



Geneva Centre for Security Policy  
Centre de Politique de Sécurité, Genève  
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## **Program on the Geopolitical Implications of Globalization and Transnational Security**

# **Proposal for a Globalization Matrix: Quantifying Impacts & Responses**

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## **Abstract**

**This project has developed a matrix in order to better understand the policy challenges and responses posed by diverse, dynamic, topical, and contemporary issues. The ultimate aim of the project is to better comprehend the relationship between globalization and stability. While we recognize that, at first glance, the matrix is complex in nature, we nonetheless propose it as a methodological tool that can be usefully employed in policy analysis. This matrix will allow for the conceptualization and contextual investigation of certain issues and, at the same time, will highlight the security implications at the state, regional, and international level.**

## Introduction

Globalization is a subjective and contested concept, and any study of the relationship between globalization and stability is bound to be contentious. This project has developed a diagnostic tool that can be used to chart, however crudely, policy implications for individual states and regions, as well as the international system, that are raised by diverse and topical contemporary issues.

In reviewing previously developed matrices (including the annual index published by *Foreign Policy* and the A. T. Kearney<sup>1</sup> consulting firm), we can see that levels of globalization are measured in terms of economic, political, and social factors. These indices look at quantitative data that rank a state's level of globalization rather than the challenges to the security of a state and the resulting impact on stability. In contrast, the GCSP Globalization Matrix provides an opportunity to see the impact of various challenges to a state and the effectiveness of any subsequent reactions. Ultimately, this matrix can be used as a tool for policy recommendations, predicting future reactions and levels of stability at the state, regional, or global level.

The idea of measuring the rate and dynamics of globalization is far from original. Table 2 (Approaches to Globalization) illustrates the range of prior attempts to quantify globalization. Each of the nine approaches outlined in this table adds value to the debate in its own way. The Centre for the Study of Globalisation and Regionalisation (CSGR) Globalisation Index and the *Konjunkturforschungsstelle* (KOF) Index of Globalization both measure how globalized a country is based on economic, social, and political measurements. The A. T. Kearney study also looks at these factors but adds technology as a criterion to identify which countries are globalizing and which ones are not. This method is useful for determining a country ranking but is otherwise limited, as it does not take into account the way policy decisions are impacted by globalization and vice versa. While some indices provide a comprehensive review of one aspect (which is the case with the Torben Andersen and Tryggvi Thor Herbertsson index), it limits the measurement of globalization to one sector, therefore rendering it only partially valid, as multiple factors contribute to the development of state policy. Finally, the Randy Kluver and Wayne Fu Index looks at the phenomenon of cultural globalization. Again, by limiting the scope of measurement, one cannot gauge a clear picture of a policy position at any given time on any given issue.

In contrast to the above, the proposed GCSP matrix looks at specific, time-sensitive policy issues by isolating them and incorporating real policy challenges and responses to these challenges into the debate. Contrary to the dominant quantitative approaches outlined above, the GCSP has attempted to create a matrix that charts the impact of policy challenges and responses within a regional and global context. One can then extrapolate from the geopolitical impact useful insights into the nature of globalization.

## **Methodology**

The GCSP Globalization Matrix (Table 1) is split into five interlinked sections that are explained below. Before applying the matrix, we select an issue that is topical, in the news, and appears at face value to have had a transnational or international impact (such as the cartoons in Denmark or Russian demographic decline).

- In the first section, we take the issue and ask what political, economic, social, military, and environmental security challenges were raised by this issue for the state. Taking each of these sectors in turn, we note the policy challenges and the policy responses. At the same time, we assess the effectiveness of the policy response within each sector, given the scale and nature of the policy challenge.
- In the second section, we attempt to look across the sectors and assess the totality of the state's responses, noting the policy dilemmas that arose and the ability of each state to tackle these dilemmas effectively.
- In the third section, we attempt to capture the nature of the impact on each state's foreign and security policy in a regional context (Europe for cartoons and Eurasia for Russian demographic decline) before looking more globally. In other words, how policy makers address the challenges posed by different issues has certain consequences for their state's foreign policies, be they acknowledged or unacknowledged, intended or unintended. This section attempts to outline this.
- The fourth section identifies the actual impact of the policy challenges and responses on foreign governments, public opinion, and the media. In other words, is there broad agreement or disagreement with the policy responses and their impact? It is important to note that, in this section, despite the existence in some instances of mixed reactions (agreement, disagreement, and a neutral response), the majority reaction is represented.
- Finally, in the fifth section, we are able to extrapolate the geopolitical impact and reaction in terms of policy responses, noting the likely impact continuity of a policy approach has on stability. Where continuity leads to instability, we make policy recommendations to ameliorate such trends. This enables the recommendations to focus on maximizing stability and minimizing the issue as a source of current or future instability.

## Results

### **(1) Proposed GCSP Globalization Matrix**

The Globalization Matrix was tested using two recent security policy challenges. The first challenge was the “Rapid Demographic Decline” in the Russian Federation. In utilizing the matrix, we were able to identify the various policy challenges presented by this issue to the Russian Federation, i.e., the labor shortage and dependency ratio issues, the issues surrounding the change in voting weights for different regions, center-periphery issues, sovereignty sensitivity, and a right-wing backlash. The government of the Russian Federation is responding in many ways. The political response, for instance, was identified as a recentralization of vertical power and the fostering of a Slavic federal ideology. This response was perceived as effective, while the tightening of citizenship laws (social response) was seen as ineffective. Overall, the researcher identified that the dilemma for the Russian Federation is how to improve the economy without causing social insecurity. Through an incoherent policy, the attempt to do both has proved ineffective. In utilizing the matrix, it was determined that the reaction of the majority of regions has been strongly against the response of the Russian Federation’s government, despite other regions remaining quite neutral. This led to a rating of instability or an anti-globalization feeling when assessing future outcomes and alternative scenarios.

