation from the original system and increases complexity.
- **The system *does not stand on its own***. It is part of a larger system but also contains its own sub-systems. It also interacts with other similar systems. Components of this 'system of systems' adapt together.
- **The system has *non-linearities and tipping points***. Non-linearity means that the inter-relationships between variables describing the behaviour of a system – such as income per capita and levels of violence – are not fixed. Inter-relationships can change over time or across different groups of countries. Tipping points are a particular type of non-linearity where the inter-relationship between variables changes abruptly.

Financing capital

The peace dividend also impacts businesses' ability to secure funding. Countries with more benign GPI outcomes tend to enjoy more favourable economic conditions that allow banks and other financial operators to increase the amount of credit available to the private sector.

Violent scenarios greatly increase the economic uncertainty prevailing in society. Business owners and workers face higher probabilities of death and injury, physical assets are more frequently damaged or destroyed, financial and physical resources are more commonly stolen or dilapidated. All this increases the probability that economic projects started by businesses and households will not come to fruition. When these projects fail, the credit lent against them may remain unpaid, which reduces creditors' ability and willingness to provide funding in the future.

Figure 1.7 shows that higher levels of domestic peace are associated with greater provision of funding to the private sector. This analysis includes countries of all income levels and the correlation coefficient between credit to the private sector as a proportion of GDP and the GPI *Safety and Security* domain is -0.57. High-income countries, represented in blue circles in the figure, tend to have better *Safety and Security* scores and higher proportions of domestic credit provided to the private sector by banks.

FIGURE 1.7

Domestic credit and safety, all countries, 2019

Countries that fare the best in the GPI are also those where credit is more readily available.

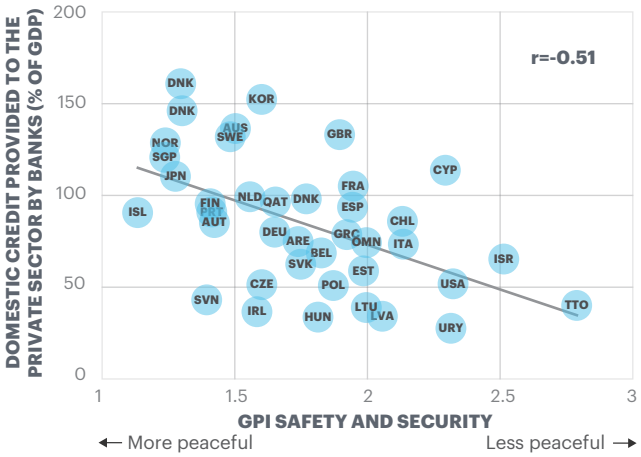
Source: IEP, IMF

Figure 1.8 deepens this analysis by zooming in on high-income countries (the blue circles in Figure 1.7) and shows that some of the most peaceful countries have levels of credit to the private sector as high as 150 per cent of GDP. The analysis suggests that on average, a 1-index-point improvement in peacefulness is associated with an increase in credit provided to the private sector of around 50 percentage points of GDP. As an example, in countries with a GPI *Safety and Security* score of around 2.5 such as Israel (ISR), Uruguay (URY) or the USA, domestic credit provided to the private sector reaches around 50 per cent of GDP. But in countries with a score of 1.5 such as the Netherlands

FIGURE 1.8

Domestic credit and safety, high-income countries, 2019

In high-income countries, as levels of peace improve, credit to the private sector increases.



Source: IEP, IMF

(NLD), Austria (AUT) and others, credit would reach 100 per cent of GDP on average.

Innovation

As discussed above, higher levels of peace are associated with greater worker and capital productivity. This result is due to multiple factors including superior physical and social infrastructure supporting businesses as well as greater focus on research and innovation.

Scientific and business innovation benefits from improved peacefulness because reductions in violence free up time and resources for more productive pursuits. As violence decreases and societies become more harmonious, public resources previously used to repair infrastructure and pay for a large security apparatus are liberated for investment in research and development. At the same time, greater peacefulness creates stability and predictability, which reduce risk aversion and prompts more firms to try new technologies and disruptive business models. This results in a noticeable correlation between measures of innovation and measures of peace according to the GPI.

The World Economic Forum's Global Competitiveness Index assesses innovation through a range or indicators. Arguably the two most relevant indicators for this analysis are: trademark applications and university-industry collaboration. Both indicators are significantly correlated with measures of domestic peacefulness: the GPI *Safety and Security* domain and the GPI Internal Peace scores (Figure 1.9). The indicator reflecting research talent in business, from the Global Innovation Index, also shows that the influence of technical research and development in businesses increases with greater levels of peace.

FIGURE 1.9

Research and innovation, correlation with GPI components, high-income countries, 2019

Measures of innovation are correlated with domestic safety and peace.

	Trademark applications	University industry collaboration	Research talent in business
Safety & security	-0.36	-0.47	-0.45
Internal peace	-0.43	-0.38	-0.39

Source: IEP, World Economic Forum - Global Competitiveness Index; Global Innovation Index

Legal system and enforcement contracts

High levels of peace are the fruit of a combination of multiple socio-economic factors, which include effective institutions — administrative, legislature, enforcement and judicial. This concept is measured in the *Institutions* domain of Positive Peace and will be expanded in the next chapter of this report. It is also discussed at length in the Positive Peace Report 2020.

An efficient, representative and transparent legal system — legislature plus the judicial system — will by itself support business activity. This is done by passing laws that reduce red-tape to unencumber entrepreneurs while underpinning a fair regulatory system. However, higher levels of peace also reduce the pressure on the judicial system, which is then not overwhelmed by criminal cases. This creates capacity in the judicial system to resolve administrative matters for business and to mediate contract disputes more promptly. This is illustrated in Figure 1.10.

Accordingly, measures of legal system efficiency in business-related matters are correlated with the GPI *Safety and Security* and Internal Peace components (Figure 1.11). The correlation of these GPI measures with the Global Innovation Index's 'ease of resolving insolvencies' indicator is -0.57 and -0.67 respectively. These are high correlations in absolute terms and are corroborated by a material relationship between the GPI and the 'time to resolve insolvency' indicator from the World Bank's Doing Business Project. These last correlations are numerically positive because the more violent a country (i.e. the higher the GPI score) the more time is necessary to resolve insolvencies due to administrative wastage and red tape.

The World Economic Forum Global Competitiveness Index's 'efficiency of the legal system in settling disputes' is materially correlated with the GPI *Safety and Security* domain. As is the indicator 'enforcing contracts' from the World Bank Doing Business Project.

FIGURE 1.10

The efficiency of the legal system

Peace contributes to a more efficient support of the business sector by the legal system.

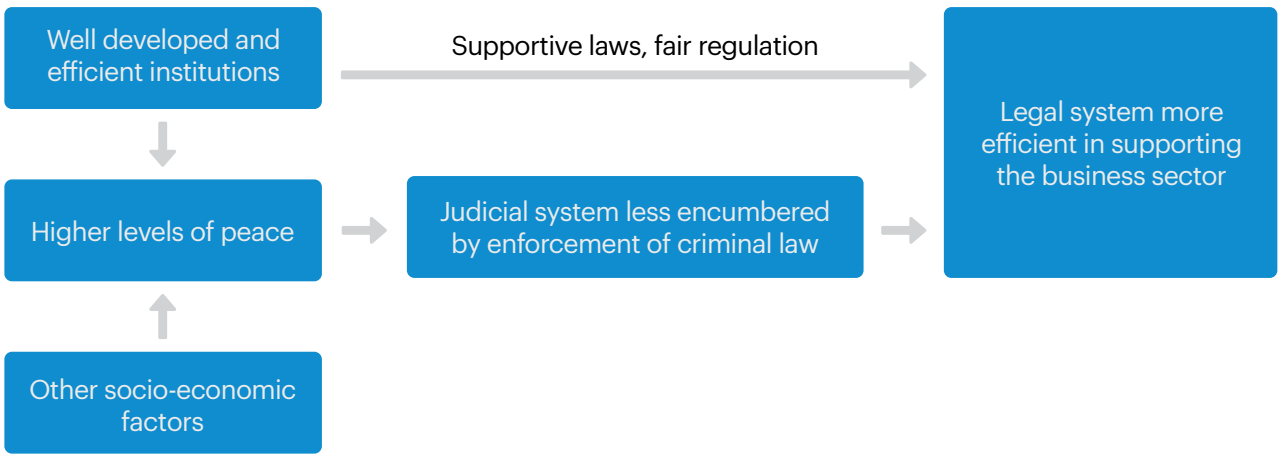


FIGURE 1.11

Legal system, correlation with GPI components, high-income countries, 2019

The higher a country's level of peace, the easier it is to resolve disputes and the faster to settle insolvencies.

	Ease of resolving insolvencies	Time required to resolve insolvencies	Efficiency of the legal system in settling disputes	Enforcing contracts
Safety & security	-0.57	0.34	-0.38	-0.39
Internal peace	-0.67	0.39	-0.25	-0.32

Source: IEP, World Economic Forum - Global Competitiveness Index; Global Innovation Index; World Bank Doing Business Project

Business regulation

The regulatory system is a major part of the economic infrastructure supporting business activity. While it is sometimes seen as a source of costs and delays, the proper oversight of private initiatives can promote economic demand and activity. An effective and balanced regulatory system guarantees:

- *Fair competition*: a level playing field in which unscrupulous operators will not gain undue commercial advantage by cutting corners, endangering workers and consumers or evading tax and duties.

- *Relational efficiencies*: a firm's corporate suppliers and clients, borrowers and creditors will act in fair and predictable ways. With due diligence left to the regulator — at least partially — the firm itself has less need for monitoring supply partner conduct and counterparty risk. A firm's operational risks are reduced under effective regulation.

As discussed in the previous section, well-functioning institutions, especially a representative and transparent legal system, are more likely to produce fair and efficient regulation. They are also more likely to support and be supported by greater levels of peace.

The Heritage Foundation's 'business freedom' indicator is a widely used gauge of the efficiency of government regulation of business. It reflects the administrative burdens of starting, operating and closing businesses. Higher levels of the index — towards 100 — denote greater efficiency of the regulatory system and therefore greater levels of freedom for businesses. Lower levels of the index indicate highly cumbersome regulatory compliance. The indicator is highly correlated with the GPI *Safety and Security* domain, illustrating a strong relationship between peacefulness and effective business oversight across countries of all levels of income (Figure 1.12).

This result is corroborated by the relationship between the GPI and the 'burden of government regulation' indicator from the World Economic Forum Global Competitive Index (Table 1.1). Greater values of this indicator denote a lesser burden. Of note, the correlation is weak for high-income countries, presumably because the regulatory systems in these countries already near maximum efficiency, therefore, the overall impact of additional

FIGURE 1.12

Business freedom, all countries, 2019

The relationship between security and effective regulation is observed for high-income, middle-income and low-income countries.

Source: IEP, Heritage Foundation

improvements in peacefulness is small. However, in middle income countries, improvements in the GPI *Safety and Security* domain are associated with material progress towards more efficient government regulation.

TABLE 1.1

Burden of government regulation, correlations with GPI safety and security, 2019

The correlation with the GPI is material for middle-income countries.

INCOME LEVEL	CORRELATION COEFFICIENT
All countries	-0.38
High-income	-0.17
Upper middle-income	-0.52
Lower middle-income	-0.49
Low income	-0.32

Source: IEP, World Economic Forum Global Competitiveness Index.

2 Positive Peace as a Predictor of Economic Outperformance

Key Findings

- Countries that score well in the Positive Peace Index (PPI) tend to have higher levels of GDP per capita, greater corporate profitability, stronger household consumption and less volatile inflation.
- Positive Peace can be used to predict future economic outperformance.
- Positive Peace allows the creation of an annually re-balanced portfolio of countries whose combined economies outgrew global averages consistently over the past decade.
- In the nine years to 2019, the real GDP growth in the Positive Peace portfolio was 33 per cent higher than global average.
- Using the same methodology, real corporate profits in countries improving in Positive Peace outgrew global averages by 26.5 per cent in the last ten years.
- Countries that improved in Positive Peace recorded an average annual per capita GDP growth rate 2.7 percentage points higher than countries that deteriorated in Positive Peace in the decade to 2019.
- For countries that improved in Positive Peace, household consumption rose at almost twice the rate compared to countries that deteriorated in Positive Peace.
- The real gross capital formation of countries that substantially improved in Positive Peace outgrew global averages by 32.3 per cent or the decade to 2019.
- Since 1990, the average lending interest rate in the most peaceful countries was 8.7 per cent, compared to 20 per cent in very low peace countries.
- Net foreign direct investment (FDI) inflows as percentage of GDP are more than twice as big in highly peaceful countries.
- The corporate sectors to benefit the most from improvements in Positive Peace are industry, construction and manufacturing. The service sector also benefits from domestic development, but to the extent that the *High Levels of Human Capital* Pillar is developed.
- Exports were 28 per cent higher and imports 30 per cent higher for countries improving in Positive Peace compared to the global average for the decade to 2019.
- The Pillars of Positive Peace work systemically to support a favorable business environment in countries of all income classifications.
- Countries that have effective and transparent business regulation systems are those that have made progress in the *Sound Business Environment*, *Well-Functioning Government* and *Low Levels of Corruption* Pillars of Positive Peace.
- Positive Peace can be thought as a gauge for a nation's total stock of productive capital in its four key aspects: social, administrative, intellectual and physical.

