POSITIVE PEACE REPORT 2022

Analysing the factors that build, predict and sustain peace.

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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WHY POSITIVE PEACE IS TRANSFORMATIONAL

Positive Peace is a transformational concept because it shifts the focus away from the negative by describing the necessary conditions for peace and society to flourish. Due to its systemic nature, improvements in Positive Peace not only strengthen peace, but are also associated with many other desirable outcomes for society, such as higher GDP growth, better measures of wellbeing, higher levels of resilience and more harmonious societies. Importantly, it provides a theory of social change, explaining how societies transform and evolve. Positive Peace describes an optimal environment under which human potential can flourish.

A parallel can be drawn with medical science. The study of pathology has led to numerous breakthroughs in our understanding of how to treat and cure disease. However, it was only when medical science turned its focus to the study of healthy human beings that we understood what was needed to do to stay healthy: physical exercise, a good mental disposition, a balanced diet and a sense of purpose. This could only be learned by studying what was working. In the same way, the study of conflict is different from the study of peace, producing very different insights. Understanding what creates sustainable peace cannot be found in the study of violence alone.

Humanity is nearing a tipping point and facing challenges unparalleled in its short history. Many of these problems are global in nature, such as climate change, ever decreasing biodiversity, depletion of the earth's freshwater, and overpopulation. Such global challenges call for global solutions and require cooperation on a scale unprecedented in human history. In a hyper-connected world, the sources of many of these challenges are multidimensional, increasingly complex and span national borders. For this reason, finding solutions requires fundamentally new ways of thinking.

Peace is the prerequisite for the survival of humanity in the 21st century. Without peace, it will not be possible to achieve the levels of trust, cooperation and inclusiveness necessary to solve these challenges, let alone empower international institutions and organisations necessary to address them. In the past, peace may have been the domain of the altruistic; but in the current interconnected and highly mobile global society it is clearly in everyone's self-interest.

Positive Peace provides a framework to understand and address the many complex challenges the world faces. It is transformational in that it is a cross-cutting facilitator of progress, making it easier for businesses to sell, entrepreneurs and scientists to innovate, individuals to produce and governments to effectively regulate.

Positive Peace is systemic and understanding systems thinking is required to grasp it in its entirety. Systems thinking originated in the study of organisms and has been extended into sociology. A system is a set of parts that interact to achieve a desired purpose/function or intent.

Systems thinking can also assist in understanding the way countries and nations function and evolve. When combined with Positive Peace, it provides new ways of conceptualising and explaining societal change. As one example — a system is more than the sum of its parts, and cannot be understood merely by breaking it down and analysing its constituent parts. Positive Peace consists of eight Pillars, but each of these Pillars does not correlate with peace as strongly as the sum of all components. This highlights that the whole is more than the simple sum of its components.

Such an approach distinctly contrasts with the traditional notion of linear causality, which dominates decision making today: identify a problem, decide upon its causes and tackle it in isolation. Without a fuller understanding of the underlying system dynamics, the linear approach is often ineffective and creates unintended consequences. The failure to solve some of society's fundamental challenges is a testimony to this. Systems thinking opens new ways of understanding nations and how they evolve. In systems, relationships and flows are more important than events. Events or problems represent the outcomes of the relationships and flows. This is why it is important to look at the multidimensional concept of Positive Peace as a holistic, systemic framework.

Positive Peace defines the goals towards which a system needs to evolve. Interventions should incrementally nudge the system towards ever higher levels of Positive Peace, rather than creating radical change, which is disruptive, disorienting and can create unease and resentment.

Importantly, viewing nations as systems provides a framework for understanding the relationships between humanity and the broader systems, such as the atmosphere and biosphere, which we intersect and depend upon. Systems are self-regulating and self-modifying and operate on two levels: first as a collection of interconnected subsystems and second as part of the larger systems surrounding it. Understanding these interdependencies is essential to meeting the global challenges of our age.

Different countries have different aims, or intent. Societies also have both formal and informal rules, referred to as encoded norms, which govern social behaviour, and aim to maintain the system in a stable state. They regulate inputs, creating feedback

loops. This can be observed in many societal processes, such as when a government stimulates the economy in response to a drop in GDP or deploys more policing resources when there is a rise in crime. Each country's system will be unique with different social norms and governance, although following the same general principles.

With the diversity in intent and encoded norms, any two nations may react differently to the same stimulus. Tipping points also occur within systems due to lagged and non-linear relationships. IEP's research uncovers evidence of tipping points in relation to peace and corruption and peace and per capita income, to name just two examples. In the past, societies have been investigated through the lens of causality; in the future, embracing these holistic, systemic approaches will forge our ability to navigate an age of unprecedented challenges.

Seen in this light, Positive Peace and systems thinking comprise an overarching framework for understanding and achieving progress not only in the level of global peacefulness, but in many other interrelated areas, including better economic progress, better ecological performance, happiness, stronger development and social advancement. All of these factors have a robust statistical relationship with Positive Peace.

Positive Peace provides the optimal environment for human potential to flourish.

Executive Summary

This report showcases the findings of the Institute for Economics and Peace's (IEP) research, including its latest results on Positive Peace and systems thinking.

Positive Peace is defined as the *attitudes, institutions and structures that create and sustain peaceful societies*. It is conceptually and empirically related to many constructive aspects of social development and can be used in multiple contexts. It can also be used to compile an index – the Positive Peace Index (PPI). This allows for the comparison and tracking of the factors that create flourishing societies. These and other concepts related to Positive Peace are covered in the first section of this report, as well as general PPI results, including rankings and changes over time.

Positive Peace is closely associated with system concepts to the extent that it is difficult to separate the two. IEP has further deepened its unique understanding of how societal systems function and has developed a framework called Halo which provides a comprehensive approach to analysing societal systems.

The same factors that create lasting peace also lead to many other positive outcomes to which societies aspire. For example, countries with higher levels of Positive Peace:

- are more resilient,
- are associated with robust and thriving economies,
- have better performance on ecological measures,
- higher levels of wellbeing and happiness,
- stronger measures of social cohesion,
- greater satisfaction with living standards and more.

All these qualities are systemically linked and are a by-product of the quality of the system. Such societies are less encumbered by the costs and wastage of violence or political instability, have higher productivity, better access to information and are not heavily weighed down by corruption or ineffective governments, to name some.

As a result, Positive Peace can be described as creating an optimal environment for human potential to flourish.

Social systems that operate with higher degrees of resilience are capable of offering more effective protection to their citizens against adverse shocks, whether political, environmental or economic. High-resilience societies are also more likely to take advantage of positive disruptions or opportunities arising from the creation of new economic paradigms and technological innovation. Frequently, after shocks, societies high in Positive Peace evolve systemically to be stronger and more capable of recovering from future shocks.

Positive Peace can be used as a predictor of future substantial falls in peace many years in advance, thereby giving the international community forewarnings and time to act. Through the modelling of the relationship between the PPI and the actual peace of a country, as measured through the Global Peace Index (GPI), it is possible to predict large falls in peace. IEP's Positive Peace deficit model shows that 80 per cent of the countries predicted to fall substantially in peace did so. This remarkable predictive power is discussed in the second section of this report.

Additionally, nations with a surplus of Positive Peace generally record substantial improvements in peace in the subsequent decade. This underscores the importance of Positive Peace as a gauge of societal resilience and the predictive role it plays in assessing future societal development. It is also important for business, as countries with better Positive Peace outcomes have superior economic performance than their peers. The GDP per capita in countries that improve in the PPI outgrew that of their peers by 2.7 percentage points per year over the past decade.

Similarly, corporate profitability is higher among nations improving their Positive Peace scores. In the industrial, construction and manufacturing sectors, corporate profits among PPI improvers outgrew that of other nations by 3 percentage points per year on average since 2009. Household demand grows twice as fast as elsewhere, inflation is three times less volatile, foreign direct investment and international trade growth is higher, while exchange rates and demand for sovereign bonds also improve.

COVID-19 had an impact on Positive Peace. The improvement in Positive Peace recorded until 2019, weakened substantially in 2020, as a result of the social and economic disruptions stemming from policy responses to the pandemic. Future editions of the PPI will be better placed to more fully assess the impact of COVID-19 on the global social system.

In regards to the management of the pandemic, nations with higher levels of societal resilience, as measured by Positive Peace, were better at protecting their citizens – they had more hospital beds, higher vaccination rates and lower mortality rates. These outcomes are the result of many systemic factors which are captured in the Positive Peace model.

Globally, Positive Peace has strengthened over the past decade, with the PPI score improving by 2.4 per cent since 2009. Improvements in Positive Peace generally happen gradually due to the system-wide nature of change. A total of 126 countries – or 77 per cent of the 163 nations assessed in the PPI – improved their scores over the past decade.

Much of this improvement came in the form of economic development, better health outcomes and greater access to technologies, especially in the information and communication

areas. There has been an increase in per-capita income, a reduction in aggregate levels of poverty and a big rise in the number of persons accessing the Internet. These economic and technological developments are captured in the *Structures* domain of Positive Peace, which improved by 8 per cent since 2009.

However, these advancements have been partially offset by a deterioration in social attitudes, captured by the *Attitudes* domain, which deteriorated by 1.8 per cent over the last decade. Sixty per cent of countries deteriorated in this domain. There have been deteriorations in the level of trust in governments, grievances between groups, measures of corruption, press freedoms, conflict between elites and misinformation. Some of the countries in which this domain deteriorated pronouncedly in the past decade were the US, Brazil, Venezuela, Turkey, the UK and India.

The *Institutions* domain, which gauges the effectiveness, transparency and reliability of the formal and informal organisations that manage societies, recorded a negligible improvement in the decade. However, there were deteriorations in some key measures including access to public services and government openness.

Seven of the eight Pillars of Positive Peace posted improvements since 2009. *Free Flow of Information* posted the largest improvement – over 10 per cent – on the back of more widespread access to the Internet. *Good Relations with Neighbours* and *Equitable Distribution of Resources* also posted large improvements. The improvements in *High Levels of Human Capital* and *Well-Functioning Government* were only marginal, reflecting weak outcomes in youth unemployment, government openness and transparency.

The only Pillar of Positive Peace to record a deterioration was *Low Levels of Corruption*, deteriorating by 1.8 per cent since 2009. This Pillar deteriorated in 99 countries, or 61 per cent of the nations assessed in the PPI and improved in only 64 countries.

The research also incorporates systems thinking, which provides a more accurate understanding of how nations operate and societies develop over time, rather than the traditional approach of cause-and-effect linear thinking. The introductory section of the report describes the fundamental concepts associated with systems thinking.

In the third section, IEP develops a new unique framework and holistic methodology for analysing societies from a systems perspective.

The model identifies the key attributes of societal systems and delineates techniques for studying them, leading to a better understanding of the overall system and its dynamics. Written in an accessible, non-technical way, the section highlights how the methodology can be used and adapted for different applications. The set of steps can be expanded or reduced depending on need and is applicable for country as well as community studies. It can also be used in simple exercises, lasting days or lengthy analyses involving months or years. This Halo methodology is at the core of IEP's process to engage in systems thinking and is successfully used in research and consulting by the Institute.

When combined with systems thinking, the analysis of Positive Peace produces a new theory of social change. Developments in Positive Peace precede societal changes in peacefulness and human development, either for better or worse. Stimuli and shocks have cascading effects, due to the feedback loops contained within national systems, pushing societies into virtuous or vicious cycles. However, these cycles can be understood, planned and moulded to produce the best social outcomes. Positive Peace provides a roadmap of the things societies need to change, to either consolidate virtuous cycles or break vicious ones.

Section four of this report describes practical examples of how IEP's Positive Peace framework has been operationalised. This work is developed through the Positive Peace Ambassador Program, the Positive Peace workshops and a number of partnerships with organisations with global and local reach.

Taken together, the findings in this report have important implications for building and sustaining peace.

- There are no quick and easy solutions. Building and sustaining societal development requires a large number of society-wide improvements progressing in concert with one another over long periods of time.
- Resilience should be the priority. Through focusing on the factors that are most critical, it is possible to build resilience in cost-effective ways.
- Stopping or averting conflict is not an end in itself. As Positive Peace progresses, it enables an environment where human potential may more easily flourish.

Without a deeper understanding of how societies operate, it will not be possible to solve humanity's major global challenges. Positive Peace provides a unique framework from which to manage human affairs and relate to the broader ecosystems upon which we depend. Positive Peace in many ways is a facilitator, making it easier for workers to produce, businesses to sell, entrepreneurs and scientists to innovate and governments to serve the interests of the people.

Key Findings

Positive Peace Fundamentals

- Positive Peace is defined as the *attitudes, institutions and structures that create and sustain peaceful societies*.
- These same factors also lead to many other positive outcomes that society feels are important, such as economic strength, resilience and wellbeing.
- Therefore, Positive Peace creates the optimal environment for human potential to flourish.
- The most peaceful countries in the world perform strongly on all eight Pillars of Positive Peace.
- High Positive Peace countries are more likely to maintain stability, adapt and recover from shocks.
- Countries that perform well in Positive Peace are more likely to achieve and sustain high levels of peace.

Global and Regional Trends

- More countries improved in Positive Peace — 126 in total, or 77 per cent of all countries assessed — than deteriorated from 2009 to 2020.
- Positive Peace improved 2.4 per cent globally in the past decade.
- This improvement was mainly driven by the *Structures* domain of Positive Peace, which improved by 8 per cent since 2009. This domain measures the technological and economic foundations that support social development.
- The *Attitudes* domain deteriorated by 1.8 per cent in the past decade. This demonstrates greater political polarisation, more intolerance of different views and opinions and less trust in governments. The *Institutions* domain recorded a marginal improvement in the period.
- Seven of the eight Pillars of Positive Peace improved since 2009, although the improvements in *High Levels of Human Capital* and *Well-Functioning Government* were minimal.
- *Low Levels of Corruption* was the only Pillar to deteriorate. This was either a reflection of greater corruption or an increase in awareness of it around the world.
- Almost all regions of the globe recorded improvements in Positive Peace over the past decade, with the Middle East and North Africa improving only marginally. The only region to record a deterioration was North America.
- The largest country improvements in the PPI over the decade were recorded for Uzbekistan, Georgia, Armenia, Côte d'Ivoire and Kazakhstan. The steepest deteriorations were in Syria, Libya, Venezuela, Yemen and South Sudan.

The Benefits of Societal Resilience

- From 2009 to 2020, the per capita GDP of countries that improved in the PPI rose by an average of 3.1 per cent per year. This compares with 0.4 per cent per year for the other nations.
- Inflation in countries where the PPI improved was on average three times less volatile than where Positive Peace deteriorated in the past decade. Inflation volatility is detrimental to growth because it creates uncertainty, thereby reducing demand and business investment.
- Household consumption in nations where Positive Peace improved grew two times faster from 2009 to 2020 than where the PPI deteriorated.
- A model based on Positive Peace suggests that the global number of COVID-19 cases by the end of 2021 was almost 700 million, instead of the officially reported 290 million. The number of fatalities was most likely around 12 million persons, instead of the reported 5.4 million.
- Nations with higher levels of resilience have been more effective in shielding their populations from the COVID-19 pandemic, recording excess mortality rates half the size of those in countries with low levels of societal resilience.
- Of the countries with a substantial Positive Peace Deficit in 2009, almost 80 per cent deteriorated in the GPI in the subsequent decade. A Positive Peace deficit is where the actual peacefulness of a country is substantially higher than what its levels of Positive Peace would suggest.
- High levels of societal resilience are associated with greater life satisfaction because individuals are not weighed down by concerns about survival or excessive poverty.
- In a large proportion of Western European nations and full democracies, females are more satisfied with their own standards of living than males. In contrast, women are less satisfied than men in authoritarian regimes.

POSITIVE PEACE: A MEASURE OF SOCIETAL RESILIENCE

FIGURE A.1

- Positive Peace is a gauge for *societal resilience*. Communities, societies and countries that operate with high levels of Positive Peace are more capable of protecting their populations for adverse shocks, such as economic downturns, political crises or natural disasters. These societies also tend to rebuild their internal structures and recover more rapidly in the aftermath of such shocks.

- Positive Peace is defined as the *attitudes, institutions and structures* that create and sustain peaceful societies. 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 tens of thousands of cross-country measures of socio-economic development, including surveys and expert assessments, 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. 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 interventions, 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 A.2

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.

POSITIVE PEACE & SYSTEMS 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 by Norwegian sociologist Johan Galtung 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 and therefore conceptually different from Galtung's version. Statistical analysis and mathematical modelling was used to identify the common characteristics of the world's most peaceful countries. It therefore forms an important evidence base to understand Positive Peace and avoids subjective value judgements.

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 or indicators with the poorer data were dropped. The remaining factors were clustered using statistical techniques into the eight Pillars of Positive Peace. Three indicators were selected for each Pillar that 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. It is also highly robust. Various tests have been performed, including using alternative methods of weighting which have produced similar results.

BOX A.1

Measuring peace: the positive peace index and the global peace index

The Global Peace Index (GPI), is produced annually by IEP, and ranks 163 independent states and territories according to their level of peacefulness and stands as the world's leading measure of global peacefulness. The GPI is composed of 23 qualitative and quantitative indicators from highly respected sources, covering 99.7 per cent of the world's population. The index measures global peace using three broad themes: the level of safety and security in society; the extent of domestic or international conflict; and the degree of militarisation. For the full 2021 report or to explore the interactive map of global peace, visit www.visionofhumanity.org.

The Positive Peace Index (PPI) measures the level of Positive Peace in 163 countries. The PPI is composed of 24 indicators that capture the eight Pillars of Positive Peace. Each indicator was selected based on the strength of its statistically significant relationship with the GPI. For more information and the latest results of the PPI, refer to Section 1 of this report.

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. 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 and are key to a robust business environment.
- ***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 nations enforce 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*** – Harmonious relations with other countries or between ethnic, religious and cultural groups within a country are vital for peace. Countries with positive internal and 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, business 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, which in turn can lead to dissatisfaction and civil unrest. Low corruption can enhance confidence and trust in institutions as well as improve the efficiency of business and the competitiveness of the country.

Positive Peace can be described as the *attitudes, institutions and structures* that create and sustain peaceful societies. 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 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.
- **Underpins progress more generally**. Positive Peace also creates an environment of better performance for the environment, well-being, economic development and inclusion.

Implementing Positive Peace

IEP implements Positive Peace in communities around the world using two approaches. The first approach is predicated on Systems Thinking. It uses the concepts of societal systems to guide the design of intervention programs and organisations dedicated to building resilience in fragile regions as well as developed states. This approach is discussed in Section 3 of this Report.

The second approach uses targeted interventions through workshops and direct training to shore up resilience at the local community level. In some cases, these interventions engage The Charitable Foundation (TCF), IEP's sister organisation, which develops programs for communities to improve their physical infrastructure and become progressively self-reliant. This is discussed in Section 4 of this Report.

Systems Thinking

Systems theory first originated while attempting to better understand the workings of biological systems and organisms, such as cells or the human body. Through such studies, it became clear that understanding the individual parts of a system was inadequate to describe a system as a whole, as systems are much more than the sum of their parts. Think of human beings, our consciousness is more than sum of our parts. Extending these principles to societal systems is a paradigm shift, allowing for a more complete understanding how societies work, how to better manage the challenges they face and how to improve overall wellbeing. This approach offers alternatives to traditional understanding of change.

All systems are considered open, interacting with the sub-systems within them, other similar systems and the super-system within which they are contained. A societal system is made up of many actors, units and organisations spanning the family, local communities and public and private sectors. As all of these operate individually and interact with other institutions and organisations, each can be thought of as their own open system within the societal system. Sub-systems may, for instance, include companies, families, civil society organisations, or public institutions, such as the criminal justice system, education or health. All have differing intents and encoded norms. Similarly, nation states interact with other nations through trading relations, regional body membership and diplomatic exchanges, such as peace treaties or declarations of war.

Figure A.3 illustrates the different levels that are relevant to the nation or country. It shows that the nation state itself is made up of these many sub-systems, including the individual, civil society and business community. Scaling up, the nation can be seen as a sub-system of the international community, in which it builds and maintains relationships with other nations and international organisations. Finally, the international community forms a sub-system of a number of natural systems, such as the atmosphere and biosphere.

Any sub-system within the following diagram can interact with a super system at any level. For example, an individual can interact with the nation they belong to, other nations, the international community or the natural environment. Therefore, the systems are not hierarchical in structure, rather they co-evolve and change together.

Systems thinking offers a more complex view of causality. Causal thinking is generally used in problem solving — find the cause of the problem and fix it. Such an approach is useful for explaining discrete and well-isolated physical phenomena. However, when multiple variables are involved, it becomes increasingly difficult to identify a cause. Further, such thinking has the implicit implication that all outcomes can be tracked

BOX A.2

A summary of the properties of systems

These are some of the key properties of complex systems:

- **The system is a *whole***. It cannot be reduced to its component parts. The simple aggregation or combination of behaviour patterns of individual parts is insufficient to describe the full operation of the whole. This is known as systemic complexity.
- **It is difficult or impossible to ascertain *causality***. Given this systemic complexity, the notion of causality – so commonly used in traditional socio-economic analysis - loses meaning in systems thinking. Rather, systems' components are thought of as mutually determining one another.
- **The evolution of a system is *path-dependent***. Systems have memory, in that they retain information about the path taken to reach a given state. For example, consider two countries now experiencing exactly the same degree of peacefulness and social order. If one country has just emerged from a long period of internal conflict, while the other has always been peaceful, the first country will more easily be nudged into unrest and turmoil by a negative shock, as old rivalries and resentments flare up again.
- **The social system has *intent***. The intent of a system is its willing pursuit of desired outputs or states. For example, the intent of a school system is to provide pupils with the best possible education through the most efficient use of resources.
- **The social system has *norms***. Norms are patterns of conduct that members should or usually follow. Norms can change over time or in response to a disruptive shock. For example, the COVID-19 pandemic changed social norms about how individuals greet one another, congregate and work. Norms can also be expressed through the legal frameworks.
- **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. Feedback loops may lead to virtuous or vicious cycles, depending on whether the self-regulation mechanism places the system in states of greater or lesser peacefulness.
- **The system is *self-modifying***. When there is a persistent mismatch between inputs and desired outputs, the system searches for a new pattern of operation. For example, a corporation that is consistently not achieving its profit goals, will modify itself by reducing or re-purposing the workforce, redesigning production processes or changing the product it manufactures.
- **The system does *not operate in isolation***. Social systems interact with one another, for example as two nations interact through trade, economic investment, migration, exchange of knowledge and other means. Systems interact with other systems of higher or lower hierarchy, as for example, a city interacts with both the national 'super-system' and the household 'sub-system', as well as the household interacting with the state.
- **The system operates *non-linearly* and may contain *tipping points***. The interrelationships among components of a system are often non-linear. That means the relationship changes depending on the level of development of a nation. In some cases, relationships change more abruptly when certain thresholds are reached. These thresholds are called tipping points. For example, corruption and per capita income exhibit tipping points. Changes in corruption only have a small effect on the overall peace until a certain point is past, after which small changes have large impacts.

back to a set of initial conditions. This discounts the potential for genuine novelty or innovation and is in contrast to our experience of reality.

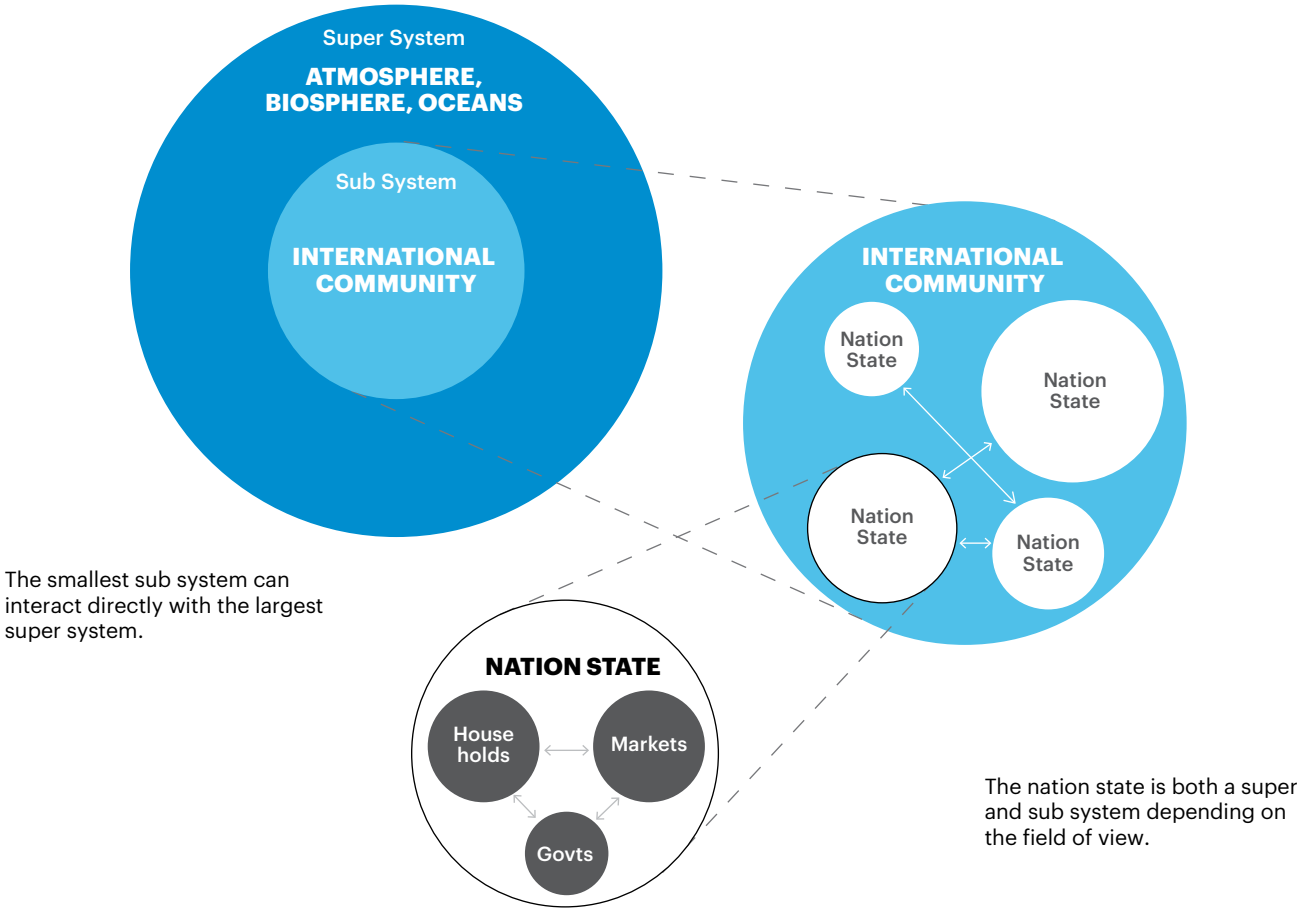
Through the mechanics of mutual feedback loops, systems thinking blurs the separation between cause and effect. A mutual feedback loop is where two interacting entities modify each other through feedback. Conversations and negotiations are good examples of mutual feedback loops. A further example can be observed in the relation between the *Free Flow of Information* and a *Well-Functioning Government*. Governments can regulate what information is available; however, information can also change governments. Both will respond to the action of the other. In systems thinking, a "cause" is seen not as an independent force, but as an input into a system which then reacts, thereby producing an effect. The difference in reaction is due to different encoded norms, or values by which society self-organises. The same input can have very distinct results in different societies.

The concept of mutual feedback loops gives rise to the notion of causeless correlations and forms the basis of Positive Peace. Statistically significant correlations describe macro relationships, but the interactions within the dynamics of the system and the causal relationships will vary depending on the particular circumstances.

FIGURE A.3

Systems and the nations

The nation is both a super and sub-system depending on the field of view. The smallest sub-system can interact directly with the largest super system.



Source: IEP

Furthermore, from a systems perspective, each 'causal' factor does not need to be understood. Rather, multiple interactions that stimulate the system in a particular way negate the need to understand all the causes. Processes can also be mutually causal. For example, as corruption increases, regulations are created, which in turn changes the way corruption is undertaken. Similarly, improved health services provide for a more productive workforce, which in turn provides the government with revenue and more money to invest in health. As conflict increases, the mechanisms to address grievances are gradually depleted increasing the likelihood of further violence.

Systems are also susceptible to tipping points in which a small action can change the structure of the whole system. The Arab Spring began when a Tunisian street vendor set himself alight because he couldn't earn enough money to support himself. The relationship between corruption and peace follows a similar pattern. IEP's research has found that increases in corruption have little effect until a certain point, after which even small increases in corruption can result in large deteriorations in peace. Similar tipping points can be seen between peace and per capita income, inflation and inequality.

Homeostasis & Self-Modification

Homeostasis is the process by which systems aim to maintain a certain state or equilibrium. An example of this is the self-regulation of the body temperature of a mammal. If the body starts to overheat, then it begins to sweat; if the body becomes cold, then the metabolism will become faster. The system attempts to make small adjustments based on the way inputs are interpreted by its encoded norms so that future inputs are within acceptable bounds. The same model of understanding can be applied to nations. Nations maintain homeostasis through their encoded norms, such as accepted levels of social behaviour. Even the social norms around queuing can be seen as maintaining an equilibrium. Another example would be governments raising taxes to fund services to a particular level. Tax rates are more or less kept the same, with the budgets for government departments only changing gradually. We expect the health and education systems to behave in a certain way.

One of the key differences between natural systems, such as the weather or the oceans, and biological systems is that biological systems have intent. Similarly, countries or nations also have intent. For example, when Costa Rica abolished its military in 1948, the government at the time arguably had the intent not to go to war.

Encoded norms can also create mutual feedback loops. When the input comes from another system, the response may attempt to alter future inputs to that system. Think of two groups who are continuously modifying their responses based on the actions of the other, such as two football teams who are continuously modifying their tactics based on the interactions in the game. In a democratic nation, this continual change based on the actions of the other can be observed in the interactions and adjustments between two political parties, or the shaping of news based on public sentiment. The sentiment shapes the news, but the news also shapes sentiment.

Systems have the ability to modify their behaviour based on the input that they receive from their environment. For example, the desire to seek food when hungry or the release of T-cells in response to infection are encoded reactions to inputs. For the nation state, as inflation increases, interest rates are raised to dampen demand. When an infectious disease outbreak occurs, medical resources are deployed to fix it.

Feedback loops provide the system with knowledge of its performance or non-performance in relation to its intentions. Given this, it is possible to analyse political systems through their feedback loops to understand how successfully they may be performing. An example would be measuring how political organisations within a society respond to inputs that align or misalign with their intentions. Similarly, social values can be better recognised using the mutual feedback model. For example, the mutual feedback model can help us understand what behaviours are shunned and what behaviours are encouraged within a society and why.

When unchecked or operating in isolation, feedback loops can lead to runaway growth or collapse. In cultures, their role can be constructive or destructive. However, feedback loops are fundamental in promoting self-modification, which allows the societal system state to evolve to a higher level of complexity. The effect of mutual feedback loops can be the accumulation of capital, the intensification of poverty, the spread of disease or the proliferation of new ideas.

If the external or internal factors of the societal system pressure the system into persistent imbalance, then a new level of complexity needs to be developed to maintain stability. Within the biosphere, it could be the mutation of a species so its offspring are better adapted to their environment. For the nation, this may take the form of major shifts within the system, such as policies to reduce carbon emissions when CO^2 emissions become too high or the implementation of an anti-corruption commission when foreign investment falters.

Successful adaptation to systemic imbalances is more likely when the societal system has higher levels of Positive Peace. This is empirically demonstrated through the relationship between high Positive Peace and the reduced impact of shocks. For example, increases in the population of a country place stress on agricultural resources. The nation can respond by implementing measures that improve the yield of the available land while building an export industry to produce capital for the importation of food. Without an adequate response, the system would slowly degrade and potentially lead to collapse.

Figure A.4 shows the process for homeostasis and self-modification. Encoded norms and intent set the goals for the societal system. The performance of the nation in relation to its intent and encoded norms is then assessed by receiving either internal or external input. When the societal system is fulfilling its intentions, the feedback loops make minor adjustments to maintain homeostasis. However, when the societal system's performance is persistently mismatched to its intent, it can begin a process of self-modification. This allows the system to adjust its encoded norms or intent so that it adapts to the new conditions. Though figure A.4 depicts this process using a simple process diagram, in reality, these mechanisms are complex and dynamic.

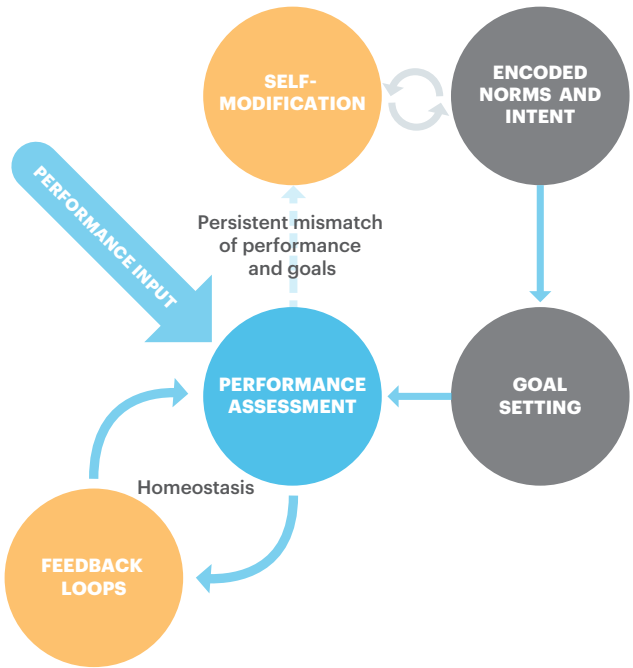
The relationship between the nation state and other systems, such as the biosphere and atmosphere, is key to the survival of humanity. If these systems become incapacitated, then nations are also weakened. Similarly, acknowledging the interdependence between nation states and other systems should fundamentally alter the way in which we handle these complex relationships.

When applying systems thinking to societal systems, it is important not to overcomplicate the analysis. What is essential is to view the system as a set of relationships, rather than a set of events, and to understand the most important feedback loops. Positive Peace provides a framework through which we can understand and approach systemic change, moving from simple causality to holistic action.

FIGURE A.4

Homeostasis and self-modification

Homeostasis occurs when there is balance between a system's internal goals and its performance. If performance persistently mismatches a nation state's goals, the system will self-modify and adapt. Once this change has occurred, the nation state will redefine its goals and attempt to maintain the new homeostasis.



Source: IEP

BOX A.3

Compilation of IEP's work on societal systems

Over the years, IEP has carried out a program of applied research on systems thinking relating to socio-economic development. This research has produced practical applications for social systems theory that have consolidated the knowledge of how societies evolve and respond to shocks. This box contains a compilation of this research program. Most references cited can be accessed from www.visionofhumanity.org.

1. **Detecting the components of a system**
   The study of societal systems is hindered by a relative scarcity of data (i.e. in comparison to engineering or biological systems). Social systems are complex, multi-faceted and fluid structures, which makes it difficult for analysts, international organisations and even national statistical offices to produce data capturing their complexity and dynamism accurately. For this reason, societal systems are often studied indirectly through statistical indicators of economic activity, opinion surveys or expert assessments. *The Global Terrorism Index 2020* (section '*Correlates of Terrorism*,' page 68) contains a methodology for finding the statistical indicators that are most closely associated with terrorism systems. The methodology is based on structural equation modelling and can be used to delineate the differences in systemic structure across diverse types of countries. Terrorism systems in advanced economies were associated with internal conflict and human rights violations, whereas the same systems in the rest of the world were also linked with societal polarisation and religious or ethnic tensions.

2. **Identifying intent**
   The *Positive Peace Index 2017* (section '*Intent of a Nation State*,' page 38) contains a methodology for statistically deriving the intent of a nation state in four key areas: economic structure, political framework, international relations and social policy. The section shows how nations can be clustered according to the affinity of their social intent. It also finds that these intent similarities form very well-defined geographical blocs across the world that map out zones of economic and cultural influencing.

3. **Feedback loops**
   The complexity inherent to social systems arises as a result of feedback loops, as discussed above. The *Mexico Peace Index 2021* (section '*Dynamics that Lead to Increases in Crime*,' page 68) discusses an analytical tool to study what social dynamics lead to changes in violence levels. It finds that indicators of the *Well-Functioning Government* and *Low Levels of Corruption* Pillars of Positive Peace deteriorate together, forming a vicious cycle – a feedback loop leading to greater levels of violence. This was particularly noticeable in Mexico, but other nations have different dynamic cycles of violence. In another example, the *Global Terrorism Index 2020* (section '*Disrupting Terrorist Groups and Networks*,' page 76) delineates the feedback loops of intent, resourcing and outcomes that keep a terrorist group functional. Disrupting these loops at specific nodes maximises the chances of such groups being dismantled.

4. **Predicting economic outperformance**
   The *Business and Peace Report 2021* (section '*Positive Peace as a Predictor of Economic Outperformance*,' page 17) shows how financial analysts can use feedback loops in Positive Peace systems to predict superior economic performance by groups of countries improving in the PPI.

5. **Non-linearities**
   Social systems often evolve non-linerarly, that is, the nature of the interrelationships between variables changes depending on the developmental stage of a nation. The *Business and Peace Report 2021* (section '*Relationship Between Peace and Business Conditions*,' page 9) shows the analysis of non-linearity applied to gauges of worker productivity. The section shows that higher worker productivity is associated with greater levels of peace. But it also shows that the relationship becomes steeper at higher developmental levels. That is, in more peaceful countries, further improvements in peace are associated with higher gains in worker productivity. A similarly non-linear relationship between the PPI and the Foundations of Wellbeing from the Social Progress Imperative is discussed in the *Positive Peace Report 2020* (section '*Positive Peace, Ethical Investment and Resilience*,' page 49).

6. **Tipping points**
   Tipping points are a special case of non-linearity. They describe instances where the relationship between two statistical variables change abruptly, instead of gradually. The 2020 book *Peace in the Age of Chaos* by IEP founder Steve Killelea describes how statistical analysis identifies tipping points between peacefulness and corruption. It describes how a deterioration in corruption past a certain tipping point leads to a drastic increase in violence (*Peace in the Age of Chaos*, 2020, Hardy Grant Books, section '*Peace and Corruption*,' page 167). The 2015 IEP report *Peace and Corruption* contains several examples of tipping points where the relationships between indicators of perceived corruption and indicators of peace change abruptly past a certain developmental threshold. In another application, research showed how Colombia and Venezuela, two originally similar countries in their GPI and PPI stances in 2009, diverged dramatically in peacefulness in the following decade. This was discussed in the *Positive Peace Report 2020* (section '*Tipping Points in the Positive and Negative Peace Systems*,' page 64).

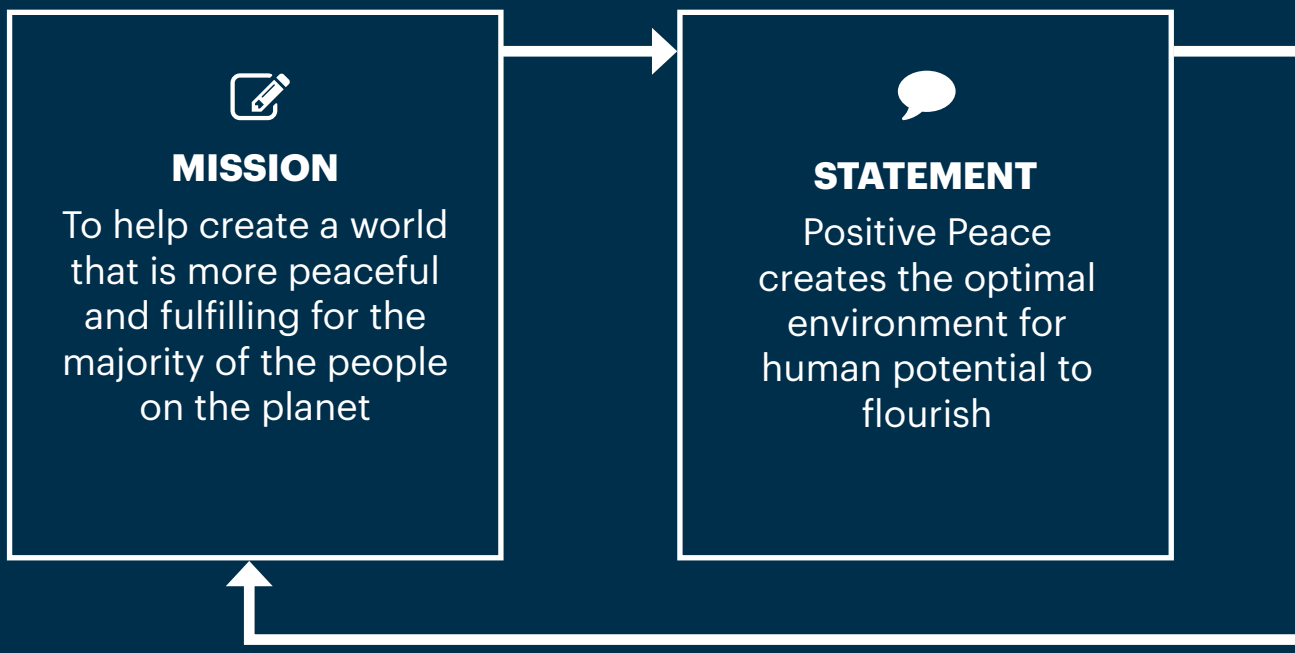
7. **Path dependency**
   The *Positive Peace Report 2020* (section '*Positive and Negative Peace Systems Dynamics Model,*' page 63) shows that countries can have different developmental trajectories in the future depending on the trajectories they traced in their past. The section gives the example of two countries, Egypt and Syria, that had similar GPI scores in 2009 but developed along different paths since, partly due to their histories.

8. **Self-modification**
   When faced with a shock, societal systems may modify their internal structures to protect citizens and facilitate a post-shock recovery. Self-modification is an important component of societal resilience and has been studied in the *Global Terrorism Index 2020* (section '*The Impact of 9/11 on the US Socio-Economic System,*' page 71). The shock-response analysis shows that the terrorist attacks in New York and Washington DC were so disruptive that led the American socio-political system to undergo fundamental changes. Some of these changes lasted only a few years after 2001, but others have not yet been unwound twenty years after the trigger event.

POSITIVE PEACE AS A

Positive Peace provides a process of change that explains the functioning

PROCESS OF CHANGE FRAMEWORK



The 'process of change' framework is a tool that shows the logical steps from the inputs behind a policy or programme to the outputs and outcomes that are expected to result.

