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**RESEARCH OF GLOBALIZATION'S INTERRUPTED
CHARACTER IN CONTEXT OF SOCIAL DEVELOPMENT AND
GLOBAL SECURITY**

**PART 1. ANALYSIS OF PRE-CRISIS PERIOD (UP TO SECOND
HALF OF 2008)**

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In given research we introduce the new valuating method of globalization in scope of basic social development and global security indicators, further named as SDS. By implementing the well-known KOF and newly introduced SDS methods the comparative analysis of globalization level among different states is carried out. With the help of Principal Compound Analysis there is a reduction in the number of variables that determine characteristics of globalization to particular factors and their simplified representation of dependence on globalization level.

INTRODUCTION

Since ancient times the mutual pervasion of cultures and economics of different nations was creating new opportunities for further development. "The Great Silk Way" just like the cultural pathway between East and West emerged in the 3rd century B.C. and existed till the 16th century. It appeared to be one of the greatest achievements of world civilization. The separated caravan routes that crossed Europe and Asia through Mediterranean Sea to China served as an important cultural communication tool for many nations. Without a slightest exaggeration it was the first significant globalization wave. Nevertheless, it was later interrupted by durable and cruel wars of 17-18 centuries.

The second wave of globalization started in 1880s and was periodically interrupted by the First, Second and Cold wars. It is observed as a coherent interrelation of art prosperity of "Silver Age" and all other economic and social events of that time (trade, science, philosophy, religion and politics). Rapid development of railways and sea transport culturally and economically united the exchange of countries among five continents.

The set of the 20th century and the rise of the 21st could be named as the third wave of globalization. This wave has been abruptly accumulating since the 80s till the end of year 2008 and has brought new opportunities, unseen before.

Still, at the same time, a set of new global challenges has emerged, that may slow down or even temporarily interrupt the third wave of globalization. Such challenges are: devaluation of fundamental human values; increase of inequality among people and states, a great number of regional conflicts, corruption, terrorism, global illnesses; rapid decrease in fossil fuels resources; natural biological imbalance; greenhouse effect, etc.

The range of these problems, first of all, cynically for humanity, stimulated the 2008 global financial collapse that will lead to economic stagnation and decline of social standards of most countries. It seems that such negative tendencies will be a long-drawn-out. They'll cause fundamental economic transformations, global redistribution of property and further reformation of relations throughout the world including emergence of new centers of power. Most importantly, these changes will become a catalyst of reinterpretation of human values that should become dominant at least in the first half of the 21st century.

Thereby, globalization is a variable interrupting phenomenon. Hence, the regularity of change and accumulation of global phenomena should be studied, analyzed for interrelations and forecasted in the frame of human life safety in long and short term.

In this research, we attempt to analyze the dependence between general phenomena like globalization, disposition of its change and most important dimensions of social development and global security, such as state and political stability, global and regional security, democracy level, and crime control, inequality among people and states, corruption perception, state's peace level and potential for terrorist acts. The analysis of globalization's phenomenon in the perspective of abovementioned indicators is called Methods of Social Development and Global Security (SDS).

QUANTITATIVE ASSESSMENT OF EFFECT OF SOCIAL DEVELOPMENT AND GLOBAL SECURITY GENERAL INDICATORS ON GLOBALIZATION

Further, we will use known global indices used by reputable international organizations to study quantitative dependence between globalization and general indicators of social development and global security:

For quantitative measuring of globalization we'll use KOF index [1, 2] that generalizes and averages economic, social and political data used to calculate the general KOF globalization index. In their turn, economical, social and political indicators are determined by official statistics data for each country that are annually standardized and put to a common calculating base, coming out as KOF Index of globalization for 122 countries.

The general indicators of social development and global security determined by SDS are as follows:

1. *Index of State Fragility* (I_{sf}) describes the level of state fragility from domestic and foreign threats and is calculated with the help of 12 indicators, that reflect the security level, political, economic and social stability, state's law legitimacy, conflicts the state participates in etc. This index was calculated in Global Report on Conflicts, Governance and State Fragility [3].

2. *Democracy index* (I_d) empirically calculates the average of 5 general categories: elections and pluralism, civil freedom level, government functioning, political participation and standards. This index is annually calculated by the Economist Intelligence Unit for 167 states.