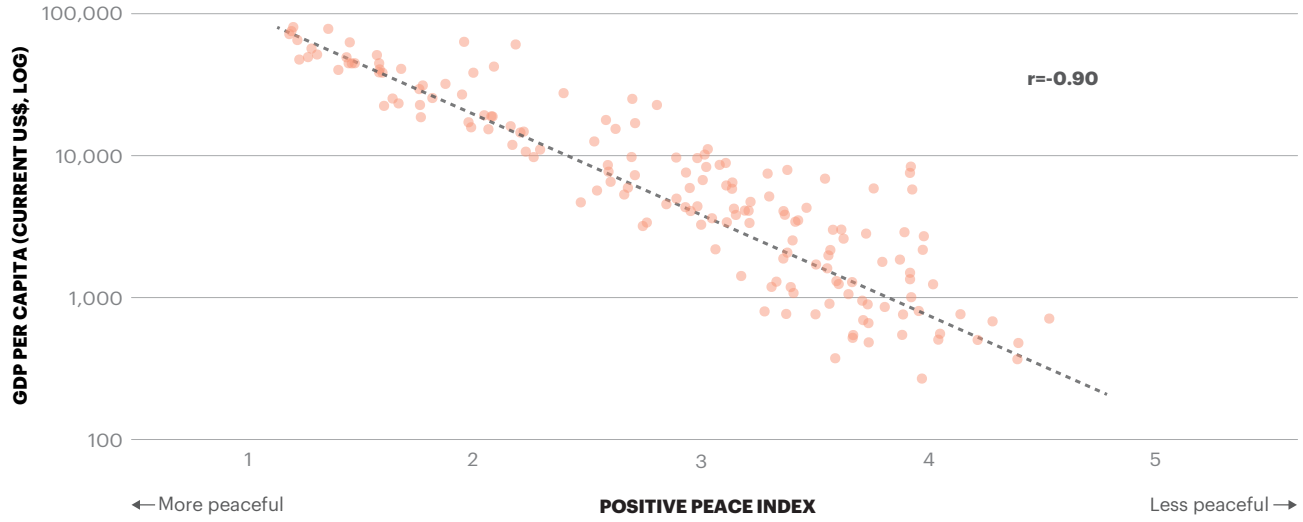
OVERVIEW

Countries that improve in the PPI outperform global averages in key macroeconomic metrics (Figure 2.1). Using a systems approach, IEP has shown how Positive Peace indicators interact with macro-economic outcomes in a complex and mutually reinforcing way.

FIGURE 2.1

Positive Peace and GDP per capita, 2019

On average, across all country income levels, every one index point improvement in the PPI is associated with a tenfold rise in GDP per capita.



Source: IEP, IMF

Improvements in Positive Peace, such as higher levels of education or effective control of corruption will lift an economy's productivity and output. In turn, these outcomes will facilitate further improvements in a nation's socio-economic infrastructure, as measured by the PPI. These self-reinforcing cycles take place over many years. Once a pattern or trend is established, it usually persists for some time.

Thus, by recording developments and trends in the PPI and macroeconomic indicators up to a given year, analysts can project future economic outcomes in the short to medium term. This explains why it is possible to forecast economic outperformance using PPI data. This is the topic of this chapter.

Using the PPI, it is possible to construct a portfolio of countries whose macroeconomics will outperform future global averages by substantial margins. This prediction of future outperformance is described in the sections below. Countries improving in Positive Peace constituted a portfolio whose real output rose by 33 per cent above global average growth from 2010 to 2019. Similar degrees of outperformance were recorded in other macroeconomic measures such as gross corporate profits, trade and capital formation.

WHAT IS POSITIVE PEACE?

FIGURE 2.2

- Positive Peace is defined as the *attitudes*, institutions *and* structures *that create and sustain peaceful societies* (Figure 2.2). These same factors also lead to many other positive outcomes that society feels are important. Higher levels of Positive Peace are statistically linked to higher GDP growth, better environmental outcomes, higher measures of wellbeing, better developmental outcomes and stronger resilience.

- Positive Peace has been empirically derived by IEP through the analysis of thousands of cross-country measures of economic and social progress to determine which have statistically significant relationships with actual peace as measured by the Global Peace Index (GPI).

- Positive Peace is measured by the Positive Peace Index (PPI), which consists of eight Pillars, each containing three indicators (Figure 2.3). This provides a baseline measure of the effectiveness of a country's capabilities to build and maintain peace. It also provides a measure for policymakers, researchers and corporations to use for effective intervention design, monitoring and evaluation.

- Positive Peace can be used as the basis for empirically measuring a country's resilience — its ability to absorb, adapt and recover from shocks, such as climate change or economic transformation. It can also be used to measure fragility and help predict the likelihood of conflict, violence and instability.

FIGURE 2.3

The Pillars of Positive Peace

A visual representation of the factors comprising Positive Peace. All eight factors are highly interconnected and interact in varied and complex ways.

The Positive Peace Index (PPI) is created using 24 indicators of socio-economic development selected according to the strength of their relationship with the Global Peace Index. Each Pillar of Positive Peace is characterised by three indicators. The indicators are also parsed in three broad areas – the Domains of Positive Peace – using the following typology:

- **Attitudes** if they measure social views, tensions or perceptions

- **Institutions** if they are directly measuring institutional operations

- **Structures** if they are embedded in the framework of society, such as poverty and equality, or are the result of aggregate activity, such as GDP.

Positive Peace and System Thinking

This section describes how Positive Peace can reinforce and build the *attitudes, institutions and structures* that allow societies to flourish. These same factors create resilient and adaptive societies that pre-empt conflict and help societies channel disagreements productively.

Positive Peace as a term was first introduced in the 1960s and has historically been understood qualitatively based on idealistic or moral concepts of a peaceful society. The distinguishing feature of IEP's work on Positive Peace is that it is empirically derived. Using statistical analysis to identify the common characteristics of the world's most peaceful countries. It forms an important evidence base and avoids subjective value judgements of the drivers of peace.

To construct the Positive Peace Index nearly 25,000 national data series, indexes and attitudinal surveys were statistically compared to the internal measures of the Global Peace Index to determine which factors had the highest statistical correlations. Indicators were then qualitatively assessed and where multiple variables measured similar phenomena, the least significant were dropped. The remaining factors were clustered using statistical techniques into the eight Pillars of Positive Peace. Three indicators were selected for each Pillar, which represent distinct, but complementary conceptual aspects. The index was constructed with the weights for the indicators being assigned according to the strength of the correlation coefficient to the GPI Internal Peace score. This empirical approach to the construction of the index means it is free from pre-established biases or value judgements.

Human beings encounter conflict regularly – whether at home, at work, among friends or on a more systemic level between ethnic, religious or political groups, but the majority of these conflicts do not result in violence. Conflict provides the opportunity to negotiate or renegotiate to improve mutual outcomes. Conflict, provided it is nonviolent, can be a constructive process.[1] There are aspects of society that enable this, such as attitudes that discourage violence or legal structures designed to reconcile grievances.

The Pillars of Positive Peace

IEP has identified eight key factors, or Pillars, that comprise Positive Peace:

- ***Well-functioning Government*** – A well-functioning government delivers high-quality public and civil services, engenders trust and participation, demonstrates political stability and upholds the rule of law.
- ***Sound Business Environment*** – The strength of economic conditions as well as the formal institutions that support the operation of the private sector. Business competitiveness and economic productivity are both associated with the most peaceful countries.

- ***Equitable Distribution of Resources*** – Peaceful countries tend to ensure equity in access to resources such as education, health, and to a lesser extent, equity in income distribution.
- ***Acceptance of the Rights of Others*** – Peaceful countries often have formal laws that guarantee basic human rights and freedoms, and the informal social and cultural norms that relate to behaviours of citizens.
- ***Good Relations with Neighbours*** – Peaceful relations with other countries are as important as good relations between groups within a country. Countries with positive external relations are more peaceful and tend to be more politically stable, have better functioning governments, are regionally integrated and have lower levels of organised internal conflict.
- ***Free Flow of Information*** – Free and independent media disseminates information in a way that leads to greater knowledge and helps individuals, businesses and civil society make better decisions. This leads to better outcomes and more rational responses in times of crisis.
- ***High Levels of Human Capital*** – A skilled human capital base reflects the extent to which societies educate citizens and promote the development of knowledge, thereby improving economic productivity, care for the young, political participation and social capital.
- ***Low Levels of Corruption*** - In societies with high levels of corruption, resources are inefficiently allocated, often leading to a lack of funding for essential services and civil unrest. Low corruption can enhance confidence and trust in institutions.

IEP does not specifically set out what interventions should be done for each of the Pillars, as these will very much be dependent on cultural norms and development path of a specific country. What is appropriate in one country may not be appropriate in another.

What sets Positive Peace apart from other studies of peace is that its framework is empirically derived. The indicators chosen to measure each Pillar are based on the factors that have the strongest statistically significant relationship with peacefulness and as such form both a holistic and empirical framework.[2]

Characteristics of Positive Peace

Positive Peace has the following characteristics:

- **Systemic and complex:** progress occurs in non-linear ways and can be better understood through relationships and communication flows rather than through a linear sequence of events.
- **Virtuous or vicious:** it works as a process where negative feedback loops or vicious cycles can be created and perpetuated. Alternatively, positive feedback loops and virtuous cycles can likewise be created and perpetuated.
- **Preventative:** though overall Positive Peace levels tend to change slowly over time, building strength in relevant Pillars can prevent violence and violent conflict.
- **Underpins resilience and nonviolence:** Positive Peace builds capacity for resilience and incentives for nonviolent conflict resolution. It provides an empirical framework to measure an otherwise amorphous concept: resilience.
- **Informal and formal:** it includes both formal and informal societal factors. This implies that societal and attitudinal factors are as important as state institutions.
- **Supports development goals:** Positive Peace provides an environment in which development goals are more likely to be achieved.

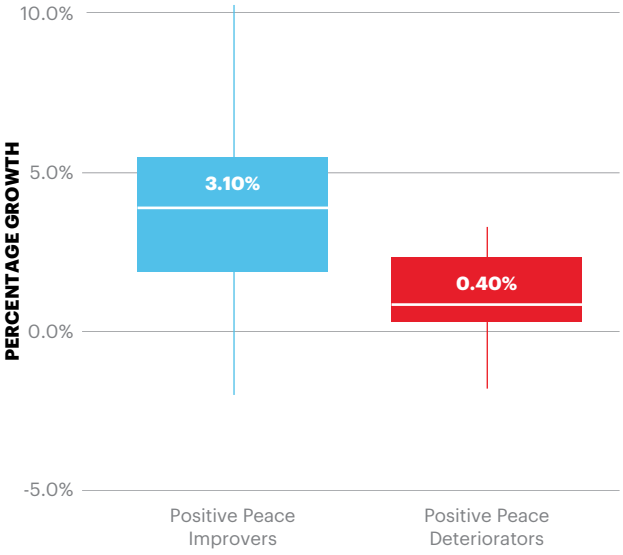
POSITIVE PEACE AS A PREDICTOR OF ECONOMIC OUTPERFORMANCE

Previous research has shown how high levels of Positive Peace are associated with superior economic performance. Other things being equal, countries that score well in the PPI tend to have higher growth in GDP per capita, greater corporate profitability, stronger household consumption and less volatile inflation. These results have been discussed in the Positive Peace Report 2020, and some key findings are reproduced in Figures 2.4 through 2.10.

FIGURE 2.4

Positive Peace and growth in GDP per capita, 2009 – 2019

Countries that improved in Positive Peace from 2009 to 2019 recorded an average annual growth rate in per capita GDP almost three percentage points above nations in which the PPI had deteriorated.



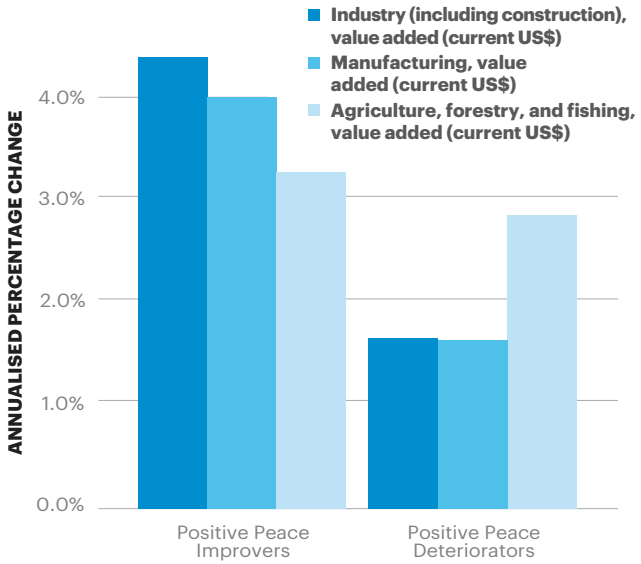
Source: World Bank, IEP

> Positive Peace is a reliable predictor of superior economic outcomes.

FIGURE 2.5

Changes in business gross value added (GVA) by Positive Peace outcome, 2009 – 2019

The construction sector is the most responsive to improvements in Positive Peace, with the GVA in countries improving in Positive Peace growing at over four per cent per year.



Source: World Bank, IEP

FIGURE 2.6

Changes in household consumption by Positive Peace, 2009 – 2019

Among countries where Positive Peace improved, household consumption rose from 2009 to 2019 at a rate much higher than in countries where the PPI deteriorated.

Source: World Bank, IEP

> Countries improving in Positive Peace experience lower and less volatile inflation and interest rates.

FIGURE 2.7

Volatility of inflation rates by Positive Peace outcome, 2009 – 2019

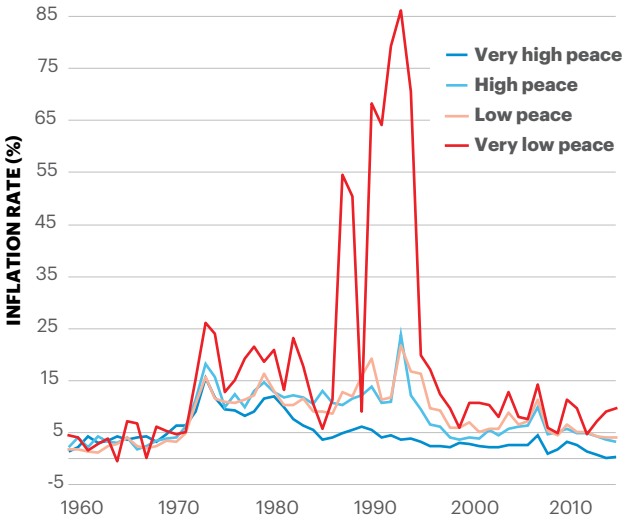
Countries in which Positive Peace deteriorated recorded a standard deviation of inflation rates much greater than those countries where the PPI improved.

