Interconnections of global trends
Analysis tool
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Analysis tool

- ABOUT THE TOOL
- ABOUT THE PROCESS
- LIST OF TRENDS
- KEY FINDINGS
- INTERVIEW PARTNERS

EXPLORE TREND CONNECTIONS BY CLICKING ON A TREND
About the Tool

PURPOSE OF THE TOOL

This tool can be used to explore the interconnections of global trends. Its goal is to promote integrated thinking and to spark debate and further research on the connections of global trends.

HOW TO READ THE TREND RELATIONS

- The bigger a circle the more influential the trend (i.e. size of circle indicates the number of other trends influenced by the trend).

- Please read the connections CLOCKWISE.
  A is influencing B and is influenced by C
  B is influencing C and is influenced by A and C
  C is influencing A and B and is influenced by B

- Trends have different influences:
  Blue shows a driving influence.
  Yellow shows an ambiguous influence.
  Red shows an inhibiting influence.

Feedback loops are showing reinforcing patterns between trends.

HOW TO USE THE TOOL

You can navigate through the tool by clicking on the different trends.

- Use the home button to jump to the starting page.
- Use explanation button for hypotheses on trend relations.
- Use the loop button to highlight feedback loops.
About the Process

In a Delphi survey in 2017, we identified trends that are likely to have a great impact on development cooperation in 2032. When discussing the results, it was found that especially the interconnections of these trends should be further analysed.

In an exploratory research process, we conducted another round of interviews in 2018. We interviewed 40 renowned international experts, asked them to assess the influence of 38 trends and conducted a quantitative and qualitative analysis of the data.

The answers of the experts were aggregated. The mean of all responses was calculated and the results were incorporated into this tool. In doing so, we differentiate between clearly driving, clearly inhibiting and ambiguous influences. All connections should be interpreted as hypotheses on trend relations.

Our tool shall inspire further reflection processes and research. One aspect we found particularly interesting was to look at reinforcing patterns or feedback loops. The tool offers the opportunity to further explore those loops and thereby identify ways to break downward spirals or reinforce upward ones.
List of Trends

ECONOMIC DEVELOPMENT, POVERTY, INEQUALITY, HEALTH
- Weakening economic growth
- Instability of financial system
- Volatile trade regime
- More global value chains
- Decrease in absolute poverty
- Inner-state inequality
- Medical progress
- Unequal access to medical services
- Higher risk of infectious diseases

TECHNOLOGY, INNOVATION, FUTURE OF WORK
- Advancing digitalisation
- Automation
- Digital divide
- Cyber insecurity
- Unemployment
- Female educational attainment

GLOBAL GOVERNANCE, INTER-DEPENDENCIES, (NEW) ACTORS AND GLOBAL PLAYERS
- Weakening of multilateral institutions
- More influential plurilateral initiatives
- Fragmented global responses
- Growing influence of China
- More non-state actors
- Increasing power of transnational companies
- Growing nationalist tendencies

ENVIRONMENT, CLIMATE CHANGE, NATURAL RESOURCES, (UN-) SUSTAINABLE LIFESTYLES
- Climate change
- Environmental degradation
- Depletion of natural resources
- More global consumption
- Energy diversification
- Volatile food supply

DEMOGRAPHIC CHANGE, URBANISATION, MOBILITY, MIGRATION
- Global population growth
- Ageing populations
- Accelerating urbanisation
- Growing mobility of people
- Increasing infrastructure
- Increased forced migration

CITIZEN-STATE RELATIONS, FRAGILITY
- Rising public demand
- Authoritarian reactions
- Increased state fragility
- Formation of interest groups
Key Findings

- **TOP 5 MOST INFLUENTIAL TRENDS**
- **TOP 5 MOST PROMINENT CONNECTIONS**
- **EXEMPLARY FEEDBACK LOOPS**
- **TOP 5 MOST INFLUENCED TRENDS**
- **TOP 5 MOST AMBIGUOUS CONNECTIONS**
TOP 5 Most Influential Trends

Trends that influence the biggest number of other trends
TOP 5
Most Influenced Trends

Trends that are influenced by the biggest number of other trends
TOP 5 Most Prominent Connections

Connections that have been identified most frequently
TOP 5 Most Ambiguous Connections

Connections on which expert opinions varied the most
Exemplary Feedback Loops

Show reinforcing patterns between trends

TOP 5 most influential trends

TOP 5 most influenced trends
Interconnections of global trends

Analysis tool
Weakening of established multilateral institutions
Weakening of established multilateral institutions

Selected trend connections

The weakening of multilateral institutions leads to increased fragmentation and more pluralism in tackling global challenges.