3. *Global Peace Index* (I_{gp}) was firstly computed by Economist Intelligence Unit in 2008 for 140 states. The index is calculated using 24 quantitative and qualitative indicators of domestic and foreign factors – from military expenditures to relations with neighboring states. Corruption Perception Index and potential for terrorist acts are the components of Global Peace Index [5].

4. *Gini Index* (I_g) is calculated for 177 countries and issued by UN Human Development Report. The main objective of this index is to demonstrate the inequality between poorest and richest layers of population [6].

5. GDP per capita (PPP)[7].

6. *Sustainable Development Index* (I_{sd}) is estimated within three dimensions – economic (I_{ec}), environmental (I_e) and social (I_s). This index is a vector, the norm of which determines sustainable development, while its dimensional location on coordinate grid characterizes the extent of its “harmony” (sustainable development harmony — G). I_{sd} is annually computed by Ukrainian branch of World Data Center (<http://www.wdc.org.ua/>) for 113 states [8].

7. *Global Security Index* (I_{gs}) is also computed by Ukrainian branch of World Data Center (<http://www.wdc.org.ua/>) for 113 states [8]. It determines the state's remoteness from an aggregate of global threats. These are the ten threats that compose Global Security Index: global reduction of energy security; biological imbalance between Earth's natural capacities and human needs, change in demographical structure; increase of inequality between people and states; global disease diffusion; child mortality; increase of corruption levels; lack of access to drinking water; global warming; state instability (calculated by State Fragility Index); global climate change and natural disasters.

8. *Corruption Perception Index* (I_{cp}) is annually calculated by Transparency International [9] for 180 countries. It is scaled from 0 to 10, where 0 is maximum and 10 is minimal corruption level respectively.

9. *Potential for Terrorist Acts Index* (I_{ta}) is also provided in Human Development Report and its objective is to demonstrate the risk of potential terrorist acts in a specific country [6].

10. *Crime Control Index* (I_{cc}) is for the first time introduced by the author and calculated according to the following formula: $I_{cc} = 12 - \{N_p - \text{jailed population per 100,000} - (\text{number of homicides per 100,000} + \text{number of casualties caused by organized conflicts per 100,000})\}$. Hence, we compute a correlation of all committed crimes against jailed population.

It is evident that KOF globalization index and its economic, social and political dimensions depend on the provided ten indicators of social development and global security (SDS) and their social, economic, and political stabilization aspects. The goal of further research is to conduct qualitative and quantitative

analyses of dependence on each of the ten indicators of SDS methods. Furthermore, we divide our research into two stages of world social development:

1. For pre-crisis period (up to the second half of 2008).
2. For crisis period (after August-September 2008).

We will carry out the research by establishing qualitative interrelations among various indicators and KOF globalization index, bringing them to the same calculation platform and substantiating an integral model of social development and global security.

At that, we will take into account that all provided indicators and indices have been issued by different international organizations independently from one another. Consequently, they are measured using different physical quantities, have different interpretations and vary on different scales. Therefore, they should to be normalized to vary on the scale from 0 to 1. In this case the lowest value of the abovementioned indicators will be close to 0, and the highest close to 1. This normalization will allow analyzing interrelations among different indices and indicators of an integral model of social development and global security on a single calculation platform.

In carrying out the abovementioned normalization applied to each of the indicators, we use the following formula

$$I^0 = 1 - \frac{I - I_{\min}}{I_{\max} - I_{\min}} \Rightarrow [0,1], \quad (1)$$

where I^0 is a normalized value of the indicator; I_{\max} , I_{\min} are maximal and minimal values of indicator deviations respectively.

Normalized data grouped by social, economic and political stability dimensions are provided in table 1.

