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**Structural Stability:
On the Prerequisites of
Nonviolent Conflict Management**

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Abstract

The concept of "structural stability" has been gaining prominence in development policy circles. In the EU's and the OECD Development Assistance Committee's (OECD DAC) understanding, it describes the ability of societies to handle intra-societal conflict without resorting to violence. This study investigates the preconditions of structural stability and tests their mutual interconnections. Seven dimensions are analyzed: (1) long-term economic growth, (2) environmental security, (3) social equality, (4) governmental effectiveness, (5) democracy, (6) rule of law, and (7) inclusion of identity groups. The postulated mutual enhancement of the seven dimensions is plausible but cannot be proven. The most significant positive relationship appears between "democracy" and "rule of law," respectively, on the one hand and the dependent variable "violence/ human security" on the other hand. This points to the usefulness of the political concept of structural stability to promote development policy agendas in this area at least. Applications that reach beyond these initial findings will, however, require further research.

Keywords: Structural stability, violence, human security, development aid, conflict management, prerequisites of nonviolence

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Zusammenfassung

Strukturelle Stabilität:

Analyse der Voraussetzungen für gewaltfreies Konfliktmanagement

Entwicklungspolitiker nehmen häufig Bezug auf das Konzept der "strukturellen Stabilität". Die EU und das OECD-DAC verstehen darunter die Fähigkeit von Gesellschaften, innergesellschaftliche Konflikte ohne Gewalt auszutragen. Die vorliegende Studie untersucht die Voraussetzungen für strukturelle Stabilität und deren Interdependenzen. Die analysierten Dimensionen umfassen langfristiges Wirtschaftswachstum, ökologische Sicherheit, soziale Sicherheit, administrative Leistungsfähigkeit, Demokratie, Rechtsstaatlichkeit und Inklusion von Identitätsgruppen. Die angenommene gegenseitige Verstärkung der sieben Dimensionen ist plausibel, kann aber durch die statistische Analyse nicht nachgewiesen werden. Der größte positive Zusammenhang zeigt sich zwischen „Demokratie" und „Rechtsstaatlichkeit" auf der einen und der abhängigen Variable „Gewalt"/„menschliche Sicherheit" auf der anderen Seite. Dies lässt die Nützlichkeit des politischen Konzeptes der strukturellen Stabilität vermuten, in diesem Bereich entwicklungspolitische Ansätze zu fördern. Allerdings bedürfen darüber hinausgehende Anwendungen weiterer ausführlicher Forschung.

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Article Outline

1   Introduction

The present study scrutinizes the prerequisites of "structural stability"—understood as the ability of societies to deal with their conflicts nonviolently. Structural stability has political, economic, ecological, and social components. From the official definitions of the EU (1996) and the OECD's Development Assistance Committee (OECD DAC, 1997) it is possible to derive seven dimensions (cf. Mehler 2002): long-term economic growth, environmental security, social equality, government effectiveness, democracy, rule of law, and inclusion of identity groups.

The context of the EU's and the OECD's preoccupation with the topic in the 1990s was the completely new manifestation of political competition (or a changed perception of it) after the end of the Cold War: the "third wave" of democratization on the one hand and the increase of violent conflicts related to the deterioration of states—"failing states"—or similarly labeled phenomena on the other. Both organizations have therefore limited their designations—based

on practical imperatives and a minimal consensus of normative orientation—solely to states going through fundamental change. The Portuguese presidency of the EU (2007) prepared a study with "structural stability" in its title.[1] However, such an action is taking the second step before the first by solidifying arguments and conflating political elements instead of verifying scientifically postulated correlations. The present study is set to initiate the latter step.

The premise (in the EU definition) that the identified dimensions of structural stability are closely related and enhance each other is significant for development cooperation. It follows that the promotion of one pillar can have positive effects on another. However, the reverse correlation could hold as well: the status of one dimension could decline due to the strengthening of another (especially if unintended effects occur). Herein lies the scientific interest: It seems possible that a short-term objective in one dimension of structural stability could interfere with a goal within another dimension. Linear correlations are therefore not necessarily to be expected. In order to test the assumed correlations, the creation of adequate hypotheses and their operationalization and verification/falsification is required.

This study has four objectives: (1) The creation of a complete set of indicators to assess the seven dimensions of structural stability, (2) the development of profiles of structural stability/instability, (3) the formation of clusters of countries which have certain characteristics in common and the depiction of types of structural instability (or of deficits in structural stability, respectively), and (4) the presentation of initial deliberations on the verification/conception of the assumed reciprocal enhancement and interconnection of the seven dimensions of structural stability. For this purpose, correlations of the relations of the seven dimensions to one another are tested statistically.

The structure of the paper will be as follows. In the second section we present the indicators used for the seven dimensions, which are defined as independent variables. Violence/human security is the dependent variable. A calculation of partial correlations follows. The partly inadequate quality of data allows only for cautious conclusions. Section 4 presents the structural stability "profiles" of the 58 countries selected[2] and discusses the clustering of cases. Section 5 summarizes the main findings and presents issues for further research.

2   Indicators and Data Sources

The selection of indicators used is outlined below and the data sources are specified. The relevant literature regarding each of the seven dimensions was extensively analyzed by the project team. Due to restricted space it cannot be discussed in detail in this article.[3]

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[1]   Promoting Structural Stability. EU Response Strategy to Fragile Situations and Difficult Environments, ECDPM/IEEI, Maastricht/Lisbon (Draft, July 2007).

[2]   The selection criterion was the status as "partner country" of the German Ministry of Economic Cooperation and Development (BMZ) which funded the original study this Working Paper is based on.

[3]   For a more extensive discussion of the literature and indicators used please contact the authors of this study in order to access the original study document.

2.1   Long-term Economic Growth

Economic growth refers to a state in which macroeconomic assets (including natural resources) increase, or at least do not decrease, and which is manifested by a growing per capita income over the course of time. Long-term economic growth depends on the capability of increasing the accumulation of physical and human capital and on increased productivity due to technological progress.

The recognized indicator for economic growth is the productivity with which states make use of their productive resources (physical, human, and natural capital). Because an accurate quantification of productivity proves to be difficult, economists usually apply the GDP or GNP instead. The advantages of this procedure are, firstly, that the GDP/GNP is easy to measure; secondly, that the GDP/GNP is a rough measure for the relative productivity of resource deployment; and thirdly, that it measures relative material welfare, irrespective of the sources of growth (for example, favorable natural resources as opposed to the effective productivity of their use). Thus, for the study of structural stability the following indicators were considered: 1) real GNP per capita, 2) real GDP per capita, and 3) real GDP per capita in purchasing power parity (PPP).

Although some criticisms regarding per capita income as an indicator of economic growth can be found in the literature (for example, it does not express income disparity; it does not measure social progress and "quality of life," or the informal or black economy), this measure was selected. The reason for its selection is the relatively good comparability between countries, its broad acceptance in scientific research, and the discriminatory power in regard to other dimensions of structural stability. An indicator equally powerful and capable of resolving the criticism is unknown so far.

As, since the early 1990s, the real GDP[4] per capita has replaced the GNP[5] worldwide as the dominant indicator of economic growth, it was selected for this study. Unfortunately, it was not possible to use GDP per capita in purchasing power parity due to a lack of adequate data for all countries investigated. The annual growth in GDP per capita indicator is a widely recognized measure for almost all economic studies on growth with regard to sustainability, speed, determinants, and effects of allocation, among others. For example, annual data for this indicator can be found in the Penn World Table for at least 188 states from 1950 until today. In addition to the Penn World Table, annual growth in GDP per capita (percent) is published by the IMF, the World Bank (for example, in the World Development Indicators database), and the UN Statistics Division.

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[4]   GDP measures the sum of the value added by the labor and capital of all citizens (resident units), plus the taxes on production and import, minus the subsidies (= net national income), plus write-offs (= gross national income).

[5]   Real GNP per capita (at constant prices) measures the aggregate output of a given economy. In the output compilation it is based on the sum of all production values (domestic concept); all goods and services produced in a country, valued at market prices of a reference year; plus product taxes and minus advance payments and subsidies.

2.2   Environmental Security

Environmental security describes the lowest possible amount of environmental stress a state or society, respectively, is exposed to. Environmental stress is defined as the lasting and/or sudden negative change of an ecosystem.