The second challenge used to test the GCSP matrix was the debate surrounding the publishing of the cartoons in Denmark that depicted caricatures of the Prophet Mohammed. Through this test, we were able to determine that the impact for Denmark was strong at all levels of society, i.e., government, public opinion, and the media. This finding was less applicable in terms of the global reaction, specifically in Sub-Saharan Africa and Latin America, despite the strong impact at the sub-regional and regional levels. This issue led to a *frangmentation* of the state that, as defined by our matrix, falls between stability and instability. The *lessons learned* highlight a lack of understanding on both sides of the cultural divide, both in the spiritual sphere and in the secular dimension. An increase in educational exchanges, dialogue, the teaching of greater cultural sensitivity, as well as improved channels of communication, were all seen to be appropriate policy recommendations.

In both of these cases, the matrix allowed for an existing challenge to be measured in accordance with how stable and secure the response of the state left that state or region and how this played into the status of global security, if at all. The reactions in both instances were measured at both the state and regional levels, which allowed for an assessment of the overall global security challenge.

The proposed matrix appears below, along with the two examples as explained above (Table 1).

**Table 1: GCSP Globalization Matrix**

<b>Policy Issue:</b>	<b>Country:</b>
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State	Security Sectors	Policy Challenge	Policy Response	Response Value		
				Effective	Moderate	Ineffective
	Political					
	Economic					
	Societal					
	Military					
	Environmental					

		Policy Dilemmas	Responses	Effective	Moderate	Ineffective
	Cross-Sector Challenge and Response					

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**Geopolitical Impacts and Reactions**

Geopolitical Impact	Foreign Policy Implications						Stability Index		
	Government		Public Opinion		Media		Further Stability	No Change	Further Instability
	Regional	Sub-region Reaction							
	Region Reaction								
Global	North America								
	Europe								
	Asia								
	Middle East & Maghreb								
	Sub-Saharan Africa								
	Latin America								

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Reaction	Impact (Strong/Moderate/Weak)			Reaction								
				Agree			Neutral			Disagree		
	Government	Public Opinion	Media	Government	Public Opinion	Media	Government	Public Opinion	Media	Government	Public Opinion	Media
Regional	Sub-region Reaction											
	Region Reaction											
Global	North America											
	Europe											
	Asia											
	Middle East & Maghreb											
	Sub-Saharan Africa											
	Latin America											

**“Impact” Box:**

The purpose of this box is:

- To measure the reaction of governments, public opinion, and the media to a given state's response to a given policy challenge. As a measure of reaction, we use the terms *strong*, *moderate*, and *weak*, which correlate to the visibility, interest, and focus paid to a given state's response to a given policy challenge by governments, public opinion, and the media in the sub-region, region, and then globally through the regions.
- To demonstrate commonalities and differences in the visibility, interest, and focus paid to a given state's response to a given policy challenge by governments, public opinion, and media in the sub-region, region, and then globally through the regions.
- This helps us to assess the global impact of a given state's response to a given policy challenge.

**“Reaction to the Challenge” Box:**

The purpose of this box is to gain a regional and global perspective on how a given state responds to a given policy challenge. This is of interest because:

- It can demonstrate the extent to which there is intra-regional coherence in response to how a given state responds to a given policy challenge. This can point to potential sources of tension and instability within a region.
- It can demonstrate divisions between governments, public opinion, and media regionally and globally. This can point to intra-regional tensions.
- It can demonstrate emerging or actual divisions between regions and the formation of regional blocs. This can point to inter-regional tensions.

<b>Future</b>		Future Outcomes Alternative Trajectories/Scenarios		
	<b>Years</b>	Fragmentation (narrow/instability) anti- globalization	Fragmengration	Integration (broad/stability) pro- globalization
	+0 (2006)			
	+5 (2011)			
	+10 (2016)			
	+25 (2031)			
	+50 (2056)			

**Future Indicators**  
**of Positive Integration/Globalization**

Society: Development, Wealth, Progress  
Stability: National, Ethnic, Minority, Integration  
Political: Legitimacy, Satisfaction  
Cultural: Integrity, Identity, Diversity, Understanding  
Conflict: Prevention, Peaceful Resolution

<b>Lessons Learned</b>	<b>Policy Recommendations</b>

**(1a) Example of Completed GCSP Globalization Matrix - Russia**

<b>Policy Issue:</b> Rapid Demographic Decline	<b>Country:</b> Russian Federation
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	Security Sectors	Policy Challenge	Policy Response	Response Value		
				Effective	Moderate	Ineffective
<b>State</b>	<b>Political</b>	Voting weight in regions change, center-periphery issues, sovereignty sensitivity, right-wing backlash	Recentralization of power vertically, fostering a Slavic federal ideology	*		
	<b>Economic</b>	Labor shortage and dependency ration issues	Migration policy changes to increase migrants for labor supply			*
	<b>Societal</b>	Societal polarization and insecurity, difference between Slavic and non-Slavic fertility and mortality rates, xenophobia	Tightening of citizenship laws			*
	<b>Military</b>	Conscript army harder to sustain, doctrine impact	Discussions on professionalization of military, threshold for nuclear first strike lowered		*	
	<b>Environmental</b>	N/A	N/A	N/A	N/A	N/A

	Cross-Sector Challenge and Response	Policy Dilemmas	Responses	Effective	Moderate	Ineffective
		How to improve economy without causing societal insecurity	Policy incoherence: try to do both and fail to do either			*

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# Geopolitical Impacts and Reactions