Table 1. The main dimensions of social development and global security

Country	KOF Rank	KOF Scores				State Fragility Index (Isf)	Democracy Index (Id)	Global Peace Index (Igp)	Crime Control Index (Ice)	Potential for Terrorist Acts (Ita)	Corruption Perception Index (Icp)	Gini Index (Ig)	GDP Per Capita	Global Security Index (Igs)	Sustainable Development (Isd)
		General	Economic	Social	Political										
Belgium	1	92,09	91,94	90,82	94,22	0	8,15	1,485	8,4	2	7,5	33	32,119	0,61	0,747
Austria	2	91,38	88,48	92,49	93,86	0	8,69	1,449	9,37	2	8,1	29,1	33,7	0,649	0,783
Sweden	3	90,02	89,51	87,43	94,69	0	9,88	1,468	8,35	1	9,3	25	32,525	0,724	0,798
Switzerland	4	88,6	83,13	95,38	86,15	1	9,02	1,468	8,35	1	9	33,7	35,633	0,671	0,844
Denmark	5	88,42	87,97	88,64	88,72	0	9,52	1,333	9,32	2	9,4	24,7	33,973	0,671	0,781
Netherlands	6	88,4	88,04	89,41	87,38	0	9,66	1,607	8,6	2	9	30,9	32,684	0,658	0,764
United Kingdom	7	86,67	79,24	87,87	95,52	2	8,08	1,801	9,7	3	8,4	36	33,238	0,606	0,781
Czech Republic	8	85,51	87,69	84,91	83,27	1	8,17	1,501	8,92	2	5,2	25,4	20,538	0,561	0,712

Table 1 (Continued)

France	9	85,38	77,42	84,17	98,64	1	8,07	1,707	9,36	2	7,3	32,7	30,386	0,632	0,788
Finland	10	84,65	88,85	83,65	80,13	0	9,52	1,432	8,31	2	9,4	26,9	32,153	0,696	0,798
Germany	11	83,01	74,22	83,3	95,17	0	8,82	1,475	8,62	2	7,8	28,3	29,461	0,628	0,787
Spain	12	82,37	82,19	77,48	91,49	1	8,34	1,683	8,69	2,5	6,7	34,7	27,169	0,605	0,756
Hungary	13	82,52	88,83	76,96	81,89	0	7,53	1,576	8,26	1	5,3	26,9	17,886	0,59	0,729
Portugal	14	81,57	83,76	76,28	86,45	0	8,16	1,412	9,56	2	6,5	38,5	20,41	0,61	0,741
Canada	15	81,21	80,83	86,85	73,21	0	9,07	1,451	9,49	2	8,7	32,6	33,375	0,736	0,795
Ireland	16	79,82	85,47	77,72	74,91	0	9,01	1,41	8,29	1	7,5	34,3	38,505	0,643	0,765
Norway	17	79,44	75,84	84,48	78,18	2	9,55	1,343	9,26	1	8,7	25,8	41,42	0,72	0,797
Italy	18	79,44	76,13	71,9	95,62	0	7,73	1,653	7,47	2	5,2	36	28,529	0,596	0,744
Poland	19	78,42	73,5	74,7	91,12	0	7,3	1,687	9,17	1	4,2	34,5	13,847	0,561	0,699
Singapore	20	78,37	95,9	92,26	32,12	2	5,89	1,673	10,84	2	9,3	42,5	29,663	–	
Australia	21	77,35	67,74	81,51	84,82	2	9,09	1,652	8,59	2,5	8,6	35,2	31,794	0,705	0,781