Positive Peace consists of eight Pillars that have been empirically derived. It describes the major factors that govern change within a society. These factors operate inter-dependently, mutually affecting each other, therefore making it difficult to understand the true cause of any event. Systems thinking provides a model to explain the interactions and changes within the system. This means that more emphasis is placed on the relationships and flows within the system than on a single event, such as a terrorist attack or the election of a controversial leader.

When programmes or policies achieve measurable improvements in the Pillars of Positive Peace, they accelerate social progress. Immediate programme outputs can help raise standards of living, improve information flows and can build trust and confidence. Other programmes can help to resolve immediate grievances, thereby reducing the amount of conflict in society. If momentum is maintained, these successes can reinforce one another and set the stage for further progress. As successes build upon one another, the system moves to a more peaceful equilibrium. Feedback loops help the system 'reset,' so its homeostasis is at a higher level of peace and wellbeing. The system will persistently return to homeostasis through feedback loops, which is why building Positive Peace requires a number of sustained interventions. Positive Peace works slowly over time. Radical changes to systems are likely to

PROCESS OF CHANGE

of a nation or society and why highly peaceful societies thrive.

PROGRAMMES & POLICIES	OUTPUTS	OUTCOMES		
		Short term*	Medium term*	Long term*
Interventions to improve Positive Peace can take many forms, but they will be most effective if they: • Focus on all 8 Pillars • Improve many aspects of Positive Peace at once • Are locally-owned • Provide local solutions to local problems	Measurable improvements in the Pillars of Positive Peace	• Improvements in material well-being and the business environment • Increased participation by citizens • Reduction in grievances and improvements in perceptions of fairness *One to five years	• Successes are reinforced via positive feedback loops • Starting of a virtuous cycle with broad based improvements across society • Greater resources and pathways to solve problems *Five to ten years	• Moves the system to a higher level of peace, creating a new, more peaceful and productive homeostasis which can self-modify to create higher level of functioning • Fewer grievances and conflicts arise, and those that do are resolved nonviolently *Ten to twenty years

Although this framework is usually applied to specific activities and interventions, the learnings from IEP's Positive Peace research can be represented in the same way.

disrupt the system, therefore change is more like continually nudging the system in the right direction. The most effective systemic change is widespread and incremental.

Interventions to improve Positive Peace can be implemented by governments, businesses, civil society organizations or others, as has been the case in IEP's Positive Peace workshops. Outputs are the measurable things that the programmes produce, such as a 30 per cent increase in school attendance and the outcomes are the social changes that result, for example, improved High Levels of Human Capital in the community.

The diagram above presents IEP's most up-to-date understanding of how increasing levels of Positive Peace creates the optimal environment for human potential to flourish and leads to societies reducing violence. Interventions to improve Positive Peace can be implemented by governments, businesses, civil society organisations, or groups of people or volunteers, as has been the case in IEP's Positive Peace workshops.

1 Positive Peace Index, Results & Trends

Key Findings

- More countries improved in Positive Peace — 126 in total — than deteriorated — 36 countries — from 2009 to 2020.
- These improvements were mainly driven by Free-Flow of Information, *Good Relations with Neighbours*, *Equitable Distribution of Resources* and *Sound Business Environment*.
- The only Pillar of Positive Peace to record a deterioration since 2009 was *Low Levels of Corruption*.
- *Well-Functioning Government* and *High Levels of Human Capital* recorded the slightest improvement, remaining almost unchanged.
- Positive Peace improved 2.4 per cent globally from 2009 to 2020.
- The global PPI improved every year without interruption since 2015, although the improvement from 2019 to 2020 was very small. The slower pace of improvement in 2020 was associated with COVID-19 and the global recession created by the policy responses to the pandemic. However, some of the indicator sources still have not updated their data for 2020. Thus, it is possible that the change in the PPI from 2019 to 2020 could be revised as more up-to-date information becomes available.
- The deterioration in the global PPI in 2015 coincided with different economic crises in emerging markets and migration crises in the US and Europe that exacerbated socio-political polarisation.
- Eight out of the nine world regions improved in Positive Peace from 2009 to 2020, with North America being the only exception.
- Russia and Eurasia, Asia Pacific and South Asia had the largest regional improvements. All countries in these three regions recorded improvements in their PPI scores.
- Improvements in the PPI are mainly due to the *Structures* domain of Positive Peace, which showed substantial development since 2009, while the *Institutions* domain recorded only a small improvement in the period.
- In contrast, the *Attitudes* domain deteriorated by 1.8 per cent globally from 2009 to 2020. This domain deteriorated in 97 of the total 163 countries assessed, reflecting increased polarisation of views on political and economic administration matters, as well as a deterioration in the quality of information disseminated to the public.
- The largest deteriorations in Positive Peace occurred in Syria, Libya, Venezuela, Yemen, and South Sudan. All of these countries are affected by conflict.

The Positive Peace Index (PPI) measures the level of societal resilience of 163 countries, covering 99.7 per cent of the world's population. The PPI is the most comprehensive global, quantitative approach to defining and measuring the positive qualities of peace. This body of work provides an actionable platform for development and improvements in peace. It can also help improve social factors, including governance and economic development as well as peace. It stands as one of the few holistic and empirical studies to identify the positive factors that create and sustain peaceful societies.

The Global Peace Index (GPI) is an inverted measure of peace, that is, scores close to 1 indicate lower levels of violence and scores close to 5 indicate greater levels of violence. To preserve consistency with the GPI, the PPI is also constructed such that lower scores indicate better socio-economic development, and higher scores indicate less development.

IEP takes a systems approach to peace, drawing on recent research into systems, especially societal systems. In order to construct the PPI, IEP analysed over 24,700 different data series,

indices and attitudinal survey variables in conjunction with current thinking about the drivers of violent conflict, resilience and peacefulness.

The result is an eight-part taxonomy of the factors associated with peaceful societies. These eight areas, known as the Pillars of Positive Peace, were derived from the datasets that had the strongest correlation with internal peacefulness, as measured by the Global Peace Index, an index that defines peace as "absence of violence or the fear of violence". The PPI measures the eight Pillars using three indicators for each. The indicators represent the best available globally-comparable data with the strongest statistically significant relationship to levels of peace. The 24 indicators that make up the PPI are listed in Table 1.1

TABLE 1.1

Indicators in the Positive Peace Index

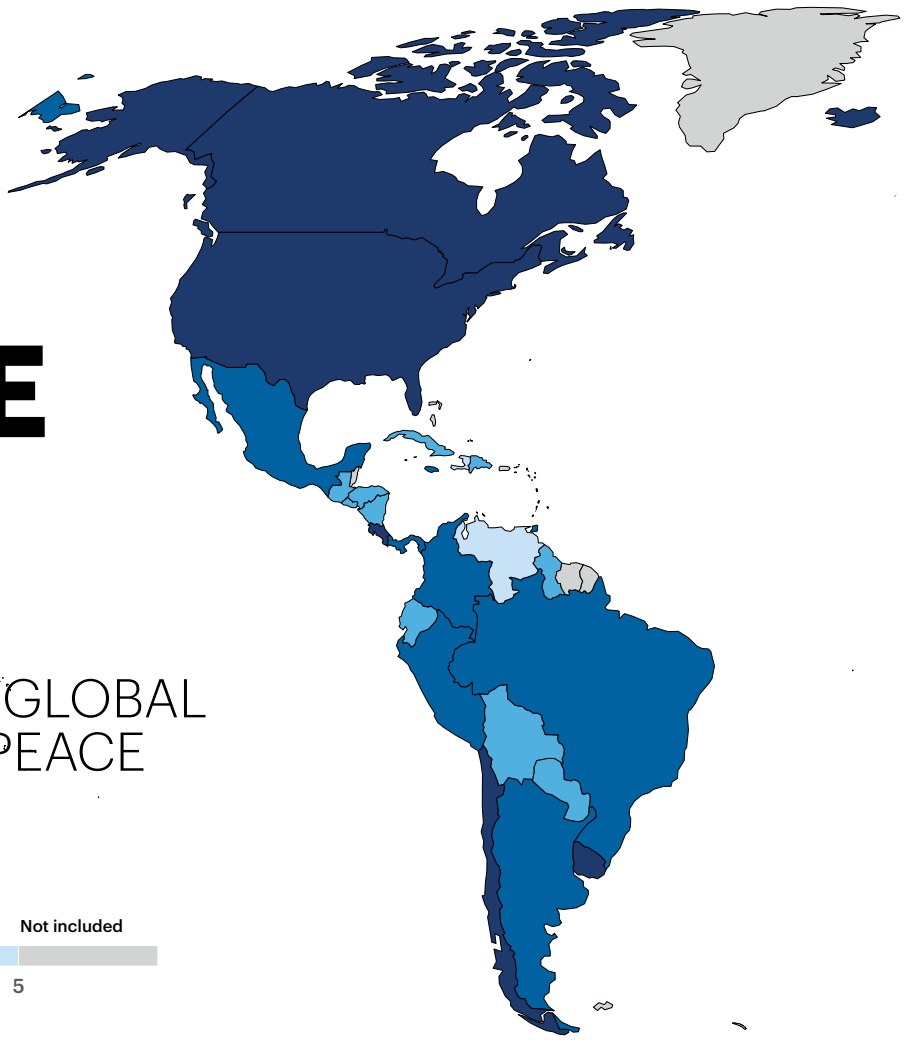
The following 24 indicators have been selected in the Positive Peace Index by showing the strongest relationships with the absence of violence and the absence of fear of violence.

Pillar	Domain	Indicator	Description	Source	Correlation coefficient (to the GPI)
Acceptance of the Rights of Others	Attitudes	Gender Inequality	The Gender Inequality Index (GII) reflects women's disadvantage in three dimensions: reproductive health, political empowerment and the labour market.	United Nations Development Programme	0.71
	Attitudes	Group Grievance	The Group Grievance Indicator focuses on divisions and schisms between different groups in society – particularly divisions based on social or political characteristics – and their role in access to services or resources, and inclusion in the political process.	Fragile States Index	0.64
	Attitudes	Exclusion by Socio-Economic Group	Exclusion involves denying individuals access to services or participation in governed spaces based on their identity or belonging to a particular group.	Varieties of Democracy (V-Dem)	0.72
Equitable Distribution of Resources	Structures	Inequality-adjusted life expectancy index	Measures the overall life expectancy of a population accounting for the disparity between the average life expectancy of the rich and that of the poor. The smaller the difference the higher the equality and that is a reflection of the equality of access to the health system.	United Nations Development Programme	0.62
	Institutions	Access to Public Services	Measures the discrepancies in access to public services distributed by socio-economic position.	Varieties of Democracy (V-Dem)	0.76
	Attitudes	Equality of Opportunity	Assesses whether individuals enjoy equality of opportunity and freedom from economic exploitation.	Freedom House	0.70
Free Flow of Information	Structures	Freedom of the Press	A composite measure of the degree of print, broadcast and internet freedom.	Reporters Without Borders (RSF)	0.50
	Attitudes	Quality of Information	Measured by Government dissemination of false information domestically: How often governments disseminate false or misleading information.	Varieties of Democracy (V-Dem)	0.60
	Structures	Individuals using the Internet (% of population)	Internet users are individuals who have used the Internet (from any location) in the last three months. The Internet can be used via a computer, mobile phone, personal digital assistant, games machine, digital TV etc.	International Telecommunication Union	0.61
Good Relations with Neighbours	Attitudes	Law to Support Equal Treatment of Population Segments	This is a measure of how population segments interrelate with their domestic neighbours. It assesses whether laws, policies and practices guarantee equal treatment of various segments of the population.	Freedom House	0.66
	Structures	International Tourism	Number of tourists (number of arrivals per 100,000 population) who travel to a country (staying at least one night) other than that in which they have their usual residence.	World Tourism Organization	0.63
	Institutions	External Intervention	The external intervention indicator considers the influence and impact of external actors in the functioning - particularly security and economic - of a state.	Fragile States Index	0.71

High Levels of Human Capital	Structures	Share of youth not in employment, education or training (NEET)	Proportion of people between 15 and 24 years of age that are not employed and are not in education or training.	International Labour Organization	0.75
	Structures	Researchers in R&D	The number of researchers engaged in Research & Development (R&D), expressed as per one million population.	UNESCO	0.67
	Structures	Healthy life expectancy (HALE)	Average number of years that a newborn can expect to live in full health.	World Health Organisation	0.59
Low Levels of Corruption	Institutions	Control of Corruption	Control of Corruption captures perceptions of the extent to which public power is exercised for private gain.	World Bank	0.78
	Attitudes	Factionalised Elites	Measures the fragmentation of ruling elites and state institutions along ethnic, class, clan, racial or religious lines.	Fragile States Index	0.72
	Institutions	Public Sector Theft	Assesses perceptions of how often public sector employees steal, embezzle or misappropriate public funds or other state resources.	Varieties of Democracy (V-Dem)	0.73
Sound Business Environment	Institutions	Regulatory Quality	Captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.	World Bank	0.76
	Institutions	Financial Institutions Index	Part of the financial development index, this indicator measures the quality of the financial institutions, including the depth of the financial sector and the access to financial products.	International Monetary Fund	0.62
	Structures	GDP per capita	GDP per capita (current US$) is gross domestic product divided by midyear population.	International Monetary Fund	0.67
Well-Functioning Government	Institutions	Government Openness and Transparency	Assesses to what extent government operations can be legally influenced by citizens and are open to scrutiny from society.	Freedom House	0.63
	Institutions	Government Effectiveness	Government Effectiveness captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.	World Bank	0.79
	Institutions	Rule of Law	Rule of Law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.	Bertelsmann Transformation Index	0.68

2022 POSITIVE PEACE INDEX

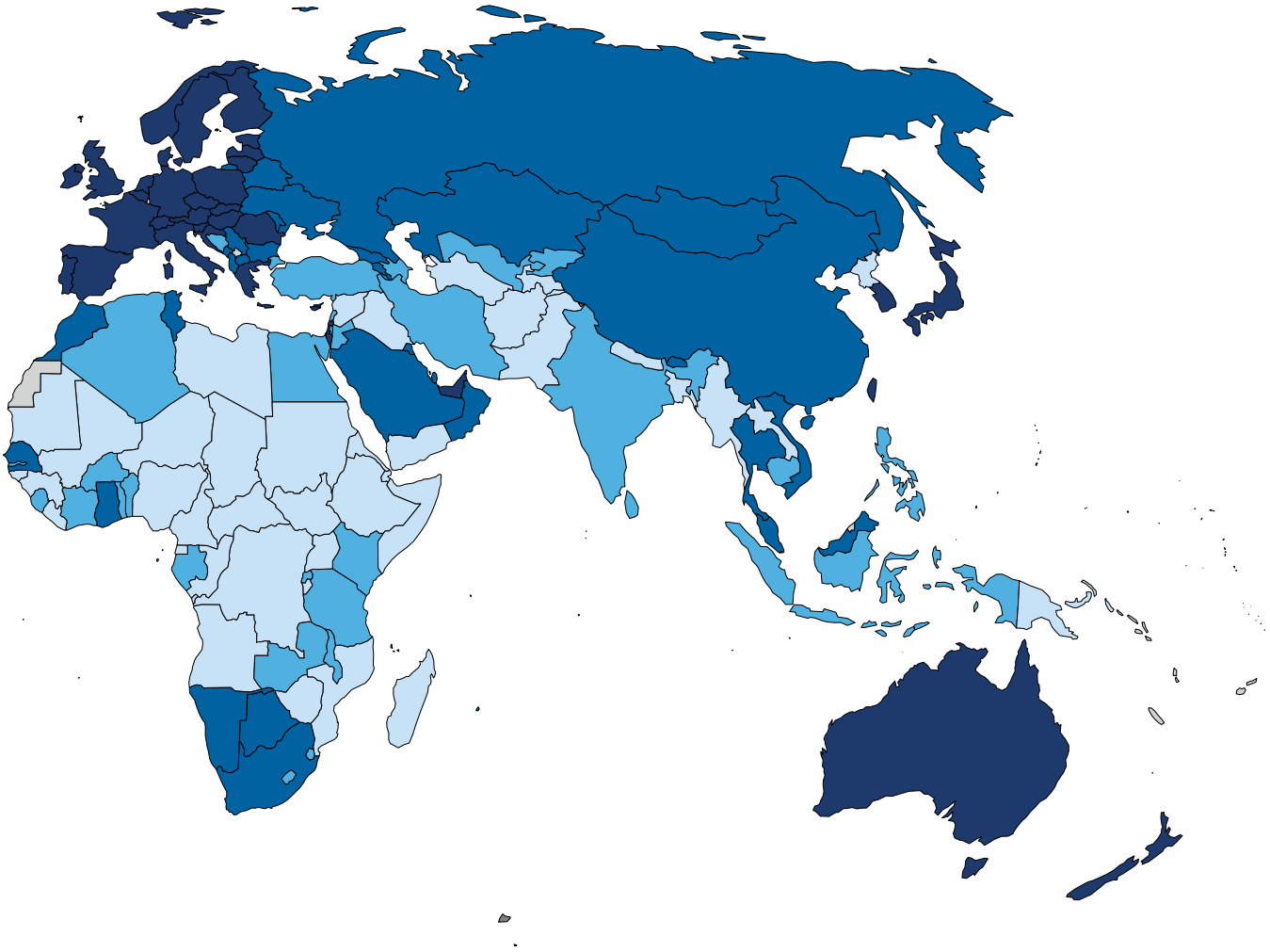
A SNAPSHOT OF THE GLOBAL LEVELS OF POSITIVE PEACE



THE STATE OF POSITIVE PEACE

Very high	High	Medium	Low	Not included
1	2.53	3.18	3.66	5

RANK	COUNTRY	SCORE	CHANGE
1	Sweden	1.228	↑ 1
2	Denmark	1.238	↓ 1
3	Finland	1.258	↔
4	Norway	1.274	↔
5	Switzerland	1.279	↔
6	Netherlands	1.362	↔
7	Canada	1.366	↔
8	Australia	1.394	↔
9	Germany	1.397	↔
10	Ireland	1.433	↔
11	New Zealand	1.451	↑ 2
12	Japan	1.466	↑ 6
13	Iceland	1.543	↓ 2
14	Singapore	1.561	↑ 5
15	Austria	1.566	↓ 3
16	Belgium	1.567	↔
17	France	1.574	↓ 3
18	United Kingdom	1.693	↓ 3
19	South Korea	1.694	↑ 6
20	Portugal	1.698	↔
21	Spain	1.833	↔
22	Slovenia	1.859	↔
23	Estonia	1.900	↑ 1
24	United States	1.949	↓ 7
25	Italy	1.979	↑ 1
26	Czech Republic	1.988	↓ 3
27	Taiwan	2.000	↔
28	Lithuania	2.010	↑ 3
29	Uruguay	2.083	↑ 6
30	Latvia	2.135	↑ 6
31	Poland	2.141	↓ 2
32	Chile	2.147	↔
33	Slovakia	2.180	↓ 3
=34	Greece	2.234	↓ 6
=34	Israel	2.234	↑ 2
36	Cyprus	2.259	↓ 3
37	United Arab Emirates	2.297	↑ 4
38	Croatia	2.313	↔
39	Costa Rica	2.314	↔
40	Hungary	2.358	↓ 6
41	Romania	2.527	↑ 2
42	Bulgaria	2.529	↔
43	Mauritius	2.572	↓ 3
44	Malaysia	2.587	↑ 7
45	Argentina	2.632	↑ 3
46	Kuwait	2.658	↓ 1
47	Trinidad and Tobago	2.682	↔
48	Botswana	2.686	↑ 1
49	Qatar	2.693	↓ 5
50	Panama	2.718	↑ 2
51	Georgia	2.766	↑ 17
52	Montenegro	2.790	↓ 2
53	Jamaica	2.833	↑ 7
54	Tunisia	2.865	↓ 1
55	Oman	2.866	↑ 3
56	Macedonia	2.874	↓ 1
57	Mongolia	2.922	↑ 8
58	South Africa	2.925	↑ 1
59	Albania	2.927	↓ 3
60	Thailand	2.937	↑ 6
61	Serbia	2.958	↓ 4
62	Armenia	2.968	↑ 19
63	Brazil	2.982	↓ 17
64	Ghana	2.986	↓ 1
65	Bhutan	2.992	↑ 12
=66	China	3.004	↑ 6
=66	Peru	3.004	↑ 4
68	Belarus	3.080	↑ 11
69	Namibia	3.081	↓ 8
70	Vietnam	3.083	↑ 16
71	Russia	3.088	↓ 2
=72	Bahrain	3.106	↓ 8
=72	Moldova	3.106	↑ 1
74	Ukraine	3.111	↑ 2
75	Kazakhstan	3.118	↑ 16
76	Mexico	3.123	↓ 14
77	Kosovo	3.136	↓ 7
78	Senegal	3.156	↑ 2
79	Saudi Arabia	3.158	↑ 13
80	Morocco	3.177	↓ 7
81	Colombia	3.180	↑ 2
82	Dominican Republic	3.185	↑ 8
=83	Bosnia and Herzegovina	3.189	↓ 8
=83	Jordan	3.189	↓ 17
85	India	3.216	↓ 3



RANK	COUNTRY	SCORE	CHANGE
86	Ecuador	3.217	↑ 2
87	Indonesia	3.220	↑ 12
88	Turkey	3.231	↓ 34
89	Paraguay	3.241	↔
90	Benin	3.258	↓ 6
91	Cuba	3.259	↑ 4
92	El Salvador	3.275	↓ 14
93	Bolivia	3.277	↓ 8
94	Guyana	3.292	↓ 7
95	Sri Lanka	3.322	↑ 5
96	Algeria	3.386	↑ 2
97	Philippines	3.405	↑ 5
98	Kyrgyz Republic	3.431	↑ 10
99	Burkina Faso	3.436	↑ 5
100	Uzbekistan	3.467	↑ 36
101	Lesotho	3.479	↑ 2
102	Tanzania	3.503	↓ 8
103	Kenya	3.536	↑ 12
104	The Gambia	3.553	↑ 26
105	Lebanon	3.554	↓ 12
106	Palestine	3.556	↑ 3
107	Honduras	3.566	↓ 11
108	Iran	3.567	↑ 8
109	Nicaragua	3.574	↓ 8
110	Sierra Leone	3.576	↔
111	Timor-Leste	3.592	↑ 18
=112	Azerbaijan	3.594	↑ 6
=112	Zambia	3.594	↓ 7
114	Egypt	3.596	↓ 1

RANK	COUNTRY	SCORE	CHANGE
115	Rwanda	3.612	↑ 5
116	Cambodia	3.625	↑ 15
117	Malawi	3.627	↓ 3
118	Gabon	3.638	↓ 6
=119	Cote d'Ivoire	3.642	↑ 21
=119	Togo	3.642	↑ 8
121	Guatemala	3.652	↓ 10
122	Eswatini	3.657	↑ 4
123	Madagascar	3.663	↑ 4
124	Laos	3.664	↑ 9
125	Mozambique	3.695	↓ 18
126	Nepal	3.698	↓ 4
127	Papua New Guinea	3.713	↓ 4
128	Myanmar	3.716	↑ 23
129	Liberia	3.718	↓ 4
130	Pakistan	3.736	↑ 9
131	Ethiopia	3.737	↑ 6
132	Djibouti	3.751	↑ 2
133	Niger	3.766	↓ 12
134	Bangladesh	3.806	↑ 1
135	Nigeria	3.836	↓ 3
136	Angola	3.838	↑ 12
137	Mali	3.844	↓ 13
138	Uganda	3.845	↓ 19
139	Mauritania	3.876	↓ 1
140	Turkmenistan	3.889	↑ 7
141	Guinea	3.911	↑ 3
142	Guinea-Bissau	3.943	↓ 1

RANK	COUNTRY	SCORE	CHANGE
143	Tajikistan	3.960	↓ 1
144	Zimbabwe	3.980	↑ 11
145	Republic of the Congo	4.002	↓ 2
146	Cameroon	4.005	↔
147	Venezuela	4.010	↓ 42
148	Haiti	4.041	↑ 1
149	North Korea	4.064	↑ 3
150	Equatorial Guinea	4.077	↔
151	Burundi	4.089	↓ 6
152	Libya	4.097	↓ 55
153	Afghanistan	4.099	↑ 6
154	Iraq	4.103	↓ 1
155	Sudan	4.214	↑ 5
156	Eritrea	4.290	↔
157	Syria	4.304	↓ 40
158	Democratic Republic of the Congo	4.306	↑ 3
159	Chad	4.374	↑ 3
160	Central African Republic	4.432	↓ 2
161	Yemen	4.542	↓ 7
162	South Sudan	4.553	↓ 5
163	Somalia	4.590	↔

GLOBAL TRENDS IN POSITIVE PEACE

The global score for the PPI has improved by 2.4 per cent since 2009, with 126 countries improving in Positive Peace, 36 countries deteriorating and one country score being little changed. The score is calculated by taking the average country score for the 163 countries included in the index.

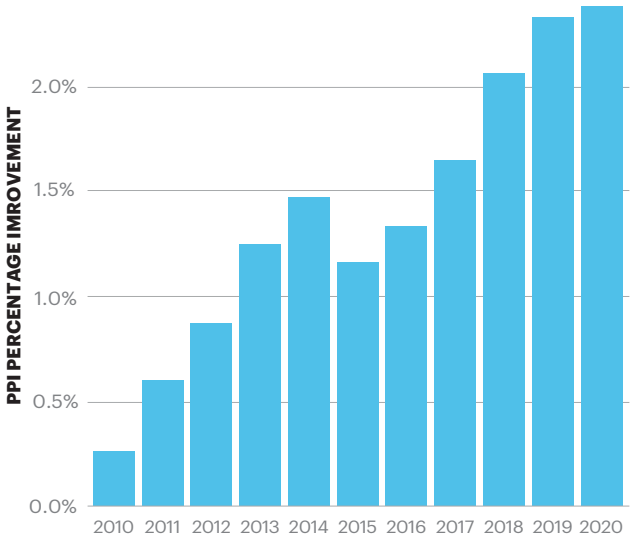
Figure 1.1 highlights the global trend in Positive Peace. Changes in Positive Peace generally occur slowly and may take many years for the benefits to show because institution building and changes in social norms are long-term processes. As such, global changes in the PPI Pillars happen relatively slowly, and even slight changes in global Positive Peace can be considered important.

Positive Peace has improved almost continuously since 2009, largely on the back of greater technological and economic development. The year 2015 was the only instance in which the global PPI score deteriorated, although the deterioration was small – around 0.3 per cent. That year saw a number of economic and financial crises in emerging markets (including Russia and China), which affected global economic growth. This coincided with a deep humanitarian crisis which saw large refugee inflows into Europe and North America.

FIGURE 1.1

Cumulative improvement in Positive Peace from 2009

By 2020, the global average Positive Peace score had improved by 2.4 per cent since 2009.



Source: IEP

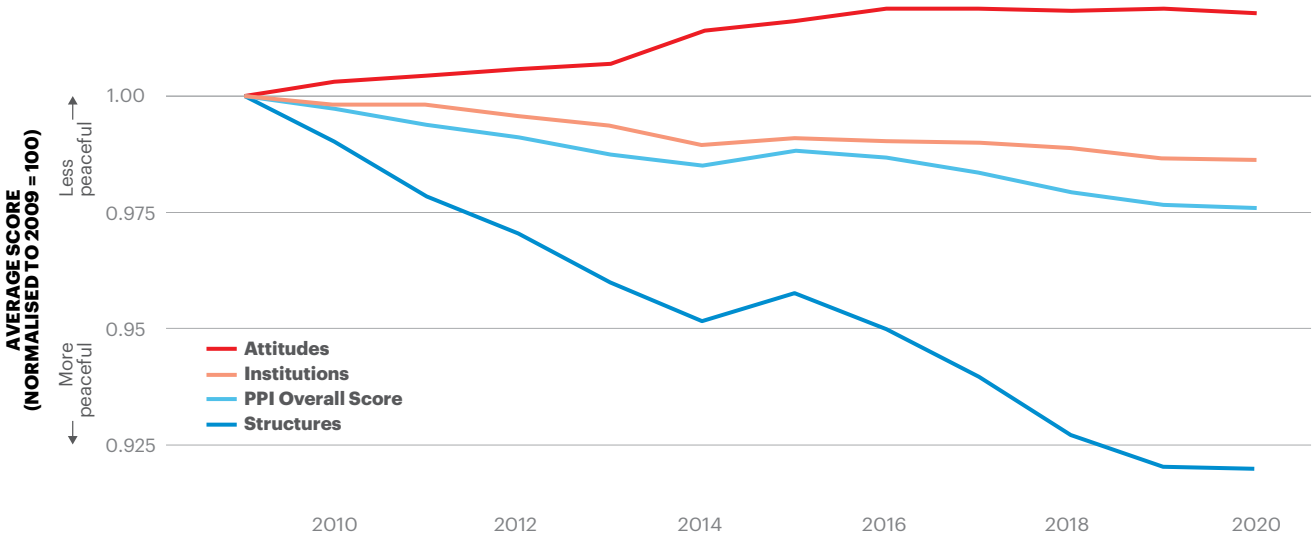
Changes in Attitudes, Institutions and Structures

Although the progression of Positive Peace seems to be almost uniform from year to year, the changes for each of the three domains vary considerably. While *Structures* have been improving each year and by 8 per cent since 2009, *Attitudes* have deteriorated almost every year, declining by 1.8 per cent since 2009. *Institutions* have slightly improved by 1.4 per cent.

FIGURE 1.2

Changes in the Attitudes, Institutions and Structures of Positive Peace, 2009–2020

The improvement in PPI since 2009 was largely driven by structural improvements globally. Institutional functioning has remained broadly the same over the period while attitudes have deteriorated.



Source: IEP

Table 1.1 classifies the 24 indicators in the PPI into one of these three domains using the following typology:

- **Attitudes** if they assess how members of a society view and relate to one another.
- **Institutions** if they measure the effectiveness, transparency and inclusiveness of administrative organisations.
- **Structures** if they gauge the technological, scientific and economic foundations that support social development.

Using this classification, Figure 1.2 shows that the improvement in the PPI since 2009 is largely driven by structural improvements. Access to information, GDP per capita and life expectancy have generally improved rapidly over the time window of analysis. Globally, institutional effectiveness has also improved over the past decade, albeit at a much slower pace than structural factors. However, the attitudinal indicators have been deteriorating over the period. The indicators showing the deepest deteriorations are *quality of information* and *factionalised elites*.

Changes in the Positive Peace Pillars

Figure 1.3 shows the percentage change from 2009 to 2020 for all eight Pillars of Positive Peace. These scores reflect gradual changes within complex social systems and typically do not fluctuate drastically year to year. As such, since 2009, the average Pillar score has changed by just 2.4 per cent, and with the exception of *Free Flow of Information*, no Pillar score has changed by more than five per cent. The slow-moving nature of Positive Peace calls for long-term planning and sustained investment to improve the Pillars.

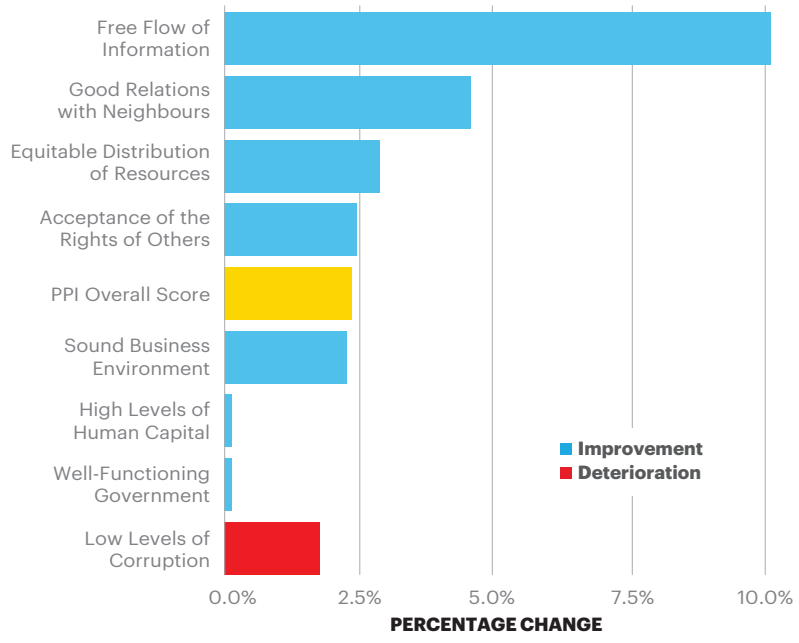
Thirteen out of the total 24 indicators used in the PPI recorded improvements from 2009 to 2020. This is just above half of the total number of indicators. However, the average improvement among indicators was of a greater quantum than the average deterioration. This led to an overall improvement in Positive Peace over the period.

The indicators that showed the most substantial improvements were those related to the *Structures* domain. Some examples are *individuals using the Internet*, *inequality-adjusted life expectancy* and *international tourism* (Figure 1.4). On the other hand, the *quality of information*, *factionalised elites* and *freedom of the press* indicators recorded the deepest deteriorations.

FIGURE 1.3

Changes in the Pillars of Positive Peace, 2009–2020

Seven of the eight Pillars have improved since 2009. *Low Levels of Corruption* deteriorated by around 1.8 per cent over the period.



Source: IEP

Global Trends

2.4%

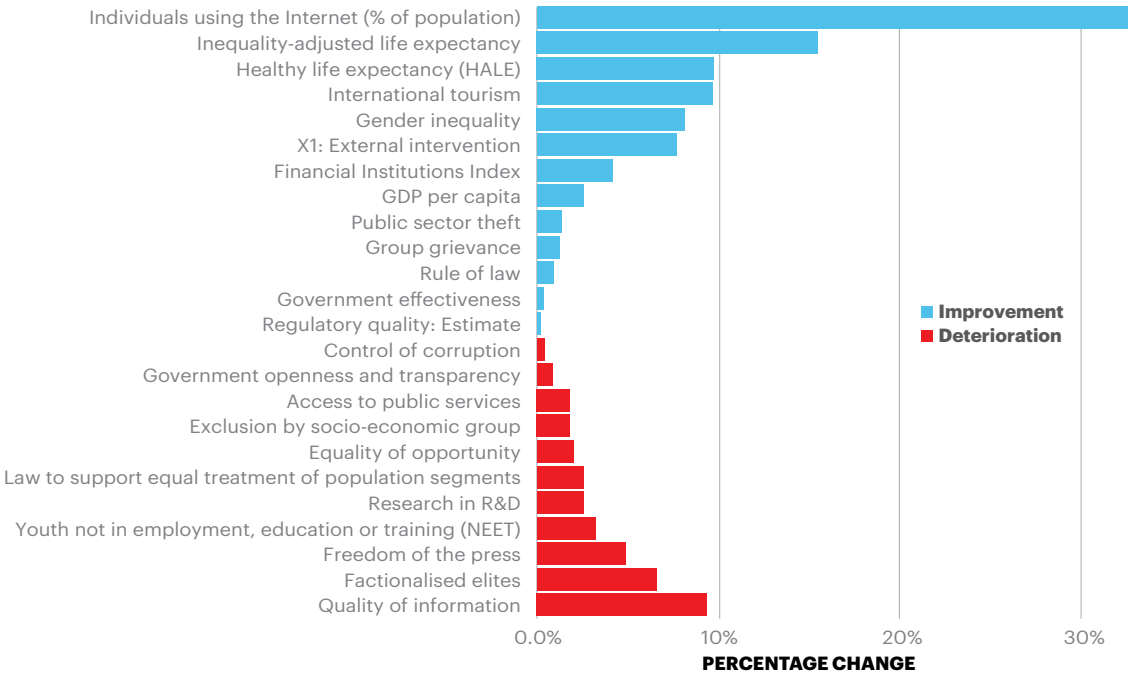
Positive Peace improved 2.4 per cent globally from 2009 to 2020.

Eight out of the nine world regions improved in Positive Peace from 2009 to 2020, with North America being the only exception.

FIGURE 1.4

Percentage change in PPI indicators, 2009–2020

Individuals using the Internet recorded the largest improvement while hostility to foreigners and *quality of information* recorded the largest deteriorations.



Source: IEP

Regional Outcomes

All geographical regions of the world recorded improvements in their PPI scores since 2009, except North America (Figure 1.5). The largest improvements occurred in Asia-Pacific, Russia and Eurasia, and South Asia, improving respectively by 6.4 per cent, 6.1 per cent and 4.2 per cent respectively. The improvement in South Asia was mainly driven by improvements in Bhutan and Sri Lanka.

The improvement in the Middle-East and North Africa was marginal. Overall, 15 of the 20 countries that comprise this region improved in Positive Peace over the period. However, the deteriorations recorded by Libya, Syria, Yemen, Lebanon and Jordan were numerically large and almost offset the PPI gains elsewhere in the region.

The only region in the world to record a deterioration in its PPI score from 2009 to 2020 was North America. At nine per cent over the period, the overall deterioration in the North American score was the sharpest movement of any region. However, this region consists only of two countries – Canada and the US – and as such, a greater variability in the average regional score is to be expected.

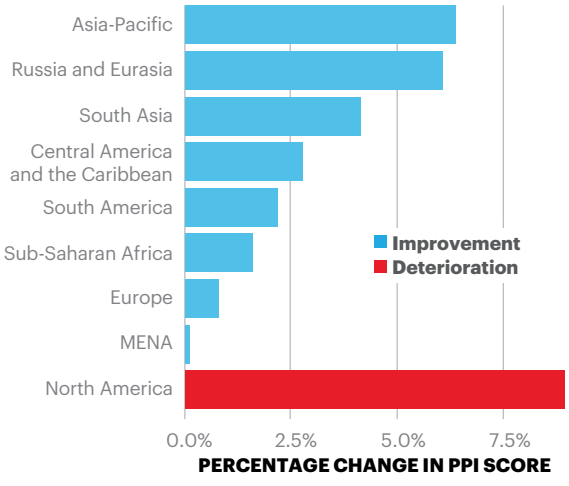
Asia-Pacific showed the largest regional improvement, by 6.4 per cent. All 19 countries from this region covered in the analysis improved in Positive Peace (Table 1.2). In addition, all eight Pillars improved for the region. The largest improvements were:

- *Free Flow of Information* experienced the largest improvement, by 12.2 per cent. This was due to individuals using the internet more than offsetting deteriorations in quality of information and freedom of the press.
- *Good Relations with Neighbours* improved by 11.1 per cent, driven by increases in international tourism and external intervention.
- *Sound Business Environment* improved by 8.8 per cent due to significant increases in financial institutions index and regulatory quality indicators.

FIGURE 1.5

Change in average regional scores, 2009–2020

North America is the only region to record a deterioration in Positive Peace between 2009 and 2020.



Source: IEP

The most notable negative results were deteriorations in the region's *youth not in employment, education or training* and *factionalised elites* indicators. The *freedom of the press* indicator deteriorated in 13 countries of the 19 countries in the region since 2009.

TABLE 1.2

Regional scores, Asia-Pacific, 2009–2020

All countries in Asia-Pacific recorded improvements in Positive Peace since 2009.

Regional Rank	Country	Overall Score in 2020	Change in score from 2009 to 2020 (%)*	Global Rank in 2020
1	Australia	1.394	-1.8	8
2	New Zealand	1.451	-6.1	11
3	Japan	1.466	-12.1	12
4	Singapore	1.561	-7.5	14
5	South Korea	1.694	-14.3	19
6	Taiwan	2.000	-1.7	27
7	Malaysia	2.587	-10.4	44
8	Mongolia	2.922	-6.7	57
9	Thailand	2.937	-6.2	60
10	China	3.004	-6.7	66
11	Viet Nam	3.083	-9.4	70
12	Indonesia	3.220	-8.6	87
13	Philippines	3.405	-3.9	97
14	Timor-Leste	3.592	-5.6	111
15	Cambodia	3.625	-5.5	116
16	Laos	3.664	-5.2	124
17	Papua New Guinea	3.713	-1.7	127
18	Myanmar	3.716	-9.9	128
19	North Korea	4.064	-1.6	149
	REGIONAL AVERAGE	**2.795**	**-6.4**	

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

South Asia recorded improvements in all of the eight Pillars, with the region's score improving by 4.2 per cent (Table 1.3). *Well-Functioning Government* was the best performing Pillar, improving by 6.5 per cent. The region also improved by 6.2 per cent in its *Equitable Distribution of Resources* score, based on significant improvement in *inequality-adjusted life expectancy* and *government openness and transparency*. *Individuals using the Internet* and *international tourism* also posted substantial improvements albeit off a relatively low base. The region recorded large deteriorations in the *quality of information* and *youth not in education, employment or training* indicators.

Bhutan is a remarkable success story in the region, having risen twelve places to rank 65th in the PPI. The country recorded substantial improvement in all Pillars of Positive Peace, with the exception of *Good Relations with Neighbours*. Afghanistan also recorded improvements from 2009 to 2020, although such improvement in societal resilience was insufficient to fend off the threat of the Taliban, a violent insurgent group that took control of the country in 2021 (Box 1.1).

TABLE 1.3

Regional scores, South Asia, 2009–2020

All countries in South Asia recorded improvements in Positive Peace.

Regional Rank	Country	Overall Score in 2020	Change in score from 2009 to 2020 (%)*	Global Rank in 2020
1	Bhutan	2.992	-8.2	65
2	India	3.216	-2.8	85
3	Sri Lanka	3.322	-5.8	95
4	Nepal	3.698	-1.7	126
5	Pakistan	3.736	-5.3	130
6	Bangladesh	3.806	-1.8	134
7	Afghanistan	4.099	-4.4	153
	REGIONAL AVERAGE	**3.553**	**-4.2**	

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

BOX 1.1

Positive Peace in Afghanistan

Afghanistan recorded a slight improvement in Positive Peace over the past decade. Since 2009, the PPI Overall Score for the country improved by 4.4 percent, broadly in line with other countries in South Asia. However, this improvement comes off a very low base and by 2020 the country still ranked 153rd out of the 163 countries evaluated in the PPI. One lingering problem with the country is that it had high levels of corruption and government ineffectiveness, which hampered social-economic development and kept the unemployment rate at over 11 per cent.

Its poor score leaves the country with a low level of societal resilience. Afghanistan fares poorly in both the PPI and the GPI rankings, which left the country vulnerable to the Taliban. With the withdrawal of the US and allied security forces, the Taliban resumed overt operations, overwhelmed the local security forces and took control of the government in August 2021. The Taliban offensive had begun as early as May, at the time the US forces began to withdraw. It is likely that these developments and the Taliban rule may cause a deterioration in Afghanistan's Positive Peace stance from 2021 onwards.