A weakening of multilateral institutions will likely coincide with a decrease in peacekeeping efforts.

This trend has an influence on all developments in global governance.

In certain areas, collective action through multilateral institutions is needed to tackle development challenges, such as climate change. In other areas, the impact of a single solution that could be provided by a single actor might be sufficient (e.g. finding medical cures).
Weakening of established multilateral institutions

Feedback loops

A weakening of established institutions leads to a shift to new systems shaped by new actors, with new standards for new activities, which in turn further weakens established institutions.

Multilateral institutions are strengthened if they can show successes on a variety of (new) global challenges (cyber insecurity, climate change, increasing power of transnational companies) but are further weakened in case they do not succeed in resolving such challenges.

The weakness of established institutions drives a shift to new systems, which will be shaped by new, increasingly non-state actors. These further weaken the position of established multilateral institutions.
More influential plurilateral initiatives
More influential plurilateral initiatives

Driving influence

Ambiguous influence

Inhibiting influence
More influential plurilateral initiatives

Feedback loops

The shrinking importance of multilateral institutions fosters new forms of cooperation and engagement, which thereby further weaken the multilateral system.
Further fragmentation of responses to global challenges
Further fragmentation of responses to global challenges

Selected trend connections

A greater plurality of actors and approaches in combination with a coherent strategy allows for innovation and has the potential to deliver positive development impacts and solutions to global challenges. On the other hand, fragmented thinking entails certain risks.

Collective action and global standards are necessary to tackle climate change, environmental degradation and the depletion of natural resources. Fragmented measures are therefore less effective.

A fragmentation of global responses will likely coincide with a decrease in peacekeeping efforts.

For medical progress, the impact of a single solution that could be provided by a single actor might be sufficient (e.g. finding of medical cures).
Further fragmentation of responses to global challenges

Feedback loops

With growing numbers of interest groups, reaching cohesive responses to global challenges becomes more difficult. Unresolved global challenges lead to increased formation of interest groups aiming for ‘self-help’.
Growing global influence of China
Growing global influence of China

Selected trend connections

Driving influence
Ambiguous influence
Inhibiting influence

China is branching out, thereby creating alternative institutions to established ones.

Through loans to developing countries (especially on the African continent), China might be fostering a debt crisis. However, the United Arab Emirates, Turkey and Japan follow similar development policies.

China, due to domestic pressure, is likely to become the single most important provider of environmental solutions, but at the same time remains one of the most important emitters.

China potentially provides a new model for state-citizen relations which other countries might follow.

China is pushing for renewables and investment (at home) could have a great impact given China's global role in providing infrastructure. On the other hand, China is still investing in, and dependent on, coal and fossil fuels (abroad).
Growing global influence of China

Feedback loops

Many transnational companies (TNCs) will be Chinese, and thus, as they are mostly state-owned, increase the (geopolitical) influence of China. On the other hand, China itself politically backs Chinese TNCs abroad, e.g. supporting the acquisition of land.

China is fostering infrastructure developments whose increasing importance in development increases the role of China.

China is leading and pushing for technological progress and automation. Its influential position is likely to increase further due to its ability to manage and profit from technological progress.

Supported by the weakness of established institutions, China is branching out and setting up alternative institutions, thereby further weakening established institutions.
Increasing emergence and assertion of non-national-state actors

Driving influence
Ambiguous influence
Inhibiting influence
Increasing emergence and assertion of non-national-state actors

Selected trend connections

Driving influence
Ambiguous influence
Inhibiting influence
Increasing emergence and assertion of non-national-state actors

Feedback loops

The weakness of established institutions drives a shift to new systems, which will be shaped by new, increasingly non-state actors. These further weaken the position of established multilateral institutions.
Increasing power of transnational companies
Increasing power of transnational companies

Selected trend connections

- Many transnational companies (TNCs) will be Chinese, and thus, as they are mostly state-owned, increase the geopolitical influence of China.
- Transnational companies invest in digital services and digitalisation in African and other developing countries, thereby driving digitalisation worldwide.
- TNCs in agriculture are likely to increase dependency and soil exploitation and have a disproportional (negative) effect on subsistence farmers.
Increasing power of transnational companies

Feedback loops

Transnational companies invest in digital services and digitalisation in African and other developing countries, thereby driving digitalisation worldwide.