Geopolitical Impact		Foreign Policy Implications						Stability Index		
				Government	Public Opinion	Media	Further Stability	No Change	Further Instability	
		Regional	Sub-region Reaction	Competition for migrants in sub-region: Kazakhstan, Ukraine	Negative	Negative			*	
	Region Reaction	Compatriots abroad status and value strengthened	Negative, especially in Moldova and Georgia					*		
Global	North America	Perception of Russian weakness	Not an issue	Not an issue			*			
	Europe	Knowledge workers and fortress Europe – Russia as a transit state/organized crime & illegal migrants	Negative: HIV/AIDS associations, poverty, diseases	Negative: HIV/AIDS associations, poverty, diseases			*			
	Asia	Chinese migration fears	Only an issue in four northern provinces	Unknown			*			
	Middle East & Maghreb	N/A	N/A	N/A			*			
	Sub-Saharan Africa	N/A	N/A	N/A			*			
	Latin America	N/A	N/A	N/A			*			

Reaction		Impact (Strong/Moderate/Weak)			Reaction										
							Agree			Neutral			Disagree		
		Government	Public Opinion	Media	Government	Public Opinion	Media	Government	Public Opinion	Media	Government	Public Opinion	Media		
Regional	Sub-region Reaction	Moderate	Moderate	Moderate							X	X			
	Region Reaction	Strong	Strong	Strong						X	X	X			
Global	North America	Weak	Weak	Weak				X	X	X					
	Europe	Moderate	Weak	Moderate				X	X	X					
	Asia	Weak	Weak	Weak				X	X	X					
	Middle East & Maghreb	N/A	N/A	N/A				X	X	X					
	Sub-Saharan Africa	N/A	N/A	N/A				X	X	X					
	Latin America	N/A	N/A	N/A				X	X	X					

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**“Reaction to the Challenge” Box:**

The purpose of this box is to gain a regional and global perspective on how a given state responds to a given policy challenge. This is of interest because:

- It can demonstrate the extent to which there is intra-regional coherence in response to how a given state responds to a given policy challenge. This can point to potential sources of tension and instability within a region.
- It can demonstrate divisions between governments, public opinion, and media regionally and globally. This can point to intra-regional tensions.
- It can demonstrate emerging or actual divisions between regions and the formation of regional blocs. This can point to inter-regional tensions.

<b>Future</b>	Future Outcomes Alternative Trajectories/Scenarios		
	<b>Years</b>	Fragmentation (narrow/instability) anti- globalization	Integration (broad/stability) pro- globalization
	+0 (2006)		*
	+5 (2011)		*
	+10 (2016)		*
	+25 (2031)		*
	+50 (2056)		*

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Conflict: Prevention, Peaceful Resolution

<b>Lessons Learned</b>	<b>Policy Recommendations</b>
Demographic decline impacts on all security sectors in Russia, least of all the environment.	Greater understanding of internal migration patterns; increased fertility and decreased mortality rates a focus.
Easily politicized for internal electoral advantage – the Chinese are coming! Unintended foreign policy impacts potentially negative with EU and China – strategic partners.	Must manage the problem with external actors.
Policy incoherence to deal with it – no focus, though rhetoric recognizes it as a threat to state survival.	Need policy coherence in citizenship and migration policies – cannot be dealt with in isolation.
Used to justify existing policy preferences.	

**(1b) Example of Completed GCSP Globalization Matrix - Denmark**

<b>Policy Issue:</b> Cartoons, freedom of speech vs. cultural sensitivity	<b>Country:</b> Denmark
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	Security Sectors	Policy Challenge	Policy Response	Response Value		
				Effective	Moderate	Ineffective
<b>State</b>	<b>Political</b>	How to uphold freedom of thought and expression and what are the limits to this freedom – are they unconditional?	The Danish prime minister refused to meet with officials from Arab embassies.			*
	<b>Economic</b>	Economic boycotts of Danish products in a number of countries	The EU Directorate for trade spoke out about a possible referral to the WTO of any country wishing to impose sanctions on Denmark.		*	
	<b>Societal</b>	Relations with the Muslim world: how to bridge growing values, religions, and cultural divides	Debates about the representation or misrepresentation of Islam and other cultures in Europe		*	
	<b>Military</b>	N/A	N/A			
	<b>Environmental</b>	N/A	N/A			

	Policy Dilemmas	Responses	Effective	Moderate	Ineffective
			<b>Cross-Sector Challenge and Response</b>	1) The right to provoke and freedom of expression, as well as the responsibility to respect the views of others and not to incite hatred or violence, but privileging one approach weakens the other – where to draw the line without damaging both  2) States should protect the liberties of their peoples, but when local is global through connectivity, and states punish someone for actions they are not responsible for and are unable to respond to without changing the nature of their governance, how are states to respond meaningfully while maintaining their integrity?  3) How can homogenous states (where there is one dominant ethnicity, religion and value base) best maintain the core identity of societies within them while integrating ever more closely into a globalized world where identities and values can clash?	1) Danish prime minister welcomed apology for the publishing of the cartoons by <i>Jyllandsposten</i> , but defended freedom of the press.  2) Discussions that have increased support for anti-immigration laws  3) Meetings with Muslim leaders in the Middle East

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**Geopolitical Impacts and Reactions**

<b>Geopolitical Impact</b>		<b>Foreign Policy Implications</b>			<b>Stability Index</b>		
		Government	Public Opinion	Media	Further Stability	No Change	Further Instability
		Regional	Sub-region Reaction	Balanced response to dilemmas, free speech vs. cultural sensitivities	Pro Free Speech	Pro freedom of the press and free speech	
Regional	Region Reaction	Balanced response to dilemmas, free speech vs. cultural sensitivities	Pro Free Speech	Pro freedom of the press and free speech			*
Global	North America	Pro freedom of speech and cultural sensitivities	Pro Free Speech	Pro freedom of the press		*	
	Europe	See above (region)	See above (region)	See above (region)			*
	Asia	Pro Cultural Sensitivities	Balanced response between the two dilemmas	Pro Cultural Sensitivities			*
	Middle East & Maghreb	Pro Cultural Sensitivities	Pro Cultural Sensitivities	Pro Cultural Sensitivities			*
	Sub-Saharan Africa	Pro Cultural Sensitivities	Pro Cultural Sensitivities	Pro Cultural Sensitivities		*	
	Latin America	Balanced Response	Balanced Response	Balanced Response		*	