Source: World Bank, IEP

FIGURE 2.8

Long term inflation by level of peace, 1960 – 2016

Long term trends show that lower peace countries historically have higher inflation and more severe inflationary shocks.[8]



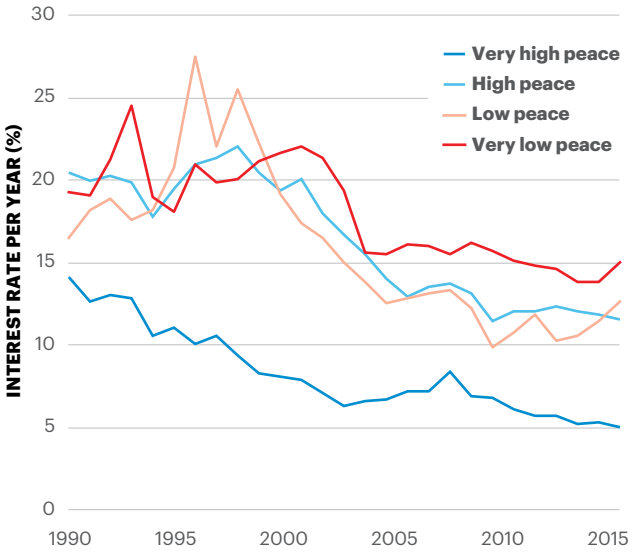
Source: World Bank, IEP

While interest rates have declined significantly in most countries, highly peaceful countries experienced the largest declines. The median lending rate in the least peaceful countries was more than two times that of the most peaceful countries since 1990. The average lending interest rate in the most peaceful countries was 8.7 per cent, compared to 20 per cent in very low peace countries.

FIGURE 2.9

Trend in interest rate by level of peace, 1990 – 2016

While interest rates have fallen globally since 1990, they are much lower in the most peaceful countries.

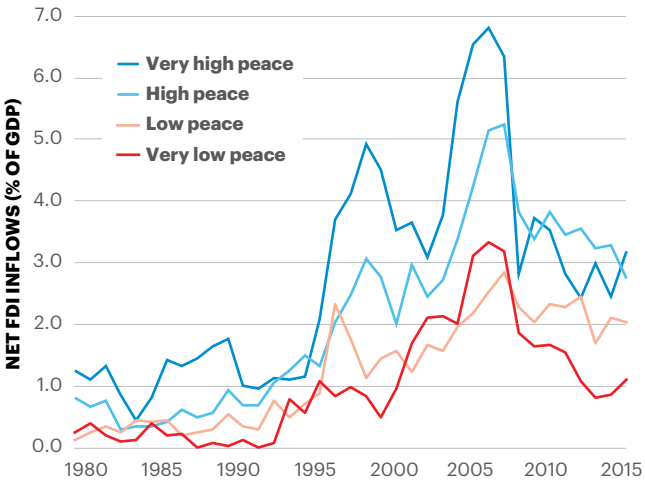


Source: World Bank, IEP

FIGURE 2.10

Foreign direct investment as per cent of GDP, by level of peace, 1980 – 2016

Net foreign direct investment (FDI) inflows as percentage of GDP are greater in highly peaceful countries.



Source: World Bank, IEP

Predicting economic performance

This section discusses how Positive Peace can be used to signal future superior economic performance, thereby acting as a predictor of better economic and corporate outcomes.

Positive Peace outcomes are autoregressive. This means that once a PPI score improves for a country or region in a given year, it will tend to continue improving for some time in the future. Positive Peace and economic processes are also self-reinforcing. A better PPI outcome in a given year will increase the probability of favorable economic results in the future, which will in turn, contribute to further improvements in Positive Peace.

These dynamics mean that Positive Peace and economic cycles tend to have long durations and be intermeshed with one another.

Because of this, nation states or regions that improve in the PPI up to a certain time, can expect to record superior economic performance beyond that time. This is at the heart of the PPI's ability to predict the economic outperformance of countries and regions. This ability can be used by businesses and investors to help guide their commercial and financial sovereign exposures.

A simple illustration of this ability is the process whereby the PPI is employed to select countries that will outperform the global average real GDP growth for the subsequent year. This simplified procedure is depicted in Table 2.1 and Figure 2.11.

TABLE 2.1

Procedure for predicting future economic outperformance using the PPI

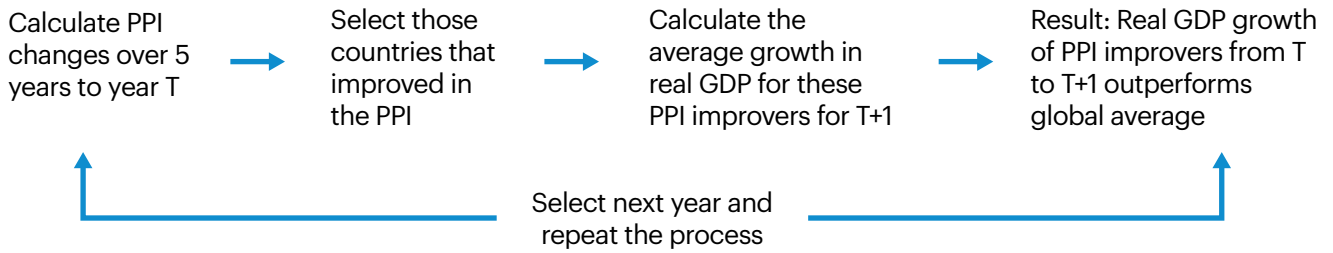
This recursive procedure using the PPI predicts future outperformance of many economic variables.

STEP	DESCRIPTION	COMMENTS AND EXAMPLES
1	Select a given year T	For example, T = 2015
2	Create a portfolio of countries that improved substantially in Positive Peace in the five years to T	Select all countries whose PPI score decreased by 0.2 index points or more from 2010 to 2015
3	Estimate the average growth of this portfolio in a given economic variable from T to T+1	Calculate the average real GDP growth between 2015 and 2016 for these countries that improved in Positive Peace from 2010 to 2015
4	Compare item 3 above with the global average of economic variable from T to T+1	Compare item 3 above with the average real GDP growth between 2015 and 2016 for all countries
5	Increase T by 1 and go to step 2 above	Select year T = 2016 and go to step 2 above

FIGURE 2.11

Procedure for predicting future economic outperformance using the PPI

This recursive procedure using the PPI predicts future outperformance of many economic variables.



Aggregate economic activity

The recursive process described above allows the construction of an annually re-calibrated portfolio of countries whose real GDP growth outperforms future growth in global real GDP. For example, by selecting those countries that improved materially in Positive Peace up to a specific year, say 2018, an investor will have a portfolio of nations whose real GDP growth will be higher than the global average in 2019.

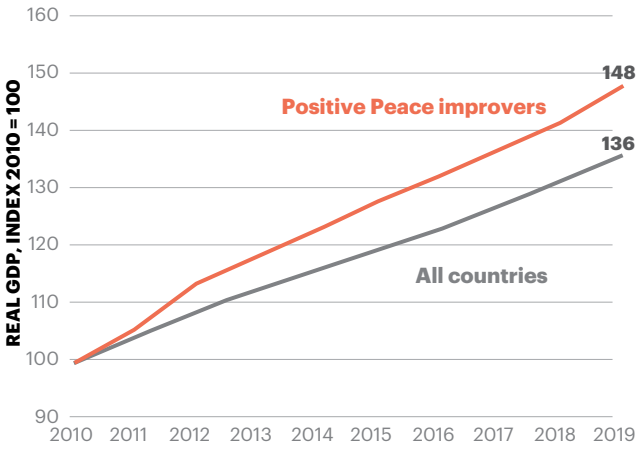
The methodology can be further developed and adapted for different time lags and different predictive windows.

The combined GDP of the annually re-calibrated portfolio of PPI improvers rose by 48 per cent from 2010 to 2019 (Figure 2.12). This is 12 percentage points higher than the global average growth of 36 per cent in the same period, amounting to an outperformance of 33.3 per cent.

FIGURE 2.12

Real GDP outperformance by Positive Peace improvers

Starting from an indexed level of 100 in 2010, the aggregated GDP of PPI improvers reached 148 by 2019 – or a 33 per cent higher return than the global average of 136.



Source: IEP, World Bank

Corporate profits

The same methodology can be employed to assess how business profits in countries where the Positive Peace is improving outperform global counterparts. To do this, the analysis used the economic concept of gross value added (GVA), which is defined as revenues from selling goods or services minus the variable costs for producing such goods and services. Therefore, profits of firms equal the GVA minus fixed costs (overheads).

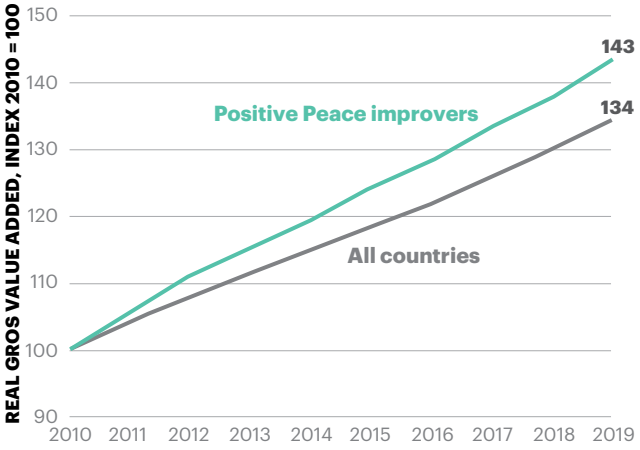
GVA is defined by the UN Systems of National Accounts and is measured consistently across different countries and time. As such, it is the standard way of measuring the profitability of firms aggregated at the national level for cross-country comparisons.

The real GVA of Positive Peace improvers recorded 26.5 per cent higher profit from 2010 to 2019 (Figure 2.13).

FIGURE 2.13

Firm profitability outperformance by Positive Peace improvers

Starting from an indexed level of 100 in 2010, the aggregated real GVA of PPI improvers reached 143 by 2019 – or 26.5 per cent higher profits over the global average of 134.



Source: IEP, World Bank

This outperformance encompasses firms in all sectors of the economy. However, specific sectors of production are more or less responsive to improving Positive Peace than others.

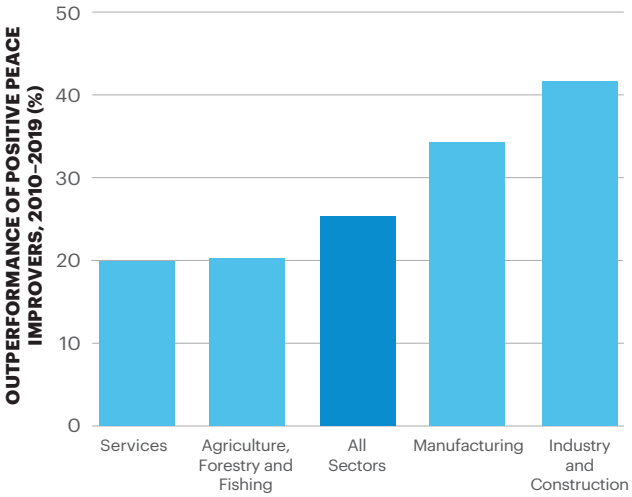
The industry and construction sector is highly responsive to improvements in Positive Peace. The outperformance of PPI improvers on real GVA for the construction sector was 41.6 per cent (Figure 2.14) compared to the overall outperformance of Positive Peace improvers of 26.5 per cent. This high responsiveness to improving internal Positive Peace conditions has multiple causes. Industry and construction are very sensitive to good governance and domestic demand. Development in this area is heavily supported by governments' investment in infrastructure and streamlined regulation, as well as the creation of new businesses. These factors come from progress in the *Well-Functioning Government*, *Low Levels of Corruption* and *Sound Business Environment* Pillars of Positive Peace amongst other Pillars.

For similar reasons, manufacturing also substantially outperforms at 33.4 per cent. The manufacturing sector benefits from improvements in infrastructure and higher consumption, as well as from business and technological innovation – as gauged by the *High Levels of Human Capital* Pillar. Overall, industry (including construction) and manufacturing are highly sensitive to improvements in Positive Peace, as per the example of Lithuania (Box 2.1).

FIGURE 2.14

Profitability outperformance by Positive Peace improvers, by corporate sector, 2010 to 2019

Industry and construction are the business sector most strongly influenced by improvements in Positive Peace.



Source: IEP, World Bank

BOX 2.1

Lithuania: Positive Peace and manufacturing

Lithuania's PPI score improved by 13.9 per cent from 2009 to 2019. On a per cent basis, the country posted the highest improvement in Positive Peace in Europe over this period. All domains and Pillars of Positive Peace recorded substantial improvements in this Baltic nation in the past decade. Of particular note, the *Good Relations with Neighbours*, and *High Levels of Human Capital* posted very large improvements. Lithuania even recorded improvements in *Low Levels of Corruption* and *Well-Functioning Government* – the only Pillars that saw deteriorations globally over the decade.

This progress was accompanied by a noticeable boom in manufacturing, largely driven by foreign direct investment (FDI) inflows. Lithuania streamlined the process of obtaining construction permits, updated its urban zoning planning frameworks from the Soviet era and eased the tax burden on hiring labour. These are examples of progress in the *Well-Functioning Government* Pillar. In 2010, there were ten large manufacturing projects being built in the country. By 2018, this number had risen to 27.[3] In that year, a report by Cushman & Wakefield – The Manufacturing Risk Index – placed Lithuania as the world's second-most attractive destination for manufacturing, behind only China.[4] A report by Invest Lithuania states that in 2017, 3,066 new jobs per million people were created by FDI projects. The EU average is more than three times lower: 900 jobs per million.

The outperformance in the agriculture sector of countries that improved in Positive Peace is smaller, at 21 per cent. This is to be expected, because agriculture is impacted by a range of factors not captured in the PPI, such as temperature, levels of rainfall and humidity, composition of the soil and terrain features. However, countries with high Positive Peace can still influence their agricultural yield to some extent, through research, mechanisation of farming, effective management of resources, as well as equitable and easy access to markets and consumption centres.

Services' outperformance is similarly subdued at just under 20 per cent. This lower responsiveness to domestic Positive Peace conditions may have a number of causes. Firstly, some service sectors such as tourism, hospitality and transport are highly dependent on geographical and climatic factors, which are not incorporated in the PPI. Other sectors such as finance and professional services are essentially international in nature, with the global hubs of New York, London, Frankfurt, Hong Kong and Shanghai, concentrating most of the activity and profits. A domestic improvement in Positive Peace in a peripheral country would do little to change this picture.

International trade

International trade is highly dependent on improvements in domestic Positive Peace conditions. The real exports of PPI improvers outgrew global averages by 28 per cent from 2010 to 2019. This outperformance could reflect improved productivity domestically, as well as an increase in the quality and sophistication of local products for external consumption. Both factors are related to worker education and qualifications, as well as good governance producing quality infrastructure – rail lines, dry and sea ports, energy networks, telecommunication assets – to facilitate trade.

Real imports by PPI improvers outgrew global averages by 30 per cent. This reflects strong internal demand for goods and services, which results from improvements in Positive Peace such as more equal income distributions, reductions in poverty, education and qualification of workers, as well as less wastage and uncertainty from corruption.