North America's overall Positive Peace score has deteriorated by nine per cent since 2009 (Table 1.4). This was due to a substantial deterioration in the Positive Peace score of the United States, whereas Canada has recorded a Positive Peace improvement. *Low Levels of Corruption* showed a distinct deterioration, a 30.6 per cent decline since 2009. The United States' *factionalised elites*, *government openness and transparency*, and *quality of information* indicator scores also deteriorated by more than 30 per cent each, reflecting increased political polarisation and an opaque government. More information on the US can be found in the 'Special Section: US, China, EU and UK' below.

TABLE 1.4

Regional scores, North America, 2009–2020

The US recorded a substantial deterioration in its PPI score.

Regional Rank	Country	Overall Score in 2020	Change in score from 2009 to 2020 (%)*	Global Rank in 2020
1	Canada	1.366	-1.3	7
2	United States	1.949	17.6	24
	REGIONAL AVERAGE	**1.658**	**9.0**	

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

The **Middle East and North Africa** (MENA) has seen a marginal 0.1 per cent improvement in Positive Peace since 2009 (Table 1.5). MENA experienced a small, but notable 3.6 per cent deterioration in *Low Levels of Corruption*. The region's *Well-Functioning Government* score has deteriorated by 4.3 per cent, pulled down by weaker administrative effectiveness as government resources are diverted to address ongoing armed conflicts in the region. The deterioration in these two Pillars have been partly offset by improvements in *Free Flow of Information*, which improved by 14 per cent.

TABLE 1.5

Regional scores, Middle-East and North Africa, 2009–2020

Fifteen countries in MENA recorded improvements in Positive Peace since 2009.

Regional Rank	Country	Overall Score in 2020	Change in score from 2009 to 2020 (%)*	Global Rank in 2020
1	Israel	2.234	-5.6	34
2	United Arab Emirates	2.297	-9.6	37
3	Kuwait	2.658	-4.2	46
4	Qatar	2.693	-2.6	49
5	Tunisia	2.865	-1.2	54
6	Oman	2.866	-5.0	55
7	Bahrain	3.106	-0.4	72
8	Saudi Arabia	3.158	-8.2	79
9	Morocco	3.177	-1.5	80
10	Jordan	3.189	1.5	83
11	Algeria	3.386	-3.7	96
12	Lebanon	3.554	2.9	105
13	Palestine	3.556	-2.3	106
14	Iran	3.567	-4.1	108
15	Egypt	3.596	-2.1	114
16	Libya	4.097	16.6	152
17	Iraq	4.103	-1.4	154
18	Sudan	4.214	-2.5	155
19	Syria	4.304	15.7	157
20	Yemen	4.542	8.6	161
	REGIONAL AVERAGE	**3.358**	**-0.1**	

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

Improvement in the MENA region's *Free Flow of Information* stems from a 44.8 per cent improvement in the region's access to internet indicator score. The region's *gender inequality* indicator score has improved by 13.4 per cent, although off a low base.

The PPI for the **Russia and Eurasia** region improved by 6.1 per cent. All Pillars improved with the exception of *High Levels of Human Capital*, which recorded 2.5 per cent deterioration. The Pillars with the largest improvements were *Good Relations with Neighbours* and *Free Flow of Information*, reflecting the benign economic and diplomatic performance of the area. Georgia, Armenia and Uzbekistan posted strong improvements in their scores (Table 1.6).

TABLE 1.6

Regional scores, Russia and Eurasia, 2009–2020

All countries in the region recorded improvements in Positive Peace.

Regional Rank	Country	Overall Score in 2020	Change in score from 2009 to 2020 (%)*	Global Rank in 2020
1	Georgia	2.766	-12.9	51
2	Armenia	2.968	-10.2	62
3	Belarus	3.080	-6.3	68
4	Russia	3.088	-3.2	71
5	Moldova	3.106	-4.2	72
6	Ukraine	3.111	-4.3	74
7	Kazakhstan	3.118	-9.3	75
8	Kyrgyz Republic	3.431	-5.0	98
9	Uzbekistan	3.467	-10.9	100
10	Azerbaijan	3.594	-3.5	112
11	Turkmenistan	3.889	-4.4	140
12	Tajikistan	3.960	-0.6	143
	REGIONAL AVERAGE	**3.298**	**-6.1**	

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

Positive Peace improved in **South America** from 2009 to 2020, with the region's PPI improving by 2.2 per cent (Table 1.7). The region posted a 10.9 per cent improvement in the *Free Flow of Information* Pillar of Positive Peace since 2009, as a result of greater access to information technology. South America also recorded a 5.8 per cent improvement in the *Sound Business Environment* Pillar from 2009 to 2020. This reflects the greater economic prosperity enjoyed by many countries in the region

TABLE 1.7

Regional scores, South America, 2009–2020

Venezuela and Brazil were the only countries to record PPI deteriorations in the region.

Regional Rank	Country	Overall Score in 2020	Change in score from 2009 to 2020 (%)*	Global Rank in 2020
1	Uruguay	2.083	-8.0	29
2	Chile	2.147	-3.6	32
3	Argentina	2.632	-6.3	45
4	Brazil	2.982	7.4	63
5	Peru	3.004	-6.0	66
6	Colombia	3.180	-4.8	81
7	Ecuador	3.217	-5.5	86
8	Paraguay	3.241	-5.4	89
9	Bolivia	3.277	-3.4	93
10	Guyana	3.292	-3.3	94
11	Venezuela	4.010	12.3	147
	REGIONAL AVERAGE	**3.006**	**-2.2**	

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

following the period of economic turmoil of the late 1990s and early 2000s. *Good Relations with Neighbours* also improved considerably in the region, by 5.6 per cent. In contrast, corruption worsened, with the *Low Levels of Corruption* Pillar deteriorating by 3.1 per cent since 2009.

Sub-Saharan Africa recorded higher levels of Positive Peace in comparison to 2009. The region's PPI improved by 1.6 per cent since 2009 and almost three quarters of the countries in the region recorded PPI improvements (Table 1.8). Key contributors were greater *Acceptance of the Rights of Others* and *Equitable Distribution of Resources*. *Free Flow of Information* also posted substantial gains. *Low Levels of Corruption*, *Well-Functioning Government* and *High Levels of Human Capital* were the only Pillars to record deteriorations in the region.

TABLE 1.8

Regional scores, Sub-Saharan Africa, 2009–2020

A quarter of the sub-Saharan countries improved in Positive Peace from 2009.

Regional Rank	Country	Overall Score in 2020	Change in score from 2009 to 2020 (%)*	Global Rank in 2020
1	Mauritius	2.572	1.7	43
2	Botswana	2.686	-4.9	48
3	South Africa	2.925	-3.4	58
4	Ghana	2.986	-3.8	64
5	Namibia	3.081	-0.2	69
6	Senegal	3.156	-4.3	78
7	Benin	3.258	-3.6	90
8	Burkina Faso	3.436	-3.8	99
9	Lesotho	3.479	-2.4	101
10	Tanzania	3.503	0.0	102
11	Kenya	3.536	-4.6	103
12	The Gambia	3.553	-6.6	104
13	Sierra Leone	3.576	-1.9	110
14	Zambia	3.594	0.6	112
15	Rwanda	3.612	-3.6	115
16	Malawi	3.627	-1.9	117
17	Gabon	3.638	-1.0	118
=18	Cote d'Ivoire	3.642	-8.4	119
=18	Togo	3.642	-3.9	119
20	Swaziland	3.657	-3.3	122
21	Madagascar	3.663	-3.3	123
22	Mozambique	3.695	2.6	125
23	Liberia	3.718	-1.7	129
24	Ethiopia	3.737	-4.5	131
25	Djibouti	3.751	-3.1	132
26	Niger	3.766	0.2	133
27	Nigeria	3.836	-0.5	135
28	Angola	3.838	-6.0	136
29	Mali	3.844	1.7	137
30	Uganda	3.845	3.0	138
31	Mauritania	3.876	-1.5	139
32	Guinea	3.911	-2.1	141
33	Guinea-Bissau	3.943	-0.8	142
34	Zimbabwe	3.980	-5.1	144
35	Republic of the Congo	4.002	0.4	145
36	Cameroon	4.005	-0.1	146
37	Equatorial Guinea	4.077	-1.1	150
38	Burundi	4.089	2.1	151
39	Eritrea	4.290	1.9	156
40	Democratic Rep. of the Congo	4.306	-2.0	158
41	Chad	4.374	-2.4	159
42	Central African Republic	4.432	4.8	160
43	South Sudan	4.553	7.7	162
44	Somalia	4.590	-1.9	163
	REGIONAL AVERAGE	**3.711**	**-1.6**	

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

The PPI for **Central America and the Caribbean** improved by 2.7 per cent since 2009 (Table 1.9). This result reflected substantial improvement in the *Free Flow of Information*, *Acceptance of the Rights of Others* and *Good Relations with Neighbours* Pillars. The *Low Levels of Corruption* and *Well-Functioning Government* Pillars were the only Pillars to record a deterioration from 2009 to 2020.

TABLE 1.9

Regional scores, Central America and the Caribbean, 2009–2020

Four countries in the region did not progress in the PPI since 2009.

Regional Rank	Country	Overall Score in 2020	Change in score from 2009 to 2020 (%)*	Global Rank in 2020
1	Costa Rica	2.314	-5.8	39
2	Trinidad and Tobago	2.682	-4.2	47
3	Panama	2.718	-6.0	50
4	Jamaica	2.833	-6.7	53
5	Mexico	3.123	1.1	76
6	Dominican Republic	3.185	-7.3	82
7	Cuba	3.259	-7.0	91
8	El Salvador	3.275	-0.3	92
9	Honduras	3.566	1.7	107
10	Nicaragua	3.574	1.1	109
11	Guatemala	3.652	0.0	121
12	Haiti	4.041	-1.9	148
	REGIONAL AVERAGE	**3.185**	**-2.7**	

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

Europe's PPI improved by 0.8 per cent over the past decade (Table 1.10). Most of this came from Eastern Europe, although some Western nations such as Switzerland, Norway and Belgium also posted strong improvements in their PPI scores. There were substantial improvements in the *Free Flow of Information*, *High Levels of Human Capital* and *Good Relations with Neighbours* Pillars. Europe deteriorated in the *Well-Functioning Government*, *Low Levels of Corruption*, *Acceptance of the Rights of Others* and *Sound Business Environment*. A more detailed discussion on Europe can be found at the end of this section.

TABLE 1.10

Regional scores, Europe, 2009–2020

Almost two-thirds of European countries improved in the PPI.

Regional Rank	Country	Overall Score in 2020	Change in score from 2009 to 2020 (%)*	Global Rank in 2020
1	Sweden	1.228	-0.4	1
2	Denmark	1.238	2.9	2
3	Finland	1.258	-2.9	3
4	Norway	1.274	-4.2	4
5	Switzerland	1.279	-5.5	5
6	Netherlands	1.362	-0.4	6
7	Germany	1.397	-1.6	9
8	Ireland	1.433	-1.8	10
9	Iceland	1.543	4.8	13
10	Austria	1.566	1.8	15
11	Belgium	1.567	-4.3	16
12	France	1.574	-0.1	17
13	United Kingdom	1.693	5.6	18
14	Portugal	1.698	-2.4	20
15	Spain	1.833	2.5	21
16	Slovenia	1.859	2.0	22
17	Estonia	1.900	-3.6	23
18	Italy	1.979	-0.6	25
19	Czech Republic	1.988	4.9	26
20	Lithuania	2.010	-7.0	28
21	Latvia	2.135	-8.3	30
22	Poland	2.141	2.2	31
23	Slovakia	2.180	1.3	33
24	Greece	2.234	7.9	34
25	Cyprus	2.259	1.4	36
26	Croatia	2.313	-3.8	38
27	Hungary	2.358	5.4	40
28	Romania	2.527	-7.8	41
29	Bulgaria	2.529	-3.1	42
30	Montenegro	2.790	-2.7	52
31	Macedonia	2.874	-4.5	56
32	Albania	2.927	-2.9	59
33	Serbia	2.958	-1.9	61
34	Kosovo	3.136	-1.8	77
35	Bosnia and Herzegovina	3.189	-1.7	83
36	Turkey	3.231	8.2	88
	REGIONAL AVERAGE	**2.041**	**-0.8**	

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

Results By Income Level and Government Type

As a measure of societal development, Positive Peace is highly correlated with a nation's income level. Income influences and is influenced by societal resilience, such that nations with higher levels of per-capita income are those with greater resources and internal organisation to protect their citizens from and recover after shocks (Figure 1.6).

This section uses the World Bank classification of income type, which groups countries into four tiers of per capita gross national income (GNI): high income; upper-middle income; lower-middle income; and low income. High-income countries tend to be the most peaceful and low-income countries tend to be the least peaceful.

The countries at the top of the PPI are all high-income countries, illustrating a recognisable correlation between Positive Peace and economic prosperity. Positive Peace can often act as a driver of economic prosperity while economic prosperity also acts as a driver of peace, highlighting how societies develop systemically through continuous feedback loops.

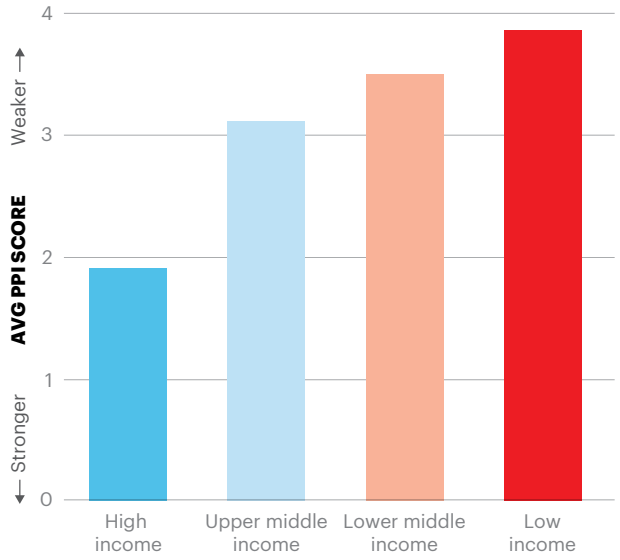
Government type has a statistically strong relationship with Positive Peace as well, as shown in Figure 1.7. Globally, there are 23 full democracies, 52 flawed democracies, 35 hybrid regimes and 57 authoritarian regimes. Indicators of democracy do not measure the transparency and representativeness of elections directly, but rather nations' democratic structures such as separation of power, effectiveness of courts, and others. Full democracies tend to score better on the PPI, while authoritarian regimes record relatively poorer scores (Figure 1.7). These results reflect the important role that the systemic influence of Positive Peace plays on effective government.

There are rare exceptions to this trend, with a few authoritarian regimes, flawed and hybrid democracies scoring well in Positive Peace. Only two authoritarian regimes are in the top 50 countries on Positive Peace, while the top ten countries are all full democracies.

FIGURE 1.6

Positive Peace by income group, 2020

High income countries have the highest levels of Positive Peace.

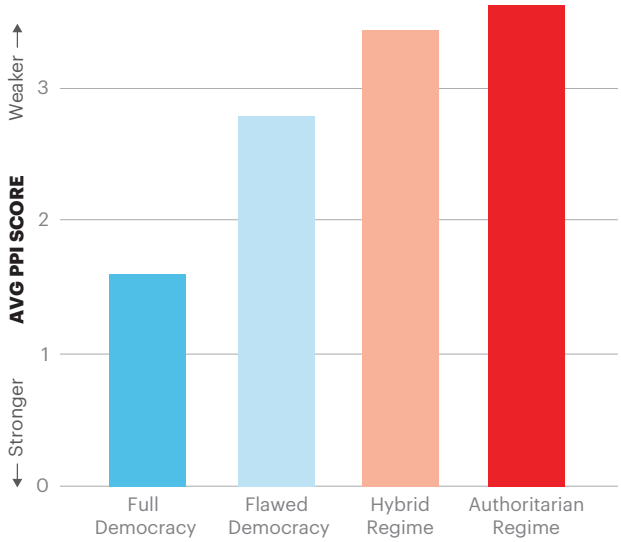


Source: World Bank, IEP

FIGURE 1.7

Positive Peace by government type, 2020

Full democracies have the highest levels of Positive Peace, as measured by the PPI.



Source: World Bank, IEP

RISERS & FALLERS IN POSITIVE PEACE

The majority of countries in the PPI — 126 out of 163 countries, or 77.3 per cent — posted an improvement in Positive Peace from 2009 to 2020. This was brought about by improvements in the *Structures* domain, especially reflecting the spread of technology and increases in income. Almost 94 per cent of countries improved in this domain.

However, the other two domains, when combined recorded a deterioration of 0.4 per cent. The *Attitudes* domain deteriorated by 1.8 per cent, while *Structures* improved by 1.4 per cent. Within the *Attitudes* domain, there were some troubling trends with *quality of information* and *factionalised elites* deteriorating by 6.5 per cent or more.

When looking at *Attitudes*, the proportion of nations that improved in this domain dropped to 40.5 per cent of the countries. The *Attitudes* indicator, *quality of information* improved in only 28.8 per cent of countries and *factionalised elites* improved in only 20.2 per cent of the nations assessed. Two other indicators of the *Attitudes* domain – *Equality of opportunity* and *exclusion by socio-economic group* – also deteriorated in the period. The deterioration in this domain is indicative of greater polarisation of the social and political debates and an increase in intolerance of dissenting views. There is also an increasing dissatisfaction with one's own standards of living which appears to be associated with greater access to information and people perhaps adopting unrealistic benchmarks against which to compare their own situations. This is further discussed in Section 2 of this report.

Progress in Positive Peace materialises slowly. Countries may show little change in a single year, which means that Positive Peace changes should be investigated over longer periods of time. This is important as social changes tends to be long-lasting and self-perpetuating. This section presents the countries that have demonstrated the largest changes, positively or negatively, since 2009 (Figure 1.8). Note that a reduction in score indicates an improvement in Positive Peace.

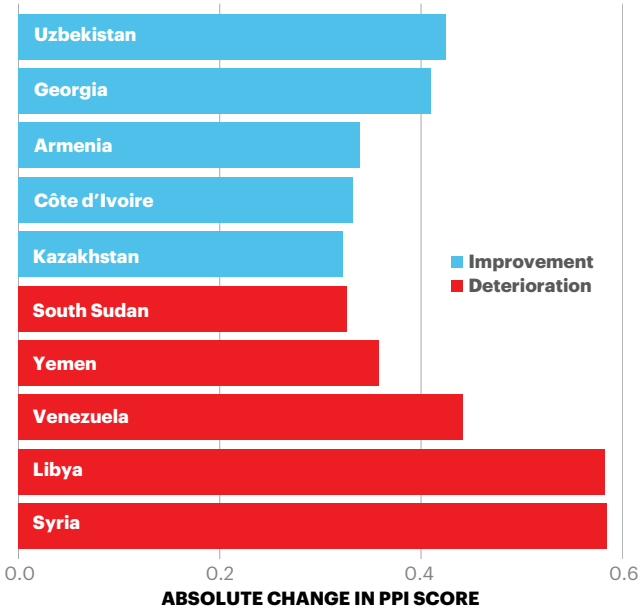
The countries that experienced the largest improvements in PPI scores between 2009 and 2020 were Uzbekistan, Georgia, Armenia, Côte d'Ivoire and Kazakhstan, each improving by at least eight per cent. Four of the most improved countries are from the Russia and Eurasia region and one is from sub-Saharan Africa.

Syria, Libya, Venezuela, Yemen and South Sudan are the countries with the largest deteriorations. Two of the largest deteriorating countries are from MENA, two are from sub-Saharan Africa and one is from South America.

FIGURE 1.8

Largest changes in Positive Peace, 2009–2020

Uzbekistan and Georgia recorded the largest improvements in Positive Peace, while Syria recorded the largest deterioration.



Source: IEP

BOX 1.2

Positive Peace in Myanmar

With a relative improvement in its PPI score of 9.9 per cent since 2009, Myanmar is one of the biggest improvers in Positive Peace in the past decade. The country saw improvements in all Pillars and had made substantial progress, albeit off a low base, with substantial improvements in combating corruption and supporting business activity. Of all 24 indicators of Positive Peace, only three saw deteriorations in Myanmar from 2009 to 2020. The country of 54 million people saw its per-capita GDP rise from US$840 in 2009 to US$1,400 in 2020.

However, all this societal development is being negatively impacted by the 2021 coup. In February, the country witnessed a coup d'état in which the military seized control of the government ousting Aung San Suu Kyi's National League for Democracy (NLD), which had won a 2020 election.

These developments will most likely cause a substantial deterioration in Myanmar's Positive Peace scores in the next edition.

Uzbekistan

CHANGE IN OVERALL SCORE, 2009-2020:
-0.422
to 3.467 from 3.889

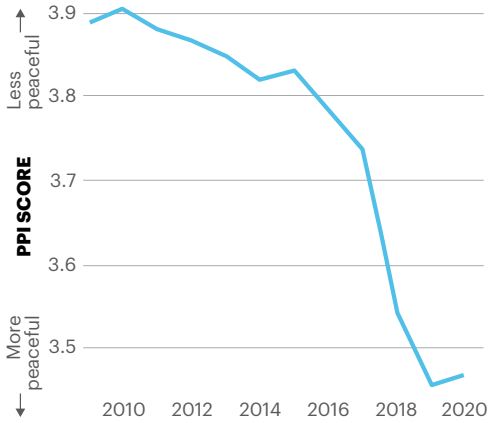
CHANGE IN RANK, 2009-2020:
↑36
to 100 from 136

Largest changes in Positive Peace in Uzbekistan

Pillar	Indicator	Value in 2009	Value in 2020	Change
Free Flow of Information	Individuals using the Internet	4.49	1.98	-2.51
High Levels of Human Capital	Youth not in employment, education or training (NEET)	3.13	1.64	-1.48
Good Relations with Neighbours	International tourism	4.71	3.36	-1.35
Low Levels of Corruption	Public sector theft	3.97	4.10	0.12
Acceptance of the Rights of Others	Gender inequality	2.13	2.27	0.14
High Levels of Human Capital	Researchers in R&D	4.03	4.58	0.55

Trend in the PPI score, Uzbekistan, 2009–2020

Positive Peace improved by 10.9 per cent since 2009.



Source: IEP

Uzbekistan recorded the largest improvement in Positive Peace of all countries assessed over the past decade. The country's score improved by 0.422 points from 2009 to 2020, or 10.9 per cent over the period. The country improved in all Domains and Pillars of Positive Peace, with particularly large changes being recorded in *Free Flow of Information*, *Good Relations with Neighbours* and *Equitable Distribution of Resources*.

While substantive, these improvements come off a relatively low base, with Uzbekistan still ranking 100th out of the 163 nations assessed in the PPI.

Most of the country's progress in societal resilience took place from 2016 onwards. Around that time, Uzbekistan implemented deep administrative reforms, effectively ending the last remains of post-Soviet isolationism. The country liberalised the exchange rate regime, began easing visa requirements and announced a series of tax changes aiming to attract international investors. There was also a program for reducing state intervention on the economy and in private affairs.

There has been some progress in combating corruption, especially with the passing of the "On Anti-Corruption" legal framework. It was put in place in 2003 and has been gradually implemented and enhanced ever since. Despite this, the level of corruption remains high, with the country ranking 139th out of the 163 nations assessed in the *Low Levels of Corruption* Pillar.

The social, economic and international relations reforms have driven large improvements in the country's *individuals using the Internet, youth not in employment, education and training (NEET)* and *international tourism* indicators. There have also been substantial improvements in the areas of *government openness and transparency*, *regulatory quality* and *group grievance*.

Georgia

CHANGE IN OVERALL SCORE, 2009-2020:
-0.408
to 2.766 from 3.174

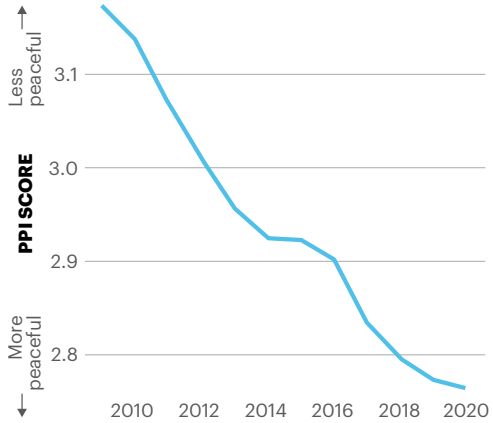
CHANGE IN RANK, 2009-2020:
↑17
to 51 from 68

Largest changes in Positive Peace in Georgia

Pillar	Indicator	Value in 2009	Value in 2020	Change
Free Flow of Information	Individuals using the Internet	4.14	1.89	-2.25
Good Relations with Neighbours	International tourism	4.64	3.12	-1.52
Sound Business Environment	Financial institutions index	4.05	2.78	-1.27
High Levels of Human Capital	Researchers in R&D	3.40	3.71	0.31
Low Levels of Corruption	Public sector theft	1.77	2.42	0.65
Free Flow of Information	Quality of information	2.80	3.70	0.91

Trend in the PPI score, Georgia, 2009–2020

Positive Peace improved by 12.9 per cent since 2009.



Source: IEP

Georgia holds the highest Positive Peace rank in the Russia and Eurasia region, with a PPI score of 2.766 in 2020. Over the past decade, the country improved its global ranking by 17 places and now stands at rank 51 of the 163 nations assessed in the PPI.

The country improved in all domains of Positive Peace, with the only exception being *Attitudes*, which was broadly unchanged from 2009 to 2020.

All Pillars of Positive Peace improved in Georgia over the past decade, with the largest changes being recorded in *Well-Functioning Government*, *Good Relations with Neighbours* and *Sound Business Environment*.

Since gaining independence in 1991, the country implemented a series of reforms that sought to liberalise the economy, improve foreign relations, combat corruption and increase administrative efficiency. In the timeframe of one generation, Georgia reduced its heavy reliance on agriculture and shifted its economic activity towards the service industry, particularly the tourism and hospitality sectors. This has lifted average incomes and reduced unemployment and underemployment rates. Such developments led to a substantial 11.8 per cent improvement in the *Equitable Distribution of Resources* Pillar. From 2005 to 2019 – before the COVID-19 pandemic – Georgian GDP grew by 5 per cent per year on average, which reduced poverty and inequality.

In 2008, Georgia was involved in a conflict with Russia. The two countries clashed over the regions of South Ossetia and Abkhazia, with the result being the expulsion of ethnic Georgians from these areas. However, the conflict was short lived and did not have a substantial negative impact on Georgia's overall level of societal resilience.

Following the conflict, Georgia continued to implement its reform agenda, liberalising the economy and improving relations with European countries. This led to the signing of an Association Agreement with the European Union (EU) in 2016. This agreement stipulated Deep and Comprehensive Free Trade Area status for Georgia, which allowed preferential trade regime for the country with EU nations. The country's *Good Relations with Neighbours* Pillar improved by almost 20 per cent over the past decade.

Armenia

CHANGE IN OVERALL SCORE, 2009-2020:
-0.338
to 2.968 from 3.306

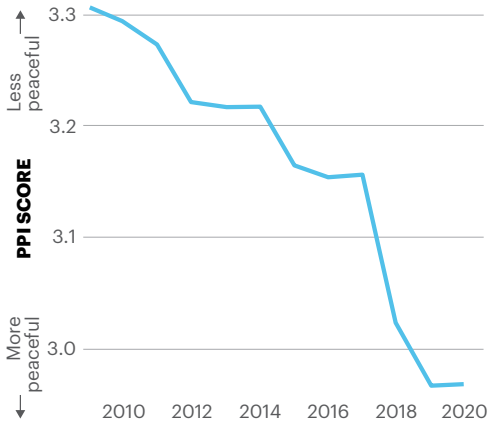
CHANGE IN RANK, 2009-2020:
↑19
to 62 from 81

Largest changes in Positive Peace in Armenia

Pillar	Indicator	Value in 2009	Value in 2020	Change
Free Flow of Information	Individuals using the Internet	4.34	2.15	-2.19
Low Levels of Corruption	Public sector theft	3.87	2.74	-1.13
Well-Functioning Government	Government openness and transparency	4	3	-1
Good Relations with Neighbours	External intervention	3.20	3.24	0.04
Low Levels of Corruption	Factionalised elites	3.62	3.67	0.04
High Levels of Human Capital	Researchers in R&D	3.42	5	1.58

Trend in the PPI score, Armenia, 2009–2020

Positive Peace improved by 10.2 per cent since 2009.



Source: IEP

The Armenian PPI score improved by 10.2 per cent since 2009, placing the country as the second highest ranking in its region of Russia and Eurasia. All Domains of Positive Peace improved in the country over the past decade.

All Pillars recorded substantial improvements in Armenia, with the exception of *High Levels of Human Capital*. *Free Flow of Information* recorded an improvement of almost 30 per cent, and *Acceptance of the Rights of Others* improved by 20 per cent.

The deterioration in *High Levels of Human Capital* was driven by a reduction in the overall number of researchers and technical professionals who left the country, with the *researchers in R&D* indicator of Positive Peace deteriorating by 46.4 per cent since 2009. This diaspora took place mainly as a result of the 2009 recession and the subsequent sluggish growth in employment. From 2008 to 2013, Armenia's GDP grew by just 1.7 per cent per year, a low level for a middle income country. This prompted a number of skilled professionals to seek employment in the US, Germany, France and other countries.

The largest improvement was in internet access, with the score for *individuals using the Internet* improving by 50.5 per cent since 2009. This, coupled with a 19.6 per cent improvement in the *quality of information* resulted in the overall improvement in the *Free Flow of Information*. Freedom House reported that "there were no major restrictions on press freedom during the 2018 parliamentary election campaign," and that independent media outlets provide a diversity of perspectives in the country.

Tourism in the country has been increasing, at the same time that Armenia strengthened its ties with the EU. Tourist arrivals in the first quarter of 2018 were up 14 per cent over the same period of the prior year, contributing to the 6.6 per cent improvement seen in the *international tourism* indicator from 2009 to 2020.

One vulnerability is the on-going border tensions with Azerbaijan over the disputed Nagorno-Karabakh region, following a short conflict in 2020. In the absence of a peaceful resolution to the dispute, the Armenian progress in societal resilience thus far could be partially unwound.

Côte d'Ivoire

CHANGE IN OVERALL SCORE, 2009-2020:
-0.332
to 3.642 from 3.974

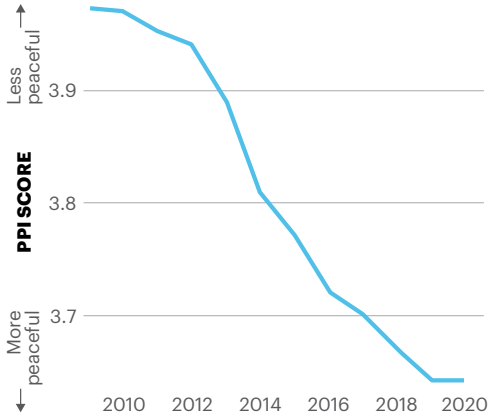
CHANGE IN RANK, 2009-2020:
↑21
to 119 from 140

Largest changes in Positive Peace in Côte d'Ivoire

Pillar	Indicator	Value in 2009	Value in 2020	Change
Free Flow of Information	Individuals using the Internet	4.91	3.45	-1.47
Equitable Distribution of Resources	Equality of opportunity	4	3	-1
Good Relations with Neighbours	Law to support equal treatment of population segments	4	3	-1
Free Flow of Information	Quality of information	2.96	3.16	0.20
Low Levels of Corruption	Factionalised elites	4.33	4.60	0.27
High Levels of Human Capital	Youth not in employment, education or training (NEET)	1.96	3.67	1.71

Trend in the PPI score, Côte d'Ivoire, 2009–2020

Positive Peace improved by 8.4 per cent since 2009.



Source: IEP

Côte d'Ivoire has improved its Positive Peace score by 8.4 per cent since 2009, based on improvements in all Pillars with the exception of *High Levels of Human Capital*. The country recorded substantial improvements in the *Attitudes* and *Institutions* domains over the decade, both improving by 8.8 per cent and 10.1 per cent, respectively. *Structures* also improved, albeit at a milder pace of 4.1 per cent.

However, this progress comes off a relatively low base, with Côte d'Ivoire remaining near the bottom of the 'medium Positive Peace' classification. The country holds the 119th position in the global PPI rankings.

Côte d'Ivoire recently endured two ethnic and racially charged civil wars from 2002 to 2007 and 2011 to 2012. Both conflicts resulted from escalating tensions between native-born nationals of Côte d'Ivoire and the country's large immigrant population, mainly from Burkina Faso, Mali, Guinea and Senegal. Before the escalation of violence, the immigrant population was estimated to be up to 50 per cent of the total population.

The first civil war resulted in over 4,000 people killed. At the end of 2003, the number of internally displaced persons was estimated to be between 700,000 and 1,000,000, or four to six per cent of the population. The second civil war broke out in 2011 following a disputed election between long-standing Ivorian President Gbagbo and newly elected President Alassane Ouattara. Though the post-electoral crisis lasted less than a year, the resulting violence caused over 3,000 deaths. Since 2012, Côte d'Ivoire has become more stable, though violent protests and strikes still arise occasionally.

In the aftermath of the second civil war, the country established a Truth and Reconciliation Commission (*Commission Dialogue, Vérité et Reconciliation* – CDVR), which investigated past human rights violations and contributed to the appeasement of sectarian pressures. The country also implemented deep economic and fiscal reforms, which contributed to the country being assessed as one of the best performing economies of the West African Economic and Monetary Union (WAEMU) by 2019. This is reflected in a 10.7 per cent improvement in *Well-Functioning Government* and an 8.6 per cent improvement in *Sound Business Environment*.

Kazakhstan

CHANGE IN OVERALL SCORE, 2009-2020:
-0.321
to 3.118 from 3.439

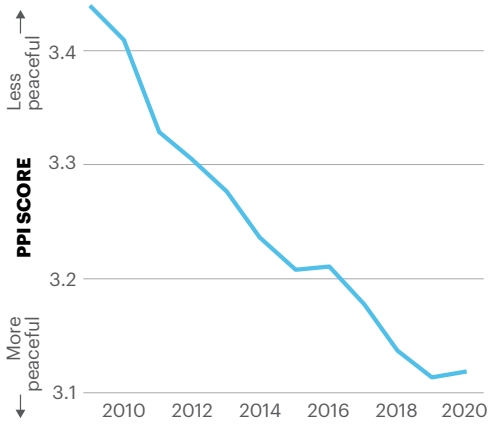
CHANGE IN RANK, 2009-2020:
↑16
to 75 from 91

Largest changes in Positive Peace in Kazakhstan

Pillar	Indicator	Value in 2009	Value in 2020	Change
Free flow of Information	Individuals using the Internet	4.22	1.32	-2.9
Good Relations with Neighbours	External intervention	3.42	2.05	-1.36
Good Relations with Neighbours	International tourism	4.08	2.93	-1.15
Well-Functioning Government	Government openness and transparency	5	5	0
Free Flow of Information	Quality of information	3.69	3.95	0.26
Acceptance of the Rights of Others	Group grievance	3.00	4.21	1.21

Trend in the PPI score, Kazakhstan, 2009–2020

Positive Peace improved by 9.3 per cent since 2009.



Source: IEP

The Positive Peace score for Kazakhstan improved by 9.3 per cent since 2009. Large improvements in the *Structures* and *Institutions* domains were only partially offset by a deterioration in *Attitudes*.

The 20.9 per cent improvement in the *Structures* domain reflected the implementation of economic reforms that opened up the economy, reduced state intervention and reduced overall levels of poverty. The country has large reserves of hydrocarbon resources, including oil, natural gas and coal. In addition, it has rich deposits of ferrous metals, copper, aluminium, zinc and uranium. These resource exports supported the economy, with GDP growth averaging above 4 per cent per year in the decade before the COVID-19 pandemic. There has also been a rise in international tourism, which has been incentivised by government campaigns promoting the country abroad.

Kazakhstan has also implemented reforms to reduce government red-tape and corruption, contributing to an improvement of 10.3 per cent in the *Structures* domain since 2009.

However, all this progress was partially negated by poor performance in *Attitudes*. The domain deteriorated by 4.5 per cent in the past decade, largely reflecting a sharp deterioration in the *group grievance* indicator. Kazakhstan has a chequered history in regards to the rights of groups and individuals.

Syria

CHANGE IN OVERALL SCORE, 2009-2020:
+0.583
to 4.304 from 3.721

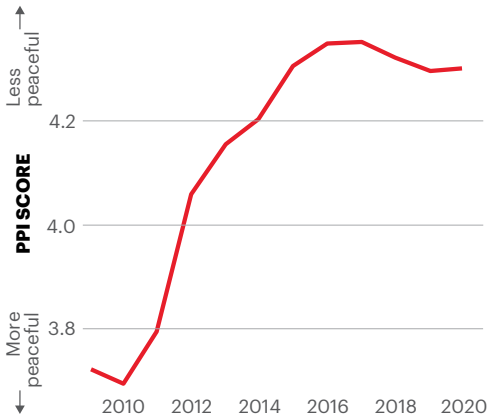
CHANGE IN RANK, 2009-2020:
↓41
to 157 from 116

Largest changes in Positive Peace in Syria

Pillar	Indicator	Value in 2009	Value in 2020	Change
Good Relations with Neighbours	External intervention	3.24	5	1.76
Free Flow of Information	Quality of information	3.50	5	1.50
Well-Functioning Government	Rule of law	3.32	4.70	1.37
Acceptance of the Rights of Others	Gender inequality	3.47	3.30	-0.17
Free Flow of Information	Freedom of the press	4.68	4.37	-0.30
Free Flow of Information	Individuals using the Internet	4.26	3.53	-0.73

Trend in the PPI score, Syria, 2009–2020

Positive Peace deteriorated by 15.7 per cent since 2009.



Source: IEP

Syria has recorded the largest deterioration in Positive Peace of any country in the index – 0.583 index points, the equivalent to a 15.7 per cent change. All Domains and Pillars deteriorated since 2009, as did 17 out of the 24 indicators of Positive Peace. The country has dropped 41 places in the PPI ranking and is now the seventh lowest Positive Peace nation in the world.

The Syrian civil war, which started in 2011 and continues to this day, devastated the physical and economic infrastructure of the country. Social resilience has been depleted, with 6.8 million Syrians leaving the country and another 6.7 million having been displaced within Syria.

The country's *Good Relations with Neighbours* Pillar has deteriorated the most sharply of any Pillar of Peace – a change of 25.9 per cent in the decade. The *external intervention* indicator deteriorated by 1.76 points or 54.2 per cent, largely reflecting the involvement of neighbours in Syria's civil war. Thousands of foreign fighters have flocked to Syria to take up arms against the Assad regime. In 2013, the number of foreign fighters in Syria exceeded that of any previous conflict in the modern history of the Muslim world.

Syria did improve on some indicators. At least two thirds of the population had mobile internet access as early as 2017. According to UNHCR, refugees say mobile phones and internet access are as important to their security as food, shelter and water. Mobile internet access among Syrian refugees also helps them connect with aid organisations. Press freedoms have also improved, albeit off a rather low base.

Libya

CHANGE IN OVERALL SCORE, 2009-2020:
+0.582
to 4.097 from 3.515

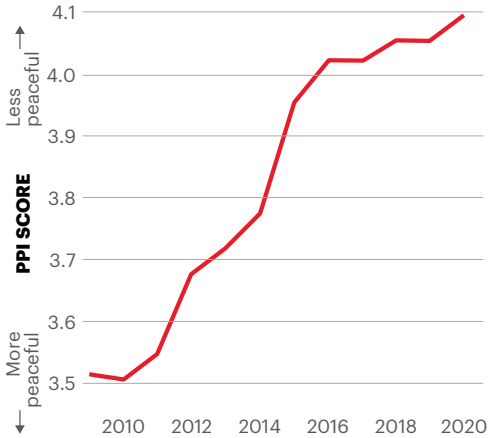
CHANGE IN RANK, 2009-2020:
↓55
to 152 from 97

Largest changes in Positive Peace in Libya

Pillar	Indicator	Value in 2009	Value in 2020	Change
Good Relations with Neighbours	External intervention	2.80	4.91	2.11
Well-Functioning Government	Government openness and transparency	3	5	2
Low Levels of Corruption	Factionalised elites	3.71	4.87	1.16
Equitable Distribution of Resources	Inequality-adjusted life expectancy	2.26	2.06	-0.20
Free Flow of Information	Individuals using the Internet	4.54	4.07	-0.47
Free Flow of Information	Quality of information	4.33	3.33	-1.00

Trend in the PPI score, Libya, 2009–2020

Positive Peace deteriorated by 16.6 per cent since 2009.



Source: IEP

The PPI score for Libya deteriorated by 0.582 index points – the second largest in the period after Syria's. Between 2009 and 2020, the scores for all three domains deteriorated in Libya, as did seven out of the eight Pillars. The only Pillar to improve was *Free Flow of Information*, buoyed by the *quality of information* and *individuals using the Internet* indicators.

The Pillar with the largest deterioration was *Well-Functioning Government*, deteriorating by 31.4 per cent since 2009. This was brought about by the civil war which has effectively seen the country controlled by militias with competing interests after the fall of the Gaddafi government.

In 2020, a ceasefire agreement was reached between the combatants, although peace remains fragile to this day. The future for Libya is uncertain due to deep divides within the ruling class. Chronic instability makes it difficult for governance to improve and social resilience to be strengthened without lasting peace.

Libya is rich in oil and natural resources, which means the country is constantly coveted and interfered with by international powers. This is behind the steep deterioration of the *external intervention indicator*.

There is mounting pressure on the healthcare system due to the COVID-19 pandemic. Humanitarian interventions are unable to reach many of the communities in Libya due to the restrictions imposed during the pandemic and associated lockdowns.