In the search for applicable indicators, sudden sporadic shocks (such as tsunamis, for example) were disregarded as they can hardly be registered in time series. Also, human vulnerability was excluded as an important component for indicators, since a comprehensive understanding is difficult to achieve. Based on these considerations, the focus was placed on environmental stress with regard to water, population, and soil. The problem ensued that environmental issues and natural premises (forest stand, water supply, deserts) differ greatly between countries and are therefore difficult to compare globally. Therefore, an initial set of indicators of key factors of environmental stress had to be discarded due to problems of comparability: 1) population growth, 2) basic food insecurity, 3) soil, and 4) potable water. For the same reason, two combined environmental indicators also had to be discarded: 1) indicators from the Environmental Performance Index (EPI) 2006 and 2) indicators from the Environmental Sustainability Index (ESI) 2005.

The selection of data sources proved to be difficult. Due to a lack of more adequate data sources, two indicators from the seventh millennium development goal (ensure environmental sustainability) had to be drawn upon:

1) Population with access to improved drinking water: this indicator, with data available for 1990 and 2004, on the one hand indicates the quantity and quality of potable water available and on the other hand evaluates the role of states in ensuring access to it. As an indicator of the Millennium Development Goals, it is widely recognized.

2) Slum population as percentage of urban population: this indicator, with data available for 1990 and 2001, indicates potential environmental stress due to insufficient sewage and waste disposal in slums. This indicator is therefore not an outcome-based indicator, as it reflects a phenomenon creating environmental stress. Additionally, it provides information on how governments fight the causes of environmental stress.

The disadvantages of the indicators selected for the dimension of environmental stress are their possible partial overlaps with the dimension of "government effectiveness," and the fact that data is only available for 1990 and 2004, or 1990 and 2001, respectively. Nonetheless, after close examination, it was determined that these internationally recognized indicators did not correlate with indicators of "government effectiveness," at least not significantly. To ensure improved comparability between the states, these two indicators were aggregated. This helped—to some extent—to qualify the problem of the countries' different initial situations with regard to the different dimensions of environmental security. For example, an initial situation of a low reserve of potable water (resulting automatically in negative values) can be put in perspective by adding a value for slum population as an indicator of another dimension of environmental stress.

2.3   Social Equality

Social equality describes a status in which all individuals have equal chances and opportunities to live their chosen way of life without having to endure extreme deprivations. These opportunities have to encompass access to assets and resources (including public services and political power).

Social inequality within states is reflected in a disparate allocation of economic, political, and social resources based on group and individual differences such as group identity, gender, level of prosperity, or geographic position. Often promoted by the elites, these inequalities are internalized by the marginalized or dominated parts of the population. Social inequality tends to be reproduced over the course of time and over generations and thus often remains a lasting condition.

Indicators that measure mainly the distribution of results and only indirectly the distribution of opportunities seem favorable. The following indicators were considered: 1) the Human Development Index (HDI), 2) stunting rates, 3) the Gini Index, and 4) income percentile ratios (quintiles, deciles, percentiles).

The Gini Index[6] has few overlaps with indicators of other dimensions of structural stability. Furthermore, from an economic point of view, it is assumed that the distribution of income/consumption reflects both the access individuals have to goods and services and their personal welfare. In this sense a connection can be drawn to the level of education or health care. Finally, if prosperity is connected to higher political influence, income- or consumption-based inequality can, conversely, also reflect low chances of exerting political influence (World Bank, 2005, pp. 36f.).

The Gini Index is the most suitable for measuring dimensions of "social equality" with regard to structural stability.[7] Although the collection frequency and the quality of the data differ for the various states, the quality of the data for most of the 58 countries of our sample is relatively good (as opposed, for example, to the income percentile ratios). For most of the countries, data is available for various years over a period from 1990 until today.

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[6]   The Gini Index measures the scale of variance in regard to a perfect allocation of income or consumption between the individuals/households of an economy. The Lorenz curve is used to show the cumulative percental distribution of different parts of the population to the national income (classified after consecutive income brackets, beginning with the lowest group). The Gini coefficient takes up values between 0 (= total equality) and 1 (= total inequality). The index is available for at least 152 states, for different points in time between 1950 and today (based on national household polls taken at varying intervals).

[7]   Nevertheless, in using the Gini Index one has to consider two aspects that are not optimal: on the one hand, comparability of the states (with regard to differing databases to measure indicators (income/consumption), differing itemization of consumer goods, differing income data based on household polls etc.) and, on the other hand, the capability of describing different configurations of income distributions (a strong equality in lower income with a strong disparity in higher income could generate the same coefficient as a strong disparity in lower groups with strong equality in higher groups).

2.4   Government Effectiveness

Government effectiveness is understood by Grindle (1996, p. 10) as the "ability of states to deliver goods and services […] and carry out the normal administrative functions of government, such as revenue collection, necessary economic regulation, and information management." Typically, a high level of government effectiveness would be denoted by the state's ability to implement policy and to prepare policies based on expertise.

In searching for data sources, the problem of how to depict the level of government effectiveness of a given state comprehensively and validly arose. This is why generally acknowledged perception indicators, which depict perceptions by experts, were short-listed above others: 1) Bertelsmann Transformation Index (BTI)—category: steering capability; 2) Governance Index/Governance Matters V (Kaufmann et al., 2006)—category: government effectiveness; 3) Transparency International (TI)—Corruption Perceptions Index (CPI); 4) World Bank Doing Business—indicator: Starting a Business.

The range of available indicators is limited, as most (CPI, BTI, and Starting a Business) depict only a section of government effectiveness as it is understood by this project. Government effectiveness as measured by the Governance Index,[8] on the other hand, captures the effectiveness of the administration of a given state, incorporates 31 sources, stretches back to 1996, and guarantees discriminatory power against the indicators of the other six dimensions of structural stability. Therefore, it is used here as the indicator for the operationalization of government effectiveness.

2.5   Democracy

Democracy is defined as the entire adult population being able to participate in political decision making by voting in regular, free, and fair elections, in which multiple interest groups or candidates, respectively, compete freely for votes to win the highest political positions (a seat in parliament or the presidency). This should ensure a peaceful transfer of political power. As long as elections are accepted by everybody involved as open, free, and fair, election results can be deemed democratic.

In searching for valid data sources, we encountered the problem that with regard to several aspects of constitutional practice or reality, aggregated data is scarce. Following the working definition, several internationally recognized indicators were scrutinized, of which the following had to be discarded because they were inconclusive:

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[8]   Governance Matters V offers an aggregated indicator for 213 states and territories compiled from data from various institutions. The indicator "government effectiveness" is defined as "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." The single indicators of 31 sources from 25 different organizations are not disaggregated. Kaufmann et al. use a so-called unobserved components model to construe aggregated indicators.

1) Polity IV—indicators from five categories: Executive Recruitment and Political Composition and Opposition, Regulation of Chief Executive Recruitment, Competitiveness of Executive Recruitment, Openness of Executive Recruitment, Regulation of Participation and the Competitiveness of Participation

2) Bertelsmann Transformation Index (BTI)—subcategory of political participation: free and fair elections

3) Freedom House (FH)—subcategory of political rights: electoral process

Only one indicator covers a longer period of time: Freedom House (FH)-political rights category.[9] The FH indicator includes elaborate questions regarding electoral processes, political pluralism and participation, and government functions. Therefore, it qualifies as a data source in regard to political competition, which is part of the definition above. The indicator provides data on 192 states for the period from 1972 to 2005. As mentioned above, this indicator has been chosen as the second best indicator after the FH electoral process indicator, as both categories correlate highly and therefore have a similar validity. The FH political rights indicator has a scale of values from one to seven, with seven being the lowest value and one being the highest. An operationalization of Freedom House means applying a perception indicator, which is not free of methodological doubt. After testing it in regard to the working definition, the extent of data for the countries concerned, and its temporal dimension, it proved to be an applicable indicator. Slight overlaps with the dimension "rule of law" had to be accepted due to the lack of more suitable indicators.

2.6 Rule of Law

Rule of law is given when freedom and legal certainty is secured for individuals. The authorities of the state do not act arbitrarily but rather within the civil rights (constitution) proclaimed by the people or their representatives; governmental actions serve law and justice while being under independent juridical control, and individuals are guaranteed steadfast civil rights.

In consequence of the definition and cornerstones mentioned above, the operationalization of the dimension has to emphasize not only individual civil rights, but also juridical control over executive actions. A variety of internationally recognized indicators were scrutinized, of which the following had to be discarded as inconclusive in terms of time covered and empirical manifestations included: 1) Bertelsmann Transformation Index (BTI)—category: rule of law; 2) World Bank Doing Business—indicator: enforcing contracts; 3) World Bank Governance Indicators by Kaufmann/Kraay/Mastruzzi—indicator: rule of law; 4) Freedom House (FH)—subcategory of civil liberty: rule of law; 5) International Country Risk Guide (ICRG), political risk data—category: law and order.