Transnational IT companies drive digitalisation, which is likely to increase the digital divide. At the same time, the greater the digital divide, the greater the influence of transnational IT companies.

Instability in the international financial system and its (political) mismanagement leave the field to TNCs, who further drive instability by exploiting the weakness of the international financial system.

Transnational companies push the proliferation of global value chains. With more global value chains transnational companies gain power.

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On the other hand, China itself politically backs Chinese TNCs abroad, e.g. supporting the acquisition of land.

Increasing power of transnational companies

More influential multilateral initiatives

Volatile trade regime

Fragmented global responses

Depletion of natural resources

Instability of financial system

Climate change

Volatility of food supply

Increased state fragility

Decrease in absolute poverty

Global population growth

Authoritarian reactions

Transnational companies also invest in digital services and digitalisation in African and other developing countries, thereby driving digitalisation worldwide.

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Transnational companies push the proliferation of global value chains. With more global value chains transnational companies gain power.
Growing nationalist
tendencies
Growing nationalist tendencies

Selected trend connections

Growing nationalist tendencies contribute to a division of the political sphere into two camps: nationalists and cosmopolitans.

Nationalist tendencies build on systems of exclusion, which makes patterns of inequality more pronounced.

Nationalist movements give rise to authoritarian and non-democratic tendencies, not only on governmental, but also on societal levels.
Growing nationalist tendencies

Feedback loops

Weakening economic growth drives nationalism whereas nationalism, in the long run, has negative effects on economic growth.
Growing number and intensity of negative effects of climate change
Growing number and intensity of negative effects of climate change

### Selected trend connections

<table>
<thead>
<tr>
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<th>Ambiguous influence</th>
<th>Inhibiting influence</th>
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<td>Climate change is likely to decrease soil fertility and not only harm subsistence, but also large-scale farming.</td>
<td>A future marker of inequality will be who has to live in affected areas and who can move away.</td>
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Growing number and intensity of negative effects of climate change

Feedback loops

Multilateral institutions are strengthened if they show success with global challenges like climate change but are further weakened in case they do not succeed in resolving such challenges.

The management of urbanisation is critical for tackling climate change and vice versa.
Environmental degradation and further loss of biodiversity
Environmental degradation and further loss of biodiversity

Selected trend connections

Environmental degradation, due to domestic pressure, is forcing China to become the most important provider of ‘green’ solutions.

The perceived helplessness concerning environmental degradation and the ineffectiveness of multilateral institutions drives nationalist reactions.

The loss of habitat of animals, who are potential transmitters of infectious diseases, leads to increased interactions between humans and animals and therefore a growing risk of outbreaks.

Populations e.g. (subsistence) farmers, are losing their livelihoods due to environmental degradation and are being pushed towards urban centers in the search of jobs.
Environmental degradation and further loss of biodiversity

Feedback loops

Climate change will be decided in cities, i.e. the (mis-)management of urbanisation is critical for tackling climate change, environmental degradation, global consumption. Cities have the potential to be more efficient and sustainable – but whether the potential is used, depends on how urbanisation is managed.

Scarcity of fertile land and water is likely to spark conflicts. At the same time, environmental issues are unlikely to be considered and enforced in conflictual contexts and fragile states which further increases environmental degradation.
Depletion of natural resources

- Driving influence
- Ambiguous influence
- Inhibiting influence
Depletion of natural resources

Selected trend connections

The depletion of natural resources increases the risk for conflicts on water and other scarce resources. Technological progress and digitalisation have a massive potential for tackling developmental and environmental challenges. At the same time, emissions increase and the need for rare metals depletes natural resources.
Rising levels of global consumption

- Driving influence
- Ambiguous influence
- Inhibiting influence
Rising levels of global consumption

Selected trend connections

Unsustainable production and over-consumption, accelerated by growing middle classes, are outstripping natural capacities. Examples are the consumption of meat as a main driver for climate change, or monocultures as a main cause for environmental degradation.