Venezuela

CHANGE IN OVERALL SCORE, 2009-2020:
+0.44
to 4.01 from 3.57

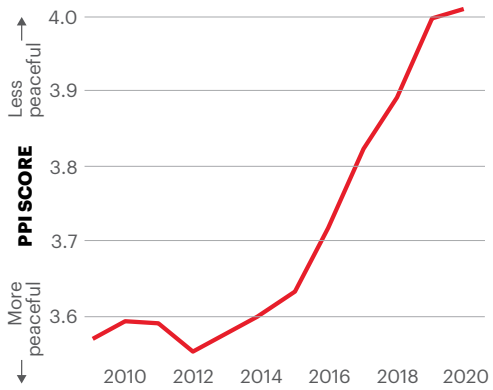
CHANGE IN RANK, 2009-2020:
↓43
to 147 from 104

Largest changes in Positive Peace in Venezuela

Pillar	Indicator	Value in 2009	Value in 2020	Change
Equitable Distribution of Resources	Equality of opportunity	3	5	2
Free Flow of Information	Quality of information	3.83	5	1.17
Equitable Distribution of Resources	Access to public services	3.50	4.63	1.13
High Levels of Human Capital	Researchers in R&D	4.79	4.74	-0.05
Sound Business Environment	GDP per capita	3.54	3.00	-0.54
Free Flow of Information	Individuals using the Internet	3.60	2.56	-1.04

Trend in the PPI score, Venezuela, 2009–2020

Positive Peace deteriorated by 12.3 per cent since 2009.



Source: IEP

Positive Peace in Venezuela deteriorated by 12.3 per cent since 2009. The *Attitudes* domain deteriorated by 19.6 per cent and the *Institutions* domain, by 15.4 per cent. The *Structures* domain improved slightly by 0.4 per cent.

The political and socio-economic crises continue in Venezuela, with all Pillars of Positive Peace recording substantial deteriorations over the past decade. *Equitable Distribution of Resources* deteriorated by 39.3 per cent in the period, as poverty and inequality have risen sharply in the Latin American country. A study by the Andrés Bello Catholic University in Caracas found that three in every four Venezuelans now face extreme poverty.[3]

After years of shortages and hyperinflation, President Nicolás Maduro's government was challenged in January of 2019 when the head of the National Assembly Juan Guaidó declared himself president. Despite international support for Guaidó, Maduro retained official power, with the backing of the military. The impasse saw the *Well-Functioning Government* Pillar of Positive Peace deteriorate by 17.8 per cent over the past decade. The uncertainty and the collapse of governance and rule of law saw 5.9 million Venezuelans flee the country as a result of the crisis.

Yemen

CHANGE IN OVERALL SCORE, 2009-2020:
+0.358
to 4.542 from 4.184

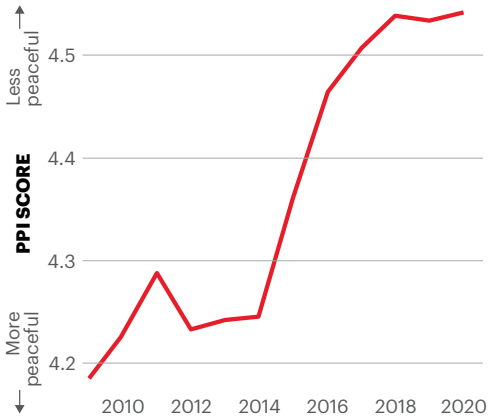
CHANGE IN RANK, 2009-2020:
↓7
to 161 from 154

Largest changes in Positive Peace in Yemen

Pillar	Indicator	Value in 2009	Value in 2020	Change
Free Flow of Information	Quality of information	3.26	4.57	1.31
Good relations with Neighbours	External intervention	3.81	5.00	1.19
Well-Functioning Government	Government effectiveness	3.97	5.00	1.03
Equitable Distribution of Resources	Inequality-adjusted life expectancy	3.49	3.20	-0.29
Free Flow of Information	Freedom of the press	4.20	3.64	-0.56
Free Flow of Information	Individuals using the Internet	4.57	3.86	-0.72

Trend in the PPI score, Yemen, 2009–2020

Positive Peace deteriorated by 8.6 per cent since 2009.



Source: IEP

The Yemeni PPI deteriorated by 8.6 per cent since 2009, largely reflecting a 14.2 per cent deterioration in the *Institutions* domain and a 12.4 per cent deterioration in *Attitudes*. The *Structures* domain improved by a comparatively moderate 3.8 per cent. Yemen, which already ranked poorly in the 2009 PPI, shed an additional seven places to rank 161st out of the 163 nations assessed in the 2020 rankings.

All Pillars of Positive Peace deteriorated in the country over the past decade.

Yemen's deterioration in Positive Peace was largely caused by the prolonged civil war. The country has been split by a north-south divide that led to a civil war in 1994, and then subsequently to another armed conflict between the government and Houthi rebels in 2009. This escalated to a full civil war in 2014.

Yemen' social and political systems remain extremely fragile. The civil war that started seven years ago left the country's economic infrastructure destroyed and resources depleted. The UN described the humanitarian crisis in the country as the "worst in the world."

UNHCR estimates that 24.1 million Yemenis, or 75 per cent of the population, are in need of humanitarian assistance. Roughly 15 million people, or more than half of Yemen's population, are food insecure and 400,000 children are suffering from severe malnutrition. Over 3.65 million Yemenis have been internally displaced; this corresponds to 12 per cent of the overall population.

> Yemen's social and political systems remain extremely fragile.

South Sudan

CHANGE IN OVERALL SCORE, 2009-2020:
+0.327
to 4.553 from 4.226

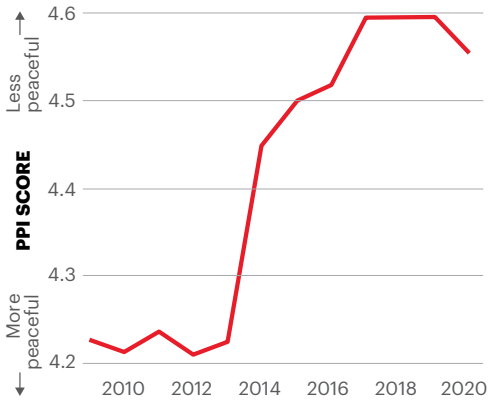
CHANGE IN RANK, 2009-2020:
↓5
to 162 from 157

Largest changes in Positive Peace in South Sudan

Pillar	Indicator	Value in 2009	Value in 2020	Change
Good Relations with Neighbours	Law to support equal treatment of population segments	3	5	2
Well-Functioning Government	Government openness and transparency	4	5	1
Equitable Distribution of Resources	Equality of opportunity	4	5	1
Equitable Distribution of Resources	Inequality-adjusted life expectancy	4.34	4.11	-0.23
Good Relations with Neighbours	External intervention	5	4.76	-0.24
Acceptance of the Rights of Others	Group grievance	5	4.60	-0.40

Trend in the PPI score, South Sudan, 2009–2020

Positive Peace deteriorated by 7.7 per cent since 2009.



Source: IEP

South Sudan is a young nation formed in 2011 after secession from Sudan. The separation of the mostly Christian and animist nation from its northern Muslim neighbour followed a 22-year-old conflict that depleted both nations.

However, independence did not appease internal tensions and South Sudan saw itself again immersed in war from 2013. This South Sudanese civil war took hold of the country as multiple groups vied for political power in the capital Juba.

All Domains and Pillars of Positive Peace deteriorated in South Sudan over the past decade, with the PPI overall score deteriorating by 7.7 per cent in the period. South Sudan is now the second lowest Positive Peace nation among the 163 countries assessed in the PPI.

South Sudan's deterioration took place from 2013 to 2018, with the country's PPI score having since stabilised. In 2018, a peace deal was struck between the established government and the Sudan People's Liberation Army-in Opposition (SPLA-IO), although inter-community fighting and human rights abuses continued on. Fighting among communities results from grievances about land and cattle, with political and military leaders adding to the instability by supplying communities in their sphere of influence with weapons and ammunition.

SPECIAL SECTION: US, CHINA, EU, UK AND RUSSIA

This analysis covers the world's leading powers. The EU has been included as a block due to the interconnected nature of their economies and foreign relations.

What is striking is that the levels of Positive Peace for these countries tend to be much higher than their levels of actual peace as recorded by the Global Peace Index (Table 1.11). This is especially the case for Russia, the UK, China and the US, because these countries maintain large military forces and are involved in external conflicts which detract from their GPI rankings. However, they operate with a level of domestic socio-economic development that is relatively high. These large Positive Peace surpluses are unlikely to change. Countries with strong geopolitical ambitions maintain large militaries with which to pursue strategic goals.

United States

The US experienced a slow and steady deterioration in its PPI score since 2009. However, this trend has accelerated since 2015 (Figure 1.9). From 2009 to 2020, the country's PPI Overall Score deteriorated by 17.6 per cent, with ten percentage points of this deterioration taking place since 2015. This was the 6th highest drop of any country over the last decade. However, the country is still ranked highly on overall levels of Positive Peace at 24th compared to 120th on the GPI.

This was driven by deteriorations in the *Attitudes* and *Institutions* domains of Positive Peace. The other domain, *Structures*, recorded a mild improvement. The biggest deterioration was in the *quality of information* indicator — the perceived quality of information disseminated by members of society, the media and authorities. This indicator deteriorated by 150 per cent. This contributed to the *Free Flow of Information* Pillar deteriorating by 28.1 per cent between 2009 and 2020, a large change for a developed nation.

The *factionalised elites* indicator deteriorated by 114 per cent since 2009 (Figure 1.10). This highlights the growing polarisation and intolerance that has been present in the political debate. The indicator is one of three that forms the *Low Levels of Corruption* Pillar, which deteriorated by 48 per cent.

Government openness and transparency also deteriorated markedly. These findings reflect the widening gap between dissenting political groups and the radicalisation of views on economic management, personal freedoms, immigration and foreign relations. Deteriorations in these three indicators have been disproportionately large relative to movements recorded for all other indicators of Positive Peace for the country.

TABLE 1.11

PPI and GPI rankings, 2020

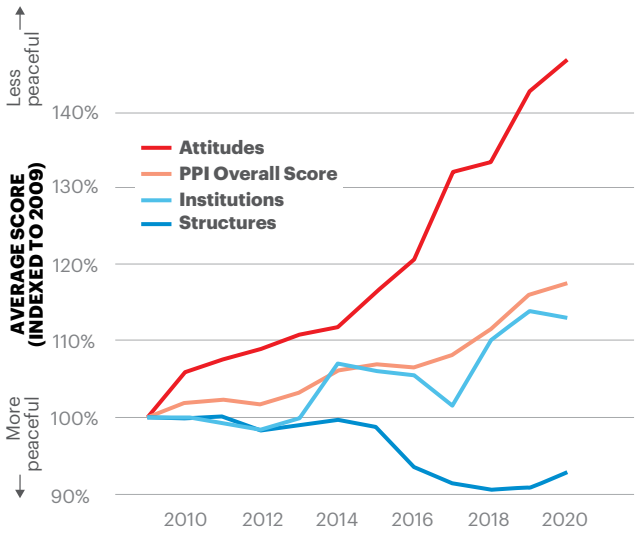
Selected countries and regions with Positive Peace surpluses.

Regional Rank	Country	PPI Ranking 2020	GPI Ranking 2020
1	US	24	120
2	UK	18	39
3	Russia	71	154
4	China	66	94
5	Europe (average of countries in region)	30	32

FIGURE 1.9

Changes in Attitudes, Institutions and Structures in the PPI, United States, 2009–2020

Positive Peace deteriorated in the US from 2015 on the back of poorer scores for institutional and attitude indicators.

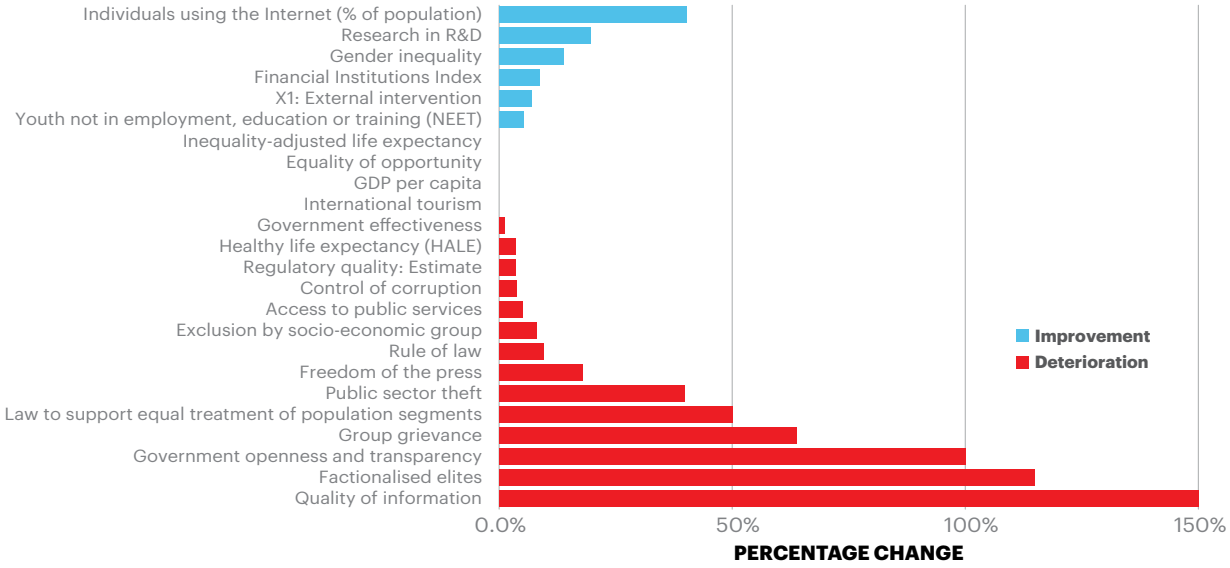


Source: IEP

FIGURE 1.10

Percentage change in Positive Peace indicators, United States, 2009–2020

Quality of information and *fractionalised elites* deteriorated the most among US indicators.



Source: IEP

China

China has improved in its PPI score by 6.7 per cent since 2009, broadly in line with other developing countries. China is now ranked 66th on the Positive Peace Index compared to 94th on the GPI.

To a large extent, the improvement has reflected advances in the economic, health and physical infrastructure, which comprise the *Structures* domain of Positive Peace (Figure 1.11). Accordingly, China posted strong improvements in its *Sound Business Environment* and the *Equitable Distribution of Resources* Pillars of Positive Peace, which improved by 14.7 per cent and seven per cent, respectively. All Pillars recorded improvements since 2009, although some – especially *Free Flow of Information*, *Low Levels of Corruption* and *Sound Business Environment* – come off very low bases.

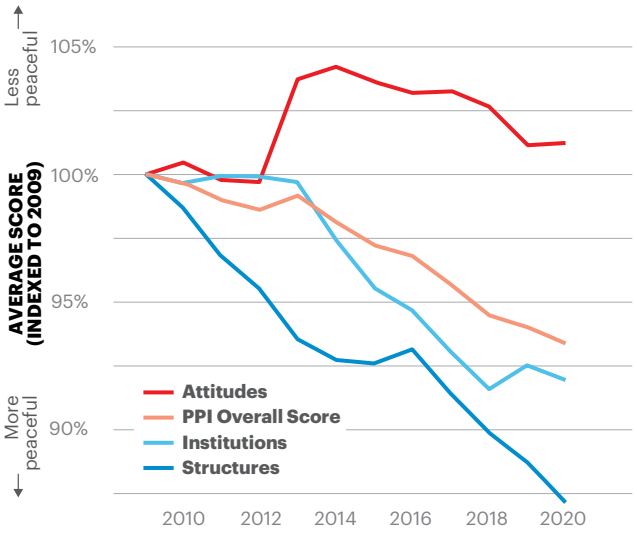
In 2013, the *Attitudes* domain deteriorated markedly. This coincided with the Chinese Banking Liquidity Crisis, which saw an end to easy credit and had a negative impact on gold and stock markets. At the time, there were noticeable deteriorations recorded in the *group grievance*, *factionalised elites* and *exclusion by socio-economic group* indicators.

Individuals using the Internet, *financial institutions* and *inequality-adjusted life expectancy* were the indicators to post the largest improvements since 2009 (Figure 1.12). On the other end of the scale, China has seen a large deterioration in the *quality of information* disseminated by the government domestically. Press freedoms have also been curtailed.

FIGURE 1.11

Changes in Attitudes, Institutions and Structures in the PPI, China, 2009–2020

Improvements in indicators of social structures – economic, health and physical infrastructure – have offset deteriorations caused by worsening scores for *Attitudes* indicators.

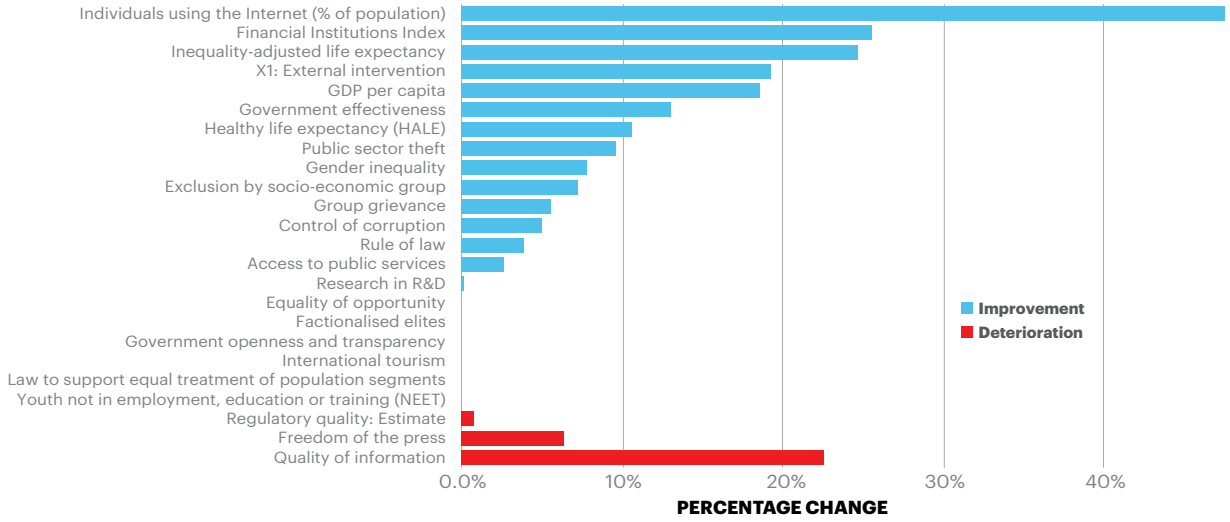


Source: IEP

FIGURE 1.12

Percentage change in Positive Peace indicators, China, 2009–2020

Improvements reflecting economic prosperity and physical infrastructure development contrast with the deterioration in the *quality of information* disseminated within the country.



Source: IEP

Europe

Positive Peace in Europe has recorded a minor improvement over the past decade as shown in Figure 1.13. This reflects improvements in the *Structures* category of indicators. This was influenced by continued economic development, especially in some southern and eastern nations, following the European debt crisis of the early 2010s. There has been substantial growth in internet usage and in cross-border tourism visitation — both within the continent and from outside (Figure 1.14).

Business conditions and health outcomes have also improved. The European PPI overall score improved by 0.8 per cent from 2009 to 2020. However, this improvement was largely a result of the development of eastern European economies, with the Western European scores improving by just being 0.2 per cent.

The *Attitudes* domain deteriorated noticeably across the region, as did the *Institutions* domain.

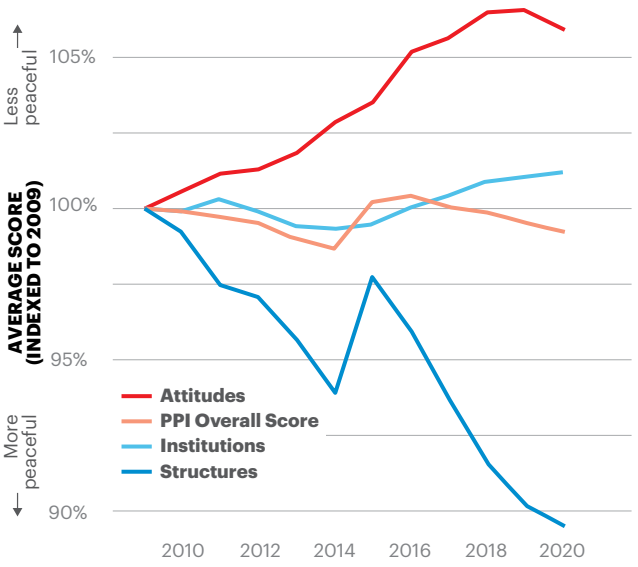
In line with global trends, the *quality of information* has deteriorated among European nations, particularly as some political groups took to the internet to disseminate radical views of both right-wing and left-wing persuasions. *Freedom of the press* has also been curtailed in some nations, which further contributed to a perceived deterioration of informed debate.

Economic inequality has increased, albeit at rates below those recorded in other regions of the world.[4] This has contributed to greater social tensions and a radicalisation of the political debate — as captured by the *factionalised elites* indicator.

FIGURE 1.13

Changes in Attitudes, Institutions and Structures in the PPI, Europe, 2009–2020

Improvements in the economy of southern and eastern European nations have contributed to benign structural outcomes for the region. In contrast, *Attitudes* deteriorated markedly.



Source: IEP

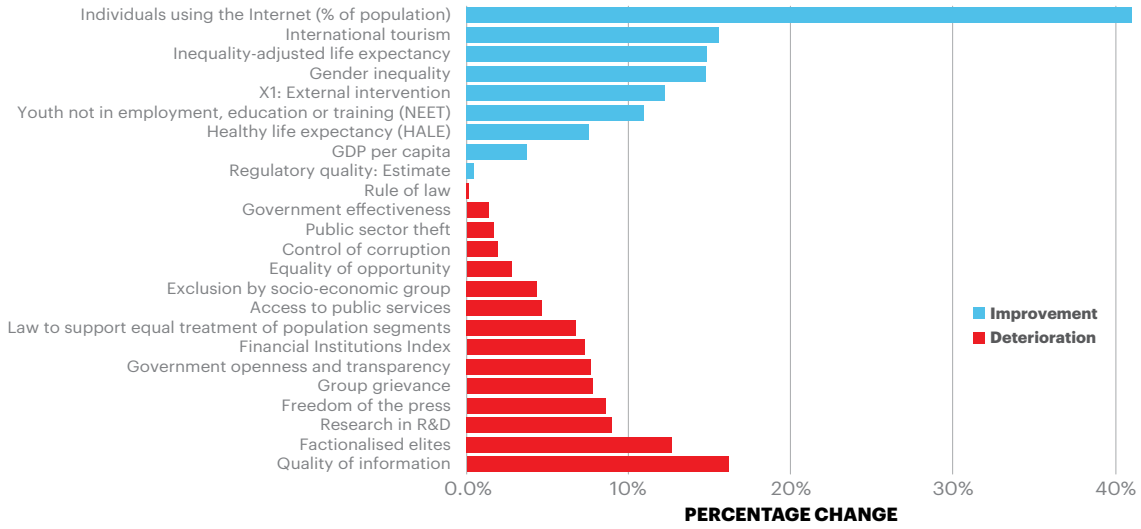
Turkey was the European country to post the largest deterioration in the region. The country's PPI score deteriorated by 8.2 per cent since 2009, largely driven by the *Well-Functioning Government* and *Low Levels of Corruption* Pillars. In 2016 the country experienced a failed military coup that greatly destabilised the nation and exacerbated sectarian tensions. This contributed to a financial crisis from 2018 onwards that further depleted societal resilience. Positive Peace also deteriorated in Greece, with the country's PPI score changing by 7.9 since 2009. The global financial crisis of 2009 curtailed credit provision to the country leading to a default in the following year. The ensuing economic crisis saw Greece's *Sound Business Environment* Pillar deteriorate by 42.5 per cent in the last decade. In Western Europe, Iceland, Austria, Spain all recorded substantial deteriorations, although their levels of Positive Peace remain very high.

The Nordic Countries recorded improvements in Positive Peace, with the exception of Denmark and the aforementioned Iceland. Norway saw a 4.2 per cent improvement in its score, largely driven by large improvements in *quality of information*, *external intervention* and *regulatory quality*. Finland also improved, albeit more modestly, while Sweden's score was very little changed.

FIGURE 1.14

Percentage change in Positive Peace indicators, Europe, 2009–2020

Substantial improvements in economic and health indicators were partially offset by worsening political radicalisation and quality of informed debate.



Source: IEP

United Kingdom

The UK had one of the poorest performances of any European nation in the last decade, deteriorating by 5.6 per cent in its Positive Peace score (Figure 1.15). It is ranked 18th on the PPI, a relatively high rank, compared to 39th on the GPI.

The UK elected to leave the European Union in a 2016 referendum. That initiated a period of economic and political uncertainty. In the wider public, the antagonism intensified between those who elected to leave and those wanted to stay within the EU. Businesses delayed investment decisions as a result of the uncertainty, which has affected economic growth and COVID-19 has further affected economic growth.

After the UK officially left the EU at the end of 2020, some border checks were introduced between Northern Ireland and the Republic of Ireland. This risks exacerbating sectarian tensions in Northern Ireland and may result in further deteriorations in Positive Peace in the UK in coming years.

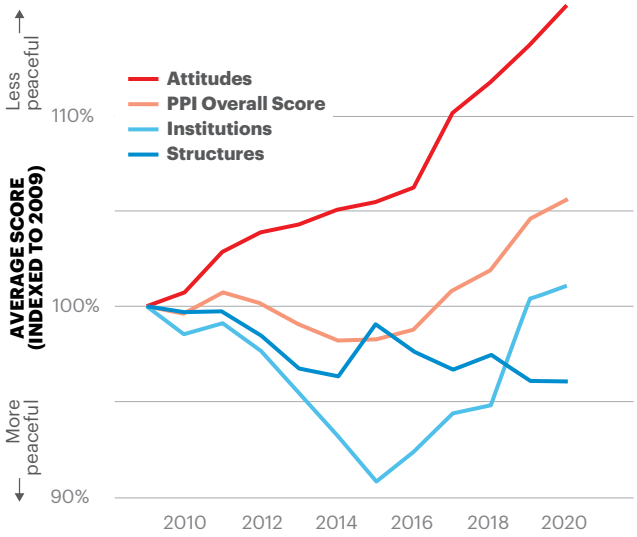
This tension has manifested as a deterioration in the UK PPI score from 2016 onwards, reversing the improving trend of the previous five years. Both the *Attitudes* and *Institutions* domains deteriorated in the past few years, more than offsetting gains in Structure indicators. British *Attitudes* deteriorated sharply in 2011. This coincided with the rise of Islamic State of Iraq and the Levant. Another sharp deterioration took place from 2016 onwards corresponding with the Brexit debate.

Since 2009, three indicators deteriorated markedly: *factionalised elites*, *group grievance and freedom of the press* (Figure 1.16). These underline tensions between 'Brexiteers' and 'Remainers' as well as a more adverse view on immigration. It is possible for the UK to reverse these trends in the years ahead. But it will require clarity and resolution from authorities, as well as policies that promote the inclusion of different societal views.

FIGURE 1.15

Changes in Attitudes, Institutions and Structures in the PPI, United Kingdom, 2009–2020

British *Attitudes* deteriorated substantially over the past decade. This has been partially offset by better outcomes for the *Institutions* and *Structures* domains.

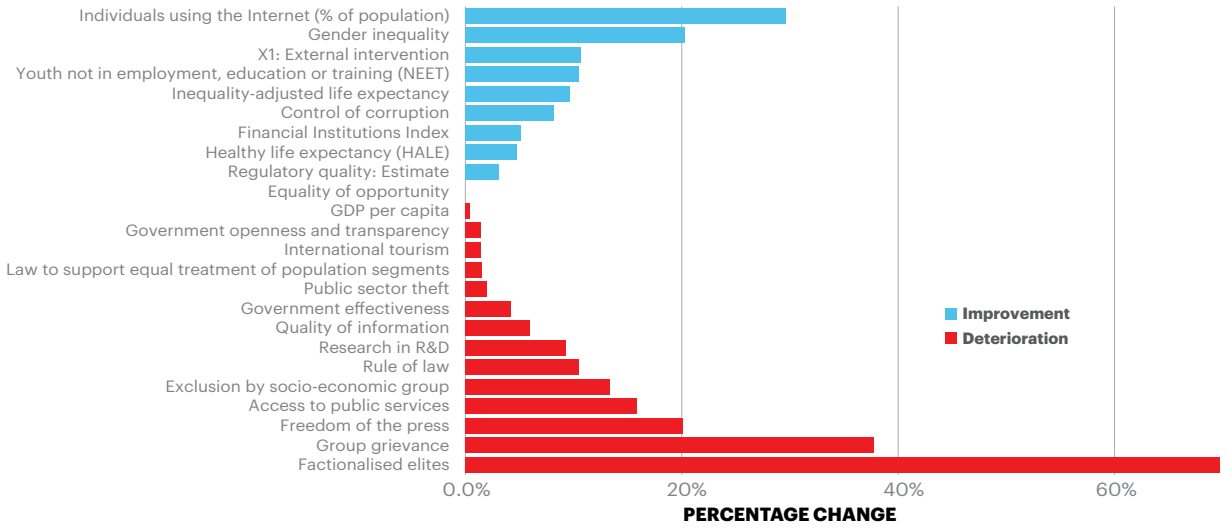


Source: IEP

FIGURE 1.16

Percentage change in Positive Peace indicators, United Kingdom, 2009–2020

Factionalised elites and *group grievance* saw large deteriorations in the United Kingdom.



Source: IEP

Russia

Russia has recorded a slight improvement (around 0.1 per cent) in its PPI score from 2009 to 2020. This saw the country lose two places over the past decade to rank 71st in the PPI. This compares with a rank of 154th in the GPI.

The *Structures* domain improved by 17.2 per cent in the period, especially due to greater access to the internet, the development of financial markets and improvements in life expectancy. The *Institutions* domain also improved, albeit more modestly at 4.7 per cent. This reflected some progress in controlling corruption and increasing the efficiency of the administrative procedures.

However, Russian *Attitudes* deteriorated markedly by 11.3 per cent, especially in the first half of the past decade (Figure 1.17).

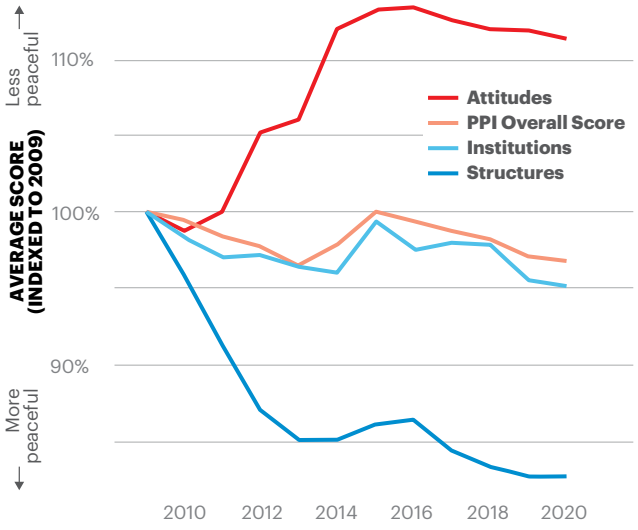
The country was seriously affected by the Global Financial Crisis of 2008 and 2009, with the ruble losing two-thirds of its value and unemployment rising from 6 per cent in 2007 to 8.3 per cent by the end of 2009. The economic downturn was a trigger for a political crisis that saw mass protests on the streets of Moscow and other cities from 2011 to 2012. The economy has also been affected by western sanctions on business and the country's elite. Frictions are also increasing along its borders, including with Ukraine and the EU. In response the country has drawn itself closer to China and some of its own neighbours, such as Belarus.

The government had stern responses to the demonstrations, but the rallies continued throughout 2012 and 2013. The turbulence and the government's response were reflected in substantial deteriorations in the *quality of information* and *law to support equal treatment of population segments* (Figure 1.18). *Freedom of the press* and *group grievances* also deteriorated.

FIGURE 1.17

Changes in Attitudes, Institutions and Structures in the PPI, Russia, 2009–2020

The deterioration in Russia's *Attitudes* domain from 2010 to 2014 has been offset by improvements in *Structures*.

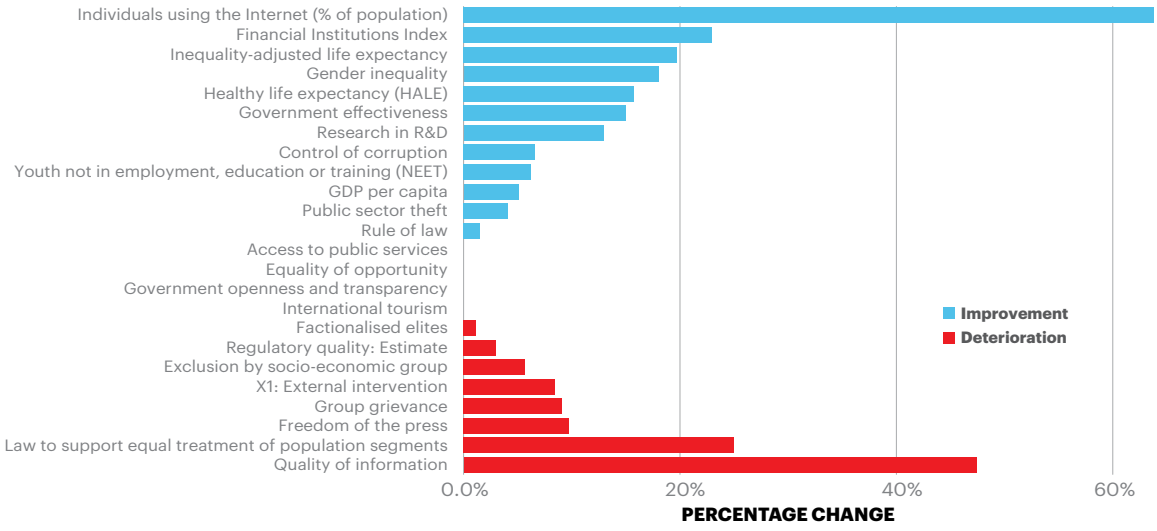


Source: IEP

FIGURE 1.18

Percentage change in Positive Peace indicators, Russia, 2009–2020

Russia has seen strong improvements in Internet usage, the quality of financial institutions and life expectancy.



Source: IEP

A Note on Methodology: The Robustness of the PPI Framework

This section describes an alternate weighting methodology that was developed for the index. The analysis found that the results were similar even though the weighting for some indicators was nearly 400 per cent higher. This highlights the robustness of the current index methodology.

The indicators in the index are weighted directly proportional to their individual correlations with *Internal Peace* from the Global Peace Index (GPI). These correlations can be seen in Table 1.1 in the beginning of this section.

The higher the correlation of an indicator with the *Internal Peace* scores, the higher will be indicator's weight in calculation of overall Positive Peace score. The rationale for this is to prioritise the importance of each indicator according its relation with internal safety, security and development of the national system. As the correlations are numerically commensurate, all indicators are factored in the index with similar weights. This produces a framework close to an equal-weights index.

As a robustness check, a new methodology was formulated to test the impact of changing the weighing. The objective was to increase the disparities between individual indicator weights to reduce the equal-weights effect described above.

Weight values were ascribed to indicators according to specific groupings of correlations. Indicators with correlations of up to 0.5 were grouped together. Those with correlations between 0.5 and 0.6 formed a second grouping, and so forth. Indicators within the same grouping received the same weights. But the weights increased sharply from one grouping to the next.

This created a greater variability of weights, with some indicators receiving weights many multiples higher than the weights of other indicators.

The results were:

- Greater standard deviations of country scores – the individual scores of countries were more spread out along the scale 1 to 5.
- Less occurrence of score and ranking draws. The number of countries sharing one same numerical score (and therefore sharing the same rank in the PPI) was reduced.

However, the two methodologies produced highly consistent results, with the correlation coefficient between the conventional and alternative methodology scores being 0.99.

This highlights the high level of robustness of the PPI framework.

This alternative methodology has some advantages over the conventional methodology. But it also has drawbacks. It is computationally more complex, which reduces the ability of the wider public to replicate and engage with the PPI. And the weights of the indicator groupings are arbitrary, which reduce the transparency of the framework.

Thus, this report continues to use weights proportional to the internal peace correlations, with the certainty that the framework is robust and transparent.

2 The Benefits of Societal Resilience

Key Findings

- On average, every one index-point improvement in the PPI is associated with a tenfold rise in GDP per capita. The direct relationship between PPI and GDP outcomes can be seen for all Pillars of Positive Peace.
- From 2009 to 2020, the per capita GDP of countries that improved in the PPI rose by an average of 3.1 per cent per year. This compares with a growth of 0.4 per cent per year for the other countries.
- Inflation in countries where the PPI improved was on average three times less volatile than where Positive Peace deteriorated in the past decade.
- Household consumption in nations where Positive Peace improved grew two times faster from 2009 to 2020 than where the PPI deteriorated.
- A model based on Positive Peace suggests that the global number of COVID-19 cases by the end of 2021 was almost 700 million, instead of the officially reported 290 million. The number of fatalities was most likely around 12 million persons, instead of the reported 5.4 million. These are underestimates and are consistent with published epidemiological research.
- Nations with higher levels of resilience have been more effective in shielding their populations from the COVID-19 pandemic, recording excess mortality rates half that of countries with low levels of societal resilience.
- Of the countries with a substantial Positive Peace deficit in 2009, 79 per cent deteriorated in the GPI in the subsequent decade. A Positive Peace deficit is where the actual peacefulness of a country is substantially higher than what its levels of Positive Peace would suggest.
- Countries with a high Positive Peace deficit in 2009 recorded an average deterioration of 11.6 per cent in the GPI in the subsequent decade. This compares with a small improvement recorded by stable countries and a substantial 3.1 per cent improvement recorded by surplus countries.
- Of the countries with a Positive Peace surplus in 2009, 68 per cent recorded improvements in their GPI scores by 2020.
- High levels of societal resilience are associated with greater life satisfaction because individuals are not weighed down by concerns about survival or excessive poverty. Correlation coefficients between the PPI and measures of life satisfaction are around 0.90.
- The deterioration detected by the PPI Domain *Attitudes* is corroborated by other measures of dissatisfaction with global society. This dissatisfaction is strongest among young people, those with lower levels of education, the unemployed and the underemployed.
- In a large proportion of Western European nations and full democracies, women are more satisfied with their own standards of living than men. In contrast, women tend to be less satisfied than men in authoritarian regimes.

Previous research has demonstrated a clear direct link between high levels of Positive Peace and favourable economic outcomes. High Positive Peace countries tend to be more economically developed than low Positive Peace ones. This is also true across time. Countries that improve in Positive Peace over the years are more likely to develop faster than comparable nations.

High Positive Peace countries tend to outperform their counterparts on a number of macroeconomic and wellbeing gauges. They have also been capable of protecting their populations more effectively from shocks such as the COVID-19 pandemic that started early in 2020.

This section discusses the PPI as an empirical gauge of societal resilience. At a superficial level, equating Positive Peace to societal resilience and a producer of superior socio-economic outcomes may seem self-evident. However, comparing the PPI with development yardsticks allows the quantification of the differences and similarities between countries that at first glance may have comparable levels of socio-economic development. It also helps shed light on how these differences can be abridged and these similarities leveraged to promote the non-violent resolution of grievances and the achievement of higher degrees of development and wellbeing.

THE BENEFITS OF POSITIVE PEACE

This section contains an updated compilation of some benefits of Positive Peace especially in relation to macroeconomic outcomes, value for business and governance.

Income

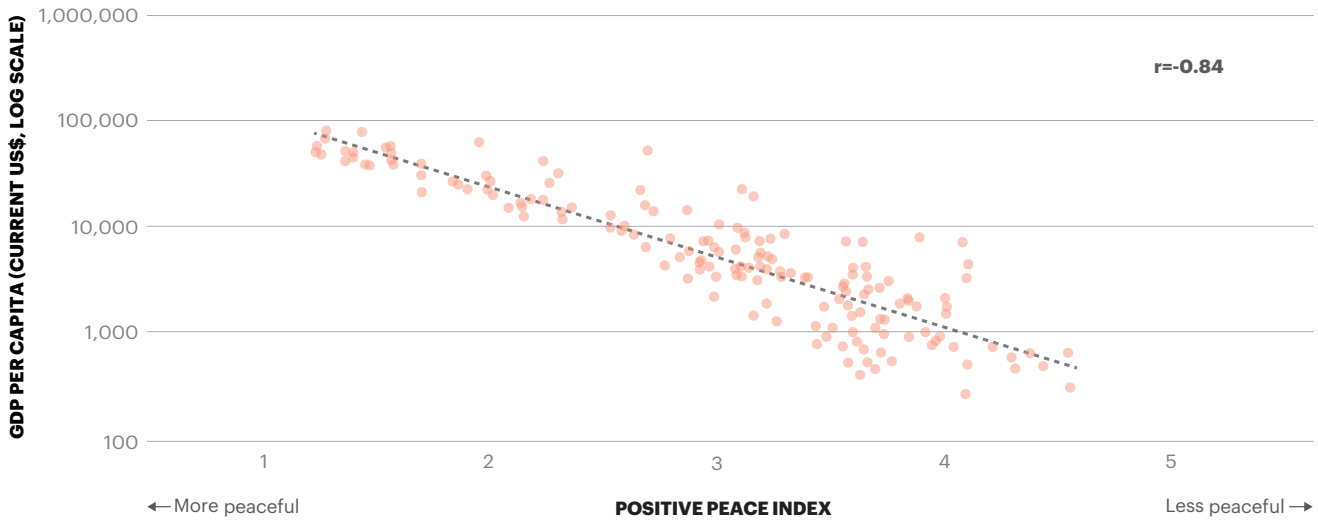
Higher levels of Positive Peace are associated with greater per-capita income (Figure 2.1). This is because the factors that create a robust business environment are the same factors that create highly peaceful societies. Some of the factors are lower levels of corruption, better governance, free flow of information through society and higher levels of human capital.

There is also a clear relationship between developments in Positive Peace and growth in per capita income across time. From 2009 to 2020, per capita GDP in countries that recorded improvements in the PPI rose by 3.1 per cent per year as shown in Figure 2.2. This compares with 0.4 per cent per year for countries in which Positive Peace deteriorated.

FIGURE 2.1

Positive Peace and GDP per capita, 2020

On average, every one index-point improvement in the PPI is associated with a tenfold rise in US$ GDP per capita.