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[9] As data is available for 2006 only, we decided to use the category political rights, which is available for a longer period, as a replacement indicator for the more precise electoral process subcategory. Both categories show a high correlation and prove, likewise, to be convincing, cf. Freedom House Methodology 2006: <www.freedomhouse.org/template.cfm?page=35&yera=2006> (last accessed May 22, 2007).

The recorded data shows that only one indicator complied with the requirements in regard to quality and long-term time frame: Freedom House (FH)—category: civil liberty.[10] The FH civil liberty category offers an aggregated index of four elements (freedom of expression and belief, association and organizational rights, rule of law, personal autonomy and individual rights). The category refers above all to fundamental liberties to be guaranteed by the state under rule of law (principle of substantive law), but through the subcategory rule of law it refers also to further cornerstones of rule of law as defined above (separation of powers, legal certainty and protection, equality before the law). The FH indicator has data on 192 states for the period from 1973 to 2006. It has a scale of values from one to seven, with seven being the lowest value and one being the highest. An operationalization of the FH indicator means the application of a perception indicator, which is not free from methodological doubts. Yet, after scrutinizing the source in regard to our working definition, the extent of the available data, and the time frame, it proved to be valid.

2.7   Inclusion of Identity Groups

The inclusion of identity groups means the acknowledgement of specific social groups as well as their integration into political decision-making processes. This refers to social groups which differ from other groups through identity-forming characteristics and which are systematically discriminated against. The definition restricts itself to conflict-relevant reference areas such as ethnicity and religion.

The database for a worldwide comparison of this dimension proved to be very poor. Interesting current databases such as Minority at Risk turned out to be fragmentary in regard to the states considered. Part of the information is only available for the years up to 2000. A second indicator taken into account for religion had to be discarded: the Cingranelli (CIRI) Human Rights Dataset—indicator: Freedom of Religion.[11] It was not suitable for the correlation calculation. Besides, only religious identities could be depicted.

Due to the problem of having only insufficient indicators at hand, we had to construct an indicator of our own. The Crises Indicators Catalogue (Krisenindikatorenkatalog, KIK) compiled annually by the GIGA for the Federal Ministry for Economic Cooperation and Development (BMZ) was used. Suitable indicators for both reference areas (religion and ethnicity) could not be determined, although the term "cultural identity" would suggest the inclusion of religious groups as well. Due to the unfavorable data situation, a restriction to only one indicator (focusing on ethnicity) had to be carried out; from analysis sector 1 (structural disparities) and analysis sector 4 (transformation and modernization processes), the following questions were combined into an indicator:

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[10]   The FH rule of law subcategory evaluates separation of powers, legal certainty, legal protection, and equality before the law. As a single category it is available for 2006 only and therefore does not allow for temporal comparisons.

[11]   Cf. CIRI Human Rights Data project: <http://ciri.binghamton.edu/documentation/ciri_variables_short_descrip tions.pdf> (last accessed Feb. 27, 2007).

1.1 Is there any significant correlation between the distribution of wealth and group identities based on having a common cultural, regional, social or political identity? (Answers: no, yes)

1.2 Is there a clear dominance of such groups in the composition of political actors or institutions or is such a dominance perceived by the population? (Answers: no; yes, namely in: a) executive, legislative, judiciary, b) other political institutions—multiple answers possible)

1.3 Are groups mentioned under 1.1 discriminated against politically, economically or culturally—be it officially/formally or de facto? (Answers: no, yes)

1.4 Does the country have any valuable natural resources which might be an incentive for potential warlords? (Answers: no; yes, groups willing to use violence can fall back on other financing sources (e.g. trafficking in drugs or human beings, smuggling, radical diaspora groups)—multiple answers possible)[12]

4.2 Will competition between the groups mentioned under 1.1 to 1.4 intensify as a result of these changes [in the political, economic or social structures]? (Answers: no, or it will be diminished; yes, with a) it will be intensified, b) one or more groups perceive these changes as a threat to their existence—multiple answers in the "yes" category possible)

Questions 1.1-1.4 and 4.2 were used as follows:

- No question answered with "yes" = 5
- One question answered with "yes" = 4
- Two questions answered with "yes" = 3
- Three questions answered with "yes" = 2
- Four questions answered with "yes" = 1
- All four questions answered with "yes" and question 4.2 additionally answered with "yes" plus "in the perception of one or more groups these changes pose an existential threat" = 0.

This results in the following categories:

0 = significant group disparities and strong states of competition and existential threat through change

1 = significant group disparities with regard to distribution of wealth, political domination, discrimination, and control over resources

2 = relatively strong group disparities with regard to distribution of wealth, political domination, discrimination, and control over resources

3 = moderate group disparities with regard to distribution of wealth, political domination, discrimination, and control over resources

4 = minimal group disparities with regard to distribution of wealth, political domination, discrimination, and control over resources

5 = no group disparities

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[12] Valuable natural resources could be accessed, distributed and sold by a dominant social group.

The indicator incorporates essential questions of inclusion. Although the crisis early warning indicators are perception indicators, which partially weakens their impact, and even though data was available only for 1999, 2000/01 and 2003–2005, they proved to be valid in the correlations.

2.8   Dependent Variable: Violence/Human Security

Violence exists mainly in two variants, or dimensions: first, in war-like conflicts with a high intensity of violence and, secondly, in an often less apparent although equally serious everyday violence, manifested in murder, manslaughter, robbery, and rape (violence understood as a direct physical act between individuals or groups of individuals). Both dimensions are signs of structural instability and are therefore considered in this project.

The data situation on everyday violence proved to be inadequate for a worldwide comparison. Potentially the best data source is Interpol, which collects the statistics of more than 180 countries (member states). Unfortunately, this data is usually available for police personnel only. Furthermore, Interpol warns against using these data sets for cross-national comparison as criminal acts are defined differently depending on the state and the statistical methods used in collecting the data. Interpol declined our request to use their database, highlighting the incompleteness of data as well as the different national codings, making a useful comparison of data sets impossible.

What is available, although it most certainly shows the same problems as Interpol's data, is the United Nations Survey of Crime Trends and Operations of Criminal Justice Systems from the UN Office on Drugs and Crime. Data on everyday crime from 1970 to 2002 is included,[13] although the number of states that have provided their national data varies greatly. Data on several countries from our sample are not considered at all, or only sporadically at best.

An initial test compilation of the category "homicides completed"—a category available for the UN survey 2003/04—was carried out for the countries of our sample for the period 1990–2004. However, it proved to be incomplete and insufficient for any concrete correlation and therefore had to be discarded.

For the analysis of wars or civil war-like conflicts, respectively, a broad set of data sources can be found. However, the majority of data sets scrutinized were insufficient in meeting the project's required criteria concerning the dependent variable. The main problem was that the data is usually gathered about a conflict, not about a state. Furthermore, the total number of conflicts varied, depending on the data sets' respective criteria for an entry in the conflict lists (for instance, Peace and Conflict reports only if the toll reaches 1000 conflict-related fatalities, whereas Uppsala and Battle Deaths report at 25 fatalities [cf. Battle Deaths Dataset]). Some data sets are fragmentary; others are questionable as to plausibility and validity. Categorizations of the intensity of conflicts were mostly inadequate. The indicator Battle Deaths, used by some of the

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[13]   A survey for 2003 and 2004 is forthcoming.

data sources, is problematic in several respects. The following data sources had to be discarded: 1) Battle Deaths Dataset (1946–2005), 2) Heidelberg Institut für Internationale Konfliktforschung—Konfliktbarometer (Heidelberg Institute for International Conflict Research—Conflict Barometer), 3) Arbeitsgemeinschaft Kriegsursachenforschung (AKUF), 4) Correlates of War (COW), 5) Major Episodes of Political Violence 1946–2006, 6) PRIO (Peace Research Institute Oslo), 7) Armed Conflict Dataset, 8) Uppsala Conflict Database—Online (1989–2005).

The following three individual data sets from the Uppsala Conflict Data Program (UCDP) were combined to form an indicator that could reach beyond battle deaths with regard to conflict-related victims:

- Battle Deaths Dataset (information on the low, best, and high estimate for fatalities in armed conflicts where at least one party is the government of a state, 2002–2005)
- Non-state Conflict Dataset (a conflict-year data set with information on communal and organized armed conflict where none of the parties is the government of a state, 2002–2005)
- One-sided Violence Dataset (an actor-year data set with information on intentional attacks on civilians by governments and formally organized armed groups, 1989–2005)

Nevertheless, the resulting indicator also proved to be fragmentary and questionable with regard to the data situation and also had to be discarded.