<b>Reaction</b>		<b>Impact</b> (Strong/Moderate/Weak)			<b>Reaction</b>								
		Government	Public Opinion	Media	<b>Agree</b>			<b>Neutral</b>			<b>Disagree</b>		
					Government	Public Opinion	Media	Government	Public Opinion	Media	Government	Public Opinion	Media
Regional	Sub-region Reaction	Strong	Strong	Strong	X	X	X						
Regional	Region Reaction	Strong	Strong	Strong	X	X	X						
Global	North America	Moderate	Moderate	Strong	X	X	X						
	Europe	Strong	Strong	Strong	X	X	X						
	Asia	Strong	Strong	Strong							X	X	X
	Middle East & Maghreb	Strong	Strong	Strong							X	X	X
	Sub-Saharan Africa	Weak	Moderate	Moderate							X	X	X
	Latin America	Weak	Weak	Weak							?	?	?

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	Years	Fragmentation (narrow/instability) anti- globalization	Fragmentation	Integration (broad/stability) pro- globalization
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	+5 (2011)		*	
	+10 (2016)		*	
	+25 (2031)			*
	+50 (2056)			*

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 Conflict: Prevention, Peaceful Resolution

Lessons Learned	Policy Recommendations
Lack of cultural understanding on both sides of the cultural divide – spiritual and secular dimension; Changing perceptions: educational exchanges, dialogue, and greater cultural sensitivity	Governments should encourage their media to correlate freedom of expression with responsibility and cultural sensitivities.
Instrumental use of the issue by some elites – mobilizing potential; Better channels of communication and crisis-management mechanisms needed	Governments on all sides of the debate should behave, through policy and statements, in a way that encourages cultural respect and minimizes xenophobia. Additionally, they should enact legislation that punishes hateful statements and actions.
Speed of event – no time to devise a response – governments lose margin of maneuver;	Encourage education and media programs about other cultures and their specific sensitivities.
	The governments of democratic states should be quick to apologize for offenses caused to people's religious feelings but should not apologize on behalf of non-state actors that caused the offense.
	Western and Middle Eastern states should engage in more thoughtful cultural diplomacy, explaining the realities and complexities of their respective societies behind closed doors and openly where appropriate.

## (2) Other Measures of Globalization

In addition to reviewing the matrix as it is used to assess current policy issues, it is important to also fully investigate other matrices that have been developed within the discipline. A number of matrices, which measure different aspects in the globalization debate, were mentioned earlier. These are reviewed in full below.

**Table 2: Approaches to Globalization:  
Measures of Globalization and Current Indices<sup>1</sup>**

<b>A. T. Kearney/Foreign Policy: Globalization Index (est. 2001)</b>						
<b>Index</b>	<b>Economic Integration</b>	<b>Technological Connectivity</b>	<b>Personal Contact</b>	<b>Political Engagement</b>	<b>Measurement</b>	<b>Methodology</b>
<p><b>A.T. Kearney/Foreign Policy Globalization Index</b></p> <p>For more information, see:</p> <p>"Measuring Globalization", <i>Foreign Policy</i>, May/June 2005, pp. 52-60.</p> <p>"Globalization Index Data and Methodology", <i>AT Kearney</i>, see <a href="http://www.atkearney.com/main.taf?p=5.4.1.116.1">http://www.atkearney.com/main.taf?p=5.4.1.116.1</a>.</p> <p>Ben Lockwood, "How Robust is the Kearney/Foreign Policy Globalisation Index?", <i>The World Economy</i>, Vol. 27, No. 4, April 2004, pp. 507-523.</p> <p>Publication Cycle: <i>Annual</i></p>	<p><b>1. Trade</b></p> <p><b>2. Foreign Direct Investments</b></p>	<p><b>1. Internet Users</b></p> <p><b>2. Internet Hosts</b></p> <p><b>3. Secure Servers</b></p>	<p><b>1. International Travel &amp; Tourism</b></p> <p><b>2. International Telephone Traffic</b></p> <p><b>3. Remittances and Personal Transfers</b> (including worker remittances, compensation to employees, and other person-to-person and non-governmental transfers)</p>	<p><b>1. Number of Memberships in International Organizations</b></p> <p><b>2. Personnel and Financial Contributions to UN Peacekeeping Missions</b></p> <p><b>3. International Treaties Ratified</b></p> <p><b>4. Government Transfers</b></p>	<p>Measures which countries are globalizing and which are not.</p>	<p>Variables are assigned by considering which elements are "relevant" for measuring globalization in these four areas. Quantitative measures are gathered and then normalized.</p> <p>The assessed countries make up 96% of the world's gross domestic product and 85% of the world's population. In order to assess the 62 countries they focus on, data is collected from the World Bank, the International Monetary Fund, the International Telecommunication Union, the World Tourism Organization, and the Central Intelligence Agency.</p>

<sup>1</sup> Information presented in parentheses following variables are weighted values. In addition, information that is presented in the methodology section is either taken directly from the source or is a paraphrase of the methodology provided in the citation noted.