Global consumption is a driver of migration as it requires poor working conditions and cheap labour in the Global South.
Rising levels of global consumption

Feedback loops

Through cheap transport and production costs, global value chains drive global consumption. On the other side, the proliferation of global value chains is driven by growing demand, i.e. consumption by growing global middle classes.
Progressing diversification in energy production
Progressing diversification in energy production

Selected trend connections

The emerging ‘green’ energy sector is likely to create (new) jobs whereas jobs may be lost in ‘old’ energy industries (e.g. coal mining jobs).

Energy diversification creates infrastructural needs for a transfer to ‘green’ energy.
Progressing diversification in energy production

Feedback loops
Increasing pressure on food supply and volatile food markets
Increasing pressure on food supply and volatile food markets

Selected trend connections

- Increasing pressure on food supply as well as volatile food markets are likely to increase inner-state inequality as poor population groups are the least resilient to food crises.
- A lack of support for, and profit from smallholder farming is likely to lead to loss of jobs and migration.
Global population growth

- Driving influence
- Ambiguous influence
- Inhibiting influence
Global population growth

Selected trend connections

Population growth coupled with the growth of the global middle class will likely increase the reach of transnational companies dramatically.

"Youth bulges" will potentially make it more difficult to curb the HIV pandemic.

Demographic shifts will have geopolitical effects: China’s population is shrinking whereas populations of India and Sub-Saharan Africa are exploding. At the same time, the mean age is plummeting.

Population growth could foster economic growth for those economies, where population growth and purchasing power growth coincide, and if products are manufactured locally for local markets (e.g. on the African continent for growing African markets).

Increases in absolute population numbers are a challenge to state systems and service provision, thus potentially increasing state fragility in the long term.

"Youth bulges\" will potentially make it more difficult to curb the HIV pandemic.

Demographic patterns will aggravate poverty, if not addressed adequately.

Driving influence
Ambiguous influence
Inhibiting influence
Global population growth

Feedback loops

Infectious diseases are likely to most severely impact the youngest and oldest parts of a population.
Ageing populations

- Driving influence
- Ambiguous influence
- Inhibiting influence
Ageing populations

Selected trend connections

Ageing populations

Medical services are unlikely to keep up with the increasing demands of ageing populations. Access to medical services therefore remains unequal/a matter of means.

Ageing populations in richer countries could create opportunities for immigration to meet growing demands in the medical sector and to make up for the shrinking labour force in countries with ageing populations.
Ageing populations

Feedback loops
Accelerating urbanisation
Accelerating urbanisation drives the increasingly influential role of growing (and a growing number of) cities as non-state actors.

On the one side, urbanisation provides working opportunities, on the other side, there is a risk of a 'ghettoization' of poor populations.

The future of work is decided in cities. Urbanisation, e.g. through needs for infrastructure and opportunities for scale economies, is likely to provide employment.

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Accelerating urbanisation

Feedback loops

(Job) opportunities arising from digitalisation are most tangible in cities (pull factor). Urbanisation on the other side provides opportunities for digital innovation (digital hubs) and thereby drives digitalisation.

Climate change will be decided in cities. The (mis-)management of urbanisation is critical for tackling climate change, environmental degradation and global consumption. Cities have the potential to be more efficient and sustainable – but whether the potential is used, depends on how urbanisation is managed.
Growing mobility of people
Growing mobility of people

Selected trend connections

Growing mobility leads to the formation of new social bonds and a plurality of individual identities. On the other side, it might also leave individuals isolated.

Migrants can pose a financial challenge to the hosting communities but can also help to bridge the skills- and labour shortage (e.g., due to an ageing population).

One in five migrants/refugees lives in the world’s top 20 largest cities.
Growing mobility of people

Feedback loops

A decrease in poverty enables greater mobility while emigrants (through remittances and investment) can contribute to a further decrease in poverty, under suitable circumstances.

Mobility (also rural to urban) frequently leads to political responses that are authoritarian in nature, restricting mobility and other civil and political rights.
Further development of infrastructure and communication networks
Further development of infrastructure and communication networks

Selected trend connections

Infrastructure development and increasing education are avenues to positively shape drivers that are relatively hard to influence. These drivers are population growth, the demographic shift towards ageing populations, urbanization, and the mobility of people.

Investments in infrastructure, e.g. in Africa, will make China an ever more powerful player.

Increased connectivity facilitates the formation of (global) interest groups.