Capital

Gross capital formation (GCF) is defined as the increase in the stock of physical economic capital – factories, infrastructure assets, equipment, energy production capabilities – minus depreciation as assets wear out. The real gross capital formation of countries that improved in Positive Peace outgrew global averages by 32.3 per cent from 2010 to 2019. This is a strong outperformance, highlighting that PPI improvements translate into materially increased productive capacity in an economy.

Productive capital is the collection of resources a business needs to produce output.

In addition to labour, a firm needs a wide range of resources to preserve productivity, including:

- *Physical capital*: physical inputs, facilities, machinery and infrastructure
- *Intellectual capital*: scientific, technical and organisational ideas and concepts that allow the design and efficient production of goods and services
- *Social capital*: favourable social conditions – such as peacefulness, access to a wide consumer base and access to markets – that allow firms to plan, operate and take business risks
- *Administrative capital*: fair and efficient regulatory systems, reduced administrative costs and delays for trading, producing and hiring.

The availability of these four types of capital determine a nation state's stock of productive capital available to support the business sector.

Positive Peace is an accurate proxy of a nation's total stock of productive capital. The Pillars of Positive Peace relate back to capital in the following ways:

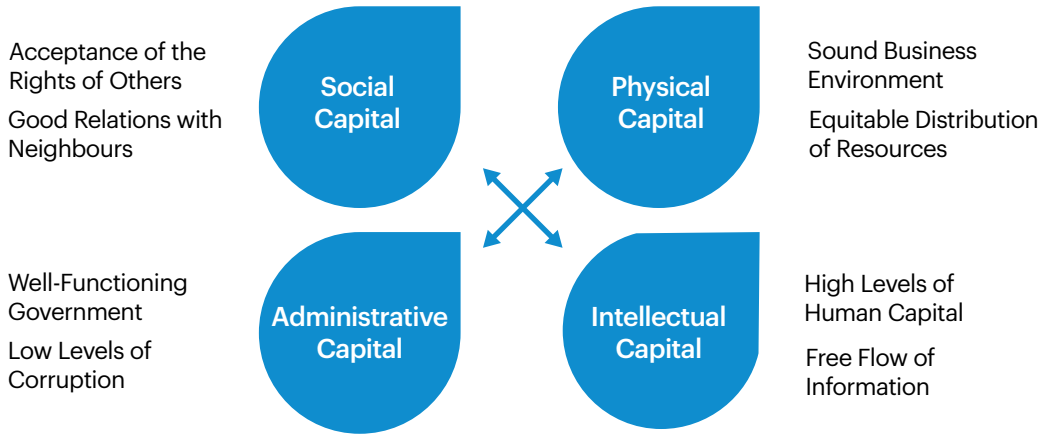
- Social capital, for example, is embodied in the Positive Peace Pillars *Acceptance of the Rights of Others* and *Good Relations with Neighbours*.
- Pillars such as *Well-Functioning Government* and *Low Levels of Corruption* represent the administrative capital that a socio-economic system requires to function efficiently.
- *High Levels of Human Capital* and *Free Flow of Information* are gauges of intellectual capital – the creation, protection and cross-fertilisation of ideas to increase wellbeing and productivity.
- *Sound Business Environment* and *Equitable Distribution of Resources* relate in part to the concept of the physical economic capital that provides citizens with tools and material resources to produce and thrive. *Equitable Distribution of Resources* is also an element of social capital.

The aforementioned four types of capital interact closely and in complex ways to support the productive capacity of a socio-economic system (Figure 2.15). As such, it is not surprising that countries that consistently and materially improve in the PPI should record superior GCF performance over global averages.

FIGURE 2.15

Components of productive capital

Positive Peace embodies social, administrative, intellectual and parts of physical economic capital that lead to stable, peaceful and productive societies.



POSITIVE PEACE SYSTEMS SUPPORTING BUSINESS

The Pillars of Positive Peace work systemically to support a favorable business environment in countries of all income classifications. This means that all Pillars are important across the spectrum of socio-economic progress, but some Pillar combinations are more critical than others at different stages of development. This section assesses which Pillars have the strongest associations with improvements in the business environment for countries in the high-income, upper middle-income, lower middle-income and low-income categories. Three critical aspects underpinning the business environment are discussed: regulation, cross border trade and financing.

Regulation

Regulation is a critical part of the business environment, making sure that firms adhere to proper conduct towards consumers and partners, that competition is fair and that the relationship with administrative agencies is transparent, predictable and efficient. Effective regulation is a boon to the business sector because it inhibits malfeasance by suppliers, customers and partners. It also makes sure that rivals do not obtain a competitive advantage by cutting corners or evading duties and tax.

The World Bank's 'Ease of doing business' (EDB) indicator captures the performance of a country's regulatory system, encompassing ten critical topics of regulation (Table 2.2). Higher 'Ease of doing business' scores mean that a country's regulatory framework is highly conducive to businesses, with low cost of compliance and highly efficient regulatory agencies and procedures.

EDB scores are highly correlated with the Positive Peace Pillars *Sound Business Environment*, *Well-Functioning Government* and *Low Levels of Corruption* across all country income levels (Table 2.3). The high correlation with the first two Pillars is to be expected, given that EDB explicitly measures the extent to which administrative efficiency facilitates business. However, the robust relationship between EDB and *Low Levels of Corruption* is less tautological. It confirms the anecdotal evidence that improbity decreases the efficiency of regulation and reduces productive activity.

TABLE 2.2

World Bank's 'Ease of doing business' topics

The 'Ease of doing business' indicator address ten critical topics of business regulation.

EASE OF DOING BUSINESS TOPIC	COMMENT
Starting a Business	Time and costs of initiating new businesses
Dealing with construction permits	Ease of obtaining authorisation to construct
Getting electricity	Securing electrical power for business operations
Registering property	Formalising ownership of physical and intellectual property
Getting credit	The ease and transparency of securing financial support
Protecting minority investors	Disclosure, directors duties and corporate transparency
Paying taxes	The time and costs of complying with the taxation system
Trading across borders	The time and cost involved with international trade
Enforcing contracts	The effort needed to put into effect contractual stipulations
Resolving insolvencies	The time and costs of winding up a business enterprise

Source: World Bank

TABLE 2.3

Correlations between Positive Peace pillars and 'Ease of doing business' indicator, 2019*

Sound Business Environment, *Well-Functioning Government* and *Low Levels of Corruption* are the Pillars most closely aligned with the 'Ease of doing business' indicator.

	SOUND BUSINESS ENVIRONMENT	WELL-FUNCTIONING GOVERNMENT	LOW LEVELS OF CORRUPTION	HIGH LEVELS OF HUMAN CAPITAL	GOOD RELATIONS WITH NEIGHBOURS	EQUITABLE DISTRIBUTION OF RESOURCES	FREE FLOW OF INFORMATION	ACCEPTANCE OF THE RIGHTS OF OTHERS
High income	-0.72	-0.68	-0.58	-0.73	-0.03	-0.41	-0.40	-0.33
Upper middle income	-0.81	-0.72	-0.62	-0.55	-0.61	-0.58	-0.38	-0.47
Lower middle income	-0.83	-0.73	-0.66	-0.46	-0.58	-0.64	-0.61	-0.68
Low income	-0.81	-0.84	-0.61	0.10	-0.57	-0.47	-0.66	-0.57

* Correlation coefficients between 0.3 and 0.5 are statistically significant and are shaded in light blue. Coefficients above 0.5 denote a more robust relationship and are shaded in dark blue.
Source: IEP, World Bank Doing Business Project

The *High Levels of Human Capital* Pillar is closely linked with EDB in high-income and upper middle-income countries. This shows that nations that have already developed economically can continue to evolve their business sectors through investment in worker capacitation and technical research (Box 2.2). High-income and upper middle-income nations may also further improve their business environment by seeking progress in *Equitable Distribution of Resources*, for example, by reducing income inequality and wealth inequality based on ethnicity, gender and age.

Improvements in *Good Relations with Neighbours*, *Free Flow of Information* and *Acceptance of the Rights of Others* are effective in boosting business conditions in lower income nations.

BOX 2.2

The contribution of research and high technology from Silicon Valley to the US economy

Silicon Valley in California is an agglomeration of high-technology companies that produce research, goods and services especially in the field of information technology. The region's output was $275 billion in 2019, broadly adding – in direct terms – around 1.3 per cent to the GDP of the US, already the world's largest economy.

The area grew out of an initiative by Stanford University in the 1940s to incentivise technological research by establishing new companies, seeking seed capital and producing cutting-edge information technology hardware and software. Silicon Valley was the leading force driving – and benefiting from – the popularisation of the personal computer in the 1980s and of the internet in the 1990s.

By 2018, the region's per capita output reached $128,308 per year, or twice the average for the US. If it were a country, Silicon Valley's GDP per capita would be the third highest in the world behind only Monaco and Liechtenstein, according to World Bank estimates.

International trade

Cross border trade is one of the key gauges and engines of national development. For this reason, it is closely associated with Positive Peace and its Pillars.

The Heritage Foundation's 'Trade freedom' indicator is a "composite measure of the absence of tariff and non-tariff barriers that affect imports and exports of goods and services."[5] Non-tariff barriers are impediments to importing or exporting, imposed in addition to cross-border duties and taxes. Examples are quantity restrictions such as import quotas, price constraints, regulatory restraints such as licensing or sanitary limitations, investment restrictions such as foreign exchange controls, customs limitations including burdensome clearance procedures or direct government intervention in the form of internal production subsides. Higher 'Trade freedom' indicator scores indicate greater levels of freedom to import into and export from a country.

Consistently with the 'Ease of doing business' results of the previous section, *Sound Business Environment*, *Well-Functioning Government* and *Low Levels of Corruption* are closely associated with 'Trade freedom' results (Table 2.4). The *Good Relations with Neighbours* Pillar for obvious reasons is also highly important for cross-border trade. However, this Pillar is not highly associated with 'Trade freedom' among high-income countries. This is because such countries already have near-maximum levels of regional integration and international trade, such that further improvements in *Good Relations with Neighbours* are difficult to attain. However, in middle-income and low-income countries, advances in this Pillar significantly boost businesses' ability to import resources and export goods and services thereby expanding their reach. In particular, improvements in *Good Relations with Neighbours* can support income and consumption in upper-middle income nations, with one evident example being Bulgaria's accession to the European Union (Box 2.3).

High Levels of Human Capital is linked to 'Trade freedom' especially in high-income countries, but less so in other categories. This is because the most developed nations tend to dominate the international trade in services – especially in finance, professional services and information technology – which are high-value added activities.

TABLE 2.4

Correlations between Positive Peace pillars and 'Trade freedom' indicator, 2019*

In addition to *Sound Business Environment*, *Well-Functioning Government* and *Low Levels of Corruption*, the 'Trade freedom' indicator is also closely linked with the *Good Relations with Neighbours* Pillar.

	SOUND BUSINESS ENVIRONMENT	WELL-FUNCTIONING GOVERNMENT	GOOD RELATIONS WITH NEIGHBOURS	LOW LEVELS OF CORRUPTION	FREE FLOW OF INFORMATION	ACCEPTANCE OF THE RIGHTS OF OTHERS	HIGH LEVELS OF HUMAN CAPITAL	EQUITABLE DISTRIBUTION OF RESOURCES
High income	-0.47	-0.49	-0.24	-0.47	-0.27	-0.30	-0.52	-0.33
Upper middle income	-0.73	-0.66	-0.64	-0.53	-0.49	-0.41	-0.32	-0.39
Lower middle income	-0.71	-0.56	-0.57	-0.57	-0.49	-0.46	-0.31	-0.48
Low income	-0.43	-0.48	-0.54	-0.18	-0.56	-0.09	0.18	0.41

* Correlation coefficients between 0.3 and 0.5 are statistically significant and are shaded in light blue. Coefficients above 0.5 denote a more robust relationship and are shaded in dark blue.
Source: IEP, The Heritage Foundation

BOX 2.3

The economic impact of Bulgaria's accession to the European Union

Bulgaria joined the European Union on 1 January 2007, after a long period of preparations. This followed a 28 per cent decline in GDP immediately after the collapse of the Iron Curtain in the early 1990s. Accession to the bloc was seen as a way to improve the country's regional integration, boosting foreign direct investment, cross-border trade and tourism. Thus, accession would provide a substantial impetus to the country's *Good Relations with Neighbours* and overall PPI scores.

In preparation for accession, the Bulgarian government and international agencies implemented a range of measures that increased income and consumption across the nation. Authorities took steps to reign in inflation and to attract greater levels of foreign direct investment. Deep economic reforms were also undertaken to reduce the size of the government and to improve administrative efficiency.

As a consequence, between 2003 and 2007, the average per-adult income rose by 37 per cent across the country.[6] In rural areas this increase reached 57 per cent. Household consumption increased by 21 per cent over the period. Bulgaria's GDP, which had hovered below $20 billion per year (current US dollars) for the entire 1990s, soared to $54 billion by 2008.

3 Economies in the post-COVID Era

Key Findings

- Nations with higher levels of Positive Peace were better able to shield their labour markets from the worst effects of the COVID-19 lockdowns and recessions. This finding demonstrates how Positive Peace can be a gauge for resilience in socio-economic systems.
- Countries belonging to the high-income and BRICS groups that showed lower levels of Positive Peace recorded larger reductions in total hours worked in 2020. High Positive Peace counties recorded reductions of less than seven per cent, while low Positive Peace countries recorded up to 23 per cent.
- Countries well placed for a post-COVID economic recovery are those that combine favourable macroeconomic results with high levels of socio-economic resilience as gauged by Positive Peace.
- Canada, the Czech Republic, Estonia, Germany, Ireland, Lithuania, the Netherlands, Norway, Singapore, Slovenia and Switzerland are best placed for a post-COVID-19 recovery.
- While the IMF and the World Bank forecast a rebound in economic growth in 2021 and 2022, it is likely that the pandemic and global recession will have long-lasting effects in most countries.

OVERVIEW

The past year has seen the publication of much commentary on the impact of COVID-19 on the business sector. The global pandemic is the greatest economic disruption in recent times, with over 255 million jobs being lost in 2020. Research published on the topic has covered which business segments were most affected, how the pandemic changed consumer behaviour and work practices, which new technologies received a boost from the disruption, how governments could support business and households in the aftermath of the recession, and many other topics. Researchers, academics and policymakers will continue to analyse this event for many years to come.