After scrutinizing several examples of states with regard to the classification of the intensity of conflicts, the data source outlined in the following section qualified as a conclusive indicator for the dependent variable "violence"/"human security."

2.9 Peace and Conflict—Human Security Subindex

Peace and Conflict 2005 by Monty G. Marshall and Ted Robert Gurr of the Center for International Development and Conflict Management (CIDCM) provides an assessment of conflict situations worldwide. The aggregate category peace-building capacity as a composite indicator had to be discarded because it incorporates crucial dimensions of structural stability. The human security subindex, however, complied with the project's understanding of structural stability. It evaluates the overall quality of human security in a country for the period 1991–2000 and encompasses the following components:

- armed conflicts and rebellions,
- intercommunal fighting,
- refugee and internally displaced populations,
- state repression,
- terrorism, and, in a few cases,
- genocide.

The subindex arranges human security into four levels: (1) countries that have performed well and have experienced little or no human security problems during the previous ten-year period, (2) countries that have had some human security problems but not at higher levels as

noted below, (3) countries that have had problems of a somewhat lower magnitude over a more limited span of time, (4) countries that have had a generally high level of human security problems in several of the categories over a substantial period of time. The disadvantage of the comparatively short time frame (1991–2000) had to be accepted for want of a better indicator.

3   Cross-sectional Analysis: Human Security and the Dimensions of Structural Stability

The following analysis serves to verify the relationship between the dependent variable, violence/human security, chosen in the project (data source: human security subindex of the Peace and Conflict Index, CIDCM) and the independent variables that were selected as indicators for the previously presented seven dimensions of structural stability. The starting point is the assumption that the structural stability of the studied countries—understood as their ability to deal with conflicts nonviolently—is strongly related, as previously mentioned, to long-term economic growth, environmental security, social equality, government effectiveness, democracy, rule of law, and the inclusion of identity groups. The sample is based on the list of BMZ partner countries. Therefore, the range of countries available for analysis has been limited; case selection does not reflect scientific criteria alone. The number of cases has been further reduced from 65 BMZ partner countries to 58 due to the poor availability of data in the cases of Afghanistan, the Palestinian Territories, East Timor, Cuba, Eritrea, Lesotho, and Mauritania. "Access to improved drinking water," "percentage of slum population," and the Gini coefficient are the variables that are particularly deficient in terms of data availability.

For all independent variables, the average value has been taken for the period 1991–2000; for the indicators of environmental security it is given until 2001 and 2004 because the average value of the dependent variable is indicated accordingly.[14]

In almost all cases the expected positive or negative relation is given, although in some cases only very weakly. In some cases the relation is even inverse to the expectation. A relatively strong linear relation is shown between human security and the indicators for democracy (Freedom House political rights indicator) and rule of law (Freedom House civil liberty indicator). The "political rights" variable as well as the "civil liberty" variable display values from one to seven. In both cases an increasing value marks deterioration. The particular regression lines illustrate that an increasing value for the "political rights" and "civil liberty" variables (which means fewer rights) is accompanied by a deterioration of human security.

In a similar way, a negative relation can be shown for the indicators of "government effectiveness" and "inclusion of identity groups" (BMZ crises indicators catalogue, KIK) with human security. The particular regression lines illustrate in scatterplots that higher values for both variables are accompanied by an amelioration of human security. For the indicators of

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[14]   For the Gini Index data is available for different base years within the period mentioned for the range of countries. Data for the variable "population with sustainable access to improved drinking water (%)" exists only for 1990 and 2004, and for "slum population as % of total urban population" only for 1990 and 2001.

long-term economic growth (per capita growth rates [%]) and environmental security (sustainable access to improved water sources [%]; slum population [%]), no clear picture emerges. The relation between the indicator for social equality (Gini coefficient) and human security was even inverse to expectations. With decreasing Gini values, the value for human security sinks as well, which would mean that greater social inequality is related to an improved situation for human security. The result is biased by an outlier result for Namibia. If Namibia is removed from the sample, an unclear picture of a "point cloud" arises that does not imply an explicit correlation.

Table 1 provides an overview of the pair-wise correlation of the independent variables with the dependent variable (value of human security). This is relevant for the question regarding the correlation between stability and the seven dimensions discussed (see marking in the first column). The table shows that none of the independent variables tested exhibits a strong correlation with the dependent variable of human security. Four of the variables, however, prove to be significantly and moderately correlated with the dependent variable.[15] These are the Gini coefficient (-0.33*); "political rights" (0.36*); "civil liberty" (0.46*); and "inclusion," based on the BMZ crises indicators catalogue (-0.35*). In contrast, the Gini coefficient is negatively correlated with the dependent variable—contrary to what was expected. This result is therefore hardly possible to interpret in terms of the question posed. The reason remains somewhat unclear and must be predominately attributed to limited data quality and several outliers, which distort the calculation of the relationship between the Gini coefficient and human security. All other significant relations correspond to their algebraic sign, which indicates the direction of the relation between the variables and the a priori expectations. Poor political rights as well as limited civil liberties accompany low human security or higher conflict intensity, respectively. In contrast, with a high level of inclusion of identity groups, human security is higher; thus, by implication, human security is lower in cases of a high level of exclusion (see Table 1).

This means that, at least for this study and for the entire 58 cases, long-term economic growth, environmental security, social equality, and government effectiveness have little significance for structural stability. However, we cannot rule out the possibility that a) indicators other than the ones carefully chosen offer a better approximation and that b) in certain historical constellations these variables (depicted by the chosen indicators) do hold explanatory power. It is also possible that the concept (developed from a political perspective) has limitations in terms of validity. This delineates other tasks that cannot be covered by this study.

More interesting are the remaining independent variables characterized by a positive correlation with the dependent variable: democracy, rule of law, and inclusion of identity groups apparently hold more explanatory power, as shown in the following steps of the analysis (see Section 4 below).

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[15]   The level of significance shows that the respective variables are indeed relevant in their relation with the dependent variable, but not how strong this relation is. It should by no means be concluded that the respective variable plays a special role in the tested context based solely on the level of significance.

Table 1:   Correlations between the Seven Dimensions of Structural Stability and with Human Security

Variables	Human security	Per capita growth rates (p.a.)	Access to improved water (% of total population)	Slum population (% of total urban population)	Standardized: access to improved water/ slum population	Gini coefficient	Government effectiveness	Political rights (Freedom House)	Civil liberty (Freedom House)	Inclusion (from BMZ crises indicator)
Human security	1.00									
Per capita growth rates (p.a.)	0.05	1.00								
Access to improved water (% of total population)	0.16	0.23	1.00							
Slum population (% of total urban population)	-0.12	-0.26	-0.77*	1.00						
Standardized: access to improved water/ slum population	0.15	0.26	0.94*	-0.94*	1.00					
Gini coefficient	-0.33*	-0.31*	0.05	-0.08	0.07*	1.00				
Government effectiveness	-0.13	0.44*	0.47*	-0.49*	0.51*	0.03	1.00			
Political rights (Freedom House)	0.36*	0.06	-0.30*	0.13	-0.23	-0.38*	-0.34*	1.00		
Civil liberty (Freedom House)	0.46*	0.14	-0.27*	0.17	-0.23*	-0.45*	-0.38*	0.92*	1.00	
Inclusion (from BMZ crises indicator)	-0.35*	0.32*	0.20	-0.20	0.21*	-0.21	0.23	0.04	0.01	1.00

* Significant at the minimum of a 5% level, N = 58.

Source: Authors' compilation.

4   Types of Structural Stability

4.1   Graphical Presentation of Structural Stability

The analysis of the seven dimensions of structural stability shows that each country exhibits a specific profile. The aim of this section is the graphical presentation of these profiles. In a second step, this leads to the formation of different types according to the countries' respective expression of dimensions of structural stability. It has to be stated that this endeavor does not amount to a validation of the concept of structural stability; it merely aims to provide a graphical presentation and a categorization of different types of structural stability. For example, an array of countries with above-average values in at least five dimensions can be differentiated from another array with clearly below-average values.