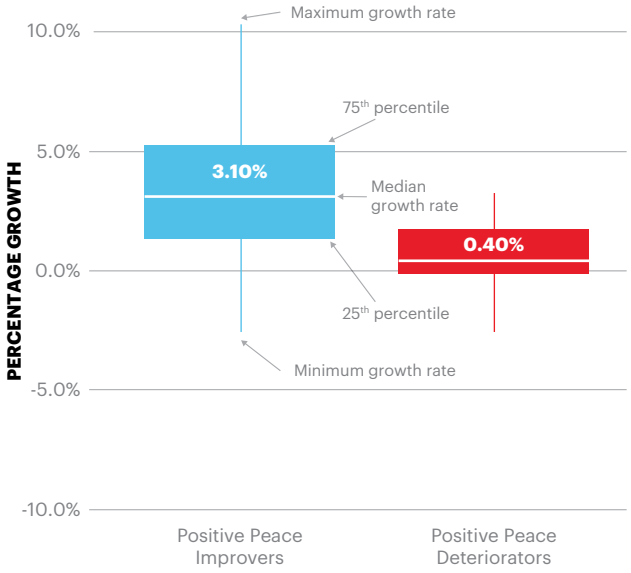


Source: IEP, IMF

FIGURE 2.2

Positive Peace and growth in GDP per capita, 2009–2020

Countries that improved in Positive Peace from 2009 to 2020 recorded an average annual growth rate in per capita GDP 2.7 percentage points higher than nations where Positive Peace had deteriorated.



Source: IEP, IMF

Volatility of Inflation

The volatility of inflation is an impediment to economic development. It makes it difficult to forecast future prices and demand for goods and services, prompting firms to cut back on investment as well as employment; and households to reduce consumption.

Countries that improved in Positive Peace from 2009 to 2020 experienced substantially lower volatility of inflation over this time (Figure 2.3). Over the past decade or so, the volatility of inflation rates in countries where Positive Peace deteriorated was three times higher than in those countries where it improved.

Household and Business Activity

Household consumption is particularly responsive to improvements in Positive Peace. Among countries that recorded such improvements, the average annual growth in household consumption from 2009 to 2020 was 3.5 per cent, around twice the rate for countries in which Positive Peace deteriorated (Figure 2.4). This confirms previous IEP findings that consumption is a key component of how socio-economic systems respond to improvements in peacefulness.

The business sector is responsible for almost all of the production of goods and services in most economies. A gauge of activity in this sector is the gross value added (GVA), which measures the value of all goods and services produced minus the variable cost of producing them. Thus, firms' profits equal GVA minus fixed costs (overheads).

The GVA of the industry and construction sector is most responsive to improvements in Positive Peace. Growth in this sector's GVA was 3.8 per cent per year among countries in which Positive Peace improved. This compares with 0.6 per cent where Positive Peace deteriorated (Figure 2.5). Similarly,

FIGURE 2.3

Volatility of inflation rates by Positive Peace outcome, 2009–2020

Countries in which Positive Peace improved had less volatile inflationary outcomes.

Source: IEP, World Bank

FIGURE 2.4

Changes in household consumption by Positive Peace, 2009–2020

Among countries where Positive Peace improved, household consumption rose between 2009 and 2020 at a rate almost twice as high as countries where the PPI deteriorated.

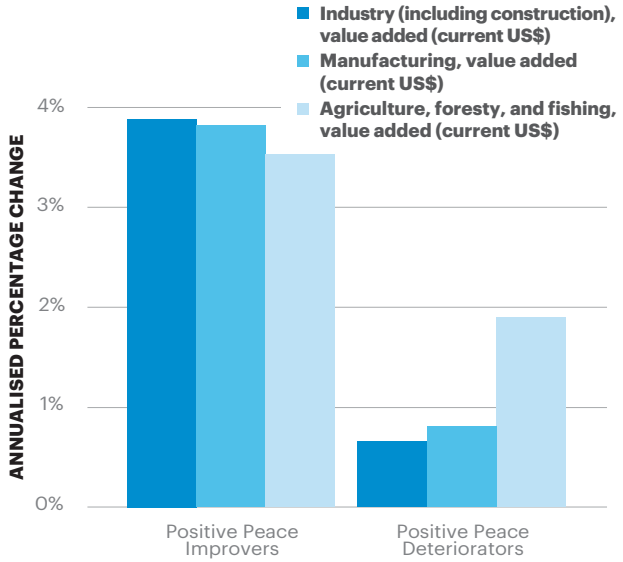
Source: IEP, World Bank

manufacturing is also highly reliant on Positive Peace improvements. The agricultural GVA growth differential for Positive Peace improvers is smaller but still positive. This is because the sector depends on a number of factors unrelated to Positive Peace, such as climatic patterns and geographical features.

FIGURE 2.5

Changes in business value added by Positive Peace outcome, 2009–2020

Construction is the sector most responsive to improvements in Positive Peace, with the GVA in countries improving in the PPI growing at almost four per cent per year.



Source: IEP, World Bank

Trade and Openness

Nations that consistently develop in Positive Peace are more attractive to foreign direct investment (FDI) because of:

- greater economic returns;
- improved governmental transparency and efficiency;
- enhanced rule of law, protection of private property and enforcement of contracts; and
- cheaper and less burdensome dispute, compensation and remediation procedures.

From 2009 to 2019, FDI for PPI improvers rose at an annual rate of 5.2 per cent, contrasting with an increase of 2.6 per cent for nations in which Positive Peace retreated (Figure 2.6). Similarly, trade growth, both imports and exports, is larger among countries with favourable performance in the PPI. The data used covered 2009 to 2019 to avoid the distortionary impact caused by the COVID-19 pandemic.

As discussed above, nations that progress in Positive Peace have more robust internal activity, which boosts demand for foreign goods and services. Accordingly, imports among Positive Peace improvers grew almost two percentage points faster than in other nations over the past decade. Positive Peace also benefits the export sector, as firms are more agile, less weighed-down by inefficient regulation, and are not held back by socio-political disruptions. Trade and openness to foreign investment are two critical channels through which societal resilience generates economic outperformance.

Governance

There is a conceptual link between the quality of governance exercised by authorities and the level of peacefulness enjoyed by a society. Empirically, the nexus between Positive Peace and governance measures compiled by the World Bank's Country Policy and Institutional Assessment (CPIA) is particularly strong.

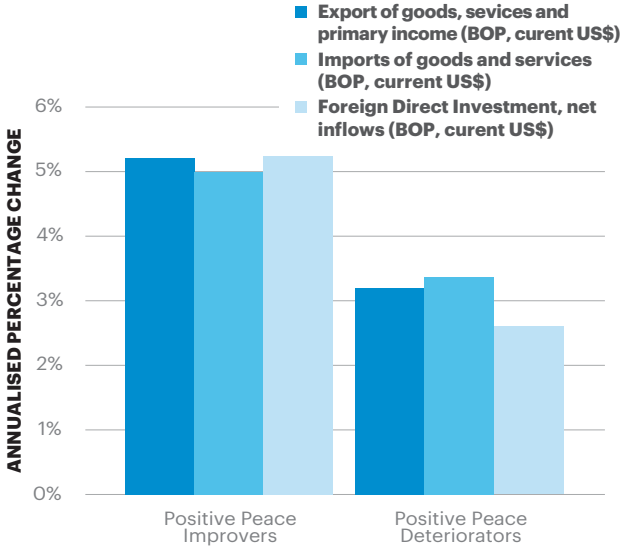
Nations that improved in the PPI also advanced their CPIA ratings, especially in the areas of education, equity, quality of administration and business regulation (Figure 2.7). This is in stark contrast to countries where Positive Peace deteriorated over the past decade, which were downgraded in all CPIA criteria.

There were some CPIA indicators that deteriorated globally, including fiscal policy, financial sector and macroeconomic management. However, countries that improved in Positive Peace recorded smaller deteriorations in such indicators than other nations.

FIGURE 2.6

Changes in FDI and trade by Positive Peace outcome, 2009–2019

FDI flows towards countries that improved in Positive Peace grew strongly over the decade, while countries where Positive Peace declined became less attractive in global capital markets.

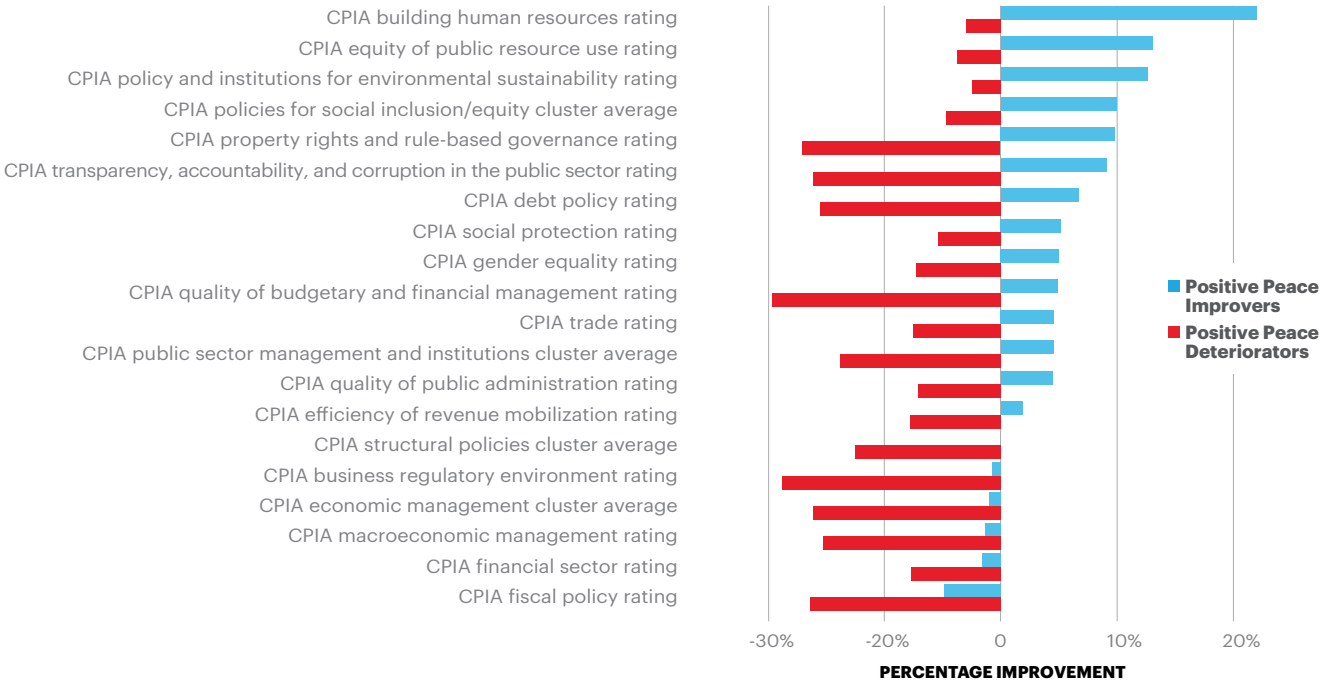


Source: IEP, World Bank

FIGURE 2.7

Governance ratings by Positive Peace outcome, 2009–2020

Countries that improve in Positive Peace tend to fare better in the CPIA assessment by the World Bank.



Source: IEP, World Bank

> Nations that improved in the PPI advanced their CPIA governance ratings especially in the areas of education, equity and quality of administration.

COVID-19 AND SOCIETAL RESILIENCE

The COVID-19 pandemic has been and continues to be the most disruptive shock to the global society in a generation. By the end of 2021, the virus had reportedly infected over 290 million people and contributed to 5.4 million deaths. Responses to the pandemic have reduced economic activity, limited the free movement of people and changed social norms in fundamental ways.

Yet, epidemiologists and statisticians are almost unanimous in stating that official infection and fatality figures underestimate the true severity of the crisis. The Institute for Health Metrics and Evaluation (IHME) suggest that the total number of deaths across the world is more than double the reported numbers.[1] Researchers from the UT Southwestern Medical Center estimate that the number of COVID-19 infected people in the US could be almost three times what official reports show.[2]

This section assesses the problem of under-reporting of COVID-19 figures and demonstrates how Positive Peace, as a gauge for societal resilience, has contributed to a more effective management of the pandemic.

Underreporting in Low-Resilience Countries

An important difficulty in handling this crisis has been ascertaining its actual severity and reach. There is anecdotal evidence that a large number of cases have remained unreported because some infected persons never develop symptoms and therefore do not get tested. Another issue regards co-morbidities, which make it difficult for medical practitioners to determine if a patient died directly of COVID-19 or of another condition that was aggravated by the virus.

However, an arguably deeper problem relates to the incapacity of countries with low levels of societal resilience and administrative effectiveness to record, let alone treat, COVID-19 cases.

Countries with lower levels of Positive Peace tend to have larger populations and rapid population growth. Yet, the volume of reported COVID-19 cases has been low (Figure 2.8).

Early in the pandemic, there was some speculation that COVID-19 would affect primarily developed societies, infecting workers in air-conditioned offices, commuters in air-tight public transport systems or shopping centre patrons. Indeed, people living or working in open-air and low population density conditions such as farmers or herders would hardly be exposed to contagion. However, the claim that COVID-19 prevalence is mostly limited to the developed world is false for two reasons.

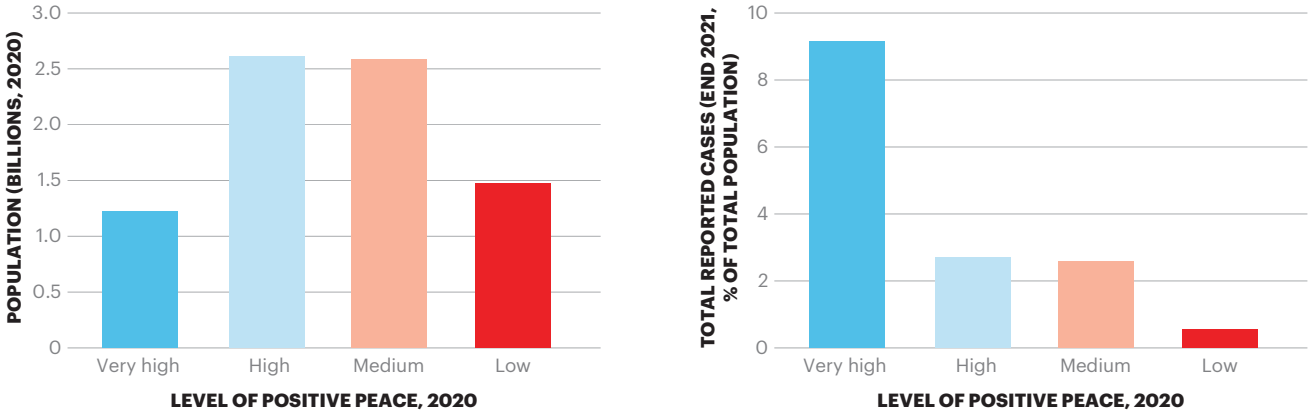
Firstly, the characteristics of the disease, including the rate of deaths among the officially reported cases is similar across all levels of societal resilience (Figure 2.9). The case fatality rates for medium and low Positive Peace countries are broadly aligned with their very high Positive Peace counterparts. Given this, it is difficult to argue that other features of the disease, such as infection rates, would be substantially different between developing and developed nations. In the beginning of the pandemic, there was speculation that the virus could be more contagious and lethal in colder climates. While contagion increases during colder months in some countries (similarly to other types of flu), COVID-19 also proved to be very disruptive in warm countries such as India, Brazil and Colombia.

The second reason has to do with excess mortality – the actual number of deaths in a given period relative to the projected deaths based on historical patterns. There is evidence that excess mortality in 2020 was higher for countries displaying lower levels of Positive Peace (Figure 2.10). Excess mortality data for medium or low Positive Peace countries is sparse, but where data exists, rates for these countries were much higher on average than among developed nations.

FIGURE 2.8

Population and COVID cases, by Positive Peace level

Countries with lower level of societal resilience reported lower rates of infection.

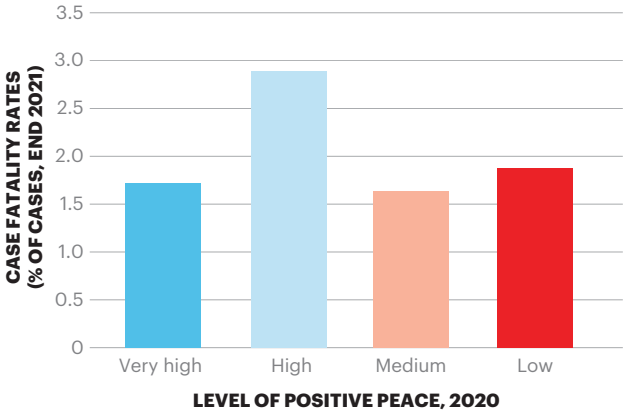


Source: IEP, John Hopkins University, Our World in Data

FIGURE 2.9

Reported case fatality rate due to COVID-19

Fatality rates among reported cases are similar across different levels of societal resilience.



Source: IEP, Johns Hopkins University

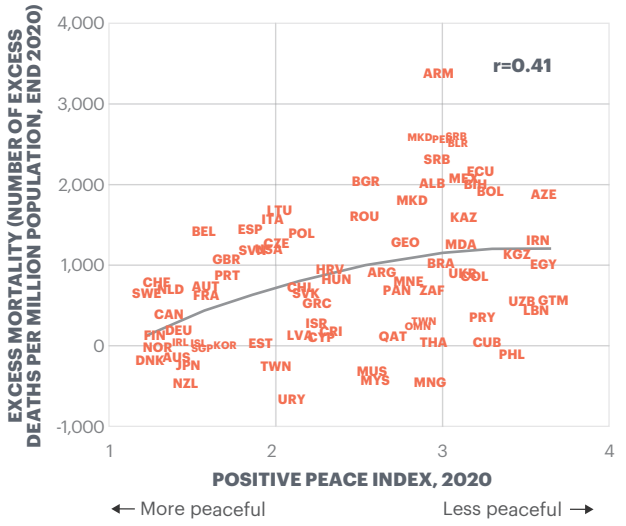
It can be assumed that these excess deaths were largely attributable to the pandemic, as it was the only factor in global health patterns that was substantially different in 2020 from 2019. Therefore, it seems obvious that the pandemic was more severe in low-resilience countries than official numbers indicate. The low case and fatality numbers reported in developing countries mainly resulted from underreporting.

This highlights a key benefit from higher degrees of societal resilience. Countries that perform well in Positive Peace have superior administrative resources to gauge the impact of the pandemic on their populations. Substantial development in the *Well-Functioning Government* and *High Levels of Human Capital* Pillars allows these nations to detect and monitor case numbers more timely and precisely. This information is critical to formulating response plans to the pandemic. Additionally, they have more resources to deploy and a more robust health system with which to assist the sick.

FIGURE 2.10

Cumulative excess mortality

Countries with lower levels of Positive Peace recorded greater excess death numbers.



Source: IEP, Human Mortality Database, World Mortality Dataset, Our World in Data

Analysts may gauge the extent of underreporting by replicating the pandemic patterns seen in high Positive Peace countries throughout the entire world. Countries in the very high category of Positive Peace recorded total COVID-19 cases of approximately 8.9 per cent of their population by end 2021. Of the COVID-19 cases recorded in these countries, around 1.7 per cent resulted in the death of the patient.

Hypothetically, if these proportions could be applied also for high, medium and low Positive Peace countries, the global number of COVID-19 cases would reach 694.8 million and fatalities would climb to 11.8 million persons by end 2021. This is two and a half times the officially reported numbers (Table 2.1). This result, estimated through a Positive Peace methodology, is broadly consistent with other conclusions published in medical literature.[3,4,5]

TABLE 2.1

COVID-19 reported and predicted global numbers, end 2021

A extrapolation suggests that the actual number of cases could be 2½ times greater than reported. And the actual number of deaths, twice that in official reports.

	Reported	Prediction using rates from high Positive Peace countries
Total Cases	291 million	694.8 million
Total Deaths	5.4 million	11.8 million

Source: IEP, John Hopkins University

If, as it seems to be the case, the fatality rates in less resilient countries are greater than 1.7 per cent, the predicted 11.8 million deaths could be an underestimation.

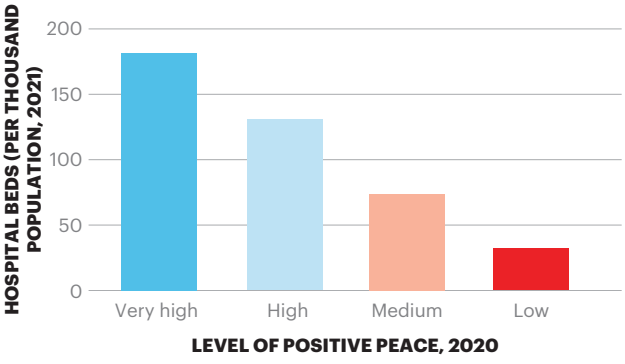
Societal Resilience in the Pandemic

Societal resilience creates the environment for governments and private organisations to protect national populations from the impact of the pandemic. This can be seen as countries in the very high Positive Peace category are capable of supplying their populations with more medical resources to combat the pandemic (Figure 2.11 and Figure 2.12).

FIGURE 2.11

Hospital beds by level of Positive Peace

Higher resilience countries have superior medical resources for the management of the pandemic.

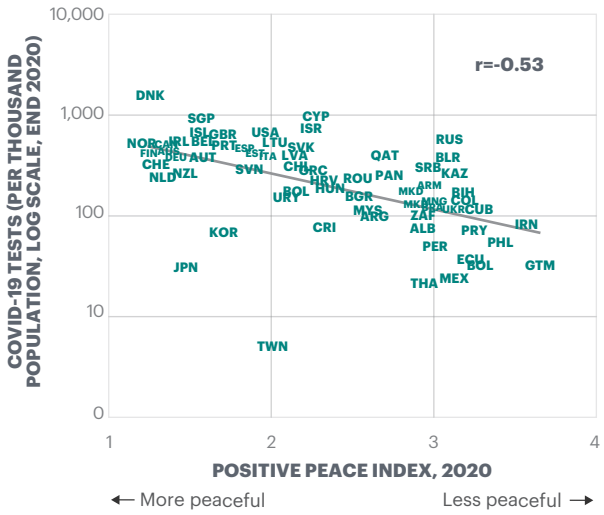


Source: IEP, World Bank

FIGURE 2.12

COVID-19 Tests

Higher resilience countries have provided tests in orders of magnitude superior to lower resilience nations.



Source: IEP, Johns Hopkins University, Our World in Data

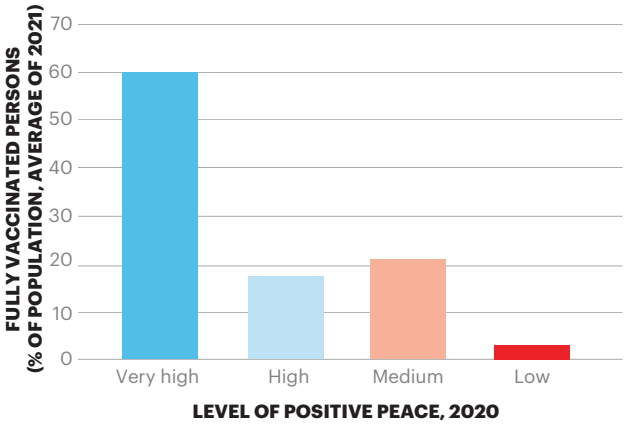
Countries with very high levels of Positive Peace had been able to vaccinate around 60 per cent of their populations in 2021 (Figure 2.13). The vaccination rates in very high Positive Peace countries sharply contrasts with the 20 per cent and less in other countries.

To a large extent, the difference in immunisation rates is due to most laboratories where the vaccines were produced being located in developed countries, as well as rich countries being able to afford the vaccines. Most developed countries gave priority to their domestic populations before allowing vaccines to be exported, which placed less developed nations at a disadvantage.

FIGURE 2.13

Fully COVID-19 vaccinated persons

Sixty per cent of the population in very-high Positive Peace countries had been vaccinated in 2021.



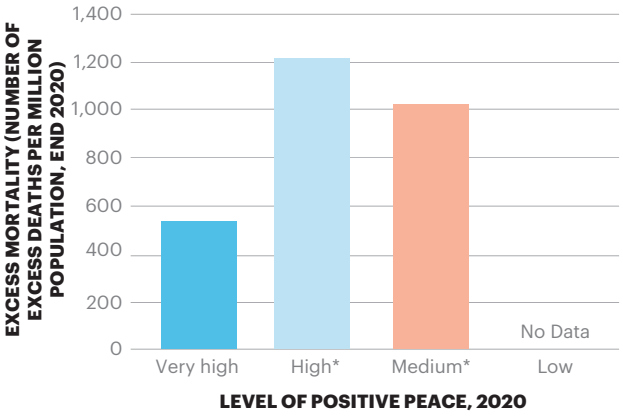
Source: IEP, Johns Hopkins University

The outcome of higher levels of resilience can be seen in the form of substantially lower cumulative excess mortality rates among developed nations (Figure 2.14, which summarises the data displayed in Figure 2.10 above). The excess mortality in high and medium Positive Peace countries, where data was available, was at least double that of very high Positive Peace countries by the end of the first year of the pandemic.

FIGURE 2.14

Cumulative excess mortality

Countries with lower levels of Positive Peace recorded greater excess death numbers.



Source: IEP, Human Mortality Database, World Mortality Dataset
Notes: * Partial data only. Samples: Very High Positive Peace: 40 countries; High Positive Peace: 26 Countries; Medium Positive Peace: 13 Countries

> Countries with higher levels of Positive Peace recorded lower excess mortality rates in 2020.

PREDICTING FUTURE CHANGES IN PEACE

One important benefit of the Positive Peace framework is the probabilistic prediction of groups of countries more likely to experience substantial falls in peace. This section describes the Positive Peace deficit model, a framework based on systems thinking that examines countries according to their relative levels of peace and Positive Peace.

Of the 39 countries with large Positive Peace deficits in 2009, 79 per cent recorded deteriorations in the GPI over the subsequent decade. This model now has had seven iterations since the publication of the 2015 Positive Peace Report, with the accuracy of the model increasing over that period.

The four countries with the largest deficits in 2020 are Equatorial Guinea, Laos, Sierra Leone and Liberia. These are the nations most likely to have falls in peace in the future.

The Positive Peace Deficit as a Predictor of Violence

As a measure of societal resilience, Positive Peace assesses nations' capacity to obtain and sustain high levels of peace, as measured by the GPI. In turn, high levels of peace create a socio-economic dividend that fosters development and promotes resilience. This systemic virtuous cycle is the main mechanism through which societies thrive.

Most nations operating with high levels of peacefulness will also enjoy high levels of Positive Peace. Thus, countries that rank well in the GPI tend to rank well in the PPI also. Those with low levels of peace according to the GPI on average, will also display low levels of societal resilience as measured by Positive Peace. For this reason, when nations are assessed in terms of the GPI rankings versus their PPI rankings at a given point in time, most countries will feature near the diagonal line (Figure 2.15). However, this is not always the case. Some nations may operate with a high level of peace but without the socio-economic development needed to sustain it. This manifests as a PPI rank that is materially inferior to the corresponding GPI rank. These nations are said to be in a Positive Peace deficit.

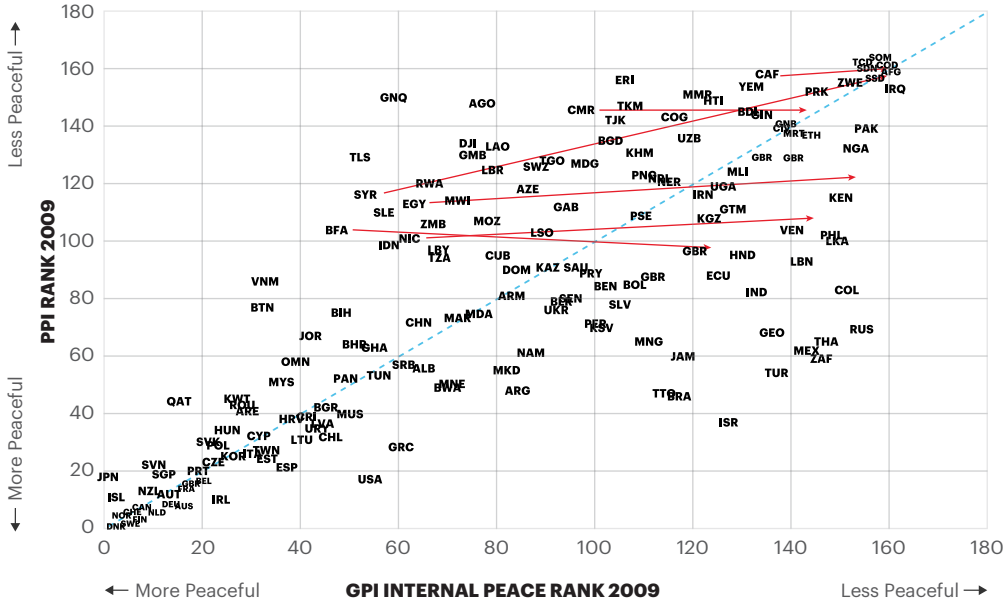
There are many reasons for a society to be in deficit. Some cultures are naturally pacifist and conciliatory and may develop peaceful societies even in the absence of high levels of economic prosperity, education and technology. Nations such as Bhutan and Mauritius are possible examples for this category. However, this type of deficit is rare.

In most cases, deficits are the result of a state of peace being artificially maintained by a non-democratic regime. History shows that such situations are unstable, as peace obtained through forceful means tends be volatile. Additionally, many of these countries have weak institutions and are susceptible to outside interference, such as in the cases of Libya, Syria and Yemen. Suppression by force without socio-economic development simply smothers the underlying grievances, without truly resolving them. Most of the countries with the largest Positive Peace deficits in 2009 deteriorated into higher levels of violence by 2020.

FIGURE 2.15

Positive Peace deficits and selectd changes in GPI, 2009–2020

Some of the countries with Positive Peace deficits in 2009 recorded large deteriorations in peace subsequently. The red arrows point towards the location of selected countries by 2020. Countries above the diagonal show a deficit in Positive Peace.



Source: IEP

The Positive Peace Deficit Model

Expanding on the previous section, countries can be grouped into three categories below.

- Positive Peace Deficit: when countries rank at least 20 places higher on the GPI than the PPI.
- Positive Peace Surplus: when countries rank at least 20 places lower on the GPI than the PPI.
- Stable: countries have a rank difference between the GPI and PPI of less than 20 places.

Of the 39 countries with Positive Peace deficits in 2009, 31 nations – or 79 per cent – had recorded deteriorations in the GPI Internal Peace Score by 2020 (Table 2.2). Many of the most extreme examples of collapse into violence over the past decade – countries such as Syria, Libya, Yemen, Nicaragua, Egypt, Burkina Faso and others – were deficit countries one decade ago.

For countries with a surplus in 2009, 32 per cent had deteriorated in peace in the subsequent ten years (Figure 2.16). Thus, 68 per cent of the countries with a Positive Peace surplus in 2009, recorded improvements in their GPI scores by 2020.

TABLE 2.2

Positive Peace deficits in 2009 and changes in GPI scores from 2009 to 2020

Of the 39 nations in deficit in 2009, 31, or 79 per cent, recorded deteriorations in peace in the subsequent decade.

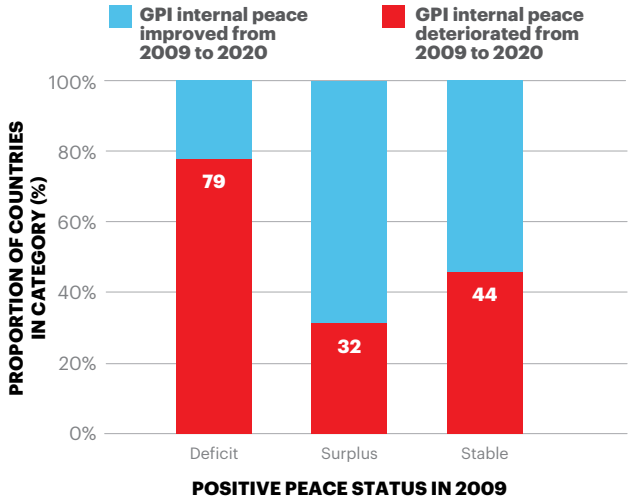
Country	PPI Rank 2009 (A)	GPI Internal Peace Rank 2009 (B)	Positive Peace Deficit 2009 (A) – (B)	Change in GPI Internal Peace 2009-2020(%)	Change in GPI Internal Peace 2009-2019
Equatorial Guinea	150	59	91	5.1	Deterioration
Timor-Leste	129	52	77	6.1	Deterioration
Angola	148	77	71	6.4	Deterioration
Syria	116	53	63	88.6	Deterioration
Djibouti	134	74	60	12.7	Deterioration
Burkina Faso	104	47	57	37.0	Deterioration
The Gambia	130	75	55	-2.8	Improvement
Rwanda	120	66	54	5.1	Deterioration
Laos	133	80	53	-8.9	Improvement
Sierra Leone	110	57	53	3.2	Deterioration
Vietnam	86	33	53	10.0	Deterioration
Egypt	113	63	50	28.4	Deterioration
Eritrea	156	106	50	0.3	Deterioration
Cameroon	146	97	49	32.1	Deterioration
Liberia	125	79	46	1.1	Deterioration
Bhutan	77	32	45	-11.2	Improvement
Malawi	114	72	42	6.8	Deterioration
Indonesia	99	58	41	0.1	Deterioration
Turkmenistan	147	107	40	-4.1	Improvement
Nicaragua	101	62	39	52.5	Deterioration
Zambia	106	67	39	6.2	Deterioration
Eswatini	126	88	38	2.8	Deterioration
Tajikistan	142	104	38	0.1	Deterioration
Togo	128	91	37	4.8	Deterioration
Azerbaijan	118	86	32	1.4	Deterioration
Bangladesh	135	103	32	-1.5	Improvement
Myanmar	151	121	30	6.2	Deterioration
Libya	97	68	29	73.1	Deterioration
Madagascar	127	98	29	-2.7	Improvement
Mozambique	107	78	29	16.0	Deterioration
Qatar	44	15	29	4.0	Deterioration
Bosnia and Herzegovina	75	48	27	9.6	Deterioration
Republic of the Congo	143	116	27	4.5	Deterioration
Tanzania	94	68	26	1.3	Deterioration
Haiti	149	124	25	-2.6	Improvement
Jordan	67	42	25	8.4	Deterioration
Central African Republic	158	135	23	28.5	Deterioration
Cambodia	131	109	22	-10.8	Improvement
Yemen	154	132	22	34.7	Deterioration

Source: IEP

FIGURE 2.16

Positive Peace deficits and deteriorations in Peace, 2009–2020

Seventy-nine per cent of countries in Positive Peace deficit in 2009 deteriorated into further violence in the subsequent decade.



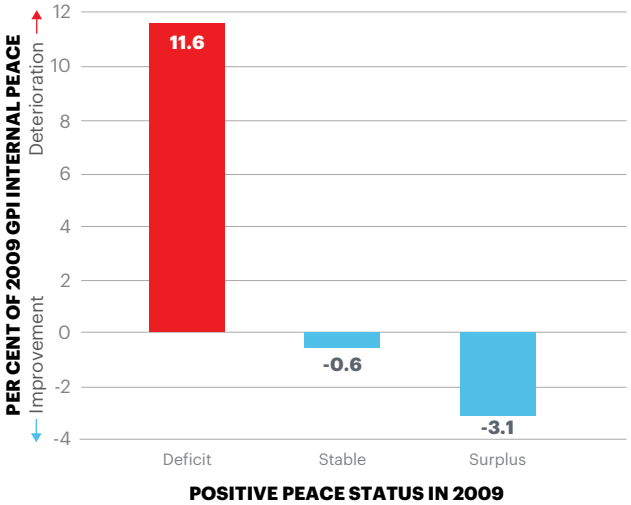
Source: IEP

On average, the countries that held a Positive Peace deficit in 2009 deteriorated by 11.6 per cent in their GPI scores from 2009 to 2020 (Figure 2.17). This compares with a small improvement recorded by stable countries and a substantial 3.1 per cent improvement recorded by surplus countries in the same period.

FIGURE 2.17

Changes in GPI from 2009 to 2020 by Positive Peace status in 2009

Countries in deficit in 2009 recorded an average deterioration in their GPI scores of 11.6 per cent from 2009 to 2020. This compares with improvements for the other categories.



Source: IEP

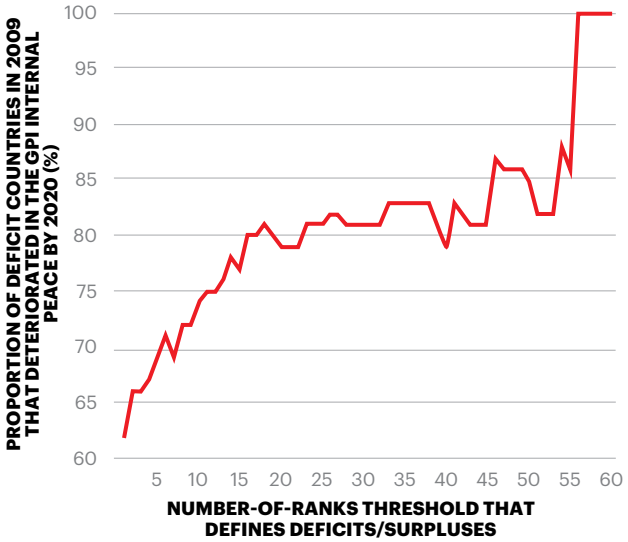
Taken together, the proportion of deteriorations among deficit countries and the size of such deteriorations show that the Positive Peace deficit model is an accurate probabilistic predictor of future deteriorations in peace. The fact that surplus countries improved in peacefulness further underscores the predictive value of this framework.

These results were obtained with a materiality threshold of 20 rank places underpinning the definitions of deficits and surpluses. If this threshold is increased to a 50-place difference between the GPI and PPI, the model has an 86 per cent predictive rate (Figure 2.18). However, the number of nations deemed to be in deficit or surplus for analysis would decrease.

FIGURE 2.18

Positive Peace deficits thresholds

If the materiality threshold rises to 50 rank places, the accuracy of the model rises to 86 per cent.



Source: IEP

> Countries that held a Positive Peace surplus in 2009 experienced less violence on average in the subsequent decade.

The Positive Peace deficit model can be seen as one tool, among others, that stakeholders and supranational agencies could use to anticipate and prepare for possible increases in violence in the future. Table 2.3 displays the 34 countries in Positive Peace deficit in 2020. It is possible that most of these countries could experience higher levels of violence over the next decade or so.

Of particular concern, Sierra Leone and the Equatorial Guinea combine large Positive Peace deficits with a long-deteriorating trend in the GPI since at least 2016.

Transition Zones and Attractor Basins

This section expands the analysis of the Positive Peace deficit model using two concepts of the dynamics of societal systems: transition zones and attractor basins.

As discussed above, the nations with a Positive Peace deficit in 2009 tended to deteriorate in peace over the subsequent years. These nations were situated on the top-left panel of the GPI – PPI diagram, as shown in Figure 2.15 above. The areas in the diagram from which nations tended to deteriorate in peace –

TABLE 2.3

Countries with a Positive Peace deficit in 2020

Countries in this list are more likely to experience increasing levels of violence over the next decade.

Country	PPI Rank 2020 (A)	GPI Internal Peace Rank 2020 (B)	Positive Peace Deficit 2020 (A) – (B)
Equatorial Guinea	150	63	87
Laos	124	52	72
Sierra Leone	110	56	54
Liberia	129	76	53
Angola	136	86	50
Timor-Leste	111	61	50
Nepal	126	78	48
Turkmenistan	140	92	48
The Gambia	104	57	47
Eritrea	156	111	45
Rwanda	115	70	45
Bhutan	65	22	43
Cambodia	116	73	43
Bangladesh	134	94	40
Tajikistan	143	104	39
Tanzania	102	64	38
Uganda	138	100	38
Zambia	112	74	38
Indonesia	87	50	37
Madagascar	123	87	36
Guinea	141	106	35
Djibouti	132	98	34
Malawi	117	83	34
Eswatini	122	91	31
Uzbekistan	100	69	31
Guinea-Bissau	142	112	30
Jordan	83	53	30
Qatar	49	19	30
Haiti	148	119	29
Azerbaijan	112	84	28
Vietnam	70	47	23
Croatia	38	17	21
Senegal	78	57	21
Chad	159	139	20

Source: IEP

that is, to fall in the GPI rankings – were marked in red, forming a new visualisation of the GPI-PPI diagram shown in Figure 2.19.

The areas in the diagram from which nations tended to improve in peace – that is, obtain higher GPI rankings over time – were painted in blue. Yellow shaded areas are those where the was little to no movement in the GPI rankings from 2009 to 2020.

The top-right quadrant is shaded almost entirely in yellow. This shows a situation where nations have both low levels of peace and low levels of Positive Peace. This is where conflict and economic underdevelopment reinforce one another in a vicious cycle of long lasting violence. This condition is termed as 'Conflict Trap.' It is very hard for countries to move out of this situation.

The bottom-left quadrant is also one of little movement. Nations with high levels of peace and high levels of socio-economic development stay in this area, as their levels of societal resilience prevent countries from collapsing into violence. In this area, Positive Peace sustains peace. This area is called 'Sustainable Peace.' In the 15 years that the GPI has been produced, there has not been a substantial fall in peace for any country among the top ranks of the index.