IEP has contributed to this effort and will continue to do so by assessing the link between resilience and the business environment. Positive Peace — the *attitudes, institutions and structures that create and sustain peaceful societies* — is an accurate gauge of socio-economic resilience and can help countries minimise the impact of the pandemic and recover from the deepest recession the world has seen in decades. Countries that perform well in the Positive Peace Index (PPI) tend to have higher capacity to cope with shocks and better ability to rebuild their societies and economies.

This section assesses the potential of a country to bounce back post-pandemic based on two factors. The first is their level of Positive Peace, because progress in the PPI means that nations are better placed to navigate and recover from recessions. The second factor includes the macroeconomic conditions prevailing in each country prior to the pandemic, which determine the depth of the recession, the amount of fiscal and monetary stimulus that can be provided, and the circumstances in which the stimulus will be rolled back and repaid.

There are vast disparities between developed and developing nations in terms of both Positive Peace and macroeconomic stances. These disparities render comparisons across these two groups difficult to interpret, when it comes to their ability to recover after a global recession. For this reason, the analysis in this section focuses on the countries classified as high-income by the World Bank plus the so-called BRICS nations of Brazil, Russia, India, China and South Africa. The analysis is detailed in the section 'Preparedness for a Post-COVID Recovery' below, but the key results are summarised in Figure 3.1.

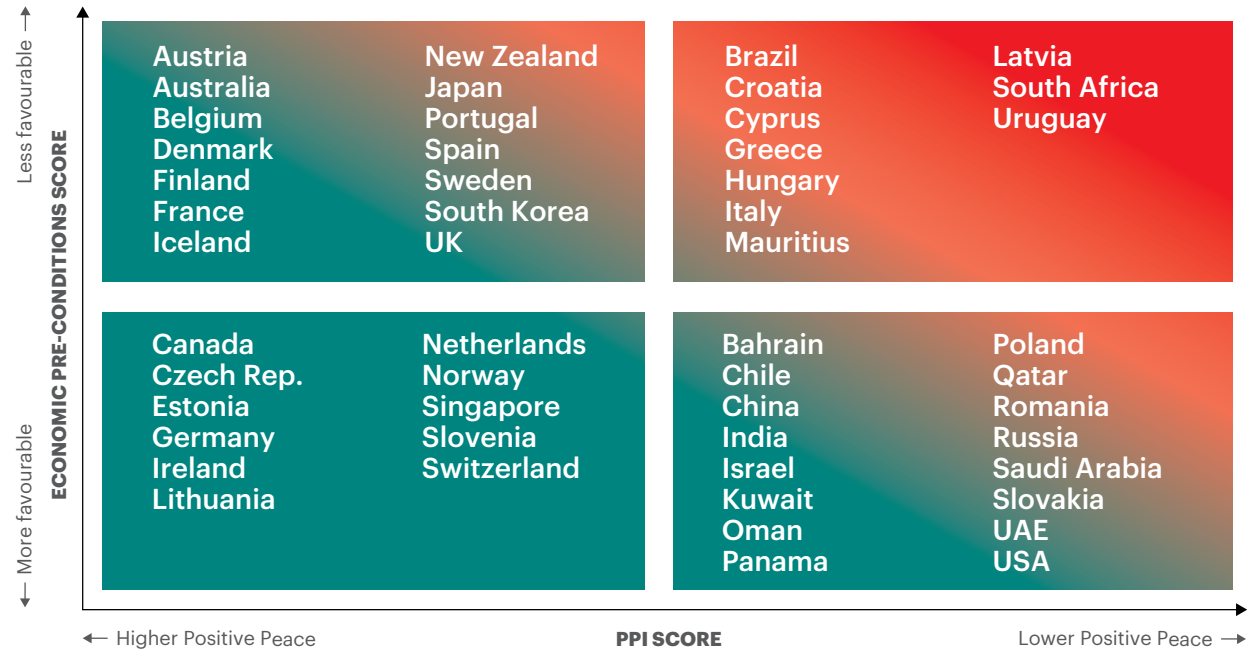
The countries in the strongest position to recover after the global pandemic are Canada, the Czech Republic, Estonia, Germany, Ireland, Lithuania, the Netherlands, Norway, Singapore, Slovenia and Switzerland. These nations are displayed in the bottom-left panel in Figure 3.1, which represents comparatively superior Positive Peace and macroeconomic circumstances.

The analysis does not imply that the recovery will be easy or quick. It also does not take into consideration the depth of the crisis afflicting individual countries. For instance, the pandemic is having a devastating effect in India and a comparatively less severe impact on South Africa. Yet the former country had a more favourable macroeconomic stance than the latter before the pandemic, thus justifying their relative positions in the diagram.

FIGURE 3.1

Capacity to recover after the COVID-19 recession, high-income plus BRICS countries, 2019

Countries in the bottom-left quadrant combine favourable economic pre-conditions with high levels of Positive Peace. These are comparatively better placed to experience an economic recovery.



Source: IEP
Note: Countries listed in the alphabetical order within each quadrant

THE DEPTH OF THE GLOBAL DOWNTURN

The International Monetary Fund (IMF) estimated that the global economy contracted by 3.3 per cent in 2020 (Table 3.1).[1] This scenario was better than expected and was due to a rebound in economic activity in the second half of that year. The original IMF forecast was a 4.4 per cent contraction in global GDP.

The IMF forecasts a rebound of six per cent in the global economy in 2021, although it recognises that the recovery will be uneven. Advanced economies are likely to have experienced a more severe downturn than emerging and developing economies.

Forecasts from the World Bank are less benign. The bank estimates a deeper recession in 2020 and a slower recovery thereafter, with the world returning to a 3.8 growth rate by 2022.[2] Both the IMF and the World Bank recognise a great deal of uncertainty surrounding these forecasts, especially in regards to whether new viral infections will be restrained and whether new variants of COVID-19 will arise.

Importantly, while both the IMF and the World Bank expect strong economic rebounds in 2021, it is obvious that some economic consequences of COVID-19 will be long lasting.

Examples of long-term economic consequences of the COVID-19 pandemic:

- Some industries such as air-travel, hospitality and tourism have been nearly wiped out. Even with the implementation of vaccination programmes in the short term, it is difficult to see how these industries will resume full activity.
- Primary and higher education have been disrupted. This will have long-term effects on education levels and worker training. It is possible that this disruption may impact future innovation and productivity.
- Most governments will end the year 2021 saddled with large amounts of debt. This will reduce their ability to support economic growth and social development for many years in the future.
- Many nations may progressively focus on improving self-reliance and creating buffers to protect communities and businesses from border closures and supply-chain disruptions. It is possible that this may affect future growth in international trade and in the use of complex and fragile international supply chains.
- A reduction in foreign direct investment and developmental aid flows in 2020 and 2021 could suppress global economic growth in the medium to long term. It could also exacerbate conflict levels in many parts of the world, with long-lasting humanitarian and economic consequences.
- Prolonged unemployment and social isolation are likely to increase mental disease and drug abuse for many years to come.
- The pandemic and recession reduced birth rates in many countries, with potential long-lasting consequences to demographics and immigration patterns.

TABLE 3.1

Impact of COVID-19 on global economic growth

The IMF and World Bank expect a strong rebound of the global economy in 2021 and 2022.

REGION	ANNUAL REAL GDP GROWTH (%)			
	2019	2020e	2021f	2022f
World				
International Monetary Fund	2.8	-3.3	6.0	4.4
World Bank	2.3	-4.3	4.0	3.8
Advanced Economies				
International Monetary Fund	1.6	-4.7	5.1	3.6
World Bank	1.6	-5.4	3.3	3.5
Emerging and Developing Economies				
International Monetary Fund	3.6	-2.2	6.7	5.0
World Bank	3.6	-2.6	5.0	4.2

Source: IMF World Economic Outlook April 2021, World Bank Global Economic Prospects January 2021.

Positive Peace and labour market resilience

According to the International Labour Organization (ILO), the COVID-19 lockdowns and recession in 2020 led to a reduction in global working hours of 8.8 per cent relative to the previous year. This was equivalent to a total loss of 255 million full-time jobs.[3] The ILO estimated that working hour losses were approximately four times larger last year than during the global financial crisis of 2009.

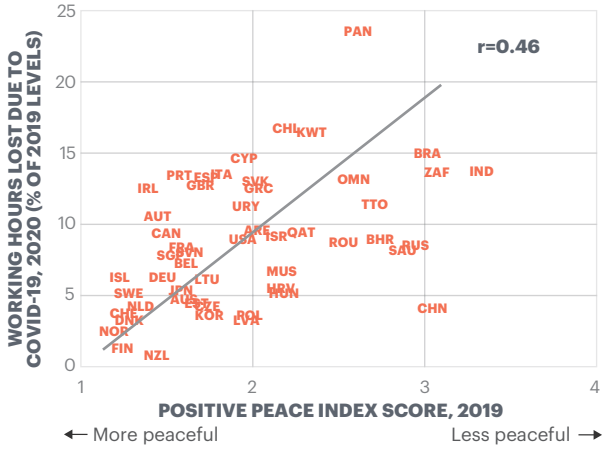
In 2020, this contraction in labour markets was unevenly distributed among countries. Nations that operated with higher levels of Positive Peace were better able to shield their labour markets from the worst effects of the pandemic lockdowns and recessions, which demonstrates that Positive Peace can be a gauge for resilience in socio-economic systems.

The correlation between working-hour losses and PPI scores is 0.46 among high-income plus BRICS countries (Figure 3.2). Countries with lower levels of Positive Peace in this group recorded reductions in working hours of up to 23 per cent in 2020 relative to the previous year. In contrast, countries with the highest Positive Peace scores recorded falls of less than seven per cent.

FIGURE 3.2

Positive Peace and working-hour losses due to COVID-19, high-income plus BRICS countries

Countries with low levels of Positive Peace countries experienced larger declines in working hours in 2020.



Source: IEP, ILO

PREPAREDNESS FOR A POST-COVID RECOVERY

The full post-pandemic economic recovery is likely to be arduous and drawn out. It is also likely to be uneven, with the IMF warning that countries with weak fiscal situations pre-pandemic will find it harder than others to rebuild their economies.

In this chapter, the term recovery should be understood simply as a return to a country's own pre-pandemic socio-economic conditions. It does not mean absolute economic development whereby a country improves its income level relative to global ranks.

This section assesses the pre-pandemic conditions of national systems to derive insight on their resilience and ability to recover. The assessment is based on two factors:

1) the economic conditions prevailing before the pandemic
2) socio-economic resilience gauged by Positive Peace.

Economic pre-conditions

The Economic Pre-Conditions (EPC) score of a nation state takes into consideration three key variables that gauge the strength of macroeconomic management immediately before the pandemic:

- **Tax revenue relative to GDP**: This variable assesses the burden that taxation has imposed on socio-economic systems. High-tax burdens before COVID-19 indicate that governments will have little fiscal leeway to absorb the shock of the pandemic and fund a recovery through increases in taxation. However, in some cases, governments may have spare funding capacity or the ability to redirect funds from other areas to stimulate their economies. In the vast majority of cases, governments will be constrained by commitments to existing programmes.

- **Government debt relative to GDP**: If central government debt was already high before the pandemic, a nation's ability to navigate a serious economic downturn and fund a recovery would be compromised.

- **Unemployment**: A high level of unemployment pre-COVID is indicative of inflexible labour markets and weak ability to generate new business and jobs.

The combination of these three factors into one EPC score allows the identification of nations in favourable macroeconomic situations before the pandemic (Table 3.2). Topping the list are some middle-eastern nations that have benefited over the years from oil production revenues. Oil prices have rebounded strongly from the lows observed in mid-2020, which is likely to support recovery efforts in these countries. Among the European countries, the Czech Republic, Switzerland, Romania and Germany appear well-placed to return to pre-pandemic conditions. China is also well-placed according to these criteria.

> Countries well-placed for a post-COVID economic recovery are those that combine favourable macroeconomic results with high levels of socio-economic resilience as gauged by Positive Peace.

TABLE 3.2

Unemployment, debt and tax burdens, high-income plus BRICS countries

Countries with low unemployment, tax burdens and debt before the pandemic have the most favourable macroeconomic pre-conditions for a recovery.

COUNTRY	COUNTRY CODE	EPC SCORE*	EPC COMPONENT RAW DATA		
			TAX REVENUE (% OF GDP), 2017	CENTRAL GOV. DEBT (% OF GDP), 2019	UNEMPLOYMENT RATE (%), 2019
Kuwait	KWT	1.0	1.4	11.8	2.3
United Arab Emirates	ARE	1.0	0.1	18.6	2.4
Oman	OMN	1.5	4.1	47.5	2.5
Saudi Arabia	SAU	1.5	3.4	22.8	5.9
Russian Federation	RUS	1.6	10.3	14.2	4.4
Bahrain	BHR	1.7	2.1	103.4	0.8
Panama	PAN	1.8	8.5	46.4	3.8
Czech Republic	CZE	1.8	14.7	37.7	1.9
Switzerland	CHE	1.9	10.3	41.0	4.8
Qatar	QAT	1.9	14.7	65.8	0.1
China	CHN	1.9	9.4	52.0	4.4
Romania	ROU	2.0	15.2	35.0	3.9
Germany	DEU	2.0	11.4	68.2	3.0
Estonia	EST	2.2	20.9	13.4	5.4
Poland	POL	2.3	16.8	63.4	3.0
India	IND	2.3	11.4	69.6	5.4
Lithuania	LTU	2.4	16.6	44.5	6.3
Norway	NOR	2.4	22.5	46.7	3.3
Chile	CHL	2.4	17.5	37.2	7.1
Slovak Republic	SVK	2.5	18.7	63.4	5.1
Netherlands	NLD	2.6	23.1	62.5	3.0
Slovenia	SVN	2.6	18.4	80.9	3.8
Ireland	IRL	2.6	18.3	68.8	5.2
Singapore	SGP	2.7	14.0	109.2	4.4
Canada	CAN	2.7	12.7	106.7	5.4
Israel	ISR	2.7	24.6	59.9	3.8
Mauritius	MUS	2.7	18.5	64.6	6.7
United States	USA	2.7	11.7	134.6	3.9
Iceland	ISL	2.7	24.2	73.5	3.2
South Korea	KOR	2.7	28.4	38.1	4.6
Latvia	LVA	2.8	23.5	47.1	6.5
Hungary	HUN	2.8	22.6	83.2	3.5
Uruguay	URY	2.8	19.7	50.7	8.8
Australia	AUS	2.8	22.0	75.7	5.3
Finland	FIN	2.8	20.8	69.6	6.7
New Zealand	NZL	2.9	32.7	42.3	4.0
Croatia	HRV	2.9	21.5	73.2	7.1
Brazil	BRA	3.0	13.6	73.4	12.0
Austria	AUT	3.1	25.4	88.9	4.8
Sweden	SWE	3.1	28.1	55.5	6.7
Denmark	DNK	3.1	33.4	51.4	4.8
Japan	JPN	3.1	11.6	196.6	2.3
France	FRA	3.2	16.0	124.0	8.3
United Kingdom	GBR	3.3	25.5	117.3	4.1

Cyprus	CYP	3.3	24.1	95.5	7.2
Belgium	BEL	3.3	22.7	120.2	5.7
Portugal	PRT	3.4	21.8	136.3	5.9
Spain	ESP	3.5	13.7	117.3	13.0
Italy	ITA	4.0	24.6	154.6	9.8
South Africa	ZAF	4.9	26.2	62.0	28.5
Greece	GRC	5.0	25.9	200.2	15.5

*Z-scores were derived for each indicator and equally weighted for the calculation of the Economic Pre-Conditions scores.
Source: OECD; World Bank; IEP

Positive Peace

In addition to favourable macroeconomic conditions, a nation state's socio-economic resilience will influence how well its socio-economic system responds to shocks. This resilience is defined as the capacity to protect its citizens and institutions from the adverse impact of a shock and the ability to rebuild its socio-economic system after the shock. Resilience is gauged by Positive Peace, as discussed in detail in the Positive Peace Report 2020. The nations with best performance in the PPI 2020 are listed in Table 3.3.