United States	22	76,76	63,15	76,52	96,67	2	8,22	2,227	12	3,5	7,2	40,8	41,89	0,546	0,796
Slovakia	23	75,82	79,32	79,59	65,07	1	7,4	1,576	7,77	1	4,9	25,8	15,871	0,572	0,733
Malaysia	24	75,6	77,15	66,05	87,87	4	5,98	1,721	7,67	2	5,1	49,2	10,882	0,499	0,704
Greece	25	73,43	73,55	66,45	83,85	0	8,13	1,867	8,39	2	4,6	34,3	23,381	0,576	0,707
New Zealand	26	73,4	79,68	72,37	65,94	1	9,01	1,35	8,93	2	9,4	36,2	24,996	0,692	0,799
Luxembourg	27	72,88	95,14	78,1	33	0	9,1	1,446	8,82	2	8,4	–	60,228	0,648	0,779
Estonia	28	72,18	90,76	74,41	42,14	1	7,74	1,702	9,74	1	6,5	35,8	15,478	0,533	0,749
Israel	29	71,8	86,17	77,17	43,05	9	7,28	3,052	8,05	4	6,1	39,2	25,864	0,503	0,723
Slovenia	30	70,26	80,05	71,4	54,49	0	7,96	1,491	9,25	1	9,2	28,4	22,273	0,61	0,733
Croatia	31	70,17	77,2	63,7	69,92	5	7,4	1,926	8,34	1	4,1	29	13,042	0,532	0,698
Turkey	32	69,96	69,86	58,24	87,88	9	5,7	2,403	6,31	2	4,1	43,6	8,407	0,443	0,651
Russia	33	69,82	57,92	64,4	96,04	7	5,02	2,777	7,29	2	2,3	39,9	10,845	0,428	0,653
Chile	34	69,63	85,13	51,83	74,42	2	7,89	1,576	9,23	1	7	54,9	12,027	0,573	0,743
UAE	35	69,07	–	75,52	38,16	3	2,42	1,745	9,49	2	5,7	–	25,514	–	0,613
Iceland	36	67,02	81,3	83,23	21,93	0	9,71	1,176	9,11	1	9,2	–	36,51	–	0,785
Malta	37	66,96	91,93	75,96	18,27	0	8,39	–	–	–	–	–	19,089	–	–
Jordan	38	65,94	67,31	55,76	79,41	0	3,92	1,969	8,47	3	4,7	38,8	5,53	0,501	0,653
Cyprus	39	65,93	86,4	69,34	31,38	3	7,6	1,847	8,31	1	5,3	–	22,699	–	0,709
Kuwait	40	65,49	67,64	76,92	45,07	4	3,09	1,786	9,61	3	4,3	–	26,321	–	0,635
Romania	41	65,31	69,65	48,35	84,82	4	7,6	1,611	8,8	1	3,7	31	9,06	0,447	0,656
Ukraine	42	64,57	62,36	57,68	78,22	5	6,94	2,096	6,87	1	2,7	28,1	6,848	0,466	0,633
China	43	64,56	61,53	49,08	92,39	10	2,97	1,981	8,55	1	3,5	46,9	6,757	0,382	0,602
Bulgaria	44	64,35	69,81	54,88	70,89	0	7,1	1,903	6,71	1	4,1	29,2	9,032	0,536	0,686
Lithuania	45	63,9	78,96	61,36	46,13	1	7,43	1,723	7,23	2	4,8	36	14,494	0,571	0,744
South Korea	46	63,56	59,36	52,56	86,28	0	7,88	1,691	8,43	1	5,1	31,6	22,029	0,461	0,733
Latvia	47	63,24	81,37	69,91	27,12	0	7,37	1,723	7,52	2	4,8	37,7	13,646	0,579	0,738
South Africa	48	63,03	69,38	43,99	82,8	11	7,91	2,412	2,76	1	5,1	57,8	11,11	0,277	0,63