To identify and present the dimensions of structural stability for each country, a heptagon-shaped net diagram (hereafter called a "diamond") has been drawn up in which the average values of all seven dimensions studied, based on the main unit of 58 BMZ partner countries,

are depicted (green line) together with, simultaneously, the specific values of the dimensions for the particular country (red line). In this way, variances in the values of single countries from the average can be illustrated graphically, thus helping to identify possible patterns of variance. A basic prerequisite for the creation of such a graphic representation of the localization of each country with regard to the seven dimensions is the standardization of the variables used; that is, all variables must be brought to the same scale setting, where a common, standardized spread of the values with a mean value of 0 and a standard variance of 1 exists.[16] In this case, the direction of the values of the variables was first standardized. All variables were to display amelioration with increasing values; therefore, for the following variables the values had to be reversed: the Gini Index for income/consumption equality (%, average for the 1990s), political rights (Freedom House) 1991–2000, and civil liberty (Freedom House) 1991–2000.

One exception is the dependent variable human security, which is not represented in the diamonds. Its respective value is stated in a field next to the diamonds and displays a deterioration of human security with an increasing value:

- 1 = good performance, no human security problems during the previous ten-year period
- 2 = some human security problems, not at higher levels
- 3 = problems of somewhat lower magnitude over a more limited span of time
- 4 = generally high level of human security problems over a substantial period of time

When the dark line (which marks standardized values of each dimension in the particular countries) moves from the average value (bright line)[17] inwards, it means that the particular dimension has a lower value than the average. If it moves from the green line outwards, it displays amelioration with respect to the average.

The graphical presentation of the countries' seven dimensions allows for the identification of patterns of variance (for example, an array of countries with clearly above-average values in at least five dimensions compared to an array of countries with clearly below-average values in at least five dimensions), thus enabling a clustering and the formation of categories based on the countries' human security value as well as the patterns of variance. Figures 1 and 2 show the diamonds of the dimensions for all cases which exhibit clear patterns in terms of above- or below-average values.

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[16]   A standardization is carried out more precisely by subtracting the arithmetical mean from each value x_i of a spread X and dividing each resulting difference by the standard variance s_x of the spread X. One obtains a z-standardized spread Z, which has a mean value of 0 and a standard variance of 1.

[17]   Originally the lines were red and green, respectively.

Figure 1: Country Profiles with High Structural Stability

(Minimum of five above-average structural stability dimensions)
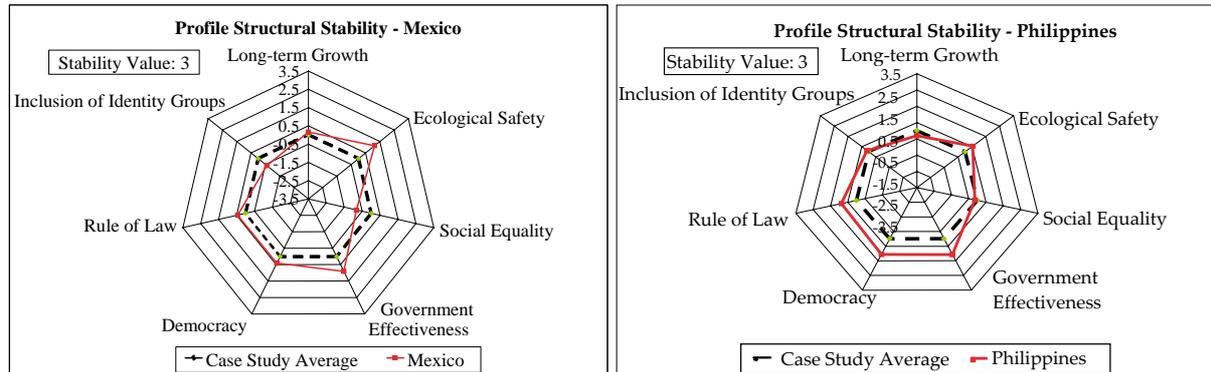
a) Low Degree of Violent Conflict

Chile and Ghana
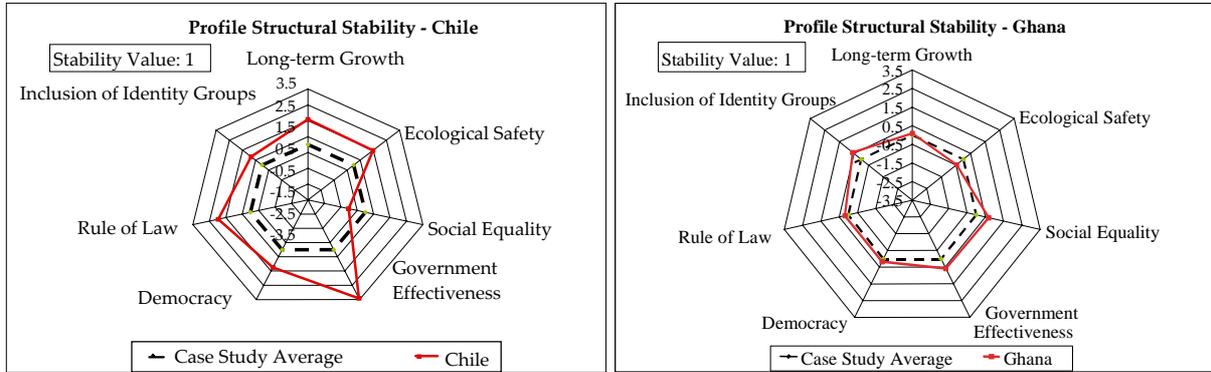
Source: Authors' representation.

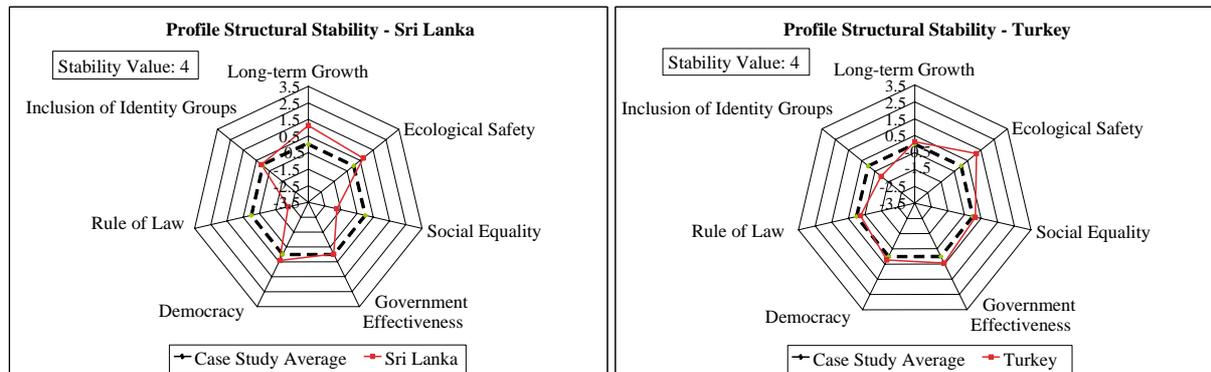### b) Medium to High Degree of Violent Conflict

Mexico and Philippines

Source: Authors' representation.

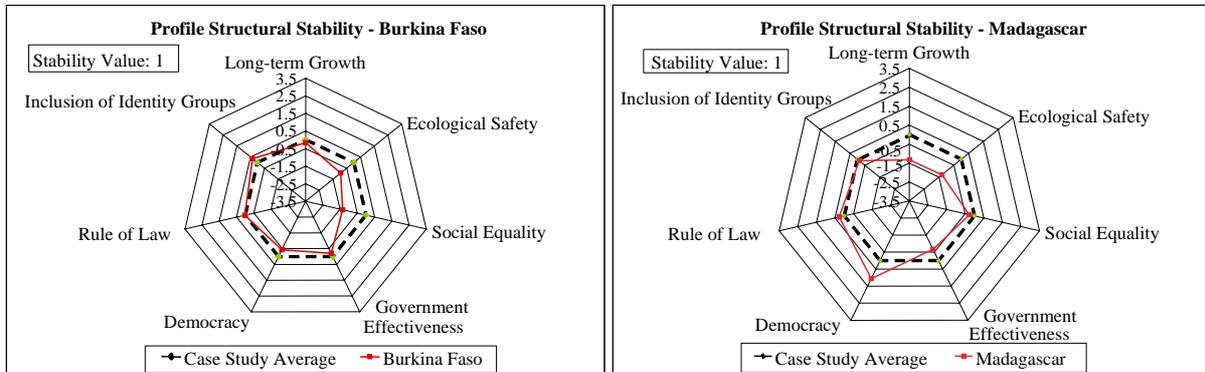### c) High Degree of Violent Conflict

Sri Lanka and Turkey

Source: Authors' representation.