Preparedness for a recovery: comparative analysis

Combining the EPC and PPI scores allows the visualisation of national preparedness for a recovery among high-income plus BRICS countries (Figure 3.3).

Countries with both PPI and EPC scores below their respective medians — lower scores mean higher levels of resilience and better macroeconomic conditions — are comparatively better placed to manage the economic recovery post-pandemic. These nations are situated in the bottom-left panel of Figure 3.3. In its World Economic Outlook April 2021, the IMF forecasts strong growth for this group in 2021.

Nations with high levels of Positive Peace, but comparatively less developed economic pre-conditions, are situated in the upper-left panel of Figure 3.3. These nations have the socio-economic resilience needed to navigate the shock well, but their macroeconomic readings were less favourable than the first group's. This may hamper their recoveries to some extent.

Countries in the bottom-right panel have comparatively favourable macroeconomics, but display weaker resilience as gauged by Positive Peace.

Finally, nations in the upper-right panel combine an already challenging macroeconomic stance with lower resilience. It is possible that these countries may find it more difficult than others to restore their economic readings and levels of social wellbeing to pre-pandemic levels.

These four groups are listed in a stylised way in the four panels of Figure 3.1 in the overview of this section. However, there are substantial variations within each panel. For instance, countries such as Brazil (BRA), South Africa (ZAF) or Greece (GRC) are considerably less prepared than nations such as Hungary (HUN), Latvia (LVA) or Uruguay (URY), despite all these nations featuring in the same top-right panel. In the bottom-

TABLE 3.3

Positive Peace, high-income plus BRICS countries

Countries with higher socio-economic resilience are those with higher rankings in the PPI.

PPI RANK IN GROUP	COUNTRY	COUNTRY CODE	PPI SCORE*, 2019
1	Norway	NOR	1.17
2	Iceland	ISL	1.21
3	Finland	FIN	1.22
4	Switzerland	CHE	1.23
5	Sweden	SWE	1.26
6	Denmark	DNK	1.27
7	Netherlands	NLD	1.33
8	Ireland	IRL	1.37
9	New Zealand	NZL	1.42
10	Austria	AUT	1.43
11	Germany	DEU	1.46
12	Canada	CAN	1.48
13	Portugal	PRT	1.55
14	Singapore	SGP	1.56
15	France	FRA	1.57
=16	Slovenia	SVN	1.58
=16	Australia	AUS	1.58
=16	Japan	JPN	1.58
19	Belgium	BEL	1.59
20	Estonia	EST	1.64
21	United Kingdom	GBR	1.68
=22	Lithuania	LTU	1.71
=22	Czech Republic	CZE	1.71
=22	Spain	ESP	1.71
25	South Korea	KOR	1.72
26	Italy	ITA	1.80
27	Cyprus	CYP	1.92
=28	Uruguay	URY	1.94
=28	Latvia	LVA	1.94
30	United States	USA	1.95
31	Poland	POL	1.98
32	Slovak Republic	SVK	2.00
33	United Arab Emirates	ARE	2.01
34	Greece	GRC	2.02
35	Israel	ISR	2.12
36	Croatia	HRV	2.14
=37	Mauritius	MUS	2.16
=37	Hungary	HUN	2.16
39	Chile	CHL	2.17
40	Qatar	QAT	2.26
41	Kuwait	KWT	2.33
42	Romania	ROU	2.51

43	Oman	OMN	2.58
44	Panama	PAN	2.60
45	Bahrain	BHR	2.74
46	Saudi Arabia	SAU	2.90
47	Russian Federation	RUS	2.92
48	Brazil	BRA	3.00
49	China	CHN	3.03
50	South Africa	ZAF	3.06
51	India	IND	3.29

* Scores vary from 1 (highest development in Positive Peace) to 5 (lowest possible development in Positive Peace). For the group of high-income countries plus BRICS, Positive Peace scores varies from 1.17 to 3.29.
Source: IEP

right panel, countries such as India (IND) are far less well placed than Slovakia (SVK) or Poland (POL).

Combining the EPC and PPI scores provides a gauge for preparedness. This allows the visualisation of preparedness against economic growth forecasts by the IMF (Figure 3.4).

The speed and characteristics of the post-pandemic recovery will be measured and studied for many years after the virus is finally controlled and normal life resumes. At the time of compiling this report in mid-2021, the world is still in the grip of the pandemic, with almost one million new cases reported each day, with the actual figure likely to be much higher. It is reasonable to assume that existing lockdowns may be extended and new ones may be imposed, which will affect IMF growth forecasts. However, economic activity has staged a comeback in some nations, with many observers expecting an economic rebound in 2021.

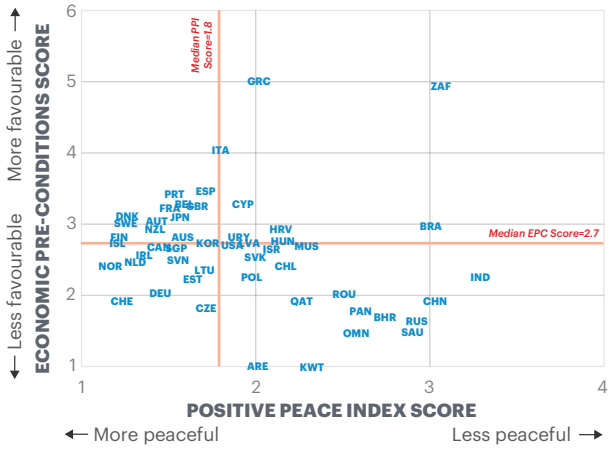
This allows an early test of the EPC and PPI framework. The combined EPC and PPI scores have a weak, but significant correspondence with IMF forecasts for economic growth in 2021. On average, countries that fare better in the preparedness score tend to have higher growth forecasts than those who fare poorly.

Importantly, the combined EPC and PPI preparedness metric does not incorporate the depth of the pandemic and the duration of the lockdowns and disruptions in each country. It simply assesses the strength of the socio-economic system and the likely speed of recovery had all countries been affected by COVID in the same manner.

FIGURE 3.3

Positive Peace and economic conditions, high-income plus BRICS countries, 2019

Positive Peace and economic pre-conditions broadly determine four quadrants of preparedness, although there is considerable variation within each quadrant.

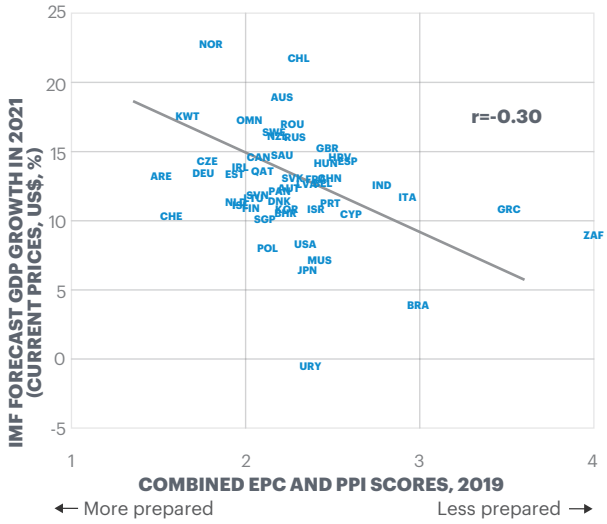


Source: IEP, OECD, World Bank

FIGURE 3.4

Preparedness for a recovery and IMF economic forecasts

Countries that have superior EPC and PPI scores tend to have higher forecasts for GDP growth by the IMF.



Source: IEP, IMF World Economic Outlook April 2021

4 Positive Peace and Ethical Investment

Key Findings

- Ethical investment strategies — those seeking strong environmental, social and governance (ESG) outcomes — are becoming more prominent in the financial and broader business sectors.
- Positive Peace is an accurate predictor of future ESG outcomes for sovereign nation state classifications, given the robust links between the Positive Peace Index (PPI) and ESG measures.
- The correlation coefficient between the Positive Peace Index and ESG scores compiled by Morgan Stanley Investment Management (MSIM) is 0.84, and by BNY Mellon is 0.91.
- Positive Peace trends indicate that the ten sovereign markets most likely to improve from their current ESG standings in the future are Georgia, Lithuania, Armenia, Kosovo, Bhutan, the United Arab Emirates, South Korea, Belarus, Malaysia and Kazakhstan.
- Some of the emerging countries with the lowest likelihood of improvement in ESG performances are Venezuela, Mozambique, Brazil, Ivory Coast, Ethiopia, Nigeria, Egypt and Zambia.
- Some high-income countries that have deteriorated in the Positive Peace Index over the past decade and as a result may also see some weakness in their future ESG ratings are US, UK, Hungary and Greece.
- Future changes in the sovereign ESG scores are likely to follow historical trends in Positive Peace scores. Improvements in Positive Peace in the recent past are likely to continue in the short to medium term.
- IEP research is used in some ESG applications in the business sector.
- Improvements in the following Pillars are more closely linked with superior ESG outcomes: *Well-Functioning Government, Low Levels of Corruption, Free Flow of Information* and *Sound Business Environment*. Although all Pillars are important.

This chapter assesses the links between Positive Peace and ethical investment measures. It shows that long-term trends in Positive Peace can be used to help predict future developments in ESG ratings. The analysis does not cover the period of the COVID-19 pandemic and the associated global recession.

The research seeks to establish the long-term interrelationships and trends among developmental variables that will guide businesses in coming years and decades.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE STANDARDS

A growing number of financial market participants are motivated by principles of ethical investment and strategies that seek financial returns while promoting social wellbeing and sustainable development. To cater for this demand, financial service providers have increasingly added ethical considerations to the process of selecting the underlying assets of investment portfolios and financial benchmarks. These considerations fall in three areas: environmental, social and governance (ESG). These are factors that:

(E) lead to *environmental* sustainability
(S) promote *social justice*, wellbeing and development
(G) encourage accountable and transparent organisational *governance*.

Different ESG principles can be applied and cater for a variety of investment styles and objectives. For example, an investor pursuing ethical strategies in corporate debt or equity markets will select companies whose operations and output minimise harm to the environment, promote the wellbeing of stakeholder communities and are responsibly managed. Similarly, a participant in sovereign markets will select countries with proper environmental protection frameworks, effective social justice practices and transparent administration.

When applied to a country, ESG principles overlap substantially with IEP's Pillars of Positive Peace. This has already created demand for IEP's research in the ethical investment sector (Box 4.1). This is because the social and governance components, the S and the G, directly relate to the *attitudes, institutions and structures* that create and sustain peaceful and prosperous societies, as Positive Peace is characterised.

In addition, most analysts gauge the environmental component, the E, through the impact of environmental conditions on human activity and living standards. For example, instead of assessing a country only by the amount of carbon dioxide emitted or the number of animal species threatened, analysts use indicators such as the proportion of the population with access to clean water, or the level of outdoor air pollution affecting citizens.

However, one of the questions often asked is what type of societal environment leads to improvements in ESG measures?

BOX 4.1

Examples of IEP's work in the ESG sector

IEP's research is employed in the ESG sector in different ways. Some stakeholders and users adopt the work on negative peace and its social impact; others concentrate on Positive Peace's potential to create favourable and sustainable operating conditions for business. All references cited below are in the public domain, with some other examples of collaboration remaining commercial in confidence at the time of publication.

One example is producer of financial benchmarks *IHS Markit*, a finance and business research house with global reach. It uses the Global Peace Index (GPI) as a gauge for the 'Level of Peace' of nation states, a component of the 'Human Rights Performance Score' used in many of its ESG indices. Some examples are the *iBoxx MSCI ESG USD Liquid Investment Grade Ultrashort Index;* the *iBoxx Global Green, Social & Sustainability Bonds Index;* the *Markit iBoxx Euro Sustainable Corporate Bond Custom Index;* and *the iBoxx MSCI ESG EUR Corporates 0-1 TCA*.[1,2,3,4]

The *London School of Economics* (LSE) invited IEP to explore the challenges of measuring corporate impacts in fragile and conflict-affected environments.[5] The work focussed on the need to develop new tools to be used by ESG ratings agencies, advisory firms, companies and investors. The initiative "discussed how the approaches of human security and Positive Peace from the Institute for Economics and Peace (IEP) could add value to existing measurement practices."

ADEC Innovations is a leading US-based provider of ESG solutions, helping private organisations operate and grow sustainably and responsibly. The company has assessed the link between peace and sustainable development using IEP's Positive Peace framework and highlights that "promoting peace and sustainable development reduces poverty and prevents conflict, translating to a healthier business environment that allows for a more effective delivery of products and services."[6]

In a recent address to shareholders lodged with the Australian Securities Exchange, the chairman of the *Global Masters Fund Ltd* Mr Murray D'Almeida explained how the firm was expanding operations to provide their investors with exposure to emerging markets. Mr D'Almeida highlighted the cooperation of their group with IEP in developing the ECP *Global Positive Peace Growth Fund* to assess the level of peace and socio-economic development of potential investable markets. He stated: "Recently, the [Global Masters Fund Ltd] invested in the ECP Global Positive Peace Growth Fund which employs data from the Institute for Economics and Peace to aid the assessment of regions with favourable economic climates. Here, the strategy aims to identify peaceful microeconomic foundations which provide the optimal conditions for quality-growth investments to drive superior long-term investment returns."[7]

Positive Peace can be used to measure this. The impact of environmental conditions on living standards is influenced by society. Positive Peace is a proven measure of societal resilience and adaptability. As one example, urban air quality is affected by economic activity, but also by society's ability to design and enforce pollution control measures.