Table 1 (Continued)

Argentina	49	62,24	54,98	52,51	87,42	2	6,63	1,895	5,67	1	2,9	51,3	14,28	0,528	0,697
Uruguay	50	62,15	68,46	50,33	71,03	1	7,96	1,606	7,96	1	6,7	44,9	9,962	0,609	0,719
Japan	51	60,91	53,84	52,66	83,59	0	8,15	1,358	9,23	1	7,5	24,9	31,267	0,644	0,775
Brazil	52	58,86	61,69	36,82	88,26	4	7,38	2,168	2,95	1	3,5	57	8,402	0,469	0,682
El Salvador	53	58,36	68,8	51,7	53,5	6	6,22	2,163	1,86	1	4	52,4	5,255	0,457	0,353
Bahrain	54	57,66	85,43	53,62	26,24	4	3,53	2,025	9,42	2	5	–	21,482	–	–
Peru	55	57,65	65,1	39,45	74,57	11	6,11	2,046	5,59	2	3,5	52	6,039	0,419	0,65
Jamaica	56	57,22	72,96	49,39	46,53	3	7,34	2,226	1,9	2	3,3	45,5	4,291	0,501	0,661
Philippines	57	57,21	61,34	40,42	76,77	0	6,48	2,386	5,49	4	2,5	44,5	5,137	0,414	0,635
Thailand	58	57,1	63,99	43,1	68,45	5	5,67	2,424	5,42	4	3,3	42	8,677	0,503	0,672
Panama	59	56,77	77,84	55,96	27,76	5	7,35	1,797	7,92	1	3,2	56,1	7,605	0,491	0,703
Mexico	60	56,48	64,59	48,32	57,25	4	6,67	2,191	3,98	2,5	3,5	46,1	10,751	0,502	0,699
Morocco	61	56,35	51,08	44,83	81,4	8	3,9	1,954	7,86	2,5	3,5	39,5	4,555	0,424	0,605
Nigeria	62	55,95	67,16	25,74	85,73	19	3,52	2,724	2,06	3	2,2	43,7	1,128	0,23	0,491
Costa Rica	63	55,28	65,07	62,02	31	0	8,04	1,701	5,9	1	5	49,8	10,18	0,599	0,738
Egypt	64	55,18	51,61	33,97	92,37	12	3,9	1,987	9,37	3	2,9	34,4	4,337	0,442	0,62
Ecuador	65	54,87	59,62	45,96	61,58	12	5,64	2,274	4,41	2	2,1	53,6	4,341	0,443	0,677
Indonesia	66	54,86	65,99	28,87	78,33	9	6,41	1,983	6,14	4	2,3	34,7	3,843	0,406	0,583
Honduras	67	54,16	–	47,73	43,23	9	6,25	2,335	1,79	2	2,5	53,8	3,43	0,333	0,632
Venezuela	68	53,62	62,31	46,59	51,85	8	5,42	2,505	2,3	3	2	48,2	6,632	0,366	0,629
Oman	69	53,57	70,51	57	24,06	4	2,77	1,612	9,34	1,5	4,7	–	15,602	–	0,628
Tunisia	70	53,49	64,4	30,1	73,36	5	3,06	1,797	9,35	3	4,2	39,8	8,371	0,494	0,662
Namibia	71	53,47	59,75	45,97	55,42	6	6,54	2,042	6,37	2	4,5	74,3	7,586	0,43	0,613
Ghana	72	53,35	51,99	44,41	68,87	13	5,35	1,723	7,2	1	3,7	40,8	2,48	0,321	–
Colombia	73	52,66	63,46	47,82	44,52	10	6,4	2,757	2,74	5	3,8	58,6	7,304	0,462	0,705
Mauritius	74	52,35	53,8	59,65	39,2	14	8,04	2,435	5,03	3	2,6	–	12,715	–	0,457
Pakistan	75	51,76	44,45	35,88	86,49	15	3,92	2,694	5,21	4	2,4	30,6	2,37	0,379	0,512
Paraguay	76	51,37	55,54	43,33	57,58	8	6,16	1,997	4,37	1	2,4	58,4	4,642	–	0,644
Guyana	77	51,36	68,9	55,34	20,14	9	6,15	–	–	–	–	–	4,508	–	0,569
Dominican Republic	78	51,07	56,42	46,88	49,77	0	6,13	2,069	3,69	1	3	51,6	8,217	0,432	0,665
Guatemala	79	51,04	52,67	44,24	59,03	11	6,07	2,328	1,21	2	2,8	55,1	4,568	0,441	0,632
Bolivia	80	50,63	56,79	36,14	63,79	12	5,98	2,043	6,35	1	2,9	60,1	2,819	0,358	0,583
India	81	50,54	42,89	31,04	91,1	14	7,68	2,355	6,06	4	3,5	36,8	3,452	0,377	0,548
Gabon	82	50,05	–	49,16	48,94	10	2,72	1,878	7,78	1	3,3	–	6,954	–	–
Trinidad and Tobago	83	49,78	74,17	44,7	22,5	4	7,18	2,23	2,54	2	3,4	38,9	14,603	0,393	0,645
Zambia	84	49,37	54,5	36,15	62,09	17	5,25	1,856	5,56	1	2,6	50,8	1,023	0,231	0,49
Fiji	85	48,67	48,27	52,64	43,22	5	5,66	–	–	–	–	–	6,049	–	–
Sri Lanka	86	48,46	47,93	40,17	61,81	12	6,58	2,584	6,52	5	3,2	40,2	4,595	0,447	–

Table 1 (End)