Through increased proliferation of smartphones, the digital divide is in fact not growing but decreasing. The relative difference will not be seen between those who are connected and those who are not connected, but between the quality of connectedness.
Further development of infrastructure and communication networks

Feedback loops

- China is fostering infrastructure development whose increasing importance in development increases the role of China.

- Transnational companies develop and provide infrastructure, which increases their influence.

- Energy diversification creates infrastructural needs. The further development of infrastructure thereby supports energy diversification.
Increased forced migration

Components:
- Volatile trade regime
- Weakening of multilateral institutions
- Ambiguous influence
- Inhibiting influence

Drivers:
- More non-state actors
- Fragmented global responses
- Depletion of natural resources
- More global value chains
- Environmental degradation
- More global consumption
- Higher risk of infectious diseases
- Global population growth
- Increased state fragility
- Increased economic growth
- Weakening economic growth
- Volatile food supply
- Growing nationalist tendencies
- Rising public demand
- Inner-state inequality
- Unequal access to medical services
- Unemployment
- Growing mobility of people
- Accelerating urbanisation
- Growing nationalistic tendencies

Consequences:
- Perfection of interest groups
- Digital divide
Increased forced migration

Selected trend connections

Perception matters: Immigration surged on the list of top concerns of European citizens since 2014 with nationalists providing easy answers to these worries. However, the actual influence of nationalist policies on global levels of forced migration is limited.

One in five migrants/refugees lives in the world’s top 20 largest cities.
Increased forced migration

Feedback loops

Mobility (also rural to urban) frequently leads to political responses that are authoritarian in nature, restricting mobility and other civil and political rights.

Increasingly scarce fertile land and loss of subsistence, e.g. through droughts, are likely to force people to migrate, leading to increased pressure on nature in areas with high population density.

Unemployment and lack of job perspectives are drivers of (forced) migration. At the same time, forced migration, e.g. due to climate change, might lead to more competition for jobs in certain areas, e.g. in the receiving countries or cities.

A decrease in poverty would also lead to a decrease in forced migration, which is one driver of increasing levels of poverty.

Unemployment
Weakening economic growth
Weakening economic growth

Selected trend connections

Economic development fosters migration in the short-term.
Weakening economic growth

Feedback loops

Weakening economic growth drives nationalism whereas nationalism, in the long term, has negative effects on economic growth.
Growing instability of the international financial system
Growing instability of the international financial system

Selected trend connections

- Driving influence
- Ambiguous influence
- Inhibiting influence

The increasing volatility of financial systems has political and destabilizing effects, i.e. leads to political tensions (e.g. Turkey, Iran).
Growing instability of the international financial system

Feedback loops

Superpowers that acted as anchor of the international system are being challenged or replaced and withdraw themselves from that role. This has created a vacuum, which will be difficult to be filled in the near future, creating further destabilizing effects.

The inability of multilateral institutions to react to challenges such as a growing instability of financial systems weakened them. Financial systems then get even more volatile due to a lack of regulation.

Instability in the international financial system and its (political) mismanagement leaves the field to TNCs whose exploitation of its weaknesses further increases instability.
Increasing volatility of international trade regime
Increasing volatility of international trade regime

Selected trend connections

The growing volatility of international trade regimes creates a need for global governance and regulation. It is however unclear whether multilateral organisations have the capacity to respond to such challenges.

The nexus unemployment, volatility of trade regime, and fragility will increasingly lead to situations of hopelessness and thereby accelerate forced migration but also mobility.
Proliferation of global value chains
Proliferation of global value chains

Selected trend connections

- Volatile trade regime
- Increasing power of transnational companies
- Weakening of multilateral institutions
- Growing influence of China
- More global value chains
- More global consumption
- Climate change
- Increased forced migration
- Accelerating urbanisation
- Growing mobility of people
- Poor working conditions and cheap labour in the global south (due to exploitation by the global north) are a driver of forced migration.

There is a trend that digitalisation will lead to a localisation of production and thereby decrease the number of global value chains.

Effects of climate change may potentially disrupt global value chains.
Proliferation of global value chains

Feedback loops

Transnational companies push the proliferation of global value chains. With more global value chains, transnational companies gain power.