Figure 2: Country Profiles with Low Structural Stability

(Minimum of five below-average structural stability dimensions)

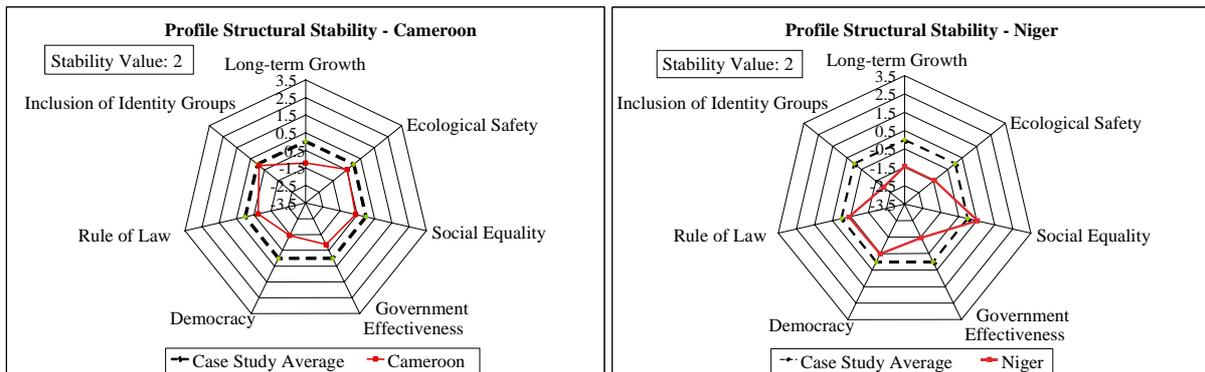**a) Low Degree of Violent Conflict**

Burkina Faso and Madagascar

Source: Authors' representation.

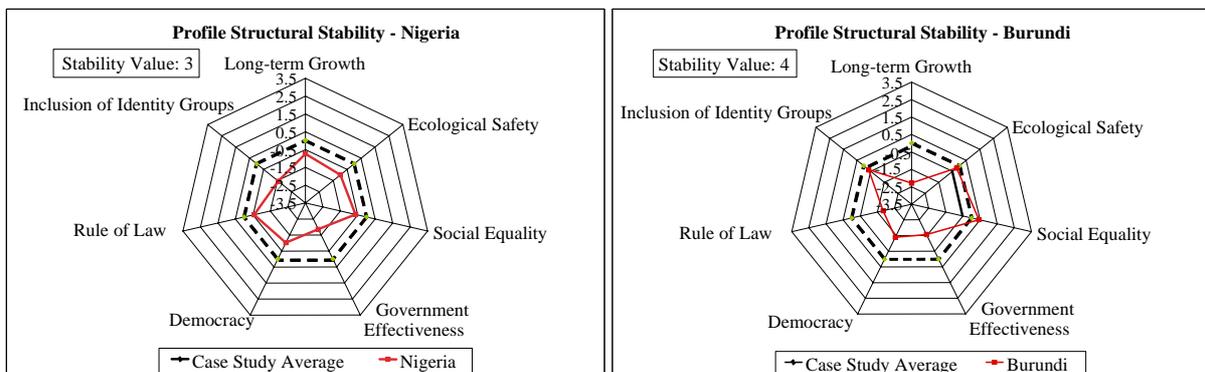**b) Medium to Low Degree of Violent Conflict**

Cameroon and Niger

Source: Authors' representation.

c) Medium to High Degree/High Degree of Violent Conflict

Nigeria and Burundi

Source: Authors' representation.

4.2   Interpretation and Clustering of Cases

The assignment of the cases into different degrees of structural stability is obvious. One-third, that is, 19 of 58 countries, can be classified as structurally stable (low level of violence); only six countries fall into the lowest category and would be classified as "structurally unstable" following the applied terminology (see Table 2). This means that the first group of countries is able—all things considered—to solve or at least nonviolently handle conflicts occurring in a democratization process or otherwise and can be considered more likely to be shock resistant. The last group, on the other hand, is extremely prone to shocks and not able to handle its conflicts nonviolently.

Table 2:   Classification of Countries According to Grades of Stability

Grades of stability			
Low number of violent conflicts (N = 19)	**Low to medium number of violent conflicts (N = 12)**	**Medium to high number of violent conflicts (N = 20)**	**High number of violent conflicts (N = 7)**
Benin	Brazil	Egypt	Algeria
Bolivia	Ecuador	Ethiopia	Burundi
Burkina Faso	El Salvador	Bangladesh	India
Chile	Guinea	China	Indonesia
Costa Rica	Yemen	Côte d'Ivoire	Colombia
Dominican Republic	Jordan	Guatemala	Sri Lanka
Ghana	Cameroon	Cambodia	Turkey
Honduras	Mozambique	Kenya	
Laos	Niger	Morocco	
Madagascar	Senegal	Mexico	
Malawi	Thailand	Nepal	
Mali	Vietnam	Nigeria	
Mongolia		Pakistan	
Namibia		Peru	
Nicaragua		Philippines	
Paraguay		Rwanda	
Tanzania		South Africa	
Tunisia		Syria	
Zambia		Chad	
		Uganda	

Source: Authors' compilation based on Marshall/Gurr, Center for International Development and Conflict Management (CIDCM) (2005): *Peace and Conflict Data 2005*.

A conclusive typology needs to incorporate a second axis of characteristics with regard to the independent variables. A classification based on the number of positively rated dimensions of structural stability (above-average values) could make sense. Table 3 provides a first indication by considering it a good precondition if five dimensions of structural stability exhibit above-average values and, in turn, considering it a poor precondition if five of seven dimensions are below average.

Table 3:   Preconditions of Structural Stability and Incidence of Violence*

Dimensions of structural stability: values	Change of regime and/or acts of war begun / ended 1990–2000	Low number of violent conflicts	Minor to medium number of violent conflicts	Medium to high number of violent conflicts	High number of violent conflicts
Minimum of 5 values above average (n = number of countries)	Change (10)	**Benin Chile Ghana Mongolia**	**El Salvador Thailand**	**Mexico Philippines**	**Colombia Sri Lanka Turkey**
	No change (8)	Costa Rica Tunisia	Jordan Vietnam	Egypt China	India
"Gray area"	Change (24)	**Bolivia Dominican Republic Honduras Namibia Malawi Mali Nicaragua Paraguay Zambia**	**Brazil Ecuador Mozambique Senegal**	**Bangladesh Guatemala Cambodia Nepal Pakistan Peru South Africa Uganda Yemen**	**Algeria Indonesia**
	No Change (2)	Laos	-	Morocco	-
Minimum of 5 values below average	Change (12)	**Burkina Faso Madagascar Tanzania**	**Guinea Cameroon Niger**	**Ethiopia Kenya Nigeria Rwanda Chad**	**Burundi**
	No change (0)	-	-	-	-
Total		19	11	19	7

* States in bold had a change of regime or went to/ceased war, 1990–2000.

Source: Authors' compilation.

Another limitation has to be brought forward: In principle the concept of structural stability has been postulated as being valid only for transitional states. We operationalized it in such a way that states satisfied this criterion if they underwent a change of regime type (for example, introduction of a multiparty system) between 1990 and 2000 and/or if wars broke out or were ended. This means that the concept is not valid for ten of the 58 countries studied. Syria (no change) and Ivory Coast (change of regime type) could not be assigned to the scheme due to a lack of critical data. Ultimately, we could determine clear outcomes for only 45 countries (bold print).[18]

The classification carried out above provides, at a glance, the average values of the dimensions of structural stability during one decade. The fact that the values vary strongly over the course of time and that in certain years a different classification would have followed cannot be ignored.

As shown in the previous section, we could not find strong correlations based on the available data, much less establish causalities. Table 3 suggests, however, a certain plausibility

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[18]   Yet it is plausible that states that did not undergo changes of regime type or see a war begin or end during this period would also react similarly in the case of such events. However, they were not exposed to such shocks.

that in the event of above-average values in five dimensions (eleven cases with changes of regime type or beginning/ending of war) as well as in the opposite case of below-average values in five dimensions (twelve cases), the hypothesis of the mutual enhancement of these dimensions is to some extent confirmed. However, this assertion does not hold true for the 24 cases which do not belong to either of these two groups. And within the group with potentially mutually enhancing, above-average dimensions there are only six cases (Benin, Chile, Ghana, Mongolia, El Salvador, Thailand) in which the dependent variable (human security) exhibits "very strong" or "strong" values. Within the group with potentially mutually enhancing, below-average marked dimensions, there are likewise six cases (Burundi, Ethiopia, Kenya, Nigeria, Rwanda, Chad) with "very poor" or "poor" values for the dependent variable. In total, only twelve of 46 cases are "clarified," that is, show strong and unambiguous relationships between the dimensions and structural stability.