London School of Economics and Political Science: Global Civil Society Index (GCSI) (est. 2001)			
Index	Variables Used (HDI)	Measurement	Methodology (HDI)
<p><b>Global Civil Society Index</b></p> <p><a href="http://www.lse.ac.uk/Depts/global/Publications/Yearbooks/2002/2002chapter910.pdf">http://www.lse.ac.uk/Depts/global/Publications/Yearbooks/2002/2002chapter910.pdf</a></p> <p>In developing the index that appears here, LSE initially calculated their index using two different methodologies, the Human Development Index (HDI) style and through a factor analytic model. They concluded that the HDI style is both simpler and more intuitive in its meaning and thus preferable. Therefore, only the HDI version is represented here.</p> <p>Publication Cycle: <i>This was a one-time proposal of a new methodology. Further research has been done but not on a global scale, and this specific index was never published again.</i></p>	<p><b>1. Participation</b></p> <p>a. Political Participation</p> <p>b. Membership of Civil Society Groups (measure split between participation and infrastructure)</p> <p><b>2. Infrastructure</b></p> <p>a. Membership of Civil Society Groups</p> <p>b. Membership Density of International Non-Governmental Organizations (INGOs)</p> <p><b>3. Civility</b></p> <p>a. Tolerance Toward Immigrants as Neighbors</p> <p>b. Encouraged Tolerance in Children</p>	<p>This Index provides a measure of the "socio-sphere of ideas, values, organizations, networks, and individuals located primarily outside the institutional complexes of family, market, and state and beyond the confines of national societies, polities, and economies."</p>	<p><b>Participation and Infrastructure</b></p> <p>These indices are linked through a common indicator, so they calculate the country score on participation and infrastructure together. The rationale for this procedure is based on the results of the confirmatory factor analysis, which suggested that the indicator (membership in global civil society associations) is highly related to both the participation and the infrastructure constructs. Therefore, they take account of this dual relationship in calculating the GCSI using the additive approach. The individual measurements are:</p> <p>A) The percentage of a country's population who are members of at least one of four civil society organizations (a community action group, a Third World or human rights movement, a peace movement, or an environmental group);</p> <p>B) The average proportion of people willing to take political action for or against a particular cause (the arithmetic mean of proportions of people who would be willing to sign a petition, join a boycott, attend a lawful demonstration, take part in an unofficial strike, and/or occupy a building); and</p> <p>C) Membership density of INGOs (how many INGOs have one member or more in the assessed country).</p> <p><b>Civility</b></p> <p>This index consists of two indicators. They combine information on:</p> <p>A) The proportion of people who would not object to having immigrants or foreign workers as neighbors; and</p> <p>B) The proportion of people who say that tolerance is an important quality to encourage in children.</p> <p><b>Global Civil Society Calculation</b></p> <p>To calculate the GCSI score, they combine the scores on infrastructure, participation, and civility. Since two of the components are already combined in a double-score, the civility index is given half the weight of this double-score index.</p>

Konjunkturforschungsstelle (KOF): Globalization Index (est. 2002) <sup>2</sup>					
Index	Economic (34%)	Social (37%)	Political (28%)	Measurement	Methodology
<p><b>KOF Index of Globalization</b></p> <p><a href="http://www.kof.ethz.ch/globalization/">http://www.kof.ethz.ch/globalization/</a></p> <p>Axel Dreher, "Does Globalization Affect Growth? Evidence From a New Index of Globalization", <i>Applied Economics</i>, 2006 (forthcoming).</p> <p>Publication Cycle: <i>Annual</i></p>	<p><b>1. Data on Actual Flows (50%)</b></p> <p>a. Trade (percentage of GDP, 21%)</p> <p>b. Foreign Direct Investment (percentage of GDP, 26%)</p> <p>c. Portfolio Investment (percentage of GDP, 27%)</p> <p>d. Income Payments to Foreign Nationals (percentage of GDP, 26%)</p> <p><b>2. Data on Restrictions (50%)</b></p> <p>a. Hidden Import Barriers (24%)</p> <p>b. Mean Tariff Rate (27%)</p> <p>c. Taxes on International Trade (percentage of current revenue, 24%)</p> <p>d. Capital Account Restrictions (25%)</p>	<p><b>1. Data on Personal Contact (26%)</b></p> <p>a. Outgoing Telephone Traffic (28%)</p> <p>b. Transfers (percentage of GDP, 13%)</p> <p>c. International Tourism (21%)</p> <p>d. Telephone Average Cost of Call to US (11%)</p> <p>e. Foreign Population (percentage of total population, 27%)</p> <p><b>2. Data on Information Flows (37%)</b></p> <p>a. Telephone Mainlines (per 1,000 people, 18%)</p> <p>b. Internet Hosts (per capita, 17%)</p> <p>c. Internet Users (share of population, 18%)</p> <p>d. Cable Television (per 1,000 people, 15%)</p> <p>e. Daily Newspapers (per 1,000 people, 16%)</p> <p>f. Radios (per 1,000 people, 17%)</p> <p><b>3. Data on Cultural Proximity (36%)</b></p> <p>a. Number of McDonald's Restaurants (per 100,000 people, 100%)</p>	<p><b>1. Embassies in Country (36%)</b></p> <p><b>2. Membership in International Organizations (36%)</b></p> <p><b>3. Participation in UN Security Council Missions (29%)</b></p>	<p>This index seeks to measure the extent to which a country has globalized through calculating economic, social, and political dimensions.</p>	<p>To provide a reliable measure, each variable and its corresponding data are ranked on a list from 0 (min) to 10 (max) and then weighted to provide an overall value. Weighted values (indicated by % values after the variables) are calculated using principal components analysis and in a way that maximizes the variation of the respective main category.</p> <p>The final result is then presented on a 0-10 scale where 10 indicates the highest level of globalization.</p> <p>To make an assessment of the 123 countries they measure, KOF utilizes primarily World Bank data. However, data from other well-established organizations such as the International Monetary Fund, the United Nations Department of Peacekeeping Operations, the International Telecommunication Union, McDonald's Corporation, the Central Intelligence Agency World Fact Book, and the Europa World Yearbook is also incorporated.</p>

<sup>2</sup> These percentages were taken directly from the KOF webpage under the section entitled "Variables and Weights." Axel Dreher, in his article (cited in the chart above), indicates a slight variation on the numbers. He notes that, while the numbers may not add up to 100%, this is to be expected due to rounding. This is noted in his article in Table 1: Components of Index and Globalization.