Through cheap production costs, global value chains drive global consumption. On the other side, the proliferation of global value chains is driven by growing demand, i.e., consumption by growing global middle classes.
Decrease in absolute poverty
Decrease in absolute poverty

Selected trend connections

As poverty and lack of perspective is one of the main drivers of forced migration, a decrease in poverty would also lead to a decrease in forced migration.
Decrease in absolute poverty

Feedback loops

A decrease in poverty enables greater mobility while emigrants (through remittances and investment) can contribute to a further decrease in poverty, under suitable circumstances.
Intensified inner-state inequality
Intensified inner-state inequality

Selected trend connections

Inequality, in terms of income and (access to) jobs and education, has frequently been named as a driver of nationalist tendencies. Experiencing inequality fuels frustration towards the state. Thus, if the state is not able to deliver, this might lead to state fragility.

The perception of inequality is as important as inequality itself.
Intensified inner-state inequality

Feedback loops

Conflict is driven by inequality but also drives inner-state inequality.

A growing digital divide with its effects on e.g. job opportunities and political representation increases inner-state inequality.

The differing access to all public services, for example health, is a driver of, and driven by inequality.
Further medical progress
Further medical progress

Selected trend connections

Through digitalisation, the diagnostic means of doctors have increased significantly. Digitalisation moreover enables greater connectivity among health professionals and facilitates the transferal of patients.

For medical progress, the impact of a single solution that could be provided by a single actor might be sufficient (e.g. finding of medical cures).

Medical progress has the potential to create new jobs in research and development of medical treatments.

Medical progress

Aging populations

Unequal access to medical services

Unemployment

Female educational attainment

Unemployment

Longer life expectancy due to medical progress.

Medical progress

Aging populations

Unequal access to medical services

Unemployment

Female educational attainment

To address the challenges of medical progress, the following trends should be considered:
Further medical progress

Feedback loops

- The differing access to all public services, for example health, is a driver of, and driven by inequality.
Continued unequal access to medical services
Continued unequal access to medical services

Selected trend connections

- Driving influence
- Ambiguous influence
- Inhibiting influence

- Urbanisation facilitates access to medical services.
- Global population growth
- Increased forced migration
- Higher risk of infectious diseases
- Fragmented global responses
- Weakening of multilateral institutions
- Weakening economic growth
- Unfair access to medical services
- Medical progress
- Inward-state inequality
- Digitalisation creates new opportunities for improved access to medical services (for example telemedicine).
- Start-up involvement in e-health can have a positive impact on access to medicine.
- More non-state actors
- Urbanisation facilitates access to medical services.
- Limited and unequal access to medical services may result in the (quicker) spread of infectious diseases.
- Medical progress could facilitate access to medical services for all populations in the future.
- Digitalisation creates new opportunities for improved access to medical services (for example telemedicine).
Continued unequal access to medical services

Feedback loops

The differing access to all public services, for example health, is a driver of, and driven by inequality.
Higher risk of infectious diseases and pandemics
Higher risk of infectious diseases and pandemics

Selected trend connections

- Driving influence
- Ambiguous influence
- Inhibiting influence

- Most severe consequences for the youngest and oldest parts of a population.
- Large outbreaks of infectious diseases can have destabilizing effects.

Infectious diseases increase the demand for public health services and insurance, which many feel should be provided by the state.

The growing risk of infectious diseases drives research and development of new medical solutions.

The risk of large outbreaks of infectious diseases can have destabilizing effects.
Higher risk of infectious diseases and pandemics

Feedback loops

If pandemics are handled poorly by the relevant multilateral institutions, popular support is reduced. On the other side, it is more difficult for weakened multilateral institutions to handle threats to global health.

Large outbreaks of infectious diseases can have destabilizing effects. On the other side, in places with poor health systems and limited health monitoring (which often is the case in fragile states), infectious diseases spread easily thereby increasing the risk for a large outbreak.
Advancing digitalisation and diffusion of artificial intelligence
Advancing digitalisation and diffusion of artificial intelligence

Selected trend connections

Multilateral institutions might be a ‘loser’ of digitalisation, as they might not yet be equipped to deal with the challenge.

There is a trend that digitalisation will lead to a localisation of production and thereby decrease the number of global value chains.

Technological progress and digitalisation provide massive potential for tackling climate change.

It is unclear whether digitalisation will amplify the digital divide and between which groups a digital divide will manifest itself.

In countries with unequal access to the internet, the digital divide is likely to further keep women away from the labour market and education. If they are however connected, women’s participation could also increase due to digitalisation.

Digitalisation will likely facilitate voicing public demand and forming interest groups.