Varying strongly from this logic and therefore requiring explanation are the following groups:

- States within the gray area of not confirming but also not disproving the hypothesis or with below-average values in five dimensions of structural stability that nevertheless exhibit a very good value in the dependent variable. These eight states include Bolivia, the Dominican Republic, Honduras, Namibia, Malawi, Mali, Nicaragua, and Zambia (gray area) as well as Burkina Faso, Madagascar, and Tanzania (below-average values).

- States within the gray area or with above-average values in five dimensions of structural stability that nevertheless exhibit a very poor value in the dependent variable. These five states include Algeria, Indonesia, Colombia, Sri Lanka, and Turkey. It is noteworthy that the last four have lived through highly escalated conflicts, albeit in subregions of their national territories (this also applies to India, which has not lived through larger changes in its system during the period studied and yet is equally "paradoxically" situated). Only the Algerian Civil War (1992–2002) seems to clearly exhibit more than one local dimension. Still, this could be a plausible reason why these states have worse values in the dependent variable than anticipated.

Another approach to plausible statements follows from an examination of the values in the formulated categories (see Table 4).

This overview shows that there is obviously a strong relationship between the combination of democracy and rule of law and high values of structural stability. Not only the especially stable countries—with a variance from the average value of over 1.0 in both dimensions (democracy and rule of law), such as Benin, Chile, and Mongolia—but also those gray-area states with a low degree of violent conflict have positive values in <u>both</u> dimensions, sometimes twice as strong (Bolivia, Namibia).[19] Within the states with below-average values with high stability, Madagascar still exhibits only two positive values in these dimensions. Thus, a clear connection between democracy/rule of law and human security is apparent, which, on

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[19]   Ghana, as an exception within the category of stable countries with above-average values in the dimensions, exhibits only average values for "rule of law" and "democracy."

Table 4:   Correlations of Stability Values with Seven Dimensions of Structural Stability*

Stability values	States	Long-term growth	Ecological security	Social equality	Governmental effectiveness	Democracy	Rule of law	Inclusion of identity groups
Above-average values								
Low number of violent conflicts	Benin	-0.06	-0.58	0.89	0.54	**1.31**	**1.37**	0.12
	Chile	1.59	1.47	-1.02	3.42	**1.25**	**1.96**	0.83
	Ghana	0.10	-0.46	0.68	0.58	**0.17**	**0.19**	0.60
	Mongolia	-1.12	-0.39	1.70	0.25	**1.25**	**1.12**	0.83
Low to medium number of violent conflicts	El Salvador	0.47	0.43	-0.04	0.27	0.95	0.95	1.55
	Thailand	0.91	1.52	-0.28	1.30	0.71	0.53	0.83
Medium to high number of violent conflicts	Philippines	-0.31	0.55	-0.14	1.07	1.07	0.86	0.12
	Mexico	0.16	1.13	-0.82	0.90	0.41	0.44	-0.60
High number of violent conflicts	Colombia	-0.42	1.17	-1.20	0.68	0.59	0.27	1.19
	Sri Lanka	1.14	0.73	0.65	-0.02	0.41	-0.32	**-1.68**
	Turkey	0.14	1.17	0.16	0.43	0.23	-0.23	**-0.96**
"Gray area"								
Low number of violent conflicts	Bolivia	-0.01	0.06	-1.20	0.01	**1.55**	**1.03**	-0.24
	Dominican Republic	1.39	0.69	-0.37	-0.16	**0.89**	**1.12**	-0.24
	Honduras	-0.50	1.03	-1.06	-0.61	**0.95**	**1.12**	0.12
	Namibia	-0.20	0.33	-3.43	1.15	**1.31**	**1.20**	-1.32
	Malawi	0.08	-1.00	-1.17	-0.58	**0.41**	**0.10**	0.83
	Mali	-0.10	-1.41	0.72	-0.46	**0.89**	**0.86**	-0.84
	Nicaragua	-0.20	-0.31	-0.92	-0.57	**0.53**	**0.70**	0.48
	Zambia	-1.55	-0.73	-1.43	-0.60	**0.23**	**0.36**	0.36
Low to medium number of violent conflicts	Brazil	-0.18	0.71	-1.47	0.40	1.01	0.53	-0.60
	Ecuador	-0.73	0.87	-0.88	-1.28	1.19	1.12	-0.60
	Mozambique	0.60	-1.49	0.77	-0.32	0.17	-0.07	-0.12
	Senegal	-0.58	-0.35	-0.65	0.63	0.17	0.27	0.60
Medium to high number of violent conflicts	Bangladesh	0.51	-0.44	1.19	-0.46	1.13	0.36	**-0.24**
	Cambodia	1.65	-1.06	0.15	-0.93	-0.90	-1.33	1.55
	Guatemala	0.12	0.33	-1.08	-0.16	0.47	-0.15	**-1,32**
	Nepal	0.47	-0.40	-0.16	-0.70	0.83	0.44	**-0.60**
	Pakistan	-0.05	0.11	1.71	-0.43	-0.01	-0.49	**-0.24**
	Peru	0.33	0.09	-0.15	0.51	-0.37	0.10	**-0.24**
	South Africa	-0.94	0.70	-1.74	1.48	1.13	1.20	**-2.03**
	Uganda	0.96	-1.14	0.11	0.13	-0.55	-0.32	**-0.12**
	Yemen	-0.02	-0.20	1.86	-0.65	-0.55	-1.00	0.83
High number of violent conflicts	Algeria	-0.81	1.30	1.29	-0.97	**-1.14**	**-1.00**	0.12
	Indonesia	0.67	0.61	1.55	0.12	**-1.08**	**-0.66**	**-1.68**
Below-average values								
Low number of violent conflicts	Burkina Faso	-0.16	-0.95	-1.35	-0.21	-0.43	0.02	0.36
	Madagascar	-1.32	-1.30	-0.28	-0.66	**1.07**	**0.27**	-0.12
	Tanzania	-0.70	-1.12	-0.26	-0.78	-0.61	-0.49	1.31
Low to medium number of violent conflicts	Guinea	-0.33	-0.97	-0.57	-0.60	-1.08	-0.57	-0.60
	Cameroon	-1.22	-0.47	-0.59	-0.87	-1.44	-0.83	-0.12
	Niger	-1.44	-1.44	0.54	-1.46	-0.49	-0.40	-2.03
Medium to high number of violent conflicts	Ethiopia	-0.56	-2.03	0.41	-0.10	**-0.49**	**-0.57**	**-1.32**
	Kenya	-1.15	-0.71	-0.66	-0.90	**-1.02**	0.53	**-0.24**
	Nigeria	-0.74	-0.99	-0.63	-1.86	**-1.02**	**-0.57**	**-1.56**
	Rwanda	-0.12	-0.60	-0.09	-0.79	**-1.50**	**-1.33**	**-1.56**
	Chad	-0.98	-1.82		-0.42	**-1.08**	**-0.74**	**-1.80**
High number of violent conflicts	Burundi	-2.29	-0.21	0.43	-1.57	**-1.38**	**-1.84**	-0.36

* Values in bold are referred to in the text; additionally underlined are distinctive values (1.0 above or -1.0 below average). The table contains states that underwent a change of regime or went to/ended war between 1990–2000 only.

Source: Authors' compilation.

the other hand, does not completely apply in reverse: With strongly positive values in de-
mocracy and rule of law, South Africa falls within the antepenultimate category in terms of
human security. But it is the only clear outlier here. Nepal, with weakly positive values,
could possibly also be seen as such. With respect to democracy, it can be said that in the
groups with middle to high or high degrees of violent conflict the values are almost entirely
strongly negative (at least -1.0) (Kenya, Nigeria, Rwanda, Chad, and Burundi).[20] Algeria and
Indonesia, within the gray area, complete this picture with corresponding values.