This means that in most financial analyses, all environmental, social and governance indicators are interdependent and related to some extent, and therefore Positive Peace is a measure of the conditions that allow for the best societal trade-offs.

Why invest ethically?

ESG investors may be individuals seeking personal fulfilment by contributing to worthy causes or organisations with a mandate to promote social development and sustainability.

At a superficial glance, ESG strategies may seem less profitable than conventional investments. This would reflect the added cost of implementing socially responsible initiatives or complying with more stringent operational standards. In addition, by excluding non-compliant companies or countries, an ESG portfolio would theoretically be less diversified than a standard counterpart.

However, ESG investing can be more advantageous than conventional strategies, especially in the medium to long term. Companies that adhere to ethical principles tend to be more transparent and responsibly managed than their peers. Further, they may pre-empt and avoid future losses associated with regulation, litigation, compensation and remediation. They are also likely to be better managed than their peers, as the operational principles necessary for a company to receive favourable ESG ratings will also lead to a long-term view on a sustainable business.

Governments that embrace ethical principles are more likely to produce effective policies and minimise losses from corruption and inefficiency. These institutions are usually more resilient and adaptable than their counterparts. Reflecting all these factors, the ESG version of the widely used financial benchmark MSCI World outperformed its non-ESG equivalent between 2007 and 2018.[8]

Fund managers can also use ESG principles to assess the resilience and business model sustainability of companies in which they invest. Increasingly, this is happening even when the funds they manage are not necessarily targeted at ethical investors.[9] As a result, ESG is becoming more widespread as a useful risk management tool in the wider financial markets.

POSITIVE PEACE AND ESG RATINGS

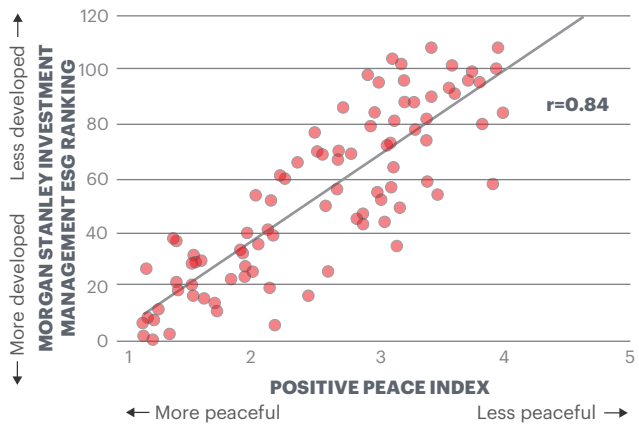
Positive Peace provides a theory of change and describes the necessary background conditions that lead to improvements ESG measures. Therefore, Positive Peace is a predictor of future improvements in ESG measures.

Because of the conceptual and empirical overlap between ESG and Positive Peace, the PPI can be used as a gauge of sovereign ESG performance. The correlation between the PPI and Morgan Stanley Investment Management's (MSIM) sovereign ESG ranking is 0.84 (Figure 4.1). The correlation coefficient between the PPI and sovereign ESG scores computed by BNY Mellon's Insight Investment for 186 countries in 2018 is 0.91 (Figure 4.2).[10]

FIGURE 4.1

MSIM sovereign ESG scores and the PPI, 2019

Countries that fare the best in the GPI are also those with the most favourable business environments.

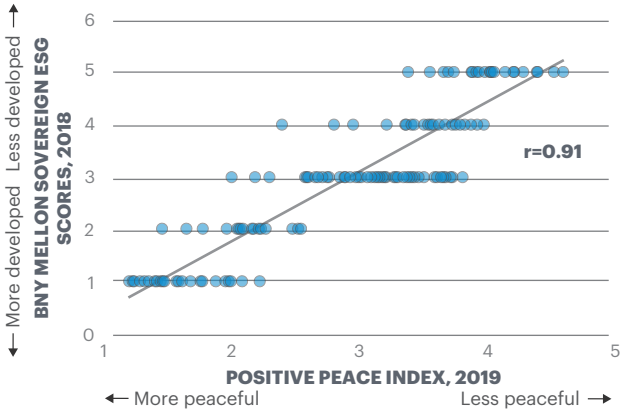


Source: IEP, Morgan Stanley Investment Management

FIGURE 4.2

BNY Mellon sovereign ESG clusters and the PPI

BNY Mellon's ESG clustered results are highly correlated to the Positive Peace Index.



Source: BNY Mellon, IEP

These empirical results show that Positive Peace is an accurate predictor of ESG outcomes from the point of view of sovereign nation state classifications. Sovereign nation state ESG scores are used in two ways:

1. To help investors with sovereign exposures — such as bonds, equity indices, credit default swaps and other derivatives — assess the alignment of their portfolios with ethical investment principles.

2. To inform companies with assets and operations in given nation states about these nations' commitment to ethical and sustainable development. When companies carefully assess this commitment and implement ethical standards in their own management and operations, these companies themselves are acting in accordance with ESG principles. This makes them more valuable for ethical investment fund managers and private investors.

Positive Peace provides a theory of change and describes the necessary background conditions that lead to improvements in ESG measures. In addition, changes in Positive Peace and the associated trends are long lasting, in that they take multiple years to work themselves through. This means they are an accurate way to predict future developments in ESG scores. This opens the possibility for ethical investors and stakeholders in ESG sectors to assess which nation states will improve in ESG ratings and which will deteriorate. This work can be coupled with analysis of the actual peace of the countries — through the Global Peace Index, the Global Terrorism Index and other national peace indices — to enhance the accuracy of ESG forecasts. The measures of peace and Positive Peace are intrinsically connected. Therefore, analysing these relationships across countries and time can add value to ESG research.

Emerging markets

For emerging markets, ESG sovereign scores computed by Aberdeen Standard Investments match the PPI with a correlation coefficient close to one in absolute value (Figure 4.3). Lazard Asset Management's emerging markets debt team have computed sovereign ESG scores whose absolute value correlation coefficient against the PPI Score is 0.88[12] (Figure 4.4).

The analysis of emerging market ESG and Positive Peace scores allows the detection of certain clusters among the countries assessed. Two types of clusters emerge:

- The first cluster contains emerging countries that are most developed in ESG and the PPI. This cluster includes nations such as Poland (POL), Chile (CHL), Hungary (HUN), Malaysia (MYS), Croatia (HRV), Slovakia (SVK) and Costa Rica (CRI). This cluster can be seen in the upper left extremes of the plots in Figure 4.3 and Figure 4.4.

- The second cluster of countries contains somewhat less developed countries than the first one and is comprised of Georgia (GEO), Romania (ROU), Jamaica (JAM), Serbia (SRB) and others.

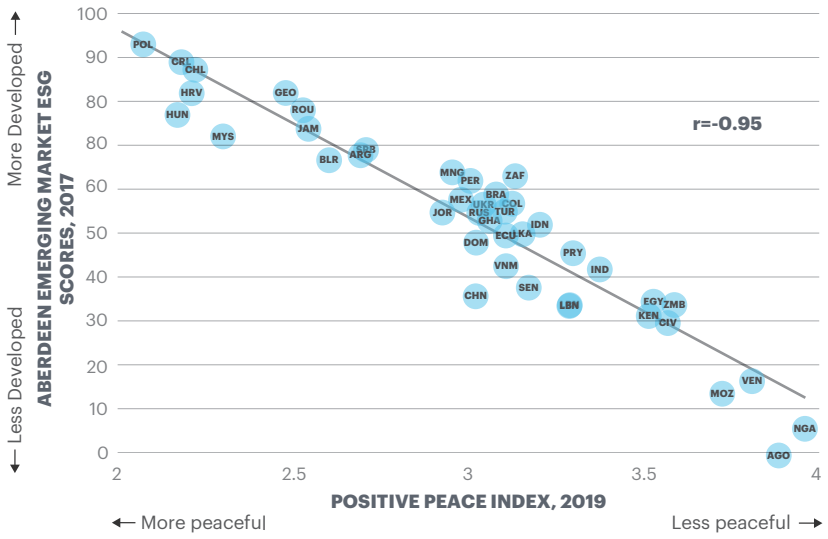
These two clusters contain the emerging market nations that have made the most advancement in their ESG standards up to this point. Their development in ESG and Positive Peace scores is almost equivalent to that of high-income nations. Yet, their internal markets and infrastructure are still relatively underdeveloped, which presents opportunities for investment.

The large nations of the BRICS group — Brazil, Russia, India, China and South Africa — all have intermediate levels of ESG and Positive Peace. They are positioned towards the centre of the plots in Figures 4.3 and 4.4, together with the bulk of the emerging economies.

FIGURE 4.3

Aberdeen emerging market ESG scores and the PPI

Positive Peace scores closely align with ESG ratings for emerging markets.

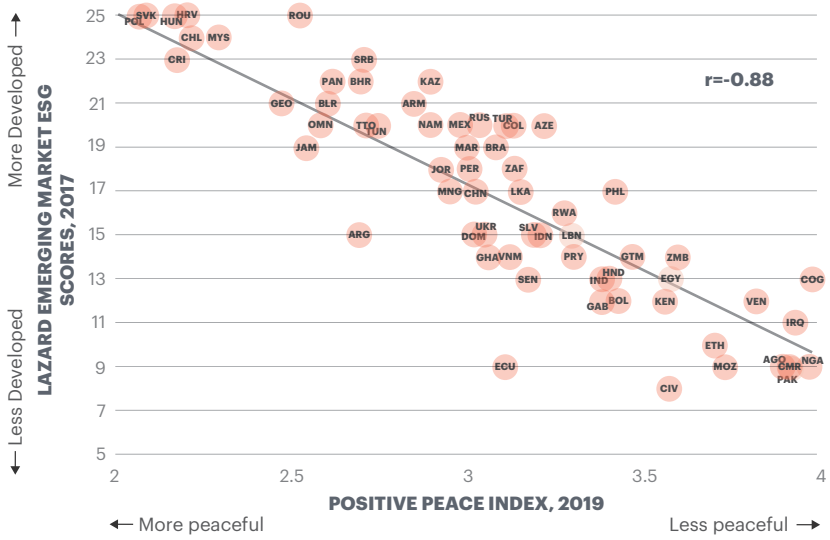


Source: Aberdeen Standard, IEP

FIGURE 4.4

Lazard emerging market ESG scores and the PPI

Positive Peace scores closely align with ESG ratings for emerging markets.



Source: Lazard Asset Management, IEP

Nations such as Venezuela (VEN), Mozambique (MOZ), Ivory Coast (CIV), Ethiopia (ETH), Nigeria (NGA), Egypt (EGY) and Zambia (ZMB) comprise the cluster with the lowest level of development.

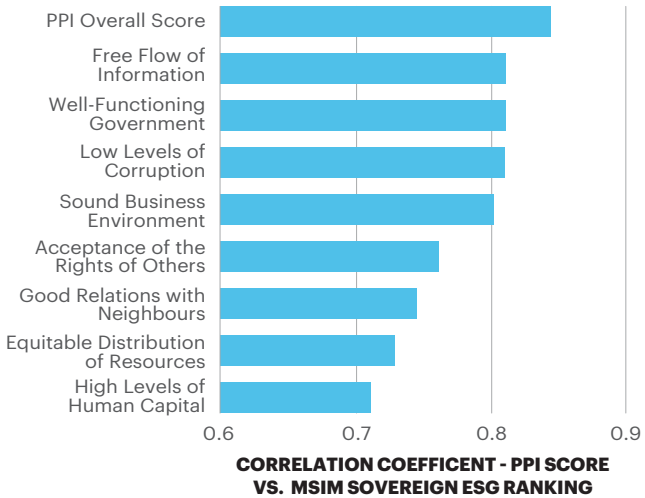
Positive Peace Pillars

Socio-economic systems operate in complex ways. Complexity stems from the observed fact that the behaviour of systems cannot be surmised simply from the analysis of isolated components. The performance of the whole system contains features or attributes that do not stem from the combined performance of individual components themselves but from the multifaceted interactions between such components. Thus, the whole has a greater informational content than the sum of the informational content of the parts.

FIGURE 4.5

Correlations between MSIM Sovereign ESG and the PPI, by Positive Peace Pillar, 2019

The correlation between Morgan Stanley Investment Management's sovereign ESG rankings and the PPI is 0.84 in 2019.



Source: IEP, Morgan Stanley Investment Management

One practical example of complexity comes from parsing Positive Peace systems — such as the socio-economy of a nation state — by their individual PPI Pillar components.

In a non-complex system, the correlation between an ESG measure and the PPI Overall Score should equal the average of the correlations between the ESG measure and each of the PPI Pillars. If the whole were a simple amalgamation of the parts, some of the Pillars would be highly correlated with ESG, others less so, and the overall correlation would reflect the average of these relationships.

However, complex systems work differently. The higher informational content of the overall score means that it is far more closely correlated with an ESG measure than any of the Pillars. The overall score captures the operation of the socio-economy as a whole and therefore is a more accurate reflection of the correspondence with ESG criteria than any individual Pillar.

This finding is reproduced in Figure 4.5 showing the Morgan Stanley Investment Management (MSIM) sovereign ESG rankings. The correlation coefficient with the PPI overall score is 0.84, as shown in Figure 4.1 above, and this correlation is greater than any of the Pillars.

The *Free Flow of Information*, *Well-Functioning Government*, *Low Levels of Corruption* and *Sound Business Environment* are the most highly correlated with ESG among the Pillars of Positive Peace, with coefficients just above 0.80. All else being equal, countries with the highest improvements in these Pillars may be more likely to receive the most favourable ESG ratings.

As socio-economic trends tend to have long durations, countries that have posted improvements in Positive Peace in the recent past are more likely to continue doing so in the short to medium term. This indicates that future developments in the sovereign ESG scores may be deduced from historical trends in the PPI and Pillar scores.

This allows the identification of 20 countries with substantial improvements in overall Positive Peace coupled with improvements in these four specific Pillars that are highly correlated to ESG measures (Table 4.1).