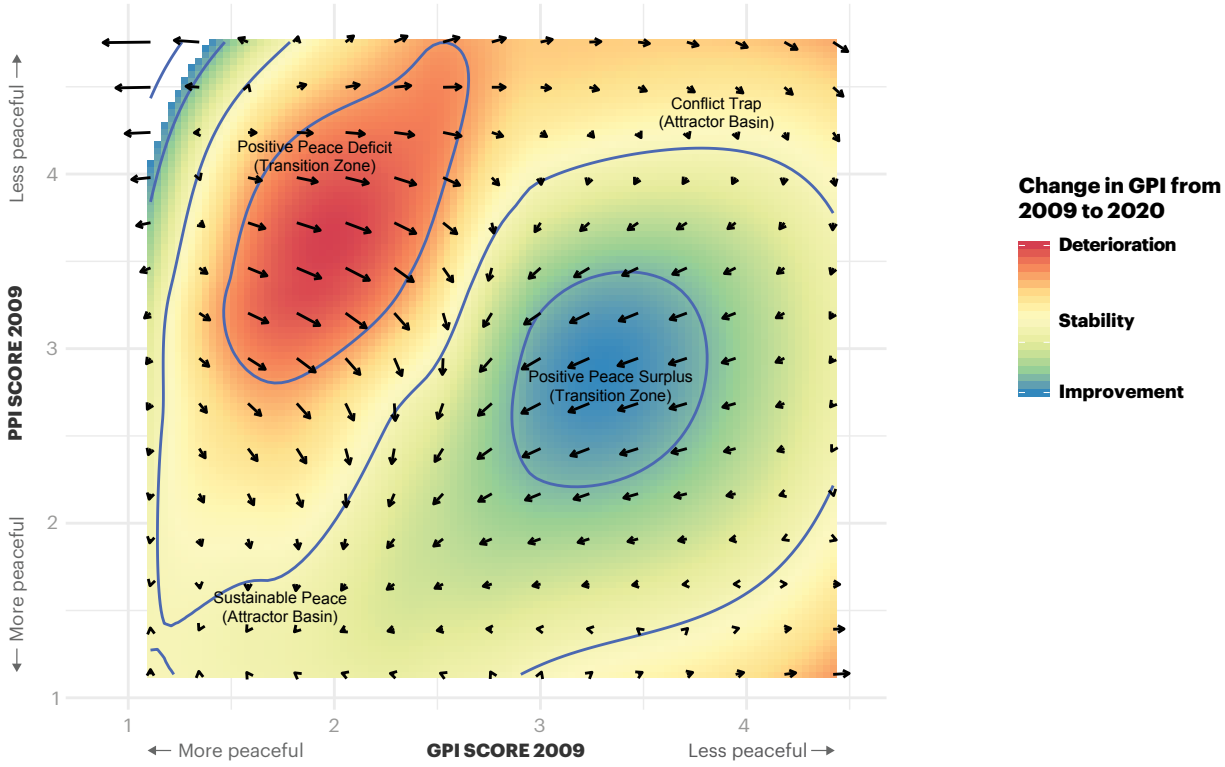
Both the Sustainable Peace and the Conflict Trap areas are attractor basins – a concept in systems dynamics that refers to particular homeostasis states to which societal systems are attracted. These are areas where entities tend to move towards or away from, however, once an entity is in an attractor basin it is very hard to escape. More details on attractor basins can be found in Section 3 of this report.

The areas of Positive Peace deficit and surplus are transition zones. These are states that can cause societal systems to change at a faster pace.

FIGURE 2.19

IEP systems dynamics of GPI and PPI trajectories, 2009–2020

Based on empirical evidence, Positive and negative peace change more rapidly depending on countries' starting levels in the PPI and the GPI.



Source: IEP

WELLBEING, LIFE SATISFACTION AND CULTURE

Nations with higher levels of societal resilience are also those with greater degrees of social wellbeing. A resilient society is capable of shielding its population from social, economic and environmental shocks. It is also more effective in implementing post-shock recoveries. This means that citizens are not overly weighed down by concerns about survival, unemployment or excessive poverty. These residents have a wider choice of socio-economic activities through which to seek personal fulfilment.

As a gauge for societal resilience, Positive Peace is highly correlated with measures of wellbeing and life satisfaction. Indicators of wellbeing from the Social Progress Imperative (SPI) display correlation coefficients against the PPI overall score of around 0.90 (Figure 2.20 and Figure 2.21).

However, Positive Peace encompasses more than social wellbeing because it incorporates all aspects of societal resilience in the form of the different Domains and Pillars.

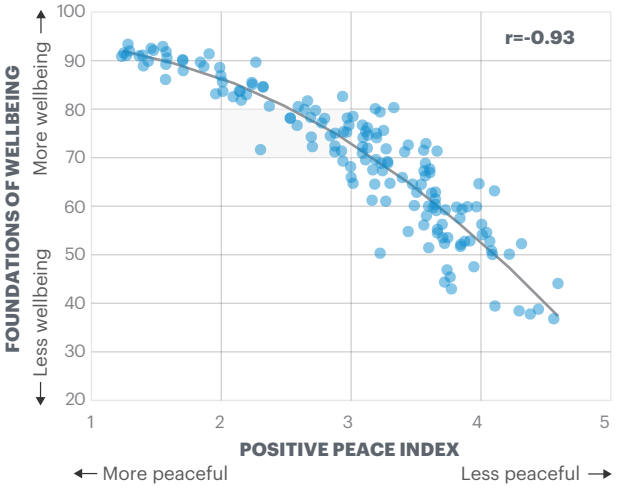
As discussed in Section 1, the global scores for the *Attitudes*, *Institutions* and *Structures* Domains developed in different ways over the past decade. The *Structures* Domain recorded a strong improvement on the back of technological and economic improvement since 2009. The *Institutions* Domain was little changed, as the formal and informal organisations that oversee societies demonstrated only small average gains in effectiveness and transparency. In contrast, *Attitudes* deteriorated in the same period, reflecting greater polarisation and intolerance in politics and society at large.

The SPI indicator *foundations of wellbeing* recorded an 8.2 per cent improvement from 2009 to 2020, aligning itself with the

FIGURE 2.20

Foundations of wellbeing and Positive Peace, 2020

SPI's Foundations of Wellbeing indicator is highly correlated with the Positive Peace Index.

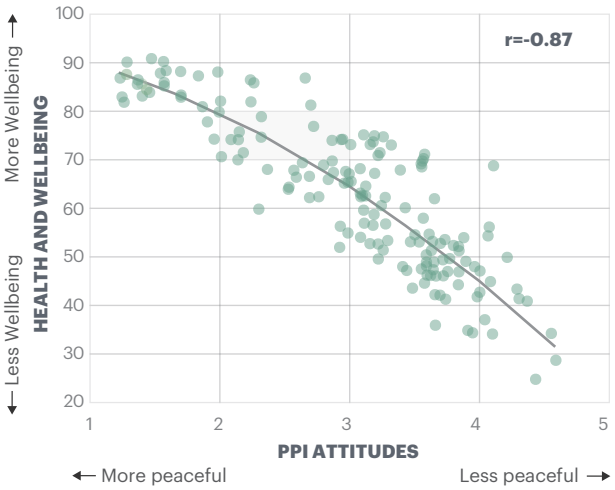


Source: IEP, Social Progress Imperative

FIGURE 2.21

Health and wellbeing and Positive Peace, 2020

Countries with higher levels of Positive Peace report greater satisfaction with living standards.



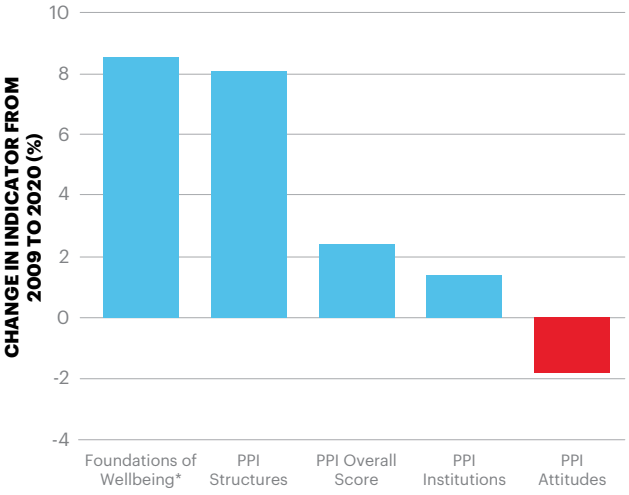
Source: IEP, Social Progress Imperative

Structures Domain of Positive Peace (Figure 2.22). This suggests this indicator has a strong conceptual and empirical link with the economic and technological underpinnings of wellbeing. However, the deterioration in the *Attitudes* Domain of Positive Peace is picking up an additional signal relating to the increased polarisation of socio political views and greater intolerance of dissenting opinions, as will be discussed below.

FIGURE 2.22

Foundations of wellbeing and the Positive Peace domains, 2009–2020

Measures of wellbeing are mostly picking up economic and technological progress. A closer look at societal *Attitudes* shows a deterioration over the past decade.



Source: IEP, Social Progress Imperative
Notes: * Change from 2011 to 2020

As discussed in Section 1 of this report, *Attitudes* was the only Domain of Positive Peace to deteriorate over the past decade. This deterioration means that political and social views have become more polarised, people have become less tolerant of opinions different from their own and people have become less trusting of others and of the institutions that manage the social system. This deterioration took place despite increasing economic prosperity, improvements in health treatments and outcomes, and the development and widespread dissemination of new technologies.

This deterioration is consistent with an increase in the proportion of persons that have negative emotions. The Gallup Negative Emotions Index captures the proportion of respondents reporting to have felt negative emotions – anger, sadness, anxiety, stress and pain – in the day before taking the survey. This proportion has increased from 24 per cent of respondents in 2009 to 32 per cent of respondents in 2020 (Figure 2.23). This deterioration corroborates the findings concerning the *Attitudes* Domain of Positive Peace.

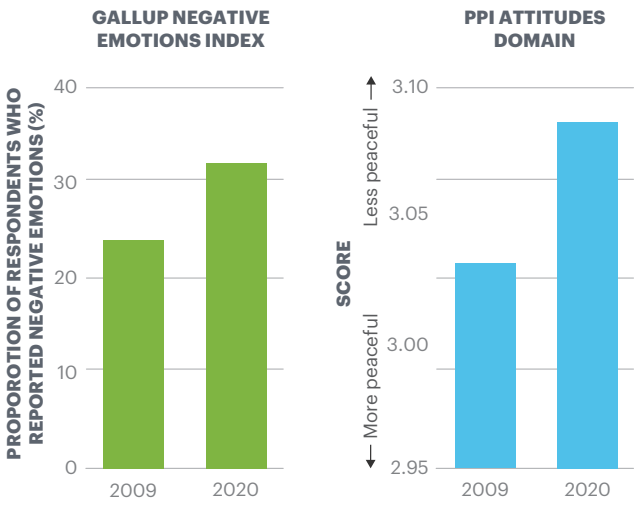
Life Satisfaction

Measures of life satisfaction also see more satisfactory outcomes among high Positive Peace countries. Among OECD countries, life satisfaction correlates with the PPI with a non-linear coefficient of 0.71 in absolute terms (Figure 2.24). Residents in OECD countries reported a level of satisfaction with life that is broadly proportional with these countries' levels of Positive Peace. One exception appears to be Japan, which has a comparatively low level of life satisfaction for the country's high level of societal resilience (Box 2.1). On the other hand, Mexico displays a level of fulfilment and contentment that is disproportional to the country's standing in the PPI (Box 2.2).

FIGURE 2.23

Global negative emotions and social attitudes, 2009–2020

Both the Gallup Negative Emotions Index and the *Attitudes* Domain of Positive Peace demonstrate a worsening of social attitudes and behaviors over the past decade.

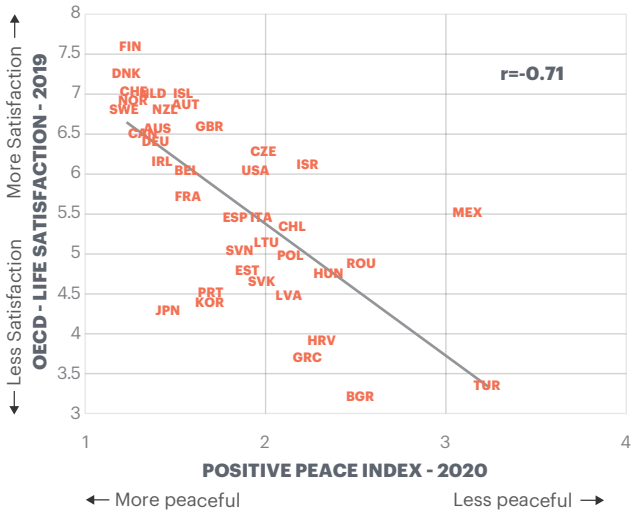


Source: IEP, Gallup

FIGURE 2.24

OECD life satisfaction and Positive Peace

Countries with superior outcomes in the OECD Life Satisfaction framework tend to be those with higher Positive Peace.



Source: IEP, Sustainable Governance indicators

BOX 2.1

Cultural Influences on Attitudes in Japan

For cultural and historical reasons, the Japanese tend to report lower levels of satisfaction with life than other nationalities of comparable level of development. In Figure 2.24, Japan has a PPI score of 1.47 in 2020, broadly aligned with Ireland, France, Belgium and Germany. But the country has a level of satisfaction with life that is close to the bottom of the OECD range.

Loneliness and isolation are widespread among the population, especially for men. Work and schooling pressures weigh heavily on the population and are partly to blame for the country's relatively high suicide rates. The Japanese culture imposes a heavy work and schooling burden on citizens, to the point that death by exhaustion or suicide linked to overwork has its own cultural designation: *karoshi*. The World Health Organisation stated that there were 12.2 suicides per 100,000 people in Japan in 2019. This is a high rate in comparison to other similarly developed countries, although it is still lower than South Korea's 21.2 suicides per 100,000 people.

There is also a relatively common practice whereby some Japanese recluses withdraw from society and do not leave their homes sometimes for many years. This practice is known as *hikikomori*, and a government survey estimated a total of 542,000 people – or 1.6 per cent of the population – were living in these conditions. Academics and experts believe the actual figures are much higher than official statistics show.

Some sociologists attribute *hikikomori* to the high societal expectations for individuals to excel at work and school.

BOX 2.2

Cultural Influences on Attitudes in Mexico

Mexico presents a mirror-image picture to that of Japan's. The country's PPI score in 2020 was 3.12, among the lowest levels of societal resilience in the OECD. Yet, Mexicans reported a degree of life satisfaction that is comparable to France, Spain and Italy: towards the middle of the OECD range.

A survey by the Pew Research Centre found Mexicans to be the happiest people on the globe among 43 nations assessed in 2014. Mexicans reported a life satisfaction of 79 per cent which was highest in the survey. The Economist stated this result showed a "fraying link between happiness and income." The same report showed that advanced countries like Germany, France, Japan, and the US had their median life satisfaction levels to be 53 per cent. Israel was the only advanced country to report life satisfaction close to Mexico's, at 75 per cent.

Some features of the Mexican culture may help explain the comparatively higher level of contentment among the country's population. Firstly, Mexicans tend to rank religious beliefs highly among their personal and societal values. Religious people tend to enjoy a greater level of fulfilment and contentment – or resignation when facing difficulties – than the non-religious. Secondly, Mexicans also value highly family interactions, including with extended family. Interaction with aunts, uncles and cousins create a strong support network upon which individuals can rely in times of difficulty. The effects of lack of trust in governments and official support institutions is partly compensated for by access to reliable and tightly knit personal support networks including family members and friends.

The OECD results are consistent with the Gallup Institute's survey outcomes. Respondents stated to be more satisfied with their own standards of living among countries displaying greater levels of societal resilience (Figure 2.25).

Satisfaction by Gender

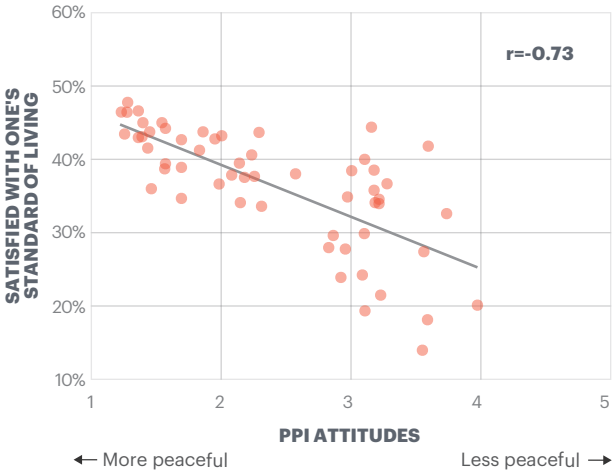
Responses to Gallup's satisfaction with one's own standard of living survey find differing levels of satisfaction by gender depending on cultural backgrounds. More countries had men reporting a lower level of satisfaction than women where the difference between the genders was more than two percentage points: 29 countries compared to ten for women.

Both genders find greater degrees of satisfaction in countries with higher levels of Positive Peace (Figure 2.26 and Figure 2.27). However, cultural peculiarities also influence the responses. For instance, in countries such as the United Arab Emirates (ARE), Bahrain (BHR) and Saudi Arabia (SAU) males are far more likely to be satisfied with their standard of living than females. However, men are less satisfied than women in many western democracies.

FIGURE 2.25

Satisfaction with standard of living and Positive Peace, 2020

Countries with higher levels of Positive Peace report greater satisfaction with living standards.

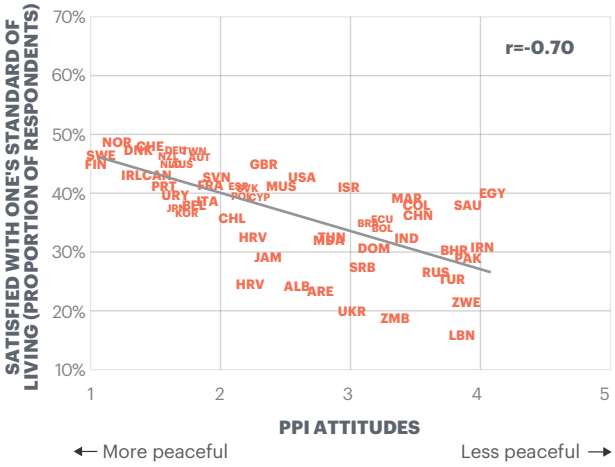


Source: IEP, Gallup

FIGURE 2.26

Satisfaction with standard of living, females, 2020

Women are more satisfied with their own standards of living in countries where Positive Peace levels are high.



Source: IEP, Gallup

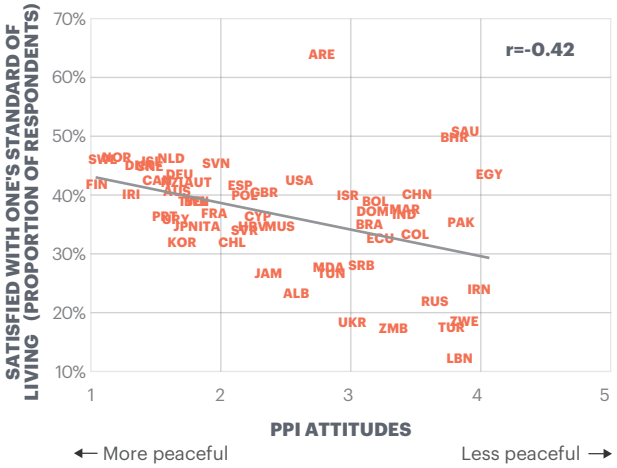
The levels of satisfaction with own standard of living between men and women showed some distinctly different patterns. For the following analysis, only differences of two percentage points or more between the proportions for men and women are considered. A total of 39 countries, or 70 per cent of the 57 countries polled had a discrepancy between the genders equal to or greater than this threshold.

Of these 39 countries, ten nations, or 17.9 per cent of the countries polled, reported males being more satisfied with their own living standards than women (Table 2.4). Twenty-nine nations, or 51.8 per cent, reported females being more satisfied with their own living standards (Table 2.5).

FIGURE 2.27

Satisfaction with standard of living, males, 2020

Men in the United Arab Emirates (ARE), Saudi Arabia (SAU), Bahrain (BHR) and Egypt (EGY) report higher levels of satisfaction with their living standards than in countries with similar levels of Positive Peace.



Source: IEP, Gallup

For men the highest differences tended to be in authoritarian states, whereas the highest differences for women tended to be in more democratic regimes, especially countries with full democracies.

The largest difference between genders was recorded in the United Arab Emirates, where 23.4 per cent of females were satisfied with their own standard of living compared to 63.9 per cent for males. This is a 40.5 percentage point difference in favour of men.

TABLE 2.4

Countries where males are more satisfied with their own standards of living than females by more than two percentage points, 2020

Most countries where males are more satisfied with their own standards of living than females are not full democracies.

Country	Proportion of Respondents Satisfied with Own Standard of Living			
	Males (%)	Females (%)	Average (%)	Difference between genders (percentage points)
United Arab Emirates	63.9	23.4	43.6	40.5
Bahrain	49.8	30.2	40.0	19.7
Saudi Arabia	50.8	37.9	44.4	12.9
Dominican Republic	37.4	30.6	34.0	6.8
Pakistan	35.4	29.7	32.6	5.7
India	36.9	32.3	34.6	4.6
Bolivia	39.0	34.5	36.7	4.5
China	40.5	36.4	38.5	4.1
Egypt	43.6	39.9	41.7	3.7
Slovenia	45.5	42.0	43.8	3.4

Source: Gallup

TABLE 2.5

Countries where females are more satisfied with their own standards of living than males by more than two percentage points, 2020

In a large proportion of Western European nations and full democracies, females are more satisfied with their own standards of living than males.

Country	Proportion of Respondents Satisfied with Own Standard of Living			
	Males (%)	Females (%)	Average (%)	Difference between genders (percentage points)
Taiwan	39.0	47.2	43.1	8.2
Turkey	17.9	25.3	21.6	7.4
Iran	24.1	30.9	27.5	6.7
Slovakia	34.3	40.7	37.5	6.5
Mauritius	34.8	41.2	38.0	6.4
Tunisia	27.2	32.2	29.7	5.1
South Korea	32.2	37.1	34.7	4.8
Australia	40.7	45.4	43.1	4.7
France	37.1	41.7	39.4	4.6
Colombia	33.5	38.0	35.8	4.5
Portugal	36.7	41.2	39.0	4.5
Russia	22.1	26.5	24.3	4.4
Moldova	27.8	32.0	29.9	4.2
United Kingdom	40.6	44.8	42.7	4.2
Austria	42.4	46.3	44.3	3.9
Italy	34.9	38.6	36.8	3.6
Uruguay	36.1	39.6	37.8	3.5
Chile	32.4	35.9	34.2	3.5
Lebanon	12.5	15.8	14.1	3.3
Finland	42.0	45.0	43.5	3.1
Switzerland	45.0	47.9	46.4	2.9
New Zealand	42.3	45.2	43.8	2.9
Cyprus	36.4	39.2	37.8	2.8
Ireland	40.3	42.9	41.6	2.6
Germany	43.7	46.3	45.0	2.6
Zimbabwe	18.9	21.4	20.2	2.5
Ecuador	32.8	35.2	34.0	2.5
Japan	34.9	37.2	36.1	2.3
Denmark	45.4	47.5	46.5	2.1

Source: Gallup

Satisfaction by Age

The relationship between satisfaction with one's own standard of living and the PPI Overall Score changes substantially depending on the age group of the respondent (Figure 2.28). Very young respondents – those between 15 years of age and 20 years of age – report an inverse relationship between satisfaction and Positive Peace. In this demographic, respondents in countries with high degrees of societal resilience declared to be less satisfied with their own living standards than those in lower Positive Peace country. Only around 21 per cent of young people in high and very high Positive Peace nations claimed to be satisfied with their living standards (Figure 2.28, Panel A). This compares with an average of around 24 per cent in lower Positive Peace countries. Interestingly, this also compares with an average of 25 per cent for respondents between 30 years of age and 49 years of age (Figure 2.28, Panel B), and an average of 28 per cent for respondents above 50 years of age (Figure 2.28, Panel C).

This low satisfaction rate among young people in developed nations could be related to excessively high expectations for their future lives, health problems such as mental health issues or obesity, concerns about global inequality, environmental threats or other matters. This counter-intuitive result that wealthier youngsters appear more dissatisfied than less wealthy ones has been confirmed multiple times, including by UNICEF, The Children's Society and others.[7,8,9]

For respondents between 30 years of age and 49 years of age, the relationship between satisfaction with one's own standard of living and Positive Peace becomes marginally statistically significant. However, for those of 50 years of age and older, the relationship between satisfaction and Positive Peace is highly significant with greater satisfaction levels being found in higher resilience nations.

Satisfaction by Education Level

Another peculiar result comes from assessing satisfaction by maximum level of education achieved. For respondents with elementary education, there is no relationship between satisfaction with one's own living standards and the national level of Positive Peace (Figure 2.29, Panel A). In fact, there is a weak 'inverted' relationship whereby nations with higher resilience tend to see more dissatisfaction among those with an elementary level of education.

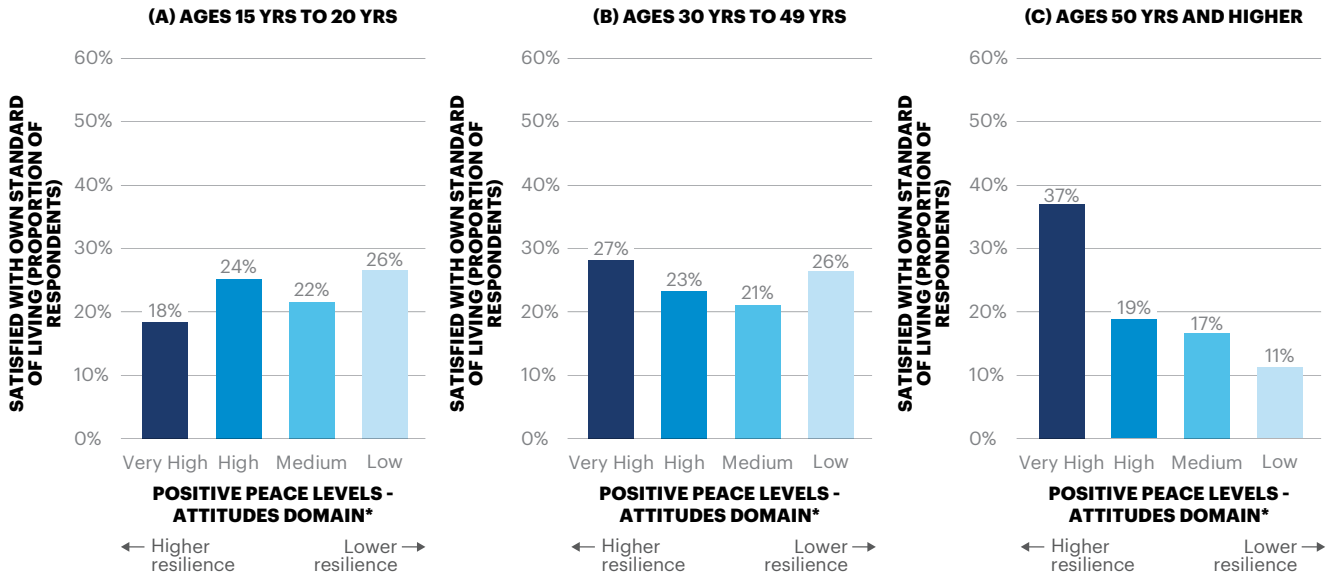
Among respondents with a secondary education the relationship between satisfaction and Positive Peace is particularly strong (Figure 2.29, Panel B). Interestingly, those more highly educated have lower overall levels of satisfaction than those with only secondary education (Figure 2.29, Panel C).

> Among those with higher education, satisfaction with one's own standard of living is greater in countries with higher levels of Positive Peace.

FIGURE 2.28

Satisfaction with standard of living, by age group, 2020

For young respondents, the relationship between satisfaction and Positive Peace is weak or even inverted. Older respondents see a strong relationship whereby very high levels of Positive Peace in the form of the Attitudes Domain are associated with greater satisfaction.

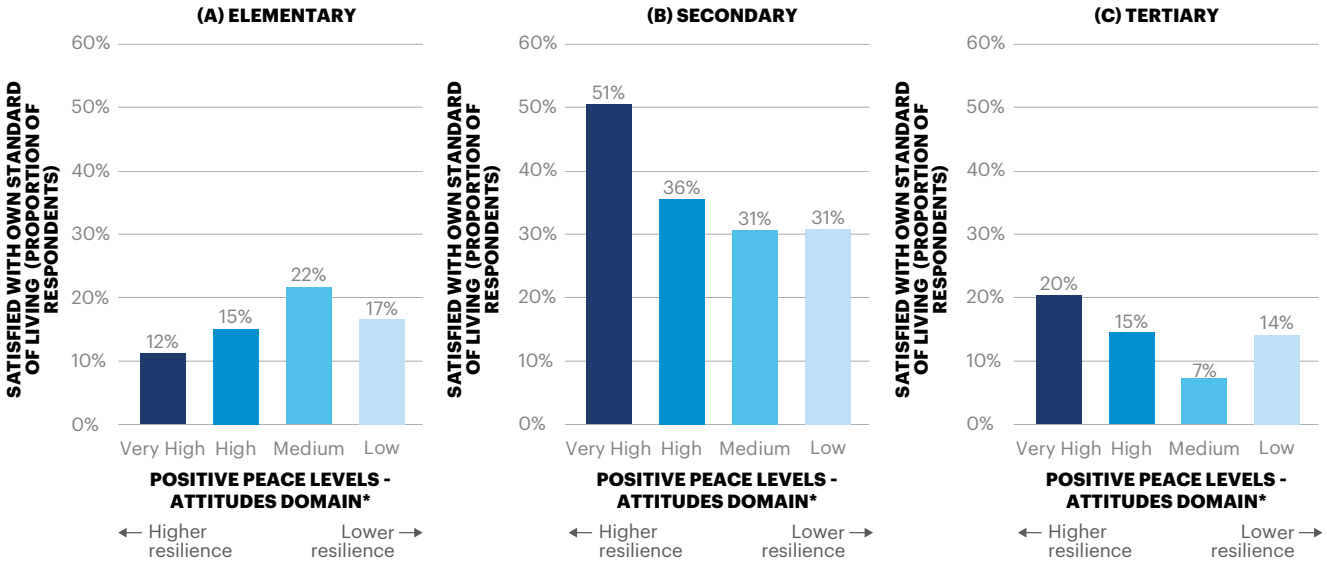


Source: IEP, Gallup
Notes: * Number of countries: Very High: 30, High: 14, Medium: 7, Low: 7

FIGURE 2.29

Satisfaction with standard of living, by education level, 2020

Those with secondary education reported higher levels of satisfaction with their own living standards than any other education demographic.



Source: IEP, Gallup
Notes: * Number of countries: Very High: 30, High: 14, Medium: 7, Low: 7

Satisfaction by Employment Status

Employment is another determinant of the level of satisfaction and the relationship between this satisfaction and the national level of resilience. Those with a full time position provided by an employer showed the highest overall level of satisfaction with their own living standards (Figure 2.30, Panel A). This category also recorded the strongest relationship between satisfaction and the level of societal resilience as measured by the PPI. Comparatively, those self-employed full time reported much lower levels of satisfaction (Figure 2.30, Panel B). Persons outside of the workforce – those not looking for or not needing employment – also demonstrated a high level of satisfaction overall (Figure 2.30, Panel C). In addition, their satisfaction was far less dependent on national Positive Peace levels than other groups.

Persons working part time demonstrated low levels of satisfaction (Figure 2.30, Panels D and E). But among these, the underemployed – those who would prefer to be working full time – demonstrated no relationship between the level of satisfaction and the national level of Positive Peace (Figure 2.30, Panel E).

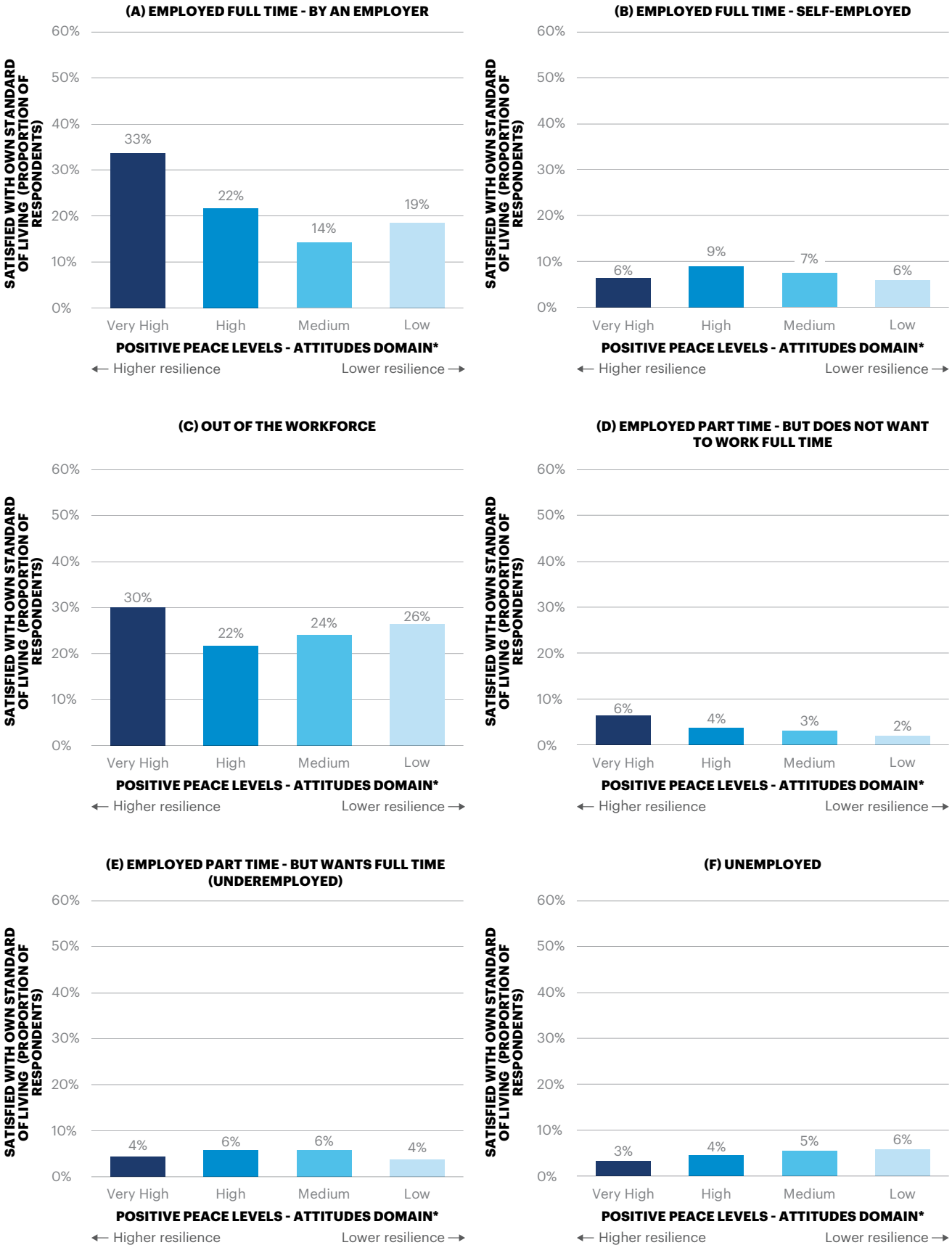
The unemployed have an extremely low level of satisfaction. In addition, the relationship between their level of satisfaction and national Positive Peace is inverted (Figure 2.30, Panel F).

> Those with a full-time position provided by an employer showed the highest overall level of satisfaction with their own living standards in very high resilience countries.

FIGURE 2.30

Satisfaction with standard of living, by employment status, 2020

Those employed full time by an employer, i.e. not self employed, display higher levels of satisfaction.



Source: IEP, Gallup
Notes: * Number of countries: Very High: 30, High: 14, Medium: 7, Low: 7

3 Halo: a framework for analysing societal systems

This section is not aimed at explaining the philosophy behind systems theory. Rather it proposes a practical guide on how to analyse societal systems to provide decision makers with the necessary information on how the societal system functions. For background on IEP's philosophical approach to systems please refer to sections 'Systems Thinking' and 'What is Positive Peace' in the beginning of this report.

The results from implementing this systems design approach will allow for more informed policy decisions because before starting systemic interventions, a thorough understanding of the system is needed. This means that institutions can now be structured to match the needs of the system.

In most cases, governments, multilaterals and other institutions engaging in societal development initiatives do not address their initiatives systemically. This can create unforeseen consequences and lead to only partially successful outcomes, since there is not a wider understanding of the dynamics of that society. If institutions themselves are not set up systemically, often it will result in inefficiencies, partial solutions, inter-organisational disagreements and duplication, to name some of the issues.

There are many approaches to systems analysis, all with varying strengths and weaknesses. One that is commonly used in conflict analysis and business is Structures, Attitudes and Transactions (SAT), others are more suited to ecology, including the Social-Ecological Systems (SES) framework. There are many more.

What sets IEP's approach apart from other systems analysis methods is the multimodal approach and modularity, along with a bias towards data and an analysis framework borne out IEP's decade long research on Positive Peace and systems thinking. It is practical and based on real-world analysis. Since it is modular, it can be scaled according to the necessary level of sophistication, available data and knowledge of the participants. It is a sophisticated framework specifically designed for assessing societal systems. It can be applied for analysing a nation, a region or a small community.

Systems also evolve slowly over time; therefore, systems analysis can be used successfully and meaningfully again at future points in time. Analysis can be iteratively updated and additional complexity added, creating a living analysis.

The Halo approach has been designed as a set of building blocks. This allows for an adaptive approach that can be uniquely tailored based on many dependencies, including the size of the societal system and also the sophistication required in the analysis. Workshops and programs can be as short as two days or as long as one year using this building block approach. Different building blocks can be utilised depending on the strengths of the design team, what may suit the project best and the length of time allocated for the analysis.

This section is divided in two parts. The first describes each of the design components, or building blocks, that are called system attributes, along with examples. The second provides a process for using some of the attributes in a design and then how to bring them together to develop the understanding of the system. The example is comprised of a 14-step process, however more steps can be added or subtracted depending on need.

THE ATTRIBUTES OF A SYSTEM

What is the outcome you hope to achieve? A system can be understood from many different perspectives; however, the starting point is what you wish to achieve from the analysis. For example, if the aim was to improve family planning or the containment of terrorism within the same social system, the knowledge needed and the approach taken would be very different even though many of the components and dynamics of the system may be the same.

The attributes contained below have varying amounts of text. Many of the more important attributes have short explanations due to the simplicity of the concepts. Additionally, the aim was to keep the text concise as many of the systems concepts are more fully explained in Section 1 of this report.

Define the Bounds of the System
Systems have boundaries. These boundaries can be described according to a geographic area or social grouping. For example, a system can be defined by a geographic area, such as a nation, state or a forest. These types of geographic boundaries are the easiest to define. It is more difficult if the system is an ethnic group or a societal function. Social functions include the education system, military, policing or a local health system. It is best to approach these as simplistically as possible at first. Some questions that help are what are the sub-systems which lie within the system. What are the legal frameworks affecting the system? For example, the health system consists of hospitals, doctors, pharmacists, government health departments, psychologists, etc. For the analysis, it may not consist of alternative medicines, aged care homes or psychic healers. Sometimes it is helpful to stipulate what is not included in a system to simplify the analysis.

Often relations and flows can be confused as systems, for example a conflict is an exchange between two or more systemic groups. A conflict is not a social system, but a series of relationships and flows between systems.

What are the Sub-Systems Contained within a System?
Systems do not exist in a vacuum, as they form parts of larger systems. For example, states are systems that form part of a larger national system. However, they are also comprised of systems, such as education, policing, business associations and others. Identifying the core systems, or sub-systems, within a greater system provides the basis for understanding its dynamics.

What Are the Other Major Systems It Interacts with?
Systems interact with other systems. This could be an adjacent country, or district. It could be another ethnic group or an area of governance. For instance, the military, the police, the judiciary and border control can all be seen as systems that interact with one another to achieve a certain objective. Another example could be a school which interacts with families, the education department and local leaders to improve literacy rates in a community.

What is the Intent of the System?
The intent of a system is its willing pursuit of desired outputs or states. For example, the intent of a school system is to provide pupils with the best possible education through the most efficient use of resources. If the system of analysis is a social group occupying a geographic area, its intent may be to control the area, stop outsiders from accessing it and maximise the use of that area. There can be multiple intents in the same system. Attempting to rank the intents is important to understand the priorities within the system. It is also critical to differentiate between actual intent and stated or idealised intent, as the two often differ substantially.

What Measurements Exist for the System?
Where accurate and consistent data is available, a system may be characterised by a set of statistical indicators that could constitute the foundation for a deeper analysis. However, it is often the case that statistical data for the specific system or sub-system is not produced and the analysis needs to be conducted indirectly through proxy data or via qualitative or subject matter expert assessments. IEP uses three different approaches when the data is insufficient, which are described later in this section.

IEP has curated a set of approximately 400 indicators grouped by specific systemic areas based around Positive Peace to assess the level of societal resilience and development in a nation. These indicators can also be compared across similar or neighbouring countries, states or communities to provide a deeper insight. They can be broken down further and can grouped under IEP's Positive Peace framework to better analyse the strengths and weaknesses of the overall system. Figure 3.1 shows that Zimbabwe recorded improvements in 13 of the 19 indicators of governance performance over the past decade. However, the country's performance remains inferior to that of its sub-Saharan African neighbours in many of these indicators, despite such improvements.

This type of statistical analysis can measure, directly or indirectly, the dynamics of sectoral components of the systems and the exchanges, or flows, between them.

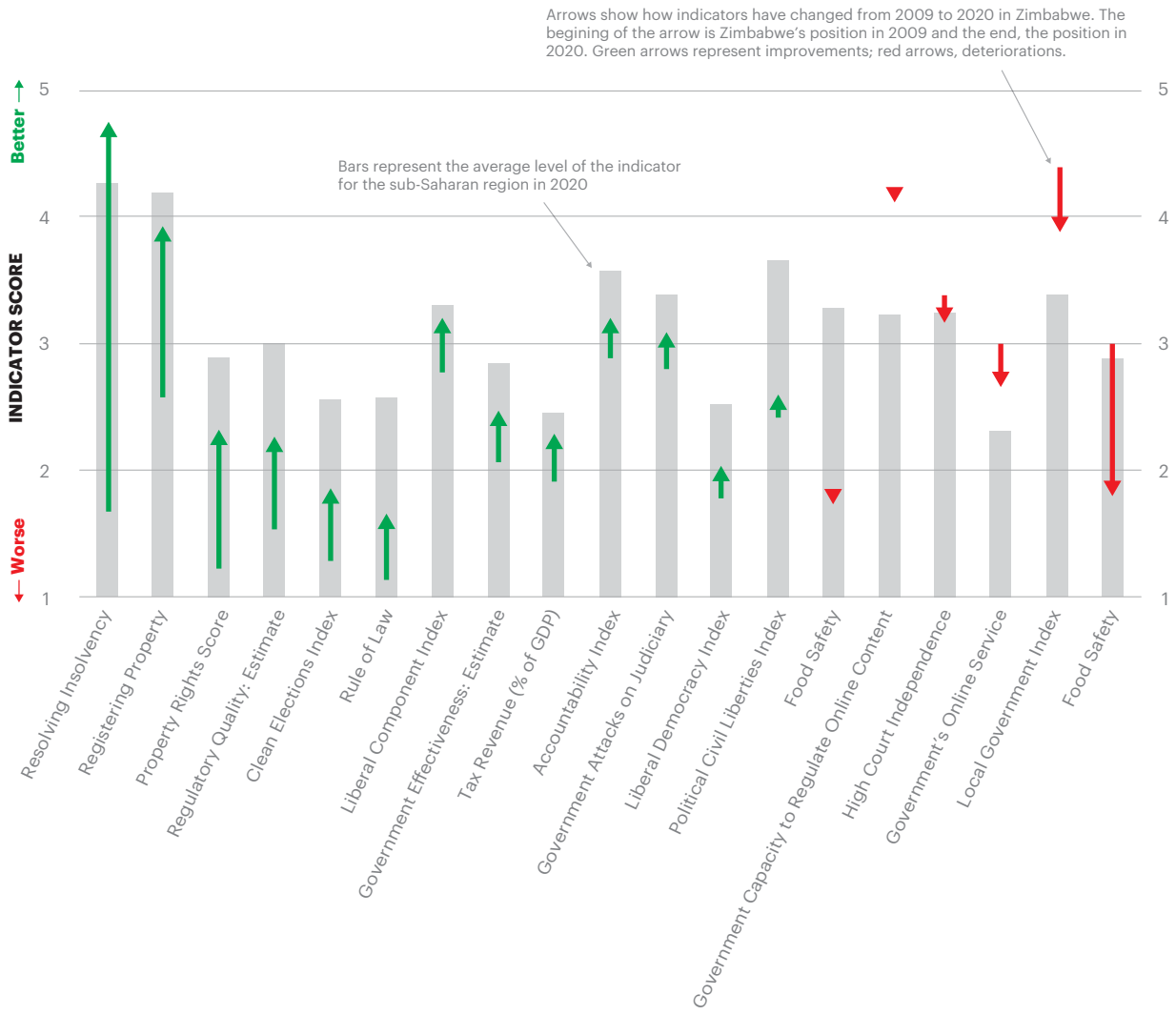
Understanding the Importance of Sub-Systems
To determine the importance of a system, consider the number of people within it, the number of people affected by the system, the amount of money revolving within it, the number of relationships or the extent of the laws or regulations prevailing in or governing the system.