 Looking at Table 1, 15 of the 19 countries classified as structurally stable have above-average
values in terms of democracy and rule of law; ten have, simultaneously, serious deficits out-
side these two dimensions and still remain stable. From the calculation of the correlation we
know that at a given significance, the corresponding correlations of the independent variables
with the dependent variable turn out positive at a middle level (Pearson's correlation coeffi-
cient of 0.3613* and 0.4650*, respectively). However, causal relations between studied vari-
ables cannot be established from the calculation of the correlation. Two states with a low de-
gree of violent conflict nevertheless exhibit below-average values in both dimensions (Tunisia
and Laos), but these states have not experienced a change of regime type or a war within the
studied period (see Table 5).

Table 5:   States with Weak Democracy and Rule of Law

Types	Low number of violent conflicts	Low to medium number of violent conflicts	Medium to high number of violent conflicts	High number of violent conflicts
Democratic constitutional states with distinctive deficits in other dimensions (minimum of three values below average)	Bolivia Dominican Republic Honduras Madagascar Malawi Mali Namibia Nicaragua Paraguay Zambia		Bangladesh Nepal South Africa	
Authoritarian states without rule of law, possessing strengths in other dimensions (minimum of three values above average)	Tunisia Laos	Vietnam	Egypt China Cambodia Morocco	Algeria Indonesia

Source: Authors' compilation.

Further, it is apparent that states with overall below-average values and middle to high degrees
of violent conflict frequently exhibit strongly negative values in the dimension "inclusion of
identity groups" (strongly negative: Ethiopia, Nigeria, Rwanda, Chad; still negative: Kenya,

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[20]   Ethiopia has a negative but not strongly negative value (-0.49) and therefore belongs only partly to this
       group. As the only country in this group, Kenya has a positive average value in "rule of law."

Burundi); this is complemented by the results in the gray area for Guatemala and South Africa (see Table 6).[21] Sri Lanka's only two negative values—in a country with overall above-average results in the dimensions but with high instability—are found in inclusion (strongly negative) and rule of law. In the case of Turkey the values are only marginally more positive; here, too, the only two negative dimensions are inclusion of identity groups and rule of law.

Table 6: Inclusion of Identity Groups in Different States

Types	Low number of violent conflicts	Low to medium number of violent conflicts	Medium to high number of violent conflicts	High number of violent conflicts
Inclusion of identity groups significantly above average (> 1.0)	Costa Rica Laos Paraguay Tunisia	El Salvador Vietnam	China Cambodia	Colombia
Inclusion of identity groups significantly below average (< -1.0)	Namibia	Niger	Ethiopia Guatemala Nigeria Rwanda South Africa Chad	Sri Lanka Indonesia

Source: Authors' compilation.

If the states that have not had to get over shocks are added, of the 19 states that have only a low degree of violent conflict, 14 are more socially inclusive than average. This already indicates that this dimension is of special importance (however, the statistical correlation is medium-strong [-0.3481*]). Especially with high fragmentation and polarization of the main identity groups, this factor is of high relevance for structural stability. The inversion of the argument seems to be adequate: Guatemala, Indonesia, Mexico, and South Africa do poorly in terms of structural stability—even though they exhibit good values in many dimensions— but not in terms of inclusion. Other countries exhibit poor values for inclusion but are considered more successful in terms of structural stability (Niger and, more clearly, Namibia). While one receives the impression that especially the dimensions of environmental security and social equality oscillate heavily and do not exhibit distinctive features in the applied categories, this is probably due to the global comparability of data for environmental security.[22] In summarizing this section, one can state:

- The synopsis of the features shows that it is not possible to create a typology that allows for the formation of clearly distinct ("disjoint") types with a high practical relevance.

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[21]   Also negative are Bangladesh, Nepal, Pakistan, Peru, and Uganda. Exceptions with positive values for inclusion despite an overall elevated degree of violent conflict are Cambodia and Algeria.

[22]   The functionality of the indicator used (access to purified water) is also dependent on the overall water supply: the problems of a Sahel country are not directly comparable to those of a country neighboring the Amazon. This exemplifies the difficulty of precisely assessing the validity of this dimension, which is important at the policy level.

- On the other hand, the systematic analysis of the identified values allows for the identification of frequent constellations (for example, "democratic states under rule of law and low degrees of violence with clear deficits in other dimensions of structural stability" [Bolivia, Dominican Republic, Honduras, Madagascar, Malawi, Mali, Namibia, Nicaragua, Paraguay, Zambia] or "states with massive deficits in the inclusion of identity groups with high degrees of violence" [Ethiopia, Indonesia, Nigeria, Rwanda, Sri Lanka, South Africa, Chad]) that suggest the necessity of developing policy strategies for exactly those groups of countries.

5   Conclusion

This study has endeavored to investigate the preconditions of structural stability and to test the mutual interconnections of these preconditions. A complete set of indicators for the assessment of the seven dimensions of structural stability has been created, clusters have been depicted, and on their basis, types of structural stability have been identified.

The identification of suitable indicators was not equally simple for all seven dimensions of structural stability. Data were often fragmentary or not available for longer periods of time. Since data for the dependent variable exists only for the period from 1990 to 2000, the investigation had to be partially limited to this research period. In various cases a correlation and, in turn, a causality problem exists: Between the studied correlations and the actual or assumed causalities an attribution gap generally arises. Linear statements, which would be necessary for an unambiguous determination of an instrument mix or the ideal sequence of measures, were not possible. These challenges limit the declarative power of the endeavor.

The initial expectation that the correlation of the various dimensions of structural stability with the dependent variable of human security would result in clear types of structural stability and structural instability was not confirmed. Accordingly, the results are only of a very tentative character. This is first of all an expression of the fact that the seven dimensions of structural stability are a political postulate—and not the result of a systematic theoretical and political lessons-learned process or stringent empirical analysis. The assumed interdependent relation between the seven dimensions of structural stability is plausible but cannot be stringently proven with the procedure used in this initial study. The same is true of the postulated mutual enhancement or weakening of the seven dimensions: this relation is not ruled out by the study but cannot be confirmed as a general rule either. This would only be possible with improved indicators and further calculations (for example, regression analysis).

The most significant positive relationship appeared between the dependent variable "human security" on the one hand and the indicators for "democracy" and "rule of law," respectively, on the other. Also, between the dimensions "inclusion of identity groups" and "government effectiveness" and "human security" a positive relation can be identified. The dimensions "sustainable economic growth"; "environmental security"; and—eliminating statistical out-

liers–"social equality" are inconclusive. For the intended formation of types, this meant that clear attributions and mutually enhancing effects were hard to deduce; they may appear plausible in individual cases, but in order to confirm them as causal, methodological analysis that cannot be achieved by quantitative statistical methods alone is required.

Despite these reservations, a preliminary clustering of the countries seems possible: In the category of states that experience only a low degree of violent conflict, a large group—15 of 19 states—has above-average values for "democracy" and "rule of law." Further, 14 of 19 states in this category are more socially inclusive than average. It is noteworthy that among the states with above-average values are countries from Africa, Asia, and Latin America. The group of transitional regimes with below-average values—regardless of the level of violence—are all African states, without exception. This makes moot the question of the specific character of statehood and politics in Africa, which would warrant further analysis.

The declarative power of the approach can be improved considerably with further research once the data set is expanded, the studied periods are differentiated, an actor's perspective is added, and a stronger empirical verification of the observed correlations is achieved. The data set can be improved by breaking the data down annually instead of into decades (this applies especially to the dependent variable) and by basing it on a separate research-based index of human security (on the basis of comparative country analyses as is done at the GIGA in regard to the countries of the South).

Secondly, future research should analyze more exactly why changes occur in regard to the dependent variable. The consequences of significant change and—above all—the determinants of the dependent variable are what would primarily have to be analyzed. In other words, which are the most important aspects of structural stability in regard to significant positive and negative changes in human security? A dynamic panel analysis would be applicable for the analysis of changes in the dependent variable, and a Tobit Model would be applicable for the identification of the most important determinants of change. The endogeneity—that is, the mutual relations between the variables—would be considered by a comprehensive instrumentation estimate at all times.

By means of these measures, the attribution gap between the observed correlations and the actual causalities would be reduced noticeably. Statements regarding a useful policy-mix for a given situation would be based on a resilient foundation. Through the introduction of an actor dimension, that is, a level of activity ("governance matters"), into the research, a dynamic dimension could be depicted that would allow for discussion of those cases in which a comparable initial situation leads to different paths and outcomes. This would also be important in regard to those states that we have located in the gray area between above-average values in at least five dimensions and below-average values in at least five dimensions of structural stability. Finally, we expect that the observed correlations can be understood and explained through the completion of a limited number of empirical case studies. In combination with the other amplifications of the research approach mentioned, concrete and resilient development policy recommendations could be formulated.

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