These are the countries with the highest probability of improvements in their ESG ratings in the future, and as such may offer good investment opportunities for ethical funds and investors. These countries may not necessarily have the highest ESG scores presently among emerging markets. But the Positive Peace developments recorded over the past decade suggest they are on a consistent trajectory of socio-economic progress, which is likely to continue in coming years.

It is always possible that some of these countries may face bumps along their development paths, such as economic crises, social tensions or difficult political transitions. For instance, Belarus is currently struggling with demonstrations, non-democratic government and EU sanctions; and Argentina continues to struggle with monetary crises. But the overall undercurrent of social evolution is noticeable and indicates that these countries' ESG evaluations will be more favourable in the future than they are today.

TABLE 4.1

Twenty countries with the greatest potential for improvements in their ESG ratings

These 20 countries recorded substantial improvement relative to the global average in the PPI overall score and the Pillars most correlated to ESG measures.

COUNTRY	WORLD BANK INCOME LEVEL	CHANGE IN PPI SCORE FROM 2009 TO 2019 (%) *				
		OVERALL SCORE	FREE FLOW OF INFORMATION	WELL-FUNCTIONING GOVERNMENT	LOW LEVELS OF CORRUPTION	SOUND BUSINESS ENVIRONMENT
Georgia	Lower middle income	-18.5	-15.5	-16.7	-10.4	-8.9
Lithuania	High income	-14.7	-12.9	-10.1	-10.9	-18.2
Armenia	Lower middle income	-13.7	-33.4	-2.4	-12.0	-5.4
Kosovo	Upper middle income	-12.3	-12.9	-11.7	-1.6	-15.4
Bhutan	Lower middle income	-12.0	-19.2	-5.3	-12.5	-7.9
United Arab Emirates	High income	-11.8	-8.0	-10.1	-11.4	-10.9
South Korea	High income	-11.5	-18.8	-7.5	-3.5	-28.2
Malaysia	Upper middle income	-11.4	-34.2	-3.1	-4.7	-13.2
Kazakhstan	Upper middle income	-10.8	-22.5	-5.2	-9.9	-10.2
Cote d'Ivoire	Lower middle income	-10.5	-16.9	-12.4	-12.0	-8.0
Latvia	High income	-9.5	-24.0	-10.2	-9.6	-15.4
Kyrgyz Republic	Lower middle income	-9.5	-15.0	-8.2	-2.6	-6.6
Azerbaijan	Upper middle income	-8.3	-17.1	-5.3	-10.8	-4.9
Indonesia	Lower middle income	-8.1	-15.0	-10.2	-9.1	-10.1
Ecuador	Upper middle income	-7.1	-26.2	-10.4	-2.6	-6.4
Argentina	Upper middle income	-7.0	-23.9	-6.3	-9.8	-6.9
Kenya	Lower middle income	-6.1	-2.4	-9.4	-9.1	-3.2
Mongolia	Lower middle income	-5.8	-20.7	-4.8	-12.4	-4.2
Taiwan	High income	-5.0	-16.6	-7.7	-7.3	-4.5
Memo item						
World		-2.9	-8.0	-0.3	1.4	-3.8

* a negative change in score is an improvement in Positive Peace.
Source: IEP

Following a similar reasoning, deteriorations in Positive Peace may suggest difficulties for some countries to maintain high ESG standings. Some high-income countries that recorded large deteriorations in the PPI over the past decade and as a result may see some weakness in their future ESG ratings are Denmark, US, UK, Hungary and Greece.

The BNY Mellon calculates scores for each individual aspect of ethical investment: environmental, social and governance. As expected, the Positive Peace measures are highly correlated with the social and governance aspects, with the environmental scores being broadly unrelated to the Pillars (Table 4.2).

The Positive Peace Pillar most highly correlated with the social aspect of ethical investment was *Equitable Distribution of Resources*. This highlights the benefits of higher levels of equality of opportunity in the social context. Importantly, equality of opportunity does not mean forced equality of outcomes. The Pillar with the highest correlation with the governance aspect was *Well-Functioning Government*, which is not surprising. *Low Levels of Corruption* also was highly correlated, highlighting the important role of probity and justice in the determination of ethical investment opportunities. Of note, *Sound Business Environment* was highly correlated with both the social and governance aspects of ESG, which points to the critical importance of entrepreneurship and opportunity in promoting social progress.

The environmental aspect of the ESG ratings computed by BNY Mellon is not directly correlated with Positive Peace. This is because this aspect is calculated in broadly two ways: 1) environmental outcomes; and 2) environmental protection and preparedness. When assessed from the point of view of environmental outcomes — such as deforested areas, carbon emissions, number of species in risk of extinction — highly socio-economically developed countries tend to have a poor track record. Indeed, developed nations are among the highest per-capita emitters of carbon dioxide and pollutants. This is a result of the process of economic development and the technology employed to attain such development.

However, most developed countries are also those taking the most decisive steps towards reversing this picture. In recent decades, there has been substantial progress in terms of legislation, business practices and technology towards environmentally sustainable economic development. This progress has created a framework for environmental protection and preparedness that led to better social and health benefits.

When measured from the point of view of this environmental protection and preparedness, ESG gauges line up very well against Positive Peace indicators. Many of the commonly cited indicators of environmental ESG data hold high correlations with the PPI, as can be seen in the E section of Table 4.3.

TABLE 4.2

BNY Mellon Sovereign ESG ratings and the PPI pillars

Apart from the overall score, the Pillars most closely aligned with BNY ESG are *Well-Functioning Governments*, *Sound Business Environment*, *Low Levels of Corruption* and *Free Flow of Information*.

PPI PILLAR SCORES, 2019	BNY MELLON SOVEREIGN ESG SCORES, 2018			
	ENVIRONMENTAL	SOCIAL	GOVERNANCE	OVERALL ESG RATING
Acceptance of the Rights of Others	0.09	0.71	0.81	0.83
Equitable Distribution of Resources	-0.04	0.81	0.76	0.80
Free Flow of Information	0.16	0.67	0.85	0.85
Good Relations with Neighbours	0.22	0.63	0.77	0.80
High Levels of Human Capital	0.13	0.69	0.81	0.81
Low Levels of Corruption	0.20	0.64	0.86	0.85
Sound Business Environment	0.12	0.73	0.87	0.87
Well-Functioning Government	0.20	0.68	0.89	0.90
PPI Overall Score	0.15	0.75	0.89	0.91

Source: BNY Mellon, IEP

> Future changes in the sovereign ESG scores are likely to follow historical trends in Positive Peace scores. Improvements in Positive Peace in the recent past are likely to continue in the short to medium term.

TABLE 4.3

Correlation between ESG indicators and the PPI, 2019

Most commonly used indicators for ethical investment are highly correlated with the PPI. Correlation coefficients are calculated across all countries covered in the PPI and absolute values above 0.5 are highlighted.

	INDICATOR NAME	CORRELATION COEFFICIENT	SOURCE
Social infrastructure factors commonly classified as 'environmental' by investment professionals			
E	Access to at least basic drinking water	-0.70	Social Progress Imperative
	Water coverage	-0.74	CEDLAS and the World Bank
	Household air pollution attributable deaths	0.68	Social Progress Imperative
	Outdoor air pollution attributable deaths	0.75	Social Progress Imperative
	Population using improved drinking-water sources	-0.70	UN Development Programme
	Population using safely managed drinking-water	-0.74	World Health Organization
	Natural hazard risk index	0.25	INFORM
	Environmental health: air quality	-0.58	Yale Environment Performance Index
	Environmental health: water & sanitation	-0.88	Yale Environment Performance Index
	Environmental health: heavy metals	-0.78	Yale Environment Performance Index
	Ecosystem vitality: forests tree cover loss	0.08	Yale Environment Performance Index
	Ecosystem vitality: water resources	-0.74	Yale Environment Performance Index
	Ecosystem vitality: biodiversity & habitat	-0.37	Yale Environment Performance Index
Factors commonly classified as 'social' by investment professionals			
S	Access to electricity (% of population)	-0.62	World Bank
	Gender inequality index	0.88	UN Development Programme
	GINI index	0.39	World Bank
	Infant mortality rate	-0.87	Global State of Democracy
	Life expectancy at age 60 (years)	-0.81	World Health Organisation
	Life expectancy at birth (years)	-0.81	UN Development Programme
	School enrolment, primary (% gross)	-0.11	UNESCO Institute for Statistics
	School enrolment, secondary (% gross)	-0.82	UNESCO Institute for Statistics
	Time required to get electricity (days)	0.25	World Bank
Factors commonly classified as 'governance' by investment professionals			
G	Control of corruption (estimate)	-0.91	World Bank
	Corruption perceptions	-0.92	The Economist Intelligence Unit
	Ease of doing business index	0.86	World Bank
	Governance (prosperity index)	-0.88	Legatum
	Legal rights index	0.24	World Economic Forum
	Regulatory governance score	-0.75	World Bank
	World press freedom index	0.62	Reporters Without Borders

Source: IEP, others included in table

End Notes

SECTION 1

1 Amadeo Kimberly, The Economic Impact of World War II, The Balance, 06 November 2020, (https://www.thebalance.com/world-war-ii-economic-impact-4570917#:~:text=It%20was%20a%201%2C048%25%20increase,more%20than%2017%25%20a%20year).

2 Kesternich, Iris; Siflinger, Bettina; Smith, James P.; Winter, Joachim K., The effects of World War II on economic and health outcomes across Europe, EconStor Working Paper, Leibniz Information Centre for Economics, January 2021, (https://www.econstor.eu/dspace/bitstream/10419/58740/1/715289985.pdf).

3 Thies, Clifford F. and Christopher F. Baum, The Effect of War on Economic Growth, Cato Journal, Cato Institute, Winter 2020, (https://www.cato.org/cato-journal/winter-2020/effect-war-economic-growth), emphasis added.

4 Global Peace Index 2020, Institute for Economics and Peace, June 2020, (https://www.visionofhumanity.org/wp-content/uploads/2020/10/GPI_2020_web.pdf).

5 World Bank, World Bank Country and Lending Groups, (https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups).

SECTION 2

1 International Alert. 2015. Peace through Prosperity: Integrating peacebuilding into economic development. London: June.; and Rummel, R.J. 1981. "Vol. 5: The Just Peace." Understanding Conflict and War. Beverly Hills, CA: Sage Publications. (http://www.hawaii.edu/powerkills/NOTE14.HTM#FULL)

2 Measured as the correlation between each Positive Peace indicator and internal peace scores from the GPI. The GPI includes measures of both internal and external peace, with internal peacefulness accounting for 60 per cent of country overall scores.

3 Invest Lithuania, The Manufacturing Landscape of Lithuania, 2019.

4 Cushman & Wakefield, Manufacturing Risk Index 2018, (https://www.cushmanwakefield.com.ua/en/manufacturing-risk-index-2018).

5 The Heritage Foundation, 2021 Index of Economic Freedom, (https://www.heritage.org/index/trade-freedom).

6 World Bank, Bulgaria – Living Conditions Before and After EU Accession, September 2009.

SECTION 3

1 International Monetary Fund, World Economic Outlook Update – January 2021, 26 January 2021, (https://www.imf.org/en/Publications/WEO/Issues/2021/01/26/2021-world-economic-outlook-update).

2 World Bank, Global Economic Prospects – January 2021, World Bank Open Knowledge Repository, 5 January 2021, (https://openknowledge.worldbank.org/handle/10986/34710).

3 International, Labour Organization, ILO Monitor: COVID-19 and the World of Work – Seventh Edition, 25 January 2021, (https://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/documents/briefingnote/wcms_767028.pdf).

SECTION 4

1 IHS Markit, ESG Factors Disclosure: iBoxx MSCI ESG USD Liquid Investment Grade Ultrashort Index, (https://cdn.ihsmarkit.com/www/pdf/1220/ESG_Factors_Disclosure__iBoxx_MSCI_ESG_USD_Liquid_Investment_Grade_Ultrashort_Index.pdf).

2 IHS Markit, ESG Factors Disclosure: iBoxx Global Green, Social & Sustainability Bonds Index, (https://cdn.ihsmarkit.com/www/pdf/1220/ESG_Factors_Disclosure__iBoxx_Global_Green__Social__Sustainability_Bonds_Index.pdf).

3 IHS Markit, ESG Factors Disclosure: Markit iBoxx Euro Sustainable Corporate Bond Custom Index, (https://cdn.ihsmarkit.com/www/pdf/1220/ESG_Factors_Disclosure__Markit_iBoxx_Euro_Sustainable_Corporate_Bond_Custom_Index.pdf).

4 IHS Markit, ESG Factors Disclosure: iBoxx MSCI ESG EUR Corporates 0-1 TCA Index, (https://cdn.ihsmarkit.com/www/pdf/1220/ESG_Factors_Disclosure__iBoxx_MSCI_ESG_EUR_Corporates_0_1_TCA_Index.pdf).

5 London School of Economics and Political Science (LSE), Roundtable explores challenges of measuring corporate impacts in fragile and conflict-affected environments, (https://www.lse.ac.uk/ideas/media/news/measuring-corporate-impacts-in-fragile-and-conflict-affected-environments).

6 ADEC Innovations ESG Solutions, The Link Between Peace and Sustainable Development, (https://www.esg.adec-innovations.com/resources/newsletters/august-2017-the-link-between-peace-and-sustainable-development/the-link-between-peace-and-sustainable-development/).

7 Global Masters Fund Limited, Chairman's Address – Annual General Meeting, 30 October 2020, (https://www.asx.com.au/asxpdf/20201030/pdf/44pc2w13zfsdmf.pdf).

8 MSCI World SRI Index (USD), 31 July 2019. Available at the time of writing at: https://www.msci.com/www/index-factsheets/msci-world-sri-index/05953516.

9 Natixis Investment Managers, When. Not if. Investor Insights Series 2017.

10 Calculations use IEP's Positive Peace Index Overall Score for 2018 and ESG score data from Insight Investment – BNY Mellon, Sovereigns and Sustainability, October 2018.

11 Calculations use IEP's Positive Peace Index Overall Score for 2017 and ESG score data from Aberdeen Standard Investments, Considering ESG for Emerging Market Sovereigns, February 2018.

12 Calculations use IEP's Positive Peace Index Overall Score for 2017 and ESG score data from Lazard Asset Management, Investment Research – Giving Credit Where it's Due – ESG Factors in EM Sovereign Debt, November 2017.

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MAY 2021 / IEP REPORT 80

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