<b>United Nations Conference on Trade and Development (UNCTAD): Development and Globalization: Facts and Figures (est. 2004)</b>			
<b>Index</b>	<b>Variables Used</b>	<b>Measurement</b>	<b>Methodology</b>
<p><b>UNCTAD Development and Globalization: Facts and Figures</b></p> <p>For a copy of the handbook, see: <a href="http://www.globalpolicy.org/socecun/un/unctad/2004/0614devglob.pdf">http://www.globalpolicy.org/socecun/un/unctad/2004/0614devglob.pdf</a>.</p> <p>Publication Cycle: <i>Published every two years</i></p>	<ol style="list-style-type: none"> <li><b>1. Countries, Population and Economic Trends</b></li> <li><b>2. External Finance, Debt, and Foreign Direct Investment</b></li> <li><b>3. Transnational Corporations and Foreign Affiliates</b></li> <li><b>4. International Trade in Merchandise and Services</b></li> <li><b>5. Production and International Trade of Commodities</b></li> <li><b>6. Production and International Trade of Manufactures</b></li> <li><b>7. Information and Communication Technologies</b></li> </ol>	<p>This compilation is aimed at describing the evolution of developing countries, attempting to identify best policies and practices in regard to achieving efficient economic and social progress.</p>	<p>This is a statistical reference book that describes the evolution of developing countries with particular reference to globalization. Their data is collected from various United Nations organizations, as well as the International Monetary Fund, the International Telecommunication Union, and the Organisation for Economic Co-operation and Development.</p>

<b>Nanyang Technological University: Measuring Cultural Globalization (est. 2004)</b>			
<b>Index</b>	<b>Cultural Globalization</b>	<b>Measurement</b>	<b>Methodology</b>
<p>Randy Kluver and Wayne Fu, "<b>Measuring Cultural Globalization</b>"</p> <p><a href="http://www.foreignpolicy.com/issues_marapr_2004/methpaper.doc">http://www.foreignpolicy.com/issues_marapr_2004/methpaper.doc</a></p> <p>Publication Cycle: <i>Published only once</i></p>	<ol style="list-style-type: none"> <li><b>1. Imported Cinematic Films</b></li> <li><b>2. Imported Television Programming</b></li> <li><b>3. Imported Print Publications</b> (books, magazine, newspapers, other periodicals)</li> </ol>	<p>Measures cultural globalization through an analysis of the consumption of mass communication products imported from overseas.</p>	<p>Using exclusively United Nations Educational, Scientific and Cultural Organization (UNESCO) data on the production/importation of media products, they sum the various products and divide them by population to get a normalized measure. The more media products per person indicates a higher value of cultural globalization.</p>

Centre for the Study of Globalisation and Regionalisation (CSGR), Warwick University: Globalisation Index (est. 2005) <sup>3</sup>					
Index	Economic	Social	Political	Measurement	Methodology
<p><b>CSGR Globalisation Index</b></p> <p><a href="http://www2.warwick.ac.uk/fac/soc/csgr/">http://www2.warwick.ac.uk/fac/soc/csgr/</a></p> <p>Ben Lockwood, Michela Redoano, "The CSGR Globalisation Index: an Introductory Guide", <i>Centre for the Study of Globalisation and Regionalisation Working Paper 155/04</i>, 2005.</p> <p>Publication Cycle: <i>This was first published in 2005 using data points from the years 1982-2001. The index will continue to be published annually as new data becomes available.</i></p>	<p><b>1. Trade (41.8%)</b></p> <p><b>2. Foreign Direct Investment (9.2%)</b></p> <p><b>3. Portfolio Investment (22%)</b></p> <p><b>4. Income (27%)</b></p>	<p><b>1. People (33.1%)</b></p> <p>a. Foreign Stock (26.6%)</p> <p>b. Foreign Flow (62.9%)</p> <p>c. Worker Remittances (7.9%)</p> <p>d. Tourists (2.6%)</p> <p><b>2. Ideas (66.9%)</b></p> <p>a. Phone Calls (0.4%)</p> <p>b. Internet Users (30.3%)</p> <p>c. Films (6.1%)</p> <p>d. Books and Newspapers (57.7%)</p> <p>e. Mail (5.4%)</p>	<p><b>1. Embassies (37.8%)</b></p> <p><b>2. UN Peace Missions (35.7%)</b></p> <p><b>3. International Organizations (26.6%)</b></p>	<p>The index assigns a country's globalization score by measuring the economic, social, and political dimensions of globalization. This was measured on an annual basis between the period from 1982 through 2001. These dimensional measurements were then combined into an overall globalization index or score.</p>	<p>Relevant variables are decided upon within the three categories: economic, social, and political. Corresponding data is then normalized, and a weighted average is calculated into numerical scores, which then provide the overall ranking. The data is derived from the World Bank; the Central Intelligence Agency; the International Telecommunication Union; the Universal Postal Union; the United Nations Educational, Scientific and Cultural Organization (UNESCO); Europa World; and the International Monetary Fund. They focus on 208 countries in their analysis.</p>