Bahamas	87	48,32	50,36	70,68	11,46	0	–	–	–	–	–	–	18,38	–	–
Zimbabwe	88	48,06	49,59	38,17	60,88	17	2,62	2,513	4,66	2	2,1	50,1	2,038	0,261	0,484
Nicaragua	89	47,34	58,95	49,48	27,41	0	5,68	1,919	6,44	1	2,6	43,1	3,674	0,395	0,617
Belize	90	46,74	65,14	50,22	15,05	0	–	–	–	–	–	–	7,109	–	–
Barbados	91	46,68	62,17	53,82	13,62	0	–	–	–	–	–	–	17,297	–	–
Cote d'Ivoire	92	45,73	50,23	32,11	59,96	19	3,38	2,451	5,16	3	2,1	44,6	1,648	0,283	–
Senegal	93	45,72	35,16	36,43	74,98	11	5,37	2,011	5,19	2	3,6	41,3	1,792	0,315	0,533
Algeria	94	45,56	45,43	24,37	77,9	16	3,17	2,378	7,6	2,5	3	35,3	7,062	0,364	0,612
Kenya	95	45,36	37,78	32,63	75,54	13	5,08	2,429	3,61	2	2,1	42,5	1,24	0,268	0,558
Malawi	96	43,6	48,16	39,28	43,6	14	4,97	2,024	6,3	1	2,7	39	667	–	–
Botswana	97	43,06	67,39	37,16	17,11	5	7,6	1,792	5,83	1	5,4	60,5	12,387	0,389	0,62
Albania	98	42,82	52,17	33,04	44,24	4	5,91	2,044	6,51	2	2,9	31,1	5,316	0,534	0,675
Tanzania	99	42,59	42,92	29,34	62,22	13	5,18	1,919	5,52	2	3,2	34,6	744	0,292	0,521
Togo	100	41,56	50,51	28,03	49,25	14	1,75	–	–	–	–	–	1,506	–	–
Uganda	101	41	46,76	28,29	52,02	17	5,14	2,391	5,42	3	2,8	45,7	1,454	–	0,526
Mali	102	40,15	53,96	18,5	53,17	14	5,99	2,238	5,07	3	2,7	40,1	1,033	–	0,436
Benin	103	40,06	38,47	30,78	56,42	0	6,16	–	–	–	–	36,5	1,141	0,28	0,491
Chad	104	38,94	49,82	26,67	41,94	20	1,65	3,007	3,09	3	1,8	–	1,427	–	0,405
Cameroon	105	38,51	38,38	25,25	58,84	16	3,27	2,182	4,59	2	2,4	44,6	2,299	0,256	0,518
Syria	106	38,46	–	26,07	37,51	0	2,36	2,027	8,21	2	2,4	–	3,808	–	0,574
Bangladesh	107	38,31	33,74	20,61	71,73	13	6,11	2,118	5,17	3	2	33,4	2,053	0,313	0,497
Congo Rep.	108	37,88	–	27,97	20,71	0	3,19	2,417	3,1	2	2,1	–	1,262	–	–
Papua New Guinea	109	36,93	56,2	31,27	17,87	12	6,54	2,224	3,27	2	2	50,9	2,563	–	–
Nepal	110	36,26	34,47	23,46	58,26	17	3,42	–	–	–	–	47,2	1,55	0,367	0,559
Sierra Leone	111	35,34	46,41	23,77	37,03	21	3,57	–	–	–	–	62,9	806	–	–
Iran	112	34,23	27,5	20,9	64,13	13	2,93	2,341	8,08	2	2,5	43	7,968	0,406	–
Madagascar	113	33,93	35,84	25,08	44,62	13	5,82	1,77	6,49	1	3,2	47,5	923	–	0,518
Congo Dem. Rep.	114	33,2	–	20,85	53,26	23	2,76	2,707	1,21	3	1,9	–	714	–	–
Guinea-Bissau	115	33,11	52,68	–	15,42	17	2	–	–	–	–	47	827	–	–
Niger	116	30,68	27,03	19,48	52,91	17	3,54	–	–	–	–	50,5	781	–	–
Haiti	117	20,78	42,66	24,04	20,02	15	4,19	2,362	2,63	2	1,6	59,2	1,663	0,228	–
Central African Rep.	118	29,5	33,7	21,08	36,25	16	1,61	2,857	2,5	3	2	61,3	1,224	–	–
Rwanda	119	29,32	31,76	25,91	31,01	18	3,89	2,03	7,74	2	2,8	46,8	1,206	–	–
Myanmar	120	27,4	–	11,29	18,02	20	1,77	2,59	8,56	3	1,4	–	1,027	–	–
Burundi	121	22,41	27,43	24,19	12,5	19	4,51	–	–	–	–	42,4	699	–	0,446
Saudi Arabia	122	–	–	68,18	48,1	8	1,92	2,357	7,62	3	3,4	–	15,711	–	0,632