This trend was mostly seen under the guise of technological progress.
Advancing digitalisation and diffusion of artificial intelligence

Feedback loops

Transnational companies invest in digital services and digitalisation in Africa and other developing countries, thereby driving digitalisation worldwide.

China is leading in, and pushing for technological progress, digitalisation and automation. Through accelerating digitalisation and automation its influential position – due to its ability to manage and profit from technological progress – is likely to further increase.

(Job) opportunities arising from digitalisation are most tangible in cities ("pull factor"). Urbanisation on the other side provides opportunities for digital innovation (digital hubs) and thereby drives digitalisation. Urbanisation is therefore driving digitalisation whereas digitalisation further drives urbanisation.
Increasing automation of manufacturing, production processes and services through robotics
Increasing automation of manufacturing, production processes and services through robotics

Selected trend connections

Digitalisation and its effects (automation and cyber security) increase the need for global regulation. There is a chance that the tasks of established institutions are further extended to these new challenges, but it is also likely (and already happening) that new institutions will take over such tasks.

Automation has the potential to re-localise production, i.e. produce where the final product is consumed.

The fear to be replaced by robotics as well as growing rates of unemployment and inequality drive nationalist tendencies.

Automation has the potential to accelerate economic growth (potentially “jobless” growth).

Automation has the potential to re-localise production, i.e. produce where the final product is consumed.

The fear to be replaced by robotics as well as growing rates of unemployment and inequality drive nationalist tendencies.

Automation has the potential to accelerate economic growth (potentially “jobless” growth).

Automation, especially in African countries, will either lead to unemployment or a downward spiral in labour costs.

Only few are gaining the benefits of digitalisation and automation, but these benefits are not shared with the poorest. Inner-state inequality rises due to the effects of automation (unemployment of low-skilled workers). Inequality also rises on a global level, meaning that the poorest countries are not sharing the benefits of digitalisation and automation.
Growing digital divide

Selected trend connections

A digital divide – between younger and older generations, people living in cities and people in rural areas, better and less educated people – might lead to a marginalization of these groups in terms of job opportunities but also political representation.

On a global level, a lack of connectivity of marginalized groups means that opportunities to escape from absolute poverty shrink.

Greater connectivity leads to a higher (and more visible) demand towards the state.
Growing digital divide

Feedback loops

A growing digital divide with its effects on e.g. job opportunities and political representation, increases inner-state inequality which in turn deepens the digital divide.

Transnational IT companies drive digitalization, which is likely to increase the digital divide. At the same time, the greater the digital divide, the greater the influence of transnational IT companies.
Increasing threats to data and cyber security
Increasing threats to data and cyber security

Selected trend connections

Digitalisation and its effects (automation and cyber security) increase the need for global regulation. There is a chance that the tasks of established institutions are further extended to these new challenges, but it is also likely (and already happening) that new institutions will take over such tasks.

People increasingly realize problems and threats caused by cyber insecurity and consequently demand action.

Cyber insecurity comes with high economic costs and has the potential to weaken economic growth.

Driving influence
Ambiguous influence
Inhibiting influence
Increasing threats to data and cyber security

Feedback loops

Cyber insecurity creates a need for global regulation through (e.g.) multilateral institutions. But established institutions are not able to react accurately to the size and nature of the problem thereby increasing the challenge.
Growing rates of unemployment
Growing rates of unemployment

Selected trend connections

An increased group of people is living in precarious conditions. The political implications of this growing class are uncertain. Now, they are not yet politicized. However, if they become active, it can lead to the formation of interest groups, rising public demand and potentially inner-state conflicts.

Unemployment and lack of any job perspective are drivers of migration.

When labour markets are disrupted, cities are a last resort for the unemployed from rural areas and smaller towns.

Increasing competition in the labour market will lead to even fewer chances to participate for women.
Growing rates of unemployment

Feedback loops

Unemployment and lack of any job perspective are drivers of (forced) migration. At the same time, forced migration, e.g. due to climate change, might lead to more competition for jobs in certain areas, e.g. receiving countries or cities.
Increasing female educational attainment and labour force participation
Increasing female educational attainment and labour force participation

Selected trend connections

- Driving influence
- Ambiguous influence
- Inhibiting influence

Female educational attainment and their participation in the labour force, in particular in research, foster research in women related illnesses.