What is the Direction or Momentum of the System?
Momentum is important as it helps explain the changing dynamics of the system or sub-system, including emergence, runaway feedback loops, decay and positive functions. The data can be assessed individually or grouped. By grouping the data, the momentum of the overall system or sub-system can be ascertained.

FIGURE 3.1

Example of changes in governance indicators, Zimbabwe and sub-Saharan Africa, 2009–2020

Zimbabwe has improved on many governance indicators over the past decade. However, the country remains less developed than its sub-Saharan African neighbours in many areas.



Source: IEP

It is also beneficial to compare the measures to the system's neighbours'. This gives insight into the relative strengths and weaknesses as neighbouring systems are often similar.

Momentum is an important concept for systems analysis because it facilitates the extrapolation or forecasting of future states the system may find itself in. If those states are undesirable – according to the intent of the system – interventions should be designed to slow down and possibly invert the system's momentum in that area. Where the extrapolated future state is desirable, programs can be developed to reinforce a specific momentum and take advantage of it to nudge other sub-systems into higher states of development.

The example of Figure 3.1 shows an improvement in the momentum in the Zimbabwean governance system in regards to government effectiveness and government accountability over the past decade. If this momentum is preserved, Zimbabwe may reach levels of effectiveness in these indicators on par with its sub-Saharan African neighbours. However, the country has recorded a sharp deterioration in institutions' ability to provide food security for the population since 2009, with food insecurity now being more severe than among neighbours. This is a critical area that should be prioritised in any resilience building programme for the country.

What is the Path of the System and its Dependencies?

Systems are path dependent. This means that the way a system will develop in the future from a given state depends on the path taken to reach that state. Path dependency can be understood as the influence that a social system's history, memory and cultural values exert on the future development of that society. These influences are expressed in the encoded norms within the system.

Define the Homeostasis States

All systems seek a steady state, which is a state of minimal change in the system's components, stocks and flows. In the same way the human body seeks to maintain a core temperature, societal systems also seek stability. Comprehending the main processes – encoded norms – which maintain the steady state are at the crux of understanding how a system operates. However, systems do have a tendency to

grow. The steady state can be one in which the system achieves growth, or one in which the system stagnates. This can vary by sub-system.

What are the Main Encoded Norms within the System?
Isolating the main encoded norms within a system and the bounds within which they operate provides an understanding of the mechanisms that hold the system together. The encoded norms can sometimes be very subtle and difficult to quantify and therefore the analysis has to focus on the important ones. They can be expressed through laws and cultural norms, rules or regulations, either formal or informal.

What Type of Feedback Loops Are Occurring?
There are two main types of feedback loops – reinforcing and balancing. Reinforcing feedback loops continue to amplify the effect of the input. A reinforcing feedback loop might include population growth or economic subsidies. When such feedback mechanisms are too strong, they become runaway feedback loops and may completely destabilise the system.

Balancing feedback loops are those in which the outputs mitigate the effect of the inputs. They keep the system in balance and support the steady state.

Has the System Passed any Tipping Points?
This is important in understanding the path trajectory of the system. Tipping points are thresholds beyond which the relationships between components of a system change abruptly. It is hard to predict the timing of them in the future, however, they can be seen in the past. They may have been positive, when they lead to higher levels of societal resilience, or negative. A tipping point refers to a permanent and irreversible change in the state of a system. Identifying past tipping points might give insight into the dynamics which created the current system. Identifying the exact timing when a system may go through a future tipping point is extremely difficult, therefore understanding past system tipping points from its history is the best approach.

How Resilient and Adaptable is the System?
There are two methods for measuring resilience and adaptability. The first is an analysis of past shocks that the system has suffered and the speed with which the system recovered back to a steady state. The second is a data driven approach based around the Positive Peace framework which is an accurate measure of resilience. Societies with greater resilience will more easily absorb the effects of shocks and recover more quickly in their aftermath.

Efficiency and Redundancy
Efficiency means that a system produces a maximum output with the minimum number of components and with the lowest level of resources. Redundancy means a system has excess capacity, or not fully used components or resources. In most cases, efficiency and redundancy are antagonistic concepts.

Efficient systems produce the highest level of output with the minimum costs and use of resources. However, if a component or sub-system is stressed or fails, the lack of alternate paths or capacity means the system may become disabled. Building redundancies in a system reduces the expected losses from failures. However, this comes at a cost to efficiency. Systems with redundancies tend to be those with the highest levels of resilience, as they are capable of absorbing shocks. However, too much redundancy may mean the system is uncompetitive.

Redundancies can be constructed in two different ways. Redundancy of components means the system has unused, or only partially used, components. For example, a factory may operate with two computers instead of one – if one breaks down the other takes over, thereby creating a failsafe environment. Another example is an over-capacity in the health system to deal with any spikes in hospitalisation rates.

Redundancy of relationships takes place when two or more components are linked by a larger number of connections than strictly necessary. An example is when two cities are interconnected through various highways instead of just one.

Follow the Money
Money flows within a system often give an idea of the size of sub-systems or the importance of encoded norms. If the amount of money is growing over time, the system may be in a virtuous cycle of development. Conversely, rising monetary power may also be an indication of an imbalance. An example would be if industry or special interest groups are subsidised by the tax payer, which enhances their ability to garner political influence with which to secure additional government money and concessions.

Function, Purpose and Potential
All components of a system can be seen through these three lenses – function, purpose and potential. All purposes in systems have functions and functions also have potential.

The function of a system or sub-system is the set of activities through which output is produced. The purpose of the system can be seen as similar to intent, however, intent is best applied to the overall system, while purpose is better applied to sub-systems. A sub-system can have multiple purposes but the best analytical approach is to focus on the most important purpose or purposes.

Potential describes what the function could be if the component had more resources or its purpose was modified.

For example, a department that collects data on crime for the government has the function of collecting, compiling and divulging crime data. Its purpose is to inform policing and the allocation of the security budget. Its potential may lie in collecting additional data, operating with an increased budget to promote its findings or to communicate directly with the population to improve crime awareness.

Causality in Systems
This is really about being able to understand the influences that lead the system to behave in certain ways. However, in systems cause and effect can become entwined. Think of a mutual feedback loop.

Different parts, events or trends can mutually influence one another, such that the differentiation between cause and effect loses usefulness. This way of thinking avoids the pitfalls and failures of the old cause/effect approach whereby an intervention is targeted at the presumed cause of a problem or

vulnerability. Understanding mutual causality leads to a deeper perspective on agency, feedback loops, connections and relationships, which are all fundamental parts of systems mapping.

Non-Linearity of Effects
The effect of one part of a system on another is not always linear. Relationships may change depending on the state of development of the system. For example, for low peace countries, improvements in peace lead to small increases in worker productivity. However, as countries progress in peace, further reductions in violence lead to ever higher increases in worker productivity. This non-linear relationship has been discussed in IEP's Business and Peace Report 2021.[1]

Emergent Properties
A system evolves through time and its current properties may not fully describe future dynamics. Finding new emerging properties is important to understand where the system is heading. The speed with which something is accelerating can help identify emergence. This can be the increase in money, the number of people employed or the rate of development of new technologies.

Stocks, Flows and Transformations
A stock is a metric that defines the state of a component, a sub-system or a system. Examples of stocks could be the number of people in a country, the balance in a bank account, the amount of grain in storage or the number of persons incarcerated. Flows are movements between stocks. Examples could be money transfers, the movement of a prisoner to the workforce or immigrants entering the system. These concepts are important in understanding the dynamics of systems.

Stocks and flows are homogeneous. That means what is stocked or what is flowing remains the same across time. For instance, money can be stored in a safe or be transacted between persons, without losing or changing its attributes.

However, a transformation changes the nature of the object, service or resource within the system over a given period of time. For example, materials and electricity flow into a factory to produce a machine. Another example is people and knowledge in a research institute creating new forms of knowledge, while a stock of food may rot and become unusable even if there has been no outflow from the storage.

Is the System Stuck in an Attractor Plain?
An attractor plain is a context or state from which the system finds it difficult to escape. Within the peace and conflict arena, the analysis of actual peace, as measured through the GPI, and Positive Peace has identified two attractor plains, as discussed in Section 2 of this report. One is called Sustainable Peace and is the state where countries have high rankings in both the GPI and the PPI. None of the countries in the Sustainable Peace area of the GPI x PPI phase plain have had a substantial fall in their levels of peace in the 15 years of the GPI. These countries tend to remain peaceful without falling into states of violence as a consequence of shocks. The other attractor plain is the Conflict Trap, defined as low rankings in both the GPI and the PPI. Countries in this plain, find it difficult to improve their societal resilience because of the losses incurred by high levels of violence. Conversely, without resilience they cannot achieve higher states of peacefulness. Nations in the Conflict Trap region find it difficult to exit this region without external assistance.

Archetypes
Archetypes are common reinforcing themes or patterns of interactions repeated in many systems. The number of archetypes varies depending on who is defining them, but generally there are seven to ten. Examples are 'limits to growth', 'seeking the wrong goals' and 'exponential success'. The value in identifying the archetypes in a system is that it short-cuts the analysis and helps in identifying solutions which are applicable for the specific archetype. A number of specific archetypes are defined in the following section on performing a societal systems analysis.

Static and Dynamic modelling
Static modelling analyses the system at a given point in time, while dynamic modelling uses many iterations of data over a period of time. Static models are useful where there isn't sufficient time series data for analysis. It is also useful to provide a snapshot early in the analysis that is simpler and easier to understand before building up the dynamics.

Analysis through Positive Peace
Positive Peace has been derived empirically to provide a holistic expression of a system and as such it can be used in this process as a check on whether the system has been analysed systemically. Once a model has been derived, each component can be classified as belonging to a Pillar of Positive Peace. If the analysis is weak in a particular Pillar or Pillars, then there may be a flaw in the analysis or a vulnerability in the social system itself.

Positive Peace can also be used as a method of analysis to better understand the various sub-systems, stocks, flows and emergent qualities of the system as explained earlier in the aforementioned heading 'What Measurements Exist for the System?'

APPROACHES TO ANALYSING THE ATTRIBUTES OF SYSTEMS

Analysing systems can be lengthy, resource intensive and expensive. One of the most critical difficulties in the process is the lack of comprehensive information on the state and dynamics of a system. Therefore, it is important to understand the scope of the work that the research team can undertake and the limitations they face. Arguably the best approach is to start with the simplest depiction of a system and progressively build its complexity.

An example of how to perform an analysis is set out below. This has been done for purely illustrative purposes. However, it does demonstrate the way the attributes come together to form a sophisticated analytical framework and the way the attributes can be used in combination.

Given the complexity and the number of choices of analytical tools presented above the approach adopted in this analysis is to focus on the most important concepts and how they could be analysed and pulled together. The major steps used in this analysis are:

- Describing the system and the sub-systems contained within it.
- Ascertaining the system's intent.
- Gauging stocks and flows.
- Finding encoded norms.
- Mapping path dependencies.
- Determining emergent properties.

Note, this analysis only uses eight of the 24 attributes listed above.

A schematic of the steps taken in performing this analysis is presented at the end of this section.

Developing a project plan is the preparatory step. Think through which of the system attributes will be used and to what end. It is important to understand why the analysis is being done and what the outcome will be used for. It is good to do a number of iterations of the analysis, deepening the depth each time. As a rough guide, it is useful to cover in the first third of a project all the selected attributes. That will result in at least a fuzzy view of the system. It will also provide an opportunity to understand where additional focus is needed on the next iteration to build the model out.

If the budget and timeframe allow for the development of new datasets, for example surveys on people's values, then generally undertaking them after the first pass through the methodology is the best approach. However, in some cases if there is limited data available surveying may be helpful before starting. Also if the timeline is short it may not allow the necessary time to complete a mid-project survey.

There are basically four approaches in this framework for analysing the attributes of a system.

- Data driven.
- Expert assessment.
- Deliberative forums.
- Survey data.

Generally, to analyse a system all four styles can be used. The utility of each approach will be dependent on the coverage and quality of the available data and the availability of funds for the study. Obviously, undertaking new surveys can be expensive and the extent to which deliberative forums are used will also impact budgets.

Deliberative forums are created by bringing together a group people who represent a community to help guide a decision about a project or issue that affects them. They form a deliberative panel, also similar to citizen juries, community meetings, and consensus conferences. They are usually formed around a specific issue, and will attend presentations from experts and make recommendations, based on the expert input and the discussions within the group. The experts are not involved in forming the recommendations.

Some of the steps below are discussed more succinctly than others. However, all steps are important in this analysis.

Step 1 – Defining the System and its Bounds
The first step is to define the boundaries of the system to be researched for the problem at hand. This can be done through defining a geographic area or a social grouping. In this sense a social grouping could be a formal body such as an education system, or a monetary system, such as a card payment system. Countries, states and administrative districts are good to use, if applicable, as their bounds are clearly defined, as well as their administrative processes and laws. The boundaries of a system can be detected through different approaches such as geographical areas, coverage of legal instruments, expert opinion and ethnicity or religion. Some of these concepts are clarified in the following examples.

1. A country's health sector is a system whose boundaries can be relatively clearly defined through an enumeration of its components, or sub-systems: the set of medical doctors, hospitals, the ambulance service, the national health budget etc. Excluding certain sub-systems is also an important in describing the bounds of a system. For example, can the police department be considered part of the health system? One key purpose of the police is to prevent violent crimes, and as such, effective policing reduces hospital admissions. However, police departments are covered by different legislative, budgetary and administrative frameworks than the health sector. Therefore, instead of characterising the police department as a sub-system of the health system, it would be more precise to think of it as a parallel system interacting closely with the health sector.
2. The natural environment is clearly a system in which

components and sub-systems interact in complex ways. The simplest way to define the bounds of the system is to define the physical boundaries of the ecosystem. For example, a forest has more or less clearly defined geographical boundaries which set the limits of that system in broad terms. However, it may also contain rivers flowing through it that originate far afield and its atmosphere – or its vertical upper boundary – is also affected by other systems.

3. The legal system can be characterised by large and complex sub-systems such as the legislative, the judiciary, law enforcement, law colleges and others. However, a particular legal instrument or a specific law is not a component of the legal system. Rather, it is an encoded norm, that is, a rule governing the function of a system or sub-system. For example, the law governing the manufacture of seat belts is an encoded norm in the car industry.

Step 2 – What are the Major Sub-Systems?
Once the boundaries of the system have been defined, it is important to consider the sub-systems that exist within the system. It is not necessary to consider every possible sub-system as there will frequently be many but it is important to understand the most influential sub-systems. They can be determined by the same approaches used to identify a system. As the analysis progresses often subsystems become apparent which were missed on the initial passes. Stocks, flows and the available data are some of the items that can give insight into subsystems.

Step 3 – What is the Intent of the System
Often the intent of the system is clear, but also the actions might not accurately reflect the intent. For example, there may be a school improvement plan, where money is given for the capital improvements on the neediest schools. However, if the decision is made by politicians then the allocation may be made to schools with the most political relevance rather than to the neediest schools. It is clear that the intents and the outcome are not aligned.

There may also be multiple intents. One approach is to assess the system on four different dimensions of activity – economic, political, social and legal.

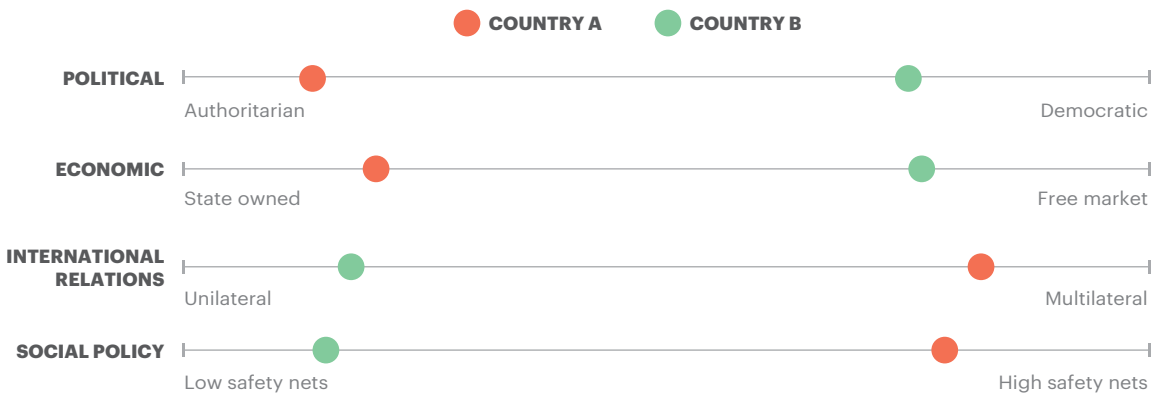
Economically, intent may be assessed by the type of system, ranging from state controlled to free market. This can be expressed in the nature and scope of the laws governing economic activity and state ownership of enterprises. A company's intent may be expressed by its desire to maximise growth or profit. The stated intent of many systems or sub-systems can be self-evident. However, they can be compromised, for example if the staff in the health or policing systems needed facility payments from the public to maintain a living wage then one of the actual primary intents would be to raise income, despite the stated intent being to provide quality service.

There are two other analytic methods that help in understanding intent. The first is using expert assessment and the second is to use a deliberative forum. The latter is comprised of people who are part of the system. They often know the way the system functions and can give insight into its non-obvious intents, but they are not necessarily subject matter experts. If it was the criminal justice system then it would not only involve police, judges, lawyers, but also people affected by crime, general public, criminals and others that the policing function touches.

In some cases, the stated intent of a society may differ from the actual intent.

The Positive Peace Report 2017 contains an exercise where nations are assessed according to their beliefs and values in four dimensions: political, economic, international relations and social policy.[2] Nations were assessed according to a linear scale in each of these dimensions. For example, along the political linear scale, nations could be considered authoritarian on one extreme to democratic on the other extreme, with several gradations occurring between these levels (Figure 3.2). The combination of a nation's assessment in these four dimensions provided an approximation for the national intent. This approximation could then be fine tuned and enriched by expert analysis. This national intent tool can be accessed at nationalintent.visionofhumanity.org.

FIGURE 3.2
Plotting country intent
Intent for each country can be classified based on the country's position on the four scales of intent.



Source: IEP

Step 4 - What is the Purpose, Function and Potential of the Sub-System

The next step is to define the purpose of each sub-system, how it functions and its potential. This process needs to be concise, because lengthy and detailed descriptions can confuse the analysis without providing any substantial informational gain. It is best to use bullet points to describe the purpose and the function.

There may be more than one purpose, but it is important to focus on the essentials and not over-describe. Examples may be a community cooperative whose purpose is to maintain a seed and fertilizer bank for its members to avoid steep changes in prices. It may contain ten or more functions related to purchasing, selling or distributing its stocks. Its potential may lie in building new purposes and functions, such as the collective sale of food, improving water sources or setting up a small-scale canning business.

Potential is often best assessed after the stocks and flows in the system have been determined.

Note that potential can also be 'negative', or more precisely, lower than the current state of its function. This could happen, for example, where a system is scaling down due to competition, obsolescence, legal impositions or regulatory action.

Step 5 – What are the Stocks, Flows and Transformations within the System

The next step is to develop the stocks and flows associated with the functions of the sub-systems. Stocks can accumulate or be depleted; flows can strengthen, weaken or reverse.

The objective is to map the interrelations between the different sub-systems. The relationship between the stocks and flows of sub-systems will show how they relate to each other. Again use simple bullet points to define the stocks, what flows into it and what flows out (Figure 3.3). Also map any transformations that happen inside the sub-system. For example, materials can be transformed into a final product within a manufacturing plant or criminals rehabilitated through the criminal justice system. It is also good to rank the importance of each function. The number of people involved, the amount of money transferred or the depth of the laws surrounding an activity can provide a strong indication of importance.

This approach can be data driven based on available statistics. It may be the way government funding passes to and through organisations, it could be the rise and fall in the stock levels or prices of important commodities or it could be the number of people employed in the hospitality sector.

The determination of stocks and flows will begin to shed light on the inefficiencies, constraints and bottlenecks in the system. The extent of these redundancies and limitations will become clearer when the analysis reaches step 13.

While stocks, flows and transformations can be ascertained by expert assessment, if data exists, a quantitative analysis is preferable.

Transformations occur when one or more flows enter a sub-system and their nature is changed within the sub-system. Manufacturing is an obvious example, however, other examples could be a theater company where money, people, costumes are transformed into a play; or a forestry regeneration program where money, people, knowledge, plants are transformed into ecological capital or multiple flows into a hospital where the transformation is improved health.

Some stocks and flows are more important than others. A simple approach is to assign a value of importance. The scale does not matter, provided it is large enough to cover important variances in observed stocks and flows. This data can then be entered into a database. This will provide the ability for a sophisticated analysis further down the track and also allow for the visualisation of the data. There are many database types including relational, graph or Kumu which is specifically designed for social networks.[3]

These relationships between stocks and flows within and between sub-systems are usually 'one to many'.

Step 6 – Finding the Encoded Norms

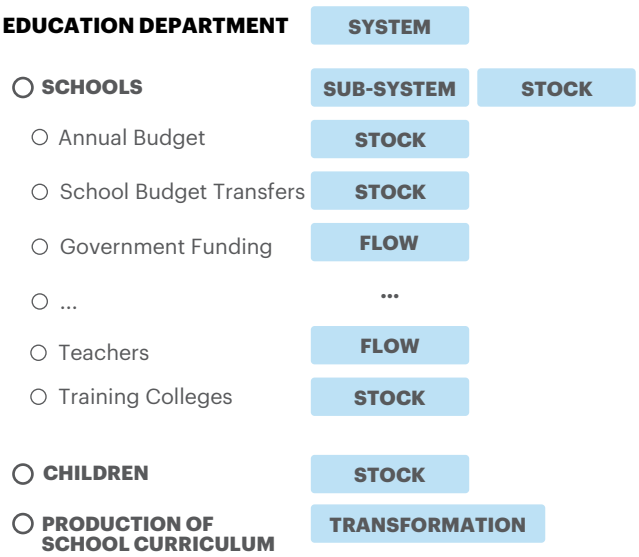
Understanding the stocks and flows will allow for the elucidation of the encoded norms. Encoded norms refer to the accepted actions, rules, regulations and cultural norms within a sub-system. For example, one encoded norm would be to purchase goods if the inventory dropped below a certain level, while another would be to change suppliers, if specific thresholds were met. Identifying the encoded norms may be the most difficult part of the process, as they are seldom clearly defined. In these cases, expert assessments are useful and deliberative assemblies are particularly helpful in the elucidation of cultural norms. It is usually best to start with what appears as the simplest areas to define.

Understanding the encoded norms requires the comprehension of purpose and intent.

FIGURE 3.3

Example using data nesting - Education department system

The listing of all stocks, flows and transformations within a system is a critical step towards understanding the dynamics of the system.



Source: IEP

Encoded norms regulate the flows between stocks, but can also be cultural values such as employment norms regarding levels of wages and work safety or discriminatory behaviour. While most encoded norms change slowly, those that arise from laws and regulations can change very rapidly in response to legal reform or new executive directives.

Step 7 – Developing System Diagrams
System dynamics can be very complex and it can be difficult to consider all relevant aspects. Visualising information can make it significantly easier to gain insights into the dynamics and obtain a more holistic perspective. There are a number of different approaches. These include cluster maps and interconnection maps.

Cluster maps are basically free-form association of what a group of people thinks a system may be. It is a qualitative exercise involving a small group of three to five people providing insight. The aim is to generate the cluster map quickly, within a couple of hours to provide a sanity check on what has been defined in the prior steps. This is best characterised as a 'brain dump' rather than an analytical exercise.

Interconnection maps take the data assembled and create lines reflecting the relationships between each different bubble. The bubbles can represent functions, sub-systems or purposes. The size of the bubble represents the importance of the stock/part and the thickness of the line represents the strength of the flow/interconnection. Figure 3.4 is a very simple example these types of maps, which could have hundreds of items and arrows.

Step 8 – Performing a Static Analysis
Often a good start is to analyse the system at one point in time. This provides for a simpler understanding of the system.

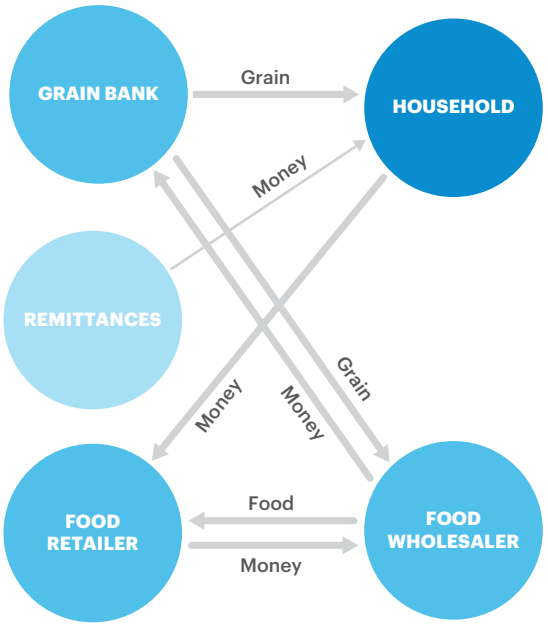
The use of network maps as described above is appropriate for static analysis, as such maps are two-dimensional representations with some three dimensional elements. For example, if the size of the box is bigger or the colour darker or the lines thicker, that may represent greater importance or influence or quality.

Once this analysis is complete, various relationships will become more apparent.

Step 9 – Performing a Dynamic Analysis
Once a static analysis has been performed, it can then be extended to a dynamic analysis for a deeper understanding of how the system changes over time. This is important because systems are dynamic, so the data will change over time. Therefore, time series are important in understanding the changes in the flows over time. Which stocks are increasing, which stocks are decreasing and which ones are static. This part of the analysis is useful for determining existing and emerging constraints in the system.

This also provides the ability to look for emergent qualities. These are stocks, flows or sub-systems that are growing in size. Sun-setting is the opposite of emergence and is typically something that is fading away; this is where stocks or flows are dwindling. This may be due to obsolescence, malfunction within the system, innovation and other factors.

FIGURE 3.4
Grain subsidy program
Stocks and flows in a grain subsidy program.



Source: IEP

This will give some clear insights into the dynamics of the system. There may be factors that need to change, due to innovation or other drivers. Sun-setting may be good or bad depending on the circumstances. For example, if the role of local leaders is declining in a pastoralist community and the government agencies that are now dispensing justice are not respected or seen as legitimate, then this can lead to further deteriorations in the system. Alternately, if the number of people who are under-nourished is falling then that is positive.

Where factors are increasing and this increase comes off a low base, this is an emerging quality within the system. This again may be good or bad. If the levels of terrorism or civil unrest are rising then it is bad, but in the case of increased use of the Internet, more teachers per student or increases in per capita income then it is good.

Sun-setting may also occur. This is where a measure of a stock or flow is falling over time. This may be due to innovation, such as electric cars replacing traditional cars or the Internet replacing earlier forms of communication.

Step 10 – Identify the System Archetypes
There are some basic patterns that keep emerging in different systems. These are often referred to as archetypes. Analysing a system from the concept of basic archetypes helps to better understand common themes and important feedback loops. Six common archetypes are listed below.

- *Limits to growth.* All systems have limited resources they can consume.
- *Exponential success.* This is a runaway feedback loop where success increases exponentially, eventually dominating the system.

- *Seeking the wrong goal.* This is related to the intent of the system. If the goal is inadequate, its pursuit will damage the system.
- *Rule breaking.* Rules are often set up to regulate and maintain homeostasis. When rules which regulate society break down the result will be changes in the system's internal structure. This can be positive but more often is destructive.
- *Escalation.* This can be defined as one-upping. Think of two groups competing for shrinking resources, escalating wars, or politicians competing for the highest spending for the popular vote.
- *The commons' tragedy*. This is where a common resource gets utilised by agents who will aim at maximising their own benefit from a commonly shared resource. If the resource gets over-utilised, then it can lead to rule breaking and escalation.

Step 11 – Path Dependency
Path dependency is important as the cultural and historical conditions of the system will set the bounds in which the system can operate. It will also give some insight into the intent of the system. If the system has had a traumatic past, then that will affect the intent of system. It is likely to lead to an overemphasis on mechanisms for protection and safety.

Path dependency can be understood through an analysis of the system's history. In the case of a country, it can be viewed through the four lenses of economic, political, social and legal. The political lens would cover aspects of foreign relations, including wars. This can be achieved by expert assessment.

Step 12 – Finding the Cultural Values.
Cultural values will also affect the bounds or limits of what the system can do. It will also affect what encoded norms exist and how they may operate. Cultural values are broader, more persistent and more fundamental to a societal system than encoded norms, which are often set by legal or regulatory frameworks. There can be hundreds of values, however, it is important to focus on the most relevant ones. This may start with insights about how different groups of people are perceived, think or behave. For example, Americans consider themselves free, Australians easy going, Burmese devout, while Chinese place an emphasis on family values. In this process, systems often have myths about who they are and this will give insight into the system and where it is likely to go. Other cultures may see themselves as war like, as the natural rulers, or in the case Iceland as peaceful.

Some examples of important values would be in relation to corruption – what is considered corrupt, views on minorities, the use of violence, the availability of guns, telling the truth or following laws.

From a practical standpoint, deliberative forums are an effective way of understanding the values of culture. Likewise, surveys are also a good method of obtaining insight into society's values.

Step 13 – Bringing it Together
After completing step twelve, there will be a wide variety of data to be assessed to better understand what are the best actions to stimulate the system towards the desired result. Some of this data may lie in databases or lists compiled in the analysis.

There are innumerable variations or permutations based on the aforementioned analysis. This text will only cover how to bring the assessment together to understand what actions should be taken. For example, if a system's intent is dysfunctional, the analysis of the purpose and flows of the sub-systems would be different compared to that of a system whose intent was in most respects functioning correctly.

- Firstly, assess whether the actual intent and functioning of the system match its stated intent. There may be some aspects of the intent of the system that are not satisfactory. If so, then analyse the sub-systems, relations and flows to determine what aspects are supporting both the dysfunctional areas and functional areas of intent. Reinforcing positives can be as important as correcting negatives.
- What is the momentum of the system and what are the variations in the momentum of different components of the system? When analysing the momentum, focus on the items that are important and deteriorating, or growing at the fastest pace. Stocks that are growing rapidly may signal a runaway feedback loop is taking place or one that may take place in the future. Use the stocks and size of the flows to better assess these points.
- What are the encoded norms supporting both the positive elements and negative elements discovered in the analysis? What laws or social values affect functions. What needs to be supported and what needs to change?
- Assess which items within the system match an archetype and which are the stocks and flows associated with the archetype.
- Next pull together a list of the things that are not working appropriately. These may be entire sub-systems, stocks or encoded norms. Once this is done, take each of the items and understand the relationships between them. Are there mutual feedback loops, is one a precedent for the other?
- Once this list is developed, attach it to the function for which it is meant to perform. In the case of sub-systems, the functions are part of the sub-system, therefore there will be stocks or encoded norms associated with it within this list. If not, then there may be a problem with the analysis.
- Next step is to analyse the functions. Are the functions appropriate for the performance of the sub-system?
- Cultural values will affect many of the items on the list. How do the cultural values assessed earlier support the items or hold the items in check? This is especially important to understand encoded norms.
- How does the path dependency affect the items on the list? Do they inhibit change or are they factors that will support change?
- How does the homeostasis affect the each of the items on the list? What are the aspects of the homeostasis that are supporting each of the items? Which aspects are suppressing them?

Step 14 – Checking Against Positive Peace
Because of the way it was derived, Positive Peace provides an ideal framework through which the various interventions proposed can be viewed to determine whether the sum of the interventions is truly systemic. Each of the interventions can be grouped under one of the eight Pillars of Positive Peace. Assessing the number of interventions under each of the Pillars provides insight into the completeness of the interventions.

It is useful to take each of the items that need addressing and use the same process to group them under the eight Pillars. This will also provide insight into the nature of the issues. In addition, it will determine whether the issues are fully systemic or partly.

If it occurs that a number of Pillars are not included or there is only a small number of items associated with a specific Pillar, this may indicate that something is missing from the analysis. However, for very specific and targeted applications, the absence of items in particular Pillars may be acceptable. If for example, the analysis was aimed at improving media freedoms the Pillar *Good Relations with Neighbours* may not be applicable or may contain only a small number of items.

In Conclusion

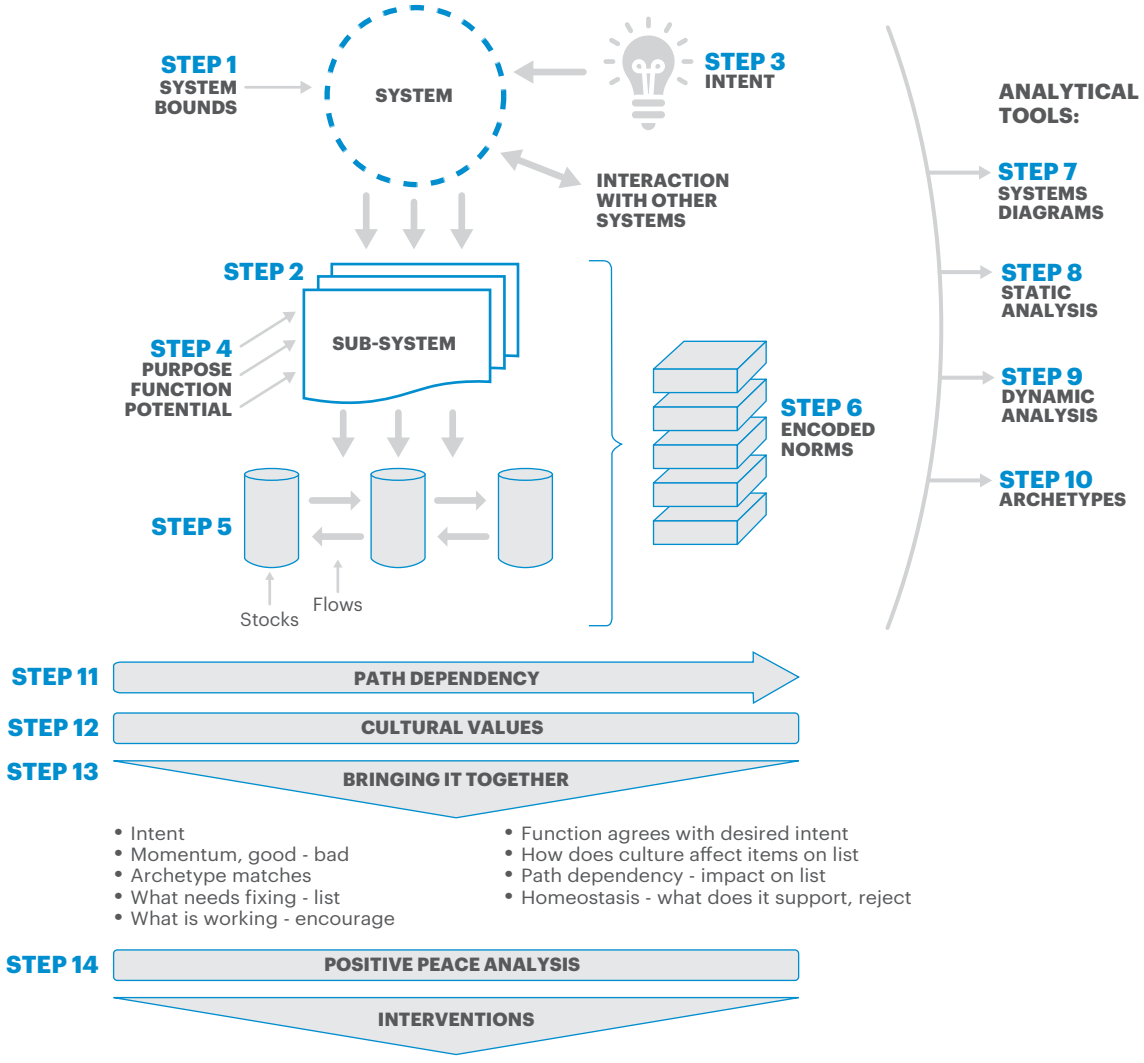
Once this analysis is complete there will be enough knowledge to start looking at what interventions need to be performed to rectify the imbalances within the system and to set it on a new course. In defining the interventions, it is generally better to attempt to do many small nudges, rather than one big intervention to change the status quo. This lessens the possibility of mistakes. One big mistake is difficult to recover from, whereas small changes can be undone more easily, even if they are numerous. In addition, drastic changes – even those in the right direction – can be disruptive and, in extreme cases, destabilising for the system. Abrupt changes create a great deal of uncertainty and individuals, groups or organisations may be unsure about how they fit in the new systemic structure. For this reason, it is possible that these large changes may cause resistance and antagonism.

The summary in Figure 3.5 illustrates the key attributes and principles of societal systems and helps analysts visualise the steps that comprise their analysis.

FIGURE 3.5

Schematic illustration of system analysis

This stylised summary depicts the key attributes of a system and helps analysts map each attribute to a real-world scenario under analysis.



Source: IEP

4 Implementing Positive Peace

This section focuses on the practical application of Positive Peace, highlighting some of the successful workshops and programmes implemented around the world. It includes an overview of IEP's educational and academic programs, with insights into our partnerships and corresponding Positive Peace activities. This section also describes some recent IEP Positive Peace workshops at strategic, development and grassroots levels. These descriptions can act as a guide for countries, communities, and organisations seeking to improve their levels of resilience and peacefulness.

The Positive Peace framework can be applied in many settings and provides a foundation to understand and address the multiple and complex challenges the world faces. The framework is applicable at the macro level, tailored for government and supranational interventions, but it is also effective at the community level.

Positive Peace projects can be tailored to a variety of different stakeholders including professionals working in development, peacebuilding, policing, military, health, education and government policy. The framework is non-political, culturally sensitive and impartial, and provides a neutral baseline from which recipients can create their own practical approaches to development.

The way the framework is designed makes it culturally applicable, with workshops having been run in Africa, Europe, Asia, North America and the Middle East.

Why is Positive Peace different?

Peace is often seen as being separate to development, or perhaps as a consequence of development that is achieved through mediation or conflict resolution practices. However, the Positive Peace framework sees peace as an integral part of societal development. IEP's Positive Peace framework is an evidence-based model for sustainable societal development that emphasises factors that create thriving societies.

Through the implementation of this framework, developmental projects translate into peacebuilding projects without political connotations. By focusing on and leveraging the strengths of a society or community, the methodology differs from traditional peacebuilding approaches that often rely on and are limited to conflict analysis.

The emphasis of Positive Peace projects is on effective action led by community stakeholders. There is limited value in stakeholders identifying actions outside of their control. They also learn how to think of their actions from a systemic perspective. This carries forward into other activities that they may undertake in the future. In addition, the framework is capable of communicating complex concepts and research findings in ways that are simple, practical and effective.

Many development organisations already have good tools for designing and executing developmental programs. The Positive Peace framework can provide a unique systemic approach to help in the development a project. However, the innovation in the Positive Peace approach teaches the principles of good governance as a by-product of the design process. Therefore, it instils a set of values that will be carried forward into other aspects of life. It also teaches the community what aspects will help sustain peace in their context.

Educational Programmes

The educational programmes are built upon IEP's research and resilience building expertise, and can be tailored for specific needs and audiences.

IEP AMBASSADOR PROGRAMME

The IEP Ambassador programme provides opportunities for peacebuilders and other stakeholders, to gather concrete knowledge and collect resources to help foster peace among their community networks.

It was first launched in 2016 and is now in its 6th year of operation. The programme has so far attracted more than 3,500 participants from over 105 countries. Since 2016, participation levels have steadily risen, with a record number of over 600 participants in 2021.

The programme consists of an initial online training course and then three webinars. Participants have the opportunity to apply the knowledge acquired by implementing a peace project or presentation by the end of the three-month programme.

Through the series of webinars, participants receive an in-depth understanding of IEP's research and methodologies, guidance on how to communicate peace research, and how to activate Positive Peace in their communities. A key output of the programme is the adoption of Positive Peace by ambassadors into their professional practises.

Programme Objectives

- To establish and train an international network of leaders and peace builders who understand and are equipped to work with the systemic nature of peace.
- To provide participants with an understanding of IEP's data driven research to facilitate the implementation of peacebuilding initiatives.
- To improve participants' capacity to interpret and communicate peace research to their respective communities and through IEP's networking platforms.
- To demonstrate the importance of an approach to peacebuilding that leverages societal strengths, rather than the traditional focus on perceived causes of conflict.

Ethiopian Ambassador Programme

The flexible nature of the online course allowed IEP to create bespoke Ambassador programmes for different communities. For example, a course was created for Ethiopia in partnership with the Rotary Club of Addis Ababa West and the Ethiopian Reconciliation Commission.