Latin Business Chronicle: Latin American Globalization Index (est. 2005)			
Index	Variables Used	Measurement	Methodology
<p><b>Latin American Globalization Index</b></p> <p>Joachim Bamrud, "Panama Best, Argentina Worst: Latin America Globalization Index", <i>Latin Business Chronicle</i>, October 2005, see <a href="http://www.latinbusinesschronicle.com/reports/reports/lagi100305.htm">http://www.latinbusinesschronicle.com/reports/reports/lagi100305.htm</a>.</p> <p>Publication Cycle: <i>Annual</i></p>	<p><b>1. Export of Goods and Services (as percentage of GDP)</b></p> <p><b>2. Import of Goods and Services (as percentage of GDP)</b></p> <p><b>3. Foreign Direct Investment (as percentage of GDP)</b></p> <p><b>4. Tourism Receipts (as percentage of GDP)</b></p> <p><b>5. Remittances (as percentage of GDP)</b></p> <p><b>6. Internet Penetration</b></p>	<p>Measures Latin America's most globalized economies</p>	<p>Using data from the International Monetary Fund, the World Bank, and the International Telecommunication Union, this index scores 0.1 for each percent of GDP. For example, 4.5% would result in a score of 0.45. Each of the six categories are then weighed equally. In total, the index assesses 17 countries.</p>

<sup>3</sup>At the date of publication, these figures appeared as the breakdown on the cited webpage. The calculations here do not always calculate to 100 due to the rounding of the calculations by the Warwick Centre for the Study of Globalisation and Regionalisation.

<b>Organisation for Economic Co-operation and Development (OECD): Measuring Globalisation: OECD Economic Globalisation Indicators (est. 2005)</b>			
<b>Index</b>	<b>Variables Used</b>	<b>Measurement</b>	<b>Methodology</b>
<p><b>Measuring Globalisation: OECD Economic Globalisation Indicators</b></p> <p><i>Measuring Globalisation: OECD Economic Globalisation Indicators</i>, November 30, 2005, see <a href="http://www.oecd.org/document/63/0,2340,en_2649_34863_35794687_1_1_1_1,00.html">http://www.oecd.org/document/63/0,2340,en_2649_34863_35794687_1_1_1_1,00.html</a>.</p> <p>Publication Cycle: <i>Annual</i></p>	<ol style="list-style-type: none"> <li><b>1. International Trade</b></li> <li><b>2. Foreign Direct Investment</b></li> <li><b>3. The Economic activity of Multinational Firms</b></li> <li><b>4. Production and International Diffusion of Technology</b></li> </ol>	<p>With over 240 graphs, the OECD measure of economic globalization seeks to shed light on financial, technological, and trade interdependencies within OECD countries. It also takes into account the contribution of multinationals to growth, employment, productivity, labor compensation, research and development, and international trade.</p>	<p>The values expressed in this measure are presented as percentages.</p> <p>The variables used are additive across countries and industries, allowing them to be interpreted through a Herfindahl<sup>2</sup> index, which gives an inverse measure of geographic diversification. A low Herfindahl index suggests less geographical concentration, i.e., a more globalized score.</p> <p>The data is collected through various organizations such as the International Monetary Fund, the World Trade Organization, the United Nations Conference on Trade and Development, the World Bank, Eurostat, and the OECD itself.</p>

<b>Torben Andersen and Tryggvi Herbertsson: "Quantifying Globalization" (est. 2005)</b>			
<b>Index</b>	<b>Variables Used</b>	<b>Measurement</b>	<b>Methodology</b>
<p><b>"Quantifying Globalization"</b></p> <p>Torben Andersen and Tryggvi Herbertsson, "Quantifying Globalization", <i>Applied Economics</i>, Vol. 37, 2005, pp. 1089-1098.</p> <p>Publication Cycle: <i>Published once</i></p>	<ol style="list-style-type: none"> <li><b>1. Freedom to Use Alternative Currencies</b></li> <li><b>2. Freedom of Exchange in Capital and Financial Markets</b></li> <li><b>3. Freedom to Trade with Foreigners</b></li> <li><b>4. Gross Private Capital Flows as a Ratio of GDP</b></li> <li><b>5. Export Plus Import of Goods and Services as a Ratio of GDP</b></li> <li><b>6. Factor Income Received as a Ratio of GDP</b></li> <li><b>7. Factor Income Paid as a Ratio of GNP</b></li> <li><b>8. Changes in Terms of Trade</b></li> <li><b>9. Inflow of Direct Investment as a Ratio of GDP</b></li> </ol>	<p>Measures how globalized nations are in regard to "international product- and capital market interactions" (p. 1096). They suggest a globalization index that measures two distinct dimensions:</p> <ol style="list-style-type: none"> <li><b>1) The Direct Effect:</b> How countries use the opportunity of integrating into the world economy;</li> <li><b>2) The Indirect Effect:</b> The extent to which the institutional setup in different countries allows for participation in global activities.</li> </ol>	<p>Uses multivariate factor analysis to combine the various indicators of globalization in one single measure. This also allows for direct and indirect effects to be statistically identified. For their analysis, they assessed 23 OECD countries.</p>