Female educational attainment and labour force participation often have an inhibiting influence on other negative dynamics (e.g. digital divide, poverty, fragility).

Women are less susceptible to corruption.

Female educational attainment can lead to a decrease in birth rates.

Education and participation in the labour force make especially women feel capable and able to migrate.
Increasing female educational attainment and labour force participation

Feedback loops

Educated women can better contribute to household income and are able to invest in their own retirement insurance (so have less need for children). A decrease in absolute poverty enables more girls and women to be educated.
Rising public demand towards the state to deliver prosperity and security
Rising public demand towards the state to deliver prosperity and security

Selected trend connections

- Driving influence
- Ambiguous influence
- Inhibiting influence

To curb the risk of climate change, citizens must have the appropriate tools and mechanisms to make their voices heard as well as a political leadership that tolerates these demands.

Experiencing inequality fuels frustration towards the state. However, if the state is not able to deliver, this might lead to state fragility.

Nationalist tendencies are likely to grow if states are not able to meet a rising public demand for security etc.

Local government and cities (i.e. governance on a local level) will become more ‘demanded’ as people can see the consequences of their political actions instantly.

Citizens can be empowered through digitalisation and connectivity to hold governments accountable.
More frequent authoritarian and nondemocratic reactions
More frequent authoritarian and nondemocratic reactions

Selected trend connections

Authoritarian states tend to be less interested in multilateral cooperation. An increase in authoritarian reactions is therefore likely to result in a growing number and rising influence of plurilateral initiatives and weaken multilateral institutions.

Authoritarian regimes can curb political participation, dissent and protests. On the other side, authoritarian leaders themselves 'form' interest groups, often in the name of religion.
More frequent authoritarian and nondemocratic reactions

Feedback loops

- Mobility (also rural to urban) frequently leads to political responses that are authoritarian in nature, restricting mobility and other civil and political rights.
- Nationalist tendencies give rise to authoritarian and non-democratic tendencies, not only on governmental but also societal level. Authoritarian regimes, on the other side, often use “national identity” to remain in power.
- State fragility and inner-state conflict often fuel authoritarian reactions. At the same time, authoritarian regimes drive conflicts between different minority groups and minorities and majorities.
Proliferation of state fragility and inner-state conflicts

- Driving influence
- Ambiguous influence
- Inhibiting influence
Proliferation of state fragility and inner-state conflicts

Selected trend connections

- Experiencing inequality fuels frustration towards the state. However, if the state is not able to deliver, this might lead to state fragility.
- Through a lack of economic diversification and economic growth, authoritarian states cannot keep up their patronage systems. Consequently, they might face more resistance from the population. This might drive increased fragility and conflict.
- Investments are generally inhibited by fragility. However, if volatility becomes the new normal, investors will face a growing need to adapt, which might change this connection.
- Women are most vulnerable and most disadvantaged in fragile contexts. Increased state fragility therefore is likely to negatively impact female educational attainment.

Relevant characteristics/categories besides 'fragility' are volatility and brittleness of states.

Absolute poverty is likely to remain in fragile states ('pockets of poverty'). Increased state fragility will therefore lead to a relative slowing in regards to the global decrease in absolute poverty.
Proliferation of state fragility and inner-state conflicts

Feedback loops

- Fragility poses a risk for multilaterals, as many have inadequate financing and ways to respond to the challenge. A weakening of multilaterals, e.g. due to legitimacy losses, will likely coincide with a decrease in peacekeeping efforts, thereby driving state fragility.

- Scarcity of fertile land and water is likely to spark conflicts. At the same time, environmental issues are unlikely to be considered and enforced in conflictual contexts and fragile states which further increases environmental degradation.
Increased formations of interest groups around value- and identity-based issues
Increased formations of interest groups around value- and identity-based issues

Selected trend connections

Narratives, especially those of victimisation, shape politics and can drive political movements. Possible consequences could be higher demands towards the state, increased nationalism, or a weakening of multilateral institutions. However, there is also the possibility for a positive normative narrative along SDG lines that might have a different impact. Which narratives emerge and who shapes them remains a critical question.
Increased formations of interest groups around value- and identity-based issues

Feedback loops

With growing numbers of interest groups, reaching cohesive responses to global challenges becomes more difficult. At the same time, unresolved global challenges lead to increased formation of interest groups aiming at 'self-help'.
# Interview Partners

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