This online programme launched shortly after the outbreak of violence in Ethiopia's Tigray region. The conflict between federal and regional forces that began in November 2020 has pushed tens of thousands of refugees into neighbouring Sudan and degenerated into a full humanitarian crisis. The free programme was launched in February 2021, and attracted Ethiopian youth, local Rotarians, business leaders, artists and entrepreneurs, and members of the Ethiopian Reconciliation Commission.

How Positive Peace was implemented

IEP led an online programme that included an introduction to Positive Peace and the IEP-devised model for practical implementation of peacebuilding. This programme was delivered through a series of three webinars with further instruction on IEP's research and methodology. It also provided training on how to communicate peace research insights. Participants were supported by a comprehensive Positive Peace resource pack and project development coaching.

Outputs

The initial online workshop attracted over 350 participants, all based in Ethiopia. To complete the programme, participants put their knowledge to use by implementing projects that applied Positive Peace in their respective communities. There were over 130 peace projects and presentations submitted by workshop participants.

Some examples of the projects are the creation of a 'Positive Peace Association', which builds a platform for Ethiopian Ambassadors on the ground to connect and further their work in Positive Peace. A Completion Certificate from the IEP Ambassador programme is a requirement to be a part of the association.

Other projects saw Positive Peace material and information translated into local Ethiopian languages, to make Positive Peace learning more accessible, especially in regional areas. One participant who was also a teacher used the eight Pillars as a framework to strengthen his school community. For example, under *Well-Functioning Government* the school decided to create identification cards for all students to improve the tracking of attendance to classes and extra curricular activities. This allowed them to give special attention to students who were missing school and offer assistance. Another Pillar activated was *High Levels of Human Capital* by creating a 'knowledge sharing club.' This club utilised peer-to-peer learning and encouraged students to share ideas, knowledge and questions among themselves and with their teachers.

IEP PEACE ACADEMIES

The IEP Peace Academy is an online academy aimed at building greater knowledge of peace. It is applicable to the general public and those who work in the field and wish to gain a better understanding of IEP's products. The online course provides participants with the skills to develop peace and take action at grassroots and institutional levels.

Over the course of 5 modules, participants learn the history of peace studies and the centrality of Positive Peace to sustaining peace in societies. The IEP Peace Academy also affords participants an opportunity to become deeply knowledgeable of some of IEP's most influential publications – such as the Global Peace Index, Positive Peace Report, Ecological Threat Register, Global Terrorism Index and IEP's research into COVID-19 and peace.

IEP has also developed a Religions and Peace Academy.[1] This bespoke course explores the important connections between religions and peace, highlighting how robust inter-faith cooperation can aid conflict resolution and enhance global peacefulness.

The Religions and Peace Academy distils IEP's research into easily digestible lessons, grounded in the Institute's data-based peace and conflict research methodology. The key takeaways of the programme are:

- A comprehensive understanding of peace and its implications for humanity.
- Appreciation of the role of interreligious cooperation as a platform for promoting and maintaining peace.
- Ability to navigate the complex landscape of peace and conflict studies with an understanding of systems theory, Positive Peace and negative peace.
- Understanding of how ecological threats and COVID-19 may impact global peacefulness.
- Knowledge necessary to take the first steps in becoming an effective peacebuilder in your community and country — equipped with a plethora of references to IEP's research and further peacebuilding opportunities.

Academic Programmes

Positive Peace and IEP's wider peace research have been included in many university curriculums around the world. This has been supported by workshops, webinars and seminars to various academic institutions around the globe.

One example is IEP's partnership with Rotary International, whereby the Institute has been able to contribute content into the Rotary Peace Centres. These centres are hosted in seven different universities around the world and are designed to form and educate peacebuilders and development practitioners.

The Rotary Peace Center at Makerere University in Uganda offers a professional development certificate programme for peace and development leaders working in Africa to address the underlying peace issues in the region. The students become Peace Fellows after undertaking a year-long programme in peacebuilding, conflict transformation and development. The topics covered focus on issues and solutions of particular relevance throughout the African continent and the world at large.

The course integrates the Positive Peace framework, with IEP staff delivering a 5-day workshop to each cohort. The workshop provides Peace Fellows with deep knowledge of IEP's peace research and hands-on skills in peacebuilding using the Positive Peace framework. The aim of the workshop is to enable Peace Fellows to use Positive Peace in their professional lives and in the communities in which they operate.

The workshop takes a hybrid format, with some content delivered face-to-face by IEP's African office staff and some modules delivered online by IEP's Sydney and Brussels offices.

Other Rotary Peace Centres that have participated in Positive Peace workshops or seminars include the Center at Chulalongkorn University in Thailand, Uppsala University in Sweden and the University of Queensland in Australia.

IEP has also co-designed a Masters Programme with Blanquerna School of Communication and International Relations at the Ramon Llull University in Barcelona, Spain. This is a new university degree in Peace, Conflict and Security Studies and fuses the data analysis expertise from IEP with the academic insights of political science studies.

The programme provides students with the tools to analyse key issues in peace and conflict around the world, preparing graduates with the skills to forge a career as practitioners or researchers in the areas of conflict analysis, arms control, international security, conflict prevention, peace-making and peacebuilding.

Partnerships

IEP has developed a wide range of partnerships with organisations including multilaterals, non-governmental organisations (NGO), international non-governmental organisations (INGO), civil society organisations (CSO), community organisations, universities and governments. These organisations partner with IEP due to the recognised value of our research and the expertise in the application of Positive Peace in real-world scenarios. IEP is a forerunner in the current shift from conventional conflict analysis and intervention to the new adaptive systems approach to peace and resilience building.

One of IEP's largest and most significant partnerships has been with Rotary International. Rotary brings together a global network of volunteer leaders dedicated to tackling the world's most pressing humanitarian challenges. Rotary connects 1.2 million members of more than 35,000 Rotary clubs in over 200 countries and geographical areas.

The partnership has enabled both organisations to work together to create the Rotary Positive Peace Academy. The aim is to teach Rotary members and Rotary Peace Fellows to apply Positive Peace within Rotary and the communities Rotary serves. Through the Academy, Rotary has embedded the Positive Peace framework into their seven areas of focus:

- Basic education and literacy;
- Disease prevention and treatment;
- Economic community development;
- Maternal and child care;
- Peacebuilding and conflict prevention;
- Water, sanitation and hygiene; and
- Environment.

In addition, the partnership allows for the development of local workshops hosted by Rotary clubs to educate

Rotary | IEP

communities about Positive Peace. The aim of the partnership is to foster community-based projects in peace and conflict resolution that are practical and impactful.

In 2019, two large-scale Positive Peace workshops in Mexico and Colombia brought peacebuilders, community leaders and Rotarians together to identify and develop local peace projects. In Colombia, Rotary conducted five regional workshops and one Train-the-Trainer workshop, educating 214 young peacebuilders. After 12 months, they had achieved over 50 Positive Peace actions directly impacting more than 3,000 Colombians. Similarly, Mexico hosted a national workshop and a Train-the-Trainer workshop educating 150 young peacebuilders. After 12 months, the participants had delivered peace projects, reaching up to 17,000 Mexicans.

Due to the successful Rotary Positive Peace workshops, the Rotary-IEP Partnership created the Rotary Positive Peace Activator Program.[2] This Rotary-led programme is an international network of facilitators trained in IEP's Positive Peace framework and techniques for leading community-based workshops with Rotary-affiliated stakeholders. The Program began with cohorts in United States and Canada in 2020, Latin America and Europe in 2021, with an Asian cohort planned for early 2022. The Program has seen 90 Activators trained so far, who have logged 2,035 hours of service, reaching 50,071 people.

Joint programmes will continue to build on IEP's expanding research on the *attitudes, institutions and structures* of peaceful societies. In addition, they will promote Rotary's grassroots work in communities around the globe.

Positive Peace Workshops

Positive Peace workshops place IEP's research into the hands of peacebuilders and help communities develop practical, concrete actions to strengthen the *attitudes, institutions and structures* and that build and sustain peaceful communities.

IEP works with partner organisations to develop workshops based on their individual community needs. IEP has developed workshops for peace leadership, development, preventing violent extremism, improving community cohesion, community development and resilience building. The empirically derived Positive Peace framework is always at the core of our workshop development.

Workshops can be adapted to local context and language, varied group sizes, or to include other development content consistent with Positive Peace values. Workshops are relevant for emerging leader groups, community groups, and diverse groups including strategic, emerging leader and community participants.

Positive Peace Workshops are:

- Versatile;
- Empirically-based;
- Strength-focused;
- Self determined;
- Engaging and interactive; and
- Relevant for local and national contexts.

PEACE 911, PHILIPPINES

The Paquibato district of Davao City in the Philippines has suffered from the decades-long violence caused by communist rebel groups seeking to overthrow the government. Paquibato covers almost a third of the area of Davao City. Many adults from the area report not knowing anything but violent conflict since the 1960s, when the country was placed under Marcos' martial law in response to a rebel insurgency.

In 2019, the Davao City mayor Sara Duterte formed the Davao City Advisory Committee on Peace and Development to promote peacebuilding in the region. The committee consulted with the 14 barangays, or villages, in the surrounding areas and learnt to what extent the locals were hungry and fearful. The committee launched an emergency response to address these immediate issues and subsequently labelled the programme Peace 911.

How Positive Peace was implemented

Peace 911 firstly addressed the critical issue of hunger by bringing basic services to the local villages. Twice a month, a caravan of services visited the 14 barangays with representatives from agencies responsible for health, agriculture, legal services, social services, education, cooperatives, civil registry, land transportation and other areas. These city agencies worked with the local officials to provide services for the community, which contributed to *Equitable Distribution of Resources* in the area.

The project arranged training in container gardening for women in the community, which enabled them to grow organic vegetables for their families and provided small income streams through the sale of vegetables to neighbours. This capacitation initiative lifted the *High Levels of Human Capital* and *Sound Business Environment* Pillars of Positive Peace in the region by supporting economic development and improving the human capital base.

The most significant element of the Peace 911 project was the installation of a telephone hotline through which local residents could request assistance or information. This was a simple communication tool to improve *Free Flow of Information*. However, it had the unintended benefit of providing a safe way for 92 New People's Army (NPA) insurgents to cease their violent activities and surrender to the authorities.

Outputs

Within nine months of the Peace 911 project, the military declared Paquibato clear of violent insurgent activity, a result far superior than project leaders had anticipated. In early 2019, the Mayor of Davao City, Sara Duterte, declared an end to the emergency in Paquibato district, an area that for more than 40 years had been marred by violent conflict. The eight Pillars of Positive Peace were translated into the local language Cebauno/Bisaya and are used as a conceptual foundation for offshoot local projects. All barangay halls now display the Walo Ka Haligi sa Kalinaw (the eight Pillars of Peace) prominently. Furthermore, Mayor Sara announced that Peace 911 will now expand to another 18 barangays in five districts of the city, bringing the total to 32 barangays.

MATAVAI, AUSTRALIA

Multicultural New South Wales (MNSW) in collaboration with IEP and the Western Sydney University (WSU) selected five communities in the Australian state of New South Wales (NSW) to deliver an educative framework to enhance social cohesion and build youth agency.

The project, called 'Positive Peace, Cultural Wellbeing and Youth Agency Initiative: Exploring peaceful solutions to living well in diverse communities,' was designed to adapt IEP's Positive Peace framework to targeted communities to foster cultural wellbeing. The project aims to support the development of community-led projects aiding their agency and resilience, contributing to broader social cohesion in an effort to counteract fear, hate, racism and societal discord.

How Positive Peace was implemented

A three-day interactive Positive Peace workshop was held at Matavai Cultural Arts Center in Liverpool, Sydney with 13 participants. Over the three days, participants explored IEP's main research reports, discussed and analysed each of the eight Pillars and participated in a variety of interactive activities. Participants were encouraged to adapt the Positive Peace framework to their own relevant community setting, exploring ways in which the framework could further strengthen not only the Matavai Cultural Arts Centre, but their Pasifika community as a whole.

Outputs

The Matavai workshop group designed and planned their own Positive Peace project, a documentary film exploring Pacific Island cultural heritage and diversity. The documentary was designed using the Positive Peace framework, with the eight Pillars as its core. Matavai will conclude the project by early 2022. From IEP's pre and post programme surveys conducted, it was evident that there were significant and positive outcomes in two main areas: knowledge and skills acquisition.

IEP's surveys indicate that the majority of participants had a limited understanding of peace building before commencing the training. Observations suggested that participants significantly shifted their understanding in peacebuilding activities within the context of learning the eight Pillars of Positive Peace and how they are applicable to a majority of context and settings.

Throughout workshop activities, participants were consistently able to identify the correlations between the Pillars and were able to link them back to their own community needs. There were many instances of intercultural learning, whereby participants connected traditional indigenous concepts of peace from across the Pacific Islands and elements of the Positive Peace framework. Examples were shared about the circular configuration of the 'the village' system within the Pasifika cultural context and the circular web of Pillars, which comprises the Positive Peace framework.

The results show only three out of 13 participants were confident (23 per cent) when asked about their capacity to organise or facilitate activities that develop peacebuilding in their community before the workshop. As the workshop progressed, Matavai participants demonstrated an in depth understanding of Positive Peace in relation to opportunities to strengthen their community and contribute to further social cohesion. This was demonstrated in discussions about unifying Matavai and sharing their culture and building relationships with others outside the Pacific community. Technical acquisition of Positive Peace knowledge was solidified in the groups' articulation of Matavai's resilience, existing expressions of peace, potential community building approaches and the role Positive Peace can play in this. This was especially evident in the application of the Pillars exercise and project planning for their documentary film.

LITERACY PROJECT, UGANDA

Jude Kakuba, a Rotarian from Uganda had been running a programme to improve levels of literacy in a school in rural Kenya for two years, with little success. After attending a Positive Peace workshop, Jude decided to look at his own project through the lens of Positive Peace. He identified a number of ways to address his project in a systemic way and engaged his local Rotary club in supporting a new initiative focusing on activating all the Pillars of Positive Peace. The original objective of was to improve student conditions, enrolment rates and academic performance. The project was later expanded to include enhancing community resilience by increasing levels of Positive Peace in and around the school system.

The results were outstanding, with the number of pupils increasing by 146 per cent and the number of students in the top two grades in the district increasing by 100 per cent.

How Positive Peace was implemented:

- *Well-Functioning Government*: The involvement of local community leaders in the planning and implementation of the project encouraged community members to participate fully in all activities. Local stakeholders were invited to form a committee to oversee the project.

- *Equitable Distribution of Resources*: School supplies were distributed equally, unrelated to a student's ability to pay or perform in class.

- *Good Relations with Neighbours*: Fruit trees and vegetables were planted to reduce student pilfering from neighbouring orchards and fields because they were hungry. More importantly, this was accompanied by a porridge project, which provided lunch for pupils. This is what mainly contributed to improved academic performance; better nutrients provided pupils with the energy to concentrate in the afternoons. It also led to higher attendances as parents knew that the children would get fed and did not have to look for their own food.

- *High Levels of Human Capital*: The provision of educational materials has served as a driving force to attract more students and has also improved creativity and practical learning. The provision of medical services also ensures that members of the community were at a low risk of falling ill. This improved productivity and punctuality amongst pupils in school.

- *Acceptance of the Rights of Others*: After identifying monthly drops in attendance by girls, sanitary pads were provided on a monthly basis. The provision of sanitary products as well as hygiene training further supported higher enrolment rates of girls.

- *Low Levels of Corruption*: A separate committee on transparency was formed to monitor funds, donated items, as well as requests for accountability on how funds are used. All donated materials were branded as a gift to the community, increasing the sense of ownership and accountability. This helped the community keep regular stock of items and improve accessibility to items at no cost.

- *Sound Business Environment*: New classrooms were constructed using exclusively local materials and labour. This increased household income in the community.

- *Free Flow of Information*: The project partnered with a local radio station that used the local language to spread news of the project and provide the community with regular updates. This made it easier to disseminate information amongst members of the community concerning projects. It also helped with proper monitoring and supervision of project activities by relaying information in a timely manner.

While all the credit must go to those who led, participated in and funded this project, IEP's conceptual Positive Peace framework was one of the success factors for this project. To Jude's further credit, this was the first time the Positive Peace framework had ever been operationalised in this way. His idea significantly influenced IEP's work at the time and informed the outline of the workshop formula the organisation uses today. This shows how real-life examples feedback into the conceptual understanding of the systemic nature of Positive Peace.

Outputs

Within two years of running the programme, pupil enrolment more than doubled from 327 to 805 (Table 4.1) and literacy levels improved substantially. Furthermore, the proportion of students earning top grades increased from 30 per cent to 62 per cent. The original objective of the programme was to improve student conditions, enrolment rates and academic performance. The project was later expanded to include enhancing community resilience by increasing levels of Positive Peace in and around the school system.

TABLE 4.1

Kampala school project: inputs and outputs

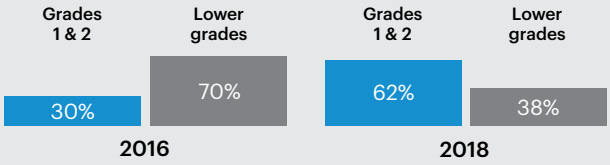
The Positive Peace based intervention produced substantial improvements in enrolment metrics.

Pupil enrolment before and after implementation of project

Enrolment	Before implementation of project	After implementation of project	Increase (%)
Boys	126	356	182.5
Girls	201	449	123.4
Total	327	805	146.2

Source: Rotary International

Pupil performance



Source: Rotary International

Closing

Increasingly peacebuilders have shifted from conflict centric approaches to adaptive and systemic approaches to change social systems. IEP's Positive Peace framework is a forerunner for this approach to peacebuilding and is increasingly adopted by peacebuilding projects, development organisations and policy makers. IEP encourages individuals to participate in the online Peace Academy and the IEP Ambassador programme. IEP also encourages organisations to adopt Positive Peace framework through partnership with the Institute.

A Positive Peace Index Methodology

The Positive Peace Index (PPI) is the first statistically derived index measuring Positive Peace according to the definition "the attitudes, institutions and structures that create and sustain peaceful societies." The PPI is similar to the Global Peace Index (GPI) in that it is a composite index built to gauge a multidimensional concept. It covers the same set of 163 countries included in the GPI, covering over 99 per cent of the world's population. The key objective is to devise a measurement system that is simple, intuitive, auditable, comparable across countries and consistent over time.

IEP takes a systems approach to peace, drawing on recent body of research on the topic. In order to construct the PPI, IEP analysed over 24,700 different data series, indices and attitudinal surveys in conjunction with current thinking about the drivers of violent conflict, resilience and peacefulness. The result is an eight-part taxonomy of the factors associated with peaceful societies. The eight domains, or Pillars of Positive Peace, were derived from the data series that had the strongest correlation with internal peacefulness as measured by the GPI, an index that defines peace as "absence of violence or the fear of violence". Each of the eight PPI Pillars is measured by three indicators. These represent the best available globally-comparable data with the strongest statistically significant relationship to levels of peace within a country. The 24 indicators that make up the PPI are listed in Table A.1.

For the 2020 report, PPI indicators were further classified in three groups: *Attitudes*, *Institutions* and *Structures*.

- *Attitudes* indicators measure social views, tensions or perceptions.
- *Institutions* indicators represent the impact that formal and informal institutions of a society exert on peacefulness, social wellbeing and the economy.
- *Structures* indicators assess the underpinning of the socio-economic system, such as poverty and equality, or are the result of aggregate activity, such as GDP. Usually, these are the indicators that measure infrastructure or socio-economic development.

The 2020 PPI uses a set of indicators that has been updated from previous reports. This new set provides a more representative picture of recent social dynamics. In addition, it was chosen to reduce missing data, both over time and by country. To maximise conceptual relevance and data completeness, the period of analysis was restricted to 2009 – 2020. Remaining instances of missing data were resolved through statistical imputation methods. The indicators are weighted proportionally to their correlation coefficient against the GPI.

TABLE A.1

Indicators in the Positive Peace Index

The following 24 indicators have been selected in the Positive Peace Index to show the strongest relationships with the absence of violence and the absence of fear of violence.

Pillar	Domain	Indicator	Description	Source	Correlation coefficient (to the GPI)
Acceptance of the Rights of Others	Attitudes	Gender Inequality	The Gender Inequality Index (GII) reflects women's disadvantage in three dimensions: reproductive health, political empowerment and the labour market.	United Nations Development Programme	0.71
	Attitudes	Group Grievance	The Group Grievance Indicator focuses on divisions and schisms between different groups in society – particularly divisions based on social or political characteristics – and their role in access to services or resources, and inclusion in the political process.	Fragile States Index	0.64
	Attitudes	Exclusion by Socio-Economic Group	Exclusion involves denying individuals access to services or participation in governed spaces based on their identity or belonging to a particular group.	Varieties of Democracy (V-Dem)	0.72
Equitable Distribution of Resources	Structures	Inequality-adjusted life expectancy index	Measures the overall life expectancy of a population accounting for the disparity between the average life expectancy of the rich and that of the poor. The smaller the difference the higher the equality and that is a reflection of the equality of access to the health system.	United Nations Development Programme	0.62
	Institutions	Access to Public Services	Measures the discrepancies in access to public services distributed by socio-economic position.	Varieties of Democracy (V-Dem)	0.76
	Attitudes	Equality of Opportunity	Assesses whether individuals enjoy equality of opportunity and freedom from economic exploitation.	Freedom House	0.70
Free Flow of Information	Structures	Freedom of the Press	A composite measure of the degree of print, broadcast and internet freedom.	Reporters Without Borders (RSF)	0.50
	Attitudes	Quality of Information	Measured by Government dissemination of false information domestically: How often governments disseminate false or misleading information.	Varieties of Democracy (V-Dem)	0.60
	Structures	Individuals using the Internet (% of population)	Internet users are individuals who have used the Internet (from any location) in the last three months. The Internet can be used via a computer, mobile phone, personal digital assistant, games machine, digital TV etc.	International Telecommunication Union	0.61
Good Relations with Neighbours	Attitudes	Law to Support Equal Treatment of Population Segments	This is a measure of how population segments interrelate with their domestic neighbours. It assesses whether laws, policies, and practices guarantee equal treatment of various segments of the population.	Freedom House	0.66
	Structures	International Tourism	Number of tourists (Number of arrivals per 100,000 population) who travel to a country (staying at least one night) other than that in which they have their usual residence.	World Tourism Organization	0.63
	Institutions	External Intervention	The external intervention Indicator considers the influence and impact of external actors in the functioning - particularly security and economic - of a state.	Fragile States Index	0.71
High Levels of Human Capital	Structures	Share of youth not in employment, education or training (NEET)	Proportion of people between 15 and 24 years of age that are not employed and are not in education or training.	International Labour Organization	0.75
	Structures	Researchers in R&D	The number of researchers engaged in Research & Development (R&D), expressed as per one million population.	UNESCO	0.67
	Structures	Healthy life expectancy (HALE)	Average number of years that a newborn can expect to live in full health.	World Health Organisation	0.59

Low Levels of Corruption	Institutions	Control of Corruption	Control of Corruption captures perceptions of the extent to which public power is exercised for private gain.	World Bank	0.78
	Attitudes	Factionalised Elites	Measures the fragmentation of ruling elites and state institutions along ethnic, class, clan, racial or religious lines.	Fragile States Index	0.72
	Institutions	Public Sector Theft	Assesses perceptions of how often public sector employees steal, embezzle or misappropriate public funds or other state resources.	Varieties of Democracy (V-Dem)	0.73
Sound Business Environment	Institutions	Regulatory Quality	Captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.	World Bank	0.76
	Institutions	Financial Institutions Index	Part of the financial development index, this indicator measures the quality of the financial institutions, including the depth of the financial sector and the access to financial products.	International Monetary Fund	0.62
	Structures	GDP per capita	GDP per capita (current US$) is gross domestic product divided by midyear population.	International Monetary Fund	0.67
Well-Functioning Government	Institutions	Government Openness and Transparency	Assesses to what extent the Government operations can be legally influenced by citizens and are open to scrutiny from society.	Freedom House	0.63
	Institutions	Government Effectiveness: Estimate	Government Effectiveness captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.	World Bank	0.79
	Institutions	Rule of Law: Estimate	Rule of Law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.	Bertelsmann Transformation Index	0.68

B Positive Peace Index Rankings

TABLE B.1

Results of the 2022 Positive Peace Index

Country	Rank	PPI Overall Score	Well-Functioning Government	Low Levels of Corruption	Sound Business Environment	Equitable Distribution of Resources	Acceptance of the Rights of Others	Free Flow of Information	High Levels of Human Capital	Good Relations with Neighbours
Sweden	1	1.23	1.15	1.34	1.31	1.22	1.10	1.04	1.15	1.49
Denmark	2	1.24	1.12	1.15	1.38	1.19	1.42	1.06	1.23	1.37
Finland	3	1.26	1.10	1.23	1.48	1.24	1.01	1.08	1.24	1.74
Norway	4	1.27	1.12	1.23	1.57	1.09	1.37	1.09	1.15	1.59
Switzerland	5	1.28	1.11	1.28	1.10	1.53	1.31	1.14	1.15	1.63
Netherlands	6	1.36	1.20	1.64	1.42	1.28	1.43	1.40	1.14	1.37
Canada	7	1.37	1.23	1.52	1.13	1.38	1.45	1.32	1.54	1.37
Australia	8	1.39	1.29	1.42	1.06	1.34	1.44	1.65	1.26	1.76
Germany	9	1.40	1.33	1.56	1.45	1.39	1.54	1.29	1.18	1.37
Ireland	10	1.43	1.50	1.56	1.52	1.39	1.17	1.28	1.28	1.74
New Zealand	11	1.45	1.21	1.22	1.27	1.71	1.61	1.26	1.34	2.07
Japan	12	1.47	1.35	1.79	1.21	1.43	1.34	1.82	1.07	1.72
Iceland	13	1.54	1.57	1.48	1.55	1.59	1.07	1.39	1.13	2.63
Singapore	14	1.56	1.59	1.60	1.33	1.56	1.15	2.49	1.09	1.76
Austria	15	1.57	1.54	1.99	1.54	1.61	1.54	1.62	1.21	1.37
Belgium	16	1.57	1.59	1.91	1.42	1.68	1.55	1.24	1.27	1.77
France	17	1.57	1.46	1.67	1.30	1.65	1.96	1.85	1.26	1.42
United Kingdom	17	1.69	1.38	2.05	1.16	2.01	2.16	1.82	1.35	1.56
South Korea	19	1.69	2.09	2.23	1.47	1.66	1.32	1.48	1.09	2.04
Portugal	20	1.70	1.63	2.17	2.05	1.85	1.32	1.41	1.23	1.77
Spain	21	1.83	1.73	2.54	1.70	1.83	1.88	1.48	1.81	1.56
Slovenia	22	1.86	1.66	2.11	2.06	1.86	1.63	2.20	1.22	2.12
Estonia	23	1.90	1.57	2.29	2.12	1.61	2.06	1.59	1.52	2.39
United States	24	1.95	1.69	2.71	1.28	2.09	2.21	2.04	1.67	1.81
Italy	25	1.98	2.41	2.80	1.66	1.50	1.60	1.79	2.18	1.76
Czech Republic	26	1.99	2.02	2.85	2.18	1.78	1.75	2.01	1.59	1.53
Taiwan	27	2.00	1.81	2.25	2.50	1.67	1.59	1.79	1.91	2.48
Lithuania	28	2.01	1.98	2.28	2.52	1.76	1.58	1.63	1.84	2.44
Uruguay	29	2.08	1.95	1.96	2.70	2.00	1.70	1.54	2.86	2.01
Latvia	30	2.14	1.96	2.65	2.57	1.75	2.32	1.25	2.25	2.19
Poland	31	2.14	2.59	2.49	2.53	1.76	1.90	2.15	1.78	1.76
Chile	32	2.15	1.68	1.91	2.44	2.22	2.24	1.97	2.80	2.04

Country	Rank	PP overall score	Well-Functioning Government	Low Levels of Corruption	Sound Business Environment	Equitable Distribution of Resources	Acceptance of the Rights of Others	Free Flow of Information	High Levels of Human Capital	Good Relations with Neighbours
Slovakia	33	2.18	2.53	2.84	2.39	2.03	2.20	1.60	1.87	1.69
Greece	34	2.23	2.46	2.73	2.70	1.67	1.75	2.03	1.69	2.71
Israel	35	2.23	1.88	2.92	1.48	2.08	2.60	2.03	1.34	3.49
Cyprus	36	2.26	1.81	3.13	2.02	1.84	1.93	1.63	2.42	3.33
United Arab Emirates	37	2.30	2.76	2.22	2.07	2.50	1.84	2.51	2.12	2.32
Croatia	38	2.31	2.40	2.83	2.56	1.96	2.00	1.98	2.26	2.42
Costa Rica	39	2.31	2.06	2.46	2.90	2.16	1.94	1.37	2.88	2.75
Hungary	40	2.36	2.61	2.93	2.68	1.99	1.94	2.40	1.85	2.31
Romania	41	2.53	2.62	3.27	2.94	2.17	2.46	1.71	2.73	2.10
Bulgaria	42	2.53	2.54	3.27	2.74	2.44	2.00	2.24	2.23	2.61
Mauritius	43	2.57	2.12	2.52	2.89	2.51	2.24	2.64	3.09	2.72
Malaysia	44	2.59	2.41	3.15	2.70	2.94	2.61	2.02	2.21	2.46
Argentina	45	2.63	2.83	2.67	3.56	2.39	2.36	1.87	2.72	2.53
Kuwait	46	2.66	2.85	3.50	2.25	2.63	2.05	2.22	2.95	2.71
Trinidad and Tobago	47	2.68	2.66	2.99	2.88	2.29	2.07	1.84	3.70	3.07
Botswana	48	2.69	2.63	2.34	3.23	2.26	2.32	2.17	3.76	2.96
Qatar	49	2.69	2.73	2.80	2.13	2.41	2.22	2.29	2.70	4.41
Panama	50	2.72	2.68	2.90	2.94	2.64	2.85	2.27	3.00	2.39
Georgia	51	2.77	2.29	3.20	2.94	2.40	2.62	2.60	2.85	3.28
Montenegro	52	2.79	2.85	3.30	3.23	1.92	2.48	2.36	2.83	3.29
Jamaica	53	2.83	2.88	2.65	3.43	2.48	2.17	1.78	3.87	3.51
Tunisia	54	2.87	2.94	3.29	3.72	2.46	2.44	2.30	2.66	2.94
Oman	54	2.87	3.21	3.12	2.98	2.84	2.21	2.33	2.90	3.24
Macedonia	56	2.87	3.01	3.54	3.16	2.49	2.27	2.07	2.83	3.48
Mongolia	57	2.92	2.81	3.31	3.24	2.79	2.25	2.34	3.33	3.31
South Africa	58	2.93	2.56	3.43	3.02	3.29	3.03	2.09	3.57	2.29
Albania	59	2.93	3.09	3.56	3.45	2.46	2.17	2.48	3.21	2.90
Thailand	60	2.94	3.06	4.05	2.95	2.78	3.04	2.67	2.53	2.09
Serbia	61	2.96	2.97	3.82	3.30	2.36	2.40	2.73	2.34	3.61
Armenia	62	2.97	3.00	3.30	3.35	2.64	2.30	2.38	3.32	3.45
Brazil	63	2.98	3.05	3.26	3.16	2.54	3.12	2.87	2.97	2.82
Ghana	64	2.99	2.71	3.25	3.89	2.79	2.43	2.04	3.62	3.14
Bhutan	65	2.99	2.36	2.64	3.70	2.42	2.93	2.94	3.02	4.16
China	66	3.00	3.14	3.42	3.07	2.58	2.68	3.75	2.62	2.74
Peru	67	3.00	3.12	3.53	3.10	2.89	3.31	2.22	2.99	2.67
Belarus	68	3.08	3.54	3.50	3.76	2.41	1.95	3.02	2.99	3.39
Namibia	69	3.08	2.80	2.78	3.25	3.28	3.02	2.59	3.67	3.38
Vietnam	70	3.08	3.20	3.61	3.70	2.69	2.52	3.20	2.85	2.76
Russia	71	3.09	3.41	4.03	3.17	2.60	2.89	3.05	2.05	3.22
Bahrain	72	3.11	3.22	3.54	2.67	2.79	3.26	2.82	2.96	3.52
Moldova	73	3.11	3.46	3.92	3.45	2.52	2.39	2.11	3.18	3.64
Ukraine	73	3.11	3.26	3.86	3.67	2.80	2.59	2.53	2.81	3.16
Kazakhstan	75	3.12	3.59	3.74	3.35	2.58	2.87	2.88	2.74	2.98
Mexico	76	3.12	3.20	3.52	3.27	2.84	3.21	2.96	3.03	2.81
Kosovo	77	3.14	3.45	3.79	3.58	2.58	2.64	1.87	3.28	3.69
Senegal	78	3.16	2.74	3.20	3.97	3.06	2.91	2.48	3.47	3.45
Saudi Arabia	79	3.16	3.33	3.52	2.91	2.90	3.20	2.99	3.14	3.20
Morocco	80	3.18	3.29	3.43	3.63	3.01	3.27	2.26	3.24	3.11

Country	Rank	PP overall score	Well-Functioning Government	Low Levels of Corruption	Sound Business Environment	Equitable Distribution of Resources	Acceptance of the Rights of Others	Free Flow of Information	High Levels of Human Capital	Good Relations with Neighbours
Colombia	81	3.18	2.77	3.54	3.29	2.87	3.64	2.90	3.14	3.25
Dominican Republic	82	3.19	3.16	3.70	3.52	3.04	3.50	1.81	3.28	3.24
Bosnia and Herzegovina	82	3.19	3.49	4.16	3.38	2.52	2.58	2.37	3.00	3.82
Jordan	84	3.19	3.13	3.27	3.46	2.71	3.35	2.91	3.28	3.41
India	85	3.22	2.61	3.56	3.71	3.14	3.44	3.36	3.46	2.43
Ecuador	85	3.22	3.25	3.65	3.89	2.73	3.02	2.81	2.90	3.33
Indonesia	87	3.22	2.99	3.84	3.57	3.00	3.65	2.58	3.20	2.73
Turkey	88	3.23	3.56	3.91	3.27	2.94	3.26	2.99	2.77	2.90
Paraguay	89	3.24	3.29	3.87	3.70	3.17	3.22	2.35	3.08	2.99
Benin	90	3.26	3.02	3.11	4.01	3.45	3.04	2.87	3.41	3.13
Cuba	91	3.26	3.65	3.78	3.92	2.70	1.97	3.66	2.75	3.57
El Salvador	92	3.28	3.06	3.45	3.53	2.96	3.49	3.03	3.36	3.30
Bolivia	93	3.28	3.53	3.97	3.61	3.00	2.67	2.97	2.97	3.30
Guyana	94	3.29	3.20	3.20	3.78	2.96	2.98	2.94	3.67	3.68
Sri Lanka	95	3.32	2.97	3.75	3.68	2.57	3.34	3.28	3.19	3.81
Algeria	96	3.39	3.65	3.83	4.22	2.94	3.07	3.18	2.90	3.07
Philippines	97	3.41	3.08	3.79	3.64	3.02	3.53	3.42	3.22	3.52
Kyrgyz Republic	98	3.43	3.45	3.97	3.99	2.95	3.26	3.02	3.19	3.47
Burkina Faso	99	3.44	3.32	3.52	4.05	3.15	2.79	2.86	3.95	3.90
Uzbekistan	100	3.47	3.73	4.30	3.95	3.19	2.90	3.00	2.79	3.62
Lesotho	101	3.48	3.32	3.56	4.02	3.59	2.68	2.77	4.31	3.65
Tanzania	102	3.50	3.68	3.15	4.21	3.19	3.11	3.45	3.27	4.00
Kenya	103	3.54	3.21	3.98	3.90	3.12	3.55	3.26	3.20	4.02
The Gambia	103	3.55	3.53	3.63	4.20	3.65	2.77	2.58	4.08	3.96
Lebanon	105	3.55	3.76	4.29	3.55	3.02	3.50	2.56	3.25	4.31
Palestine	106	3.56	3.75	3.92	3.47	3.31	3.39	2.45	3.28	4.78
Honduras	107	3.57	3.74	4.01	3.86	2.92	3.13	3.37	3.43	4.01
Iran	108	3.57	3.64	4.31	3.94	3.08	3.70	3.09	2.94	3.59
Nicaragua	109	3.57	3.85	4.21	4.08	3.03	3.29	3.49	2.75	3.67
Sierra Leone	110	3.58	3.27	3.81	4.39	3.41	3.44	3.17	3.31	3.73
Timor-Leste	111	3.59	3.59	3.70	4.18	3.27	3.61	2.92	3.32	4.06
Azerbaijan	112	3.59	3.72	4.23	3.74	3.52	3.05	3.21	3.02	4.10
Zambia	113	3.59	3.30	3.44	4.12	3.61	3.42	3.29	4.02	3.61
Egypt	114	3.60	3.48	4.12	3.99	3.31	3.89	3.23	3.18	3.37
Rwanda	115	3.61	3.12	3.38	3.92	3.49	4.12	3.39	3.62	3.94
Cambodia	116	3.63	3.71	4.41	3.91	3.43	3.64	2.88	2.98	3.75
Malawi	117	3.63	3.28	4.04	4.22	3.51	3.41	2.98	3.70	3.81
Gabon	118	3.64	4.02	3.99	4.05	3.54	2.91	2.84	3.94	3.69
Cote d'Ivoire	119	3.64	3.55	3.92	3.94	3.51	3.57	2.96	3.80	3.81
Togo	120	3.64	3.42	3.89	4.07	3.59	3.37	3.38	3.56	3.84
Guatemala	121	3.65	3.78	3.94	3.61	3.50	4.22	3.07	3.43	3.49
Eswatini	122	3.66	3.87	3.73	3.90	3.57	2.92	3.30	3.95	4.04
Madagascar	123	3.66	3.64	4.06	4.21	3.90	3.53	3.12	3.11	3.51
Laos	124	3.66	3.78	4.01	4.07	3.40	3.41	3.64	3.38	3.52
Mozambique	125	3.70	3.54	3.83	4.18	3.59	3.28	3.31	4.08	3.77
Nepal	126	3.70	3.72	4.02	3.92	3.45	3.44	3.44	3.65	3.90
Papua New Guinea	127	3.71	3.74	3.89	3.99	3.82	4.08	2.90	3.58	3.53
Myanmar	128	3.72	3.93	3.62	4.14	3.61	3.78	3.03	3.19	4.30

Country	Rank	PP overall score	Well-Functioning Government	Low Levels of Corruption	Sound Business Environment	Equitable Distribution of Resources	Acceptance of the Rights of Others	Free Flow of Information	High Levels of Human Capital	Good Relations with Neighbours
Liberia	129	3.72	3.71	3.97	4.29	3.63	3.60	3.12	3.30	3.97
Pakistan	129	3.74	3.10	4.03	4.05	3.69	3.53	3.68	3.57	4.31
Ethiopia	131	3.74	3.57	3.93	4.23	3.71	3.67	3.41	3.10	4.16
Djibouti	132	3.75	4.02	3.81	4.04	3.63	3.49	3.50	3.16	4.26
Niger	132	3.77	3.37	3.96	4.17	3.77	3.49	3.36	4.19	3.85
Bangladesh	134	3.81	3.38	4.45	4.12	3.17	4.21	3.82	3.38	3.82
Nigeria	135	3.84	3.58	4.58	4.14	3.85	4.04	2.92	3.76	3.59
Angola	136	3.84	4.20	3.88	4.17	4.14	3.96	3.12	3.65	3.35
Mali	137	3.84	3.83	3.73	4.12	3.93	4.14	2.73	3.64	4.55
Uganda	138	3.85	3.50	4.24	4.10	3.69	3.84	3.54	3.69	4.13
Mauritania	139	3.88	3.56	4.32	4.18	4.06	4.25	3.26	3.49	3.70
Turkmenistan	140	3.89	4.33	4.39	4.37	3.59	3.11	4.44	3.10	3.62
Guinea	141	3.91	3.86	4.28	4.27	3.70	4.12	3.55	3.33	4.01
Guinea-Bissau	142	3.94	4.39	4.65	4.41	3.97	3.30	2.93	3.74	3.85
Tajikistan	143	3.96	4.23	4.29	4.19	3.80	3.64	3.89	3.78	3.73
Zimbabwe	144	3.98	4.02	4.47	4.43	3.76	3.28	3.73	4.07	4.02
Republic of the Congo	145	4.00	4.31	4.08	4.32	3.70	4.20	3.62	3.28	4.32
Cameroon	146	4.01	3.84	4.53	4.19	4.11	4.26	2.97	3.44	4.47
Venezuela	147	4.01	4.80	4.80	4.03	4.12	3.34	3.55	3.18	3.90
Haiti	148	4.04	3.90	4.29	4.35	4.38	4.05	3.37	3.38	4.46
North Korea	149	4.06	4.49	4.50	4.21	3.16	3.39	5.00	3.01	4.72
Equatorial Guinea	150	4.08	4.39	4.41	4.21	4.32	3.72	3.80	3.64	3.94
Burundi	151	4.09	4.39	4.55	4.27	3.71	3.99	4.12	3.15	4.35
Libya	152	4.10	4.72	4.68	4.59	3.50	3.08	3.64	3.45	4.92
Afghanistan	153	4.10	4.25	4.48	4.29	3.78	4.11	3.49	3.91	4.34
Iraq	154	4.10	4.22	4.53	4.15	3.57	4.25	3.54	3.70	4.74
Sudan	155	4.21	4.38	4.35	4.52	4.09	4.25	3.74	3.51	4.71
Eritrea	156	4.29	4.58	4.17	4.81	4.12	3.81	4.70	3.64	4.47
Syria	157	4.30	4.73	4.70	4.53	3.83	3.91	4.30	3.43	4.87
Democratic Republic of the Congo	158	4.31	4.33	4.61	4.62	4.05	4.52	3.78	3.48	4.88
Chad	159	4.37	4.42	4.77	4.43	4.42	4.55	3.74	3.89	4.59
Central African Republic	160	4.43	4.62	4.46	4.61	4.57	4.48	3.90	3.76	4.91
Yemen	161	4.54	4.79	4.73	4.58	4.47	4.95	4.04	3.97	4.61
South Sudan	162	4.55	4.85	4.79	4.79	4.61	4.61	4.14	3.49	4.90
Somalia	163	4.59	4.98	4.78	4.90	4.51	4.49	4.41	3.61	4.82

ENDNOTES

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SECTION 4

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2 Rotary, (https://www.rotary.org/en/institute-economics-and-peace).

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