**THE RESEARCH OF GLOBALIZATION DEPENDENCE ON THE FACTORS
OF SOCIAL DEVELOPMENT AND GLOBAL SECURITY OF WORLD
COUNTRIES**

Analysis of globalization during the pre-crisis period (early 1980s – first half of 2008)

While analyzing Table 2 for the pre-crisis period, it is evident that the first twenty socially globalized states are: Denmark, Slovenia, Sweden, Norway, Finland, Singapore, Canada, the Netherlands, Austria, Japan, New Zealand, Iceland, United Kingdom, Switzerland, United States, Germany, Australia, France, Luxembourg, Ireland, and Estonia. Ukraine and Russia are 46th and 59th respectively.

The first twenty politically globalized states are: Iceland, Sweden, Norway, Malta, Ireland, Switzerland, Japan, Denmark, Finland, Canada, Slovenia, New Zealand, Luxembourg, Netherlands, Austria, Uruguay, Costa-Rica, Germany, Hungary and Cyprus. Ukraine, United States and Russia are 48th, 56th, and 87th respectively.

The first twenty states by economic globalization (GDP per capita (PPP)) are: Luxembourg, United States, Norway, Ireland, Iceland, Switzerland, Denmark, Austria, Canada, United Kingdom, the Netherlands, Sweden, Finland, Australia, Japan, France, Singapore, Germany, Italy and Spain. Russia and Ukraine are on the 51st and 69th places respectively.

Finally, 14 states top the rankings of three indicators simultaneously: Denmark, Sweden, Norway, Finland, Canada, Netherlands, Austria, Japan, Iceland, Switzerland, United States, Germany, Luxembourg, and Ireland respectively. Ten of them are among twenty most globalized countries by KOF index (Table 2). The exceptions from this list are Japan, Iceland, United States, and Luxembourg.

The abovementioned ten top countries (according to both systems) are characterized by very significant levels of global peace, democracy index, global security, crime control, at the same time by low levels of corruption and inequality among population. This group is mainly composed of non-members of G8, except for Germany and Canada. Such states could be described by shabby economies and absence of attempts on imposing their will on other states worldwide.

Interestingly, according to KOF globalization index the United States (22nd place) and Japan (51st place) demonstrate very strong positions in political globalization, meanwhile, being behind twentieth places in economic and social globalization. Luxembourg (27th place according to KOF), on the other hand, while being the first in economic globalization, is mediocre in terms of social and very low in terms of political globalization. Thus, the 22nd place of the United States according to KOF rating is fully substantiated. This country indicates substantially low values of peace (0.492) and global security (0.546) indices, high potential for terrorist acts (0.435) and significant level of population inequality (0.688). At the same time, the 51st place for Japan and the 27th place for Luxembourg according to KOF do not respond to their substantial values of practically all SDS indicators.

A significant group of rapidly progressing states is composed of the so-called BRIC countries (Brazil, Russia, India, and China). During the pre-crisis period, these countries manifested huge economic growth amounting to 8–12% annually.

It happened both due to the increase in innovational and hi-tech constituent of these countries' development and with the help of intensive exploitation of one's own natural and environmental resources, involvement of cheap labor and enormous consumption of organic fuels (oil, gas, and coal).

Despite rapid economic growth, these countries are on 33rd through the 81st places by KOF index (Brazil – the 52nd, Russia - the 33rd, India - the 81st, China - the 43rd). This fact is explained by low level of sustainability in their development. Having taken the way of economic development prioritization, current states haven't yet managed to provide high environmental and social indicators. For instance, if these countries are analyzed using SDS method, it is evident that they demonstrate high levels of corruption and population inequality; low values of democracy and global security indices. Meanwhile, Russia and India have very low levels of global peace and high potential for terrorist acts.