Geneva Centre for Security Policy (GCSP): Globalization Matrix (est. 2006)			
Index	Variables Used	Measurement	Methodology
<p><b>Geneva Centre for Security Policy, Globalization Matrix, 2006</b></p> <p>“Proposal for a Globalization Matrix: Quantifying Impacts &amp; Responses”</p> <p>Nayef R.F. Al-Rodhan, Gérard Stoudmann, Graeme Herd, 2006.</p> <p><a href="http://www.gcsp.ch/e/publications/Globalisation/index.htm">http://www.gcsp.ch/e/publications/Globalisation/index.htm</a></p>	<ol style="list-style-type: none"> <li>1. Political</li> <li>2. Economic</li> <li>3. Societal</li> <li>4. Military</li> <li>5. Environmental</li> </ol>	<p>The GCSP Globalization Matrix is split into five interlinked parts. An issue is selected that is topical, in the news, and appears <i>prima facie</i> to have had a transnational or international impact. The matrix measures the level of this impact in relation to the state, region, and international system.</p>	<p>This matrix begins by assessing the political, economic, societal, military, and environmental security challenges that are raised by a particular issue for the state. The policy challenges and the policy responses are noted in each sector, assessing how effective the policy response is, given the scale and nature of the policy challenge.</p> <p>An attempt is then made to look across the sectors and assess the totality of the state responses, noting the policy dilemmas that arose and the ability of the states to tackle these dilemmas effectively.</p> <p>Clearly, the policy challenge and the nature of the responses and the ability of any given state to resolve the inherent policy dilemmas have a foreign and security policy impact, which is also accounted for in the matrix.</p> <p>The next section identifies the actual impact of the policy challenges and responses undertaken on foreign governments, public opinion, and the media. The level of agreement is noted in each of these areas.</p> <p>Finally, the index extrapolates the geopolitical impact and reaction, noting the likely continued impact of the policy approach on stability. Where continuity leads to instability, policy recommendations are made to ameliorate such trends. This enables the recommendations to be focused on maximizing stability and minimizing the issue as a source of current or future instability.</p>

## **Discussion**

The idea of measuring a state or region within a certain context, in this case globalization, has been used in multiple disciplines many times before. As seen from Table 2 presented above, over the past six years various institutions have developed a means of measuring how globalized a state is based on a number of factors. In reviewing these indices, however, it became obvious that no one table was designed to weigh the level of impact any one policy issue may have at any given time. The weighted values are based largely on quantitative data and do not take into account the human nature of policy making and decision makers. Alternatively, our matrix offers an analysis of the way in which policy makers arrive at their decisions and provides concrete policy recommendations to the state. These recommendations may provide direction for other states dealing with a similar issue either today or sometime in the future.

The development of our matrix grew out of the above rationale. Despite this, what value does such a matrix add? Are we contributing to the debate in a meaningful way by developing a method in which experts can analyze an issue by putting it into the format that we suggest? The matrix clearly fills a gap by offering analysis from a perspective that, until now, had been lost in the measurements of the past. In order to assess the level of stability a state maintains regardless of the policy challenges it faces, we can clearly see how that state contributes to the stability of a region and, therefore, to the global status. It is imperative to start at the micro level and work towards a macro perspective. Foreign policy is also impacted by the reactions of the government, public opinion, and the media. Hence, it is vital to take this into account when measuring how a state contributes to global stability and security.

The benefit of looking at the policy challenges, responses, foreign policy implications, and reactions in this manner is that it forces a thorough analysis of the issue. Perhaps an expert would have looked at the way in which a government or economy has reacted to the policy challenge but may not have addressed the social, environmental, and military aspects. Our matrix forces the author to think about the issue at different levels, which allows for an accurate assessment at its conclusion. Most important to our program, the matrix allows for a “lessons learned” review, as well as the opportunity to make policy recommendations. Our matrix therefore offers the chance for change and, perhaps, the development of more-effective policies in the future.

By measuring the influence that one state’s reaction has in a region, it can strongly indicate where that region may be headed as a result of, or reaction to, what has happened to one particular state. There are also times where an issue may affect more than one state, perhaps in the case of a drought, a flood, or a natural disaster, which would then have implications at the regional level. Thus, it becomes very important to see how the region has dealt with the policy challenge at hand.

As explained in the matrix itself, the impact box is a way of measuring the reaction of governments, public opinion, and the media to a given state’s response to a given policy challenge. This also provides an opportunity for the visibility, interest, and focus of a region to be presented. Ultimately, this provides the tools for an accurate assessment of the global impact of a given state’s response to a specific policy challenge. At the same time, we assess the reaction to this challenge and whether or not the reactions of the government, public opinion, and the media agree with the response. This can

have a strong impact on policy because it can demonstrate the extent to which there is intra-regional coherence. This, in turn, can indicate potential sources of tension and instability within a region. Concurrently, it can also illustrate whether the government, public opinion, or the media are aligned in the way in which they view the reaction of a region. Again, this can identify potential sources of pressure. Finally, it can highlight emerging or actual divisions between regions and the formation of regional blocs. It is central to stability at the international level that regional tensions do not greatly impact global stability. Therefore, this issue has become a fundamental part of this matrix in order to accurately assess the impact of a certain policy on the stability of an entire region.

Finally, through the policy recommendations, the author of the matrix is able to provide a comprehensive conclusion to the challenge, the response, and the reaction at both the state and regional levels. This provides for a proposed solution or a more effective way of handling the situation. This contributes to the debate because it enables policy makers, decision makers, academics, and field practitioners to find true value in the matrix. We provide a tool to accurately assess the way in which a policy has been received at the state and regional levels. Only then are we able to truly determine what the geopolitical implications of the challenge are and subsequently predict likely future trends and scenarios.

## **Conclusion**

This matrix was designed to be used as a benchmark for determining how any given policy challenge impacts the level of stability of individual states, regions, and, ultimately, the international system. Using two current challenges, we were able to illustrate the effectiveness of the matrix as a tool for conceptualizing a policy challenge and to produce future outcomes and scenarios based on what the state has conceived to be an effective response.

## **References**

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<sup>1</sup> For further examples of such globalization matrices, please see the index published in *Foreign Policy*, as well as the index used at the University of Warwick at <http://www2.warwick.ac.uk/fac/soc/csqr/index/>.

<sup>2</sup> In economics, the Herfindahl index is a measure of the size of firms in relationship to the industry and an indicator of the amount of competition among them (see [http://en.wikipedia.org/wiki/Herfindahl\\_index](http://en.wikipedia.org/wiki/Herfindahl_index)).