Ten least globalized countries of the world according to KOF are mostly African countries, such as: Madagascar, Congo, Guinea-Bissau, Niger, Haiti, Central African Republic, Rwanda, Myanmar, Burundi and one country of South-eastern Asia - Saudi Arabia (which has been placed into this group by the developers of KOF index in a purely formal way, due to a lack of economic globalization data). If we analyze these states using SDS method, we will see that, with the exception of Saudi Arabia, which shouldn't be taken into account during further analysis, these are the poorest world countries where GDP per capita amounts to much less than \$ 2,000. These countries indicate the highest levels of corruption, tremendous population inequality, high level of state instability, low levels of peace, democracy, crime control, and global security. These circumstances greatly complicate the integration of abovementioned countries into the world's economy and culture.

In general, while comparing the ten least globalized African states to twenty most globalized states we can assert, that the gap between these two groups consistently expanded in both economic welfare (GDP per capita) and practically by all SDS indicators (state instability, democratization, peacefulness, crime control, global safety, corruption, and population inequality levels) during the period of 2007-2008 and the previous years. This disturbing tendency arose from the increasing tension throughout the world, spread of global diseases, intensification of regional conflicts, and increase in levels of crime rate, corruption, and terrorism.

By analyzing Ukraine alone, we will specify its peculiarities in the context of globalization. The country accounts for powerful human capital s- 46-million highly educated population (according to the UN data, education index in Ukraine amounts to 0.94). Its geographic location and resource potential provide great opportunities for economic and cultural cooperation both with Russia and the Central and Western European states. These states are located on the Black and Azov Sea shores, have fertile soils and powerful gas transportation network. In perspec-

tive of a transit zone, this area is a modern “Silk Way” for energy, cultural and goods exchange between the East and the West. It is strategically important for Ukraine to maintain the stability of this corridor. Its destabilization in the beginning of 2009, due to the interruption of gas transit, led to almost 40% drop in Ukrainian economy and multibillion losses for the economies of Russia and Western European states.

According to KOF index, during the pre-crisis period Ukraine was on the 42nd place in globalization rating. When analyzing Ukraine using the SDS method, we can witness a tremendous corruption level, low crime control, growing inequality between the poorest and the richest and high state instability, which complicates its further integration into global economy and culture.

Analyzing the dependence of globalization on the social development and global security of a particular state in the range of 10 SDS indicators simultaneously is a complicated task. Therefore, we will apply the method of Principal Compound Analysis (PCA), an important element of RapidMiner system [10], for more convenient and demonstrative analysis. This method allows reducing variables with multiple properties to several implicit factors determining these properties. Therefore, the dependence of state’s globalization level on the noted indicators can be simplified and presented by several most essential indicators instead of ten.

Fig. 1 provides the values of dependence of KOF globalization index on ten indicators in PCA plane where the extension of these ten indicators has been projected. In other words, PCA plane is the least distant plane from the whole group of indicator values among in the ten-dimension area of these indicators.

The provided PCA analysis (fig. 1) demonstrates the indicators that in the most essential way influence the level of globalization are the index of state sustainability and the potential for terrorist acts. It is evident that Norway, Sweden, Denmark, Switzerland, Japan, Austria, Canada and other countries are located close to each other in the right half-plane of PCA intersection and are the most globalized countries according to SDS method. On the other hand, Zimbabwe, Guatemala, Pakistan, Venezuela, Cameroon, Kenia and others are located in the lower left quarter of PCA intersection and are respectively the least globalized states according to both KOF and SDS methods.

CONCLUSIONS

1. A new method is introduced to estimate the level of globalization for world countries in the scope of main social development and global security indicators, referred to as SDS method.

2. Using the well-known KOF method and the newly proposed SDS method, we have conducted a comparative analysis of globalization level for various world countries relying on the most important indicators of their social development and security, such as state and political stability, global and regional security, democracy level, crime control, inequality among people and states, corruption level, state’s peace level and the potential for terrorist acts on their territories.

3. Using the Principal Compound Analysis, variables with multiple properties have been reduced to several implicit factors, which define these properties in the most significant way. These properties are the index of state instability and the potential for terrorist acts. This method allows presenting a simplified way to determine the dependence globalization level of any state not on two most essential SDS indicators, instead of all ten.

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