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MEASURING THE TECHNOLOGY ACHIEVEMENT INDEX: COMPARISON AND RANKING OF COUNTRIES

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ABSTRACT

Purpose- Countries that can adapt to the pace of technological developments, follow and use this speed have a stronger economy and obtain a significant competitive advantage in the global arena. Therefore, the countries make various regulations to increase the technological achievements, access to the global technologies, adapt to the rapid technological transformation and organize their substructures according to these technologies. Technology Achievement Index (TAI), which is one of the studies to evaluate the technological performance of countries, classifies countries according to their technological achievements.

Methodology- In this study, TAI-16 of 105 countries is calculated by using the methodology based on the original study of Desai et al. TAI that originally proposed in 2002 by Desai et al. is a unified index that revealing countries' technological abilities and performance in terms of technology capacity, diffusion of new technologies, diffusion of old innovations and development of human skills. TAI which consists of four main dimensions and eight sub-indicators of the dimensions calculate the average of the dimensions of the index based on the selected indicators. Each of four dimensions includes two sub-indicators.

Findings- In this study, technological capabilities and performances of 105 countries were analyzed and Technology Achievement Index (TAI-16) was calculated using most of the data of 2015. Moreover, TAI-16 values of the 105 countries were classified as Leaders (TAI > 0,5), Potential Leaders (TAI = 0,35-0,49), Dynamic Adopters (TAI = 0,20-0,34), and Marginalized (TAI < 0,20) following the methodology in TAI-02. **Conclusion-** According to TAI-16 classification, the countries were identified as follows; 40 countries as Leaders, 38 countries as Potential Leaders, 17 countries as Dynamic Adopters, and 10 countries as Marginalized. Furthermore, TAI ranking of the 105 countries was created. In this classification, while Switzerland had the highest with 0.813 TAI value, Ethiopia had the lowest value with 0,028 TAI value.

Keywords: Human skills, technology achievement index, technology creation, technology development, technology diffusion. JEL Codes: O31, O33, 034

1. INTRODUCTION

The factors such as technology achievement capacity, creativity, diffusion of innovation, and knowledge generation have become fundamental conditions to provide the sustainable competitive advantage, economic growth, and development in the global arena. In this process, countries make various regulations to increase the technological achievements, access to the global technologies, adapt to the rapid technological transformation and organize their sub-structures according to these technologies.

Countries benefit from global technological advantages when they increase their technological capacities and performances. There are many factors that influence the technological achievement and progress in a country, as well as several methods used to measure this success. Human Development Index (HDI), ICT Development Index (IDI) reported by

ITU, Global Competitiveness Report (GCR) reported by World Economic Forum, The Global Information Technology Report, Global Innovation Index (GII), and Technology Achievement Index (TAI) are one of these methods.

Technology Achievement Index (TAI) is a composite index that measures of the countries' skills to participate in the network age. The TAI was included in Human Development Index 2001 and originally developed by Desai et al. It reflects countries' ability to create and diffuse technology as well as building human skills.

The TAI evaluates the technological performance of countries and classifies the countries according to their technological achievements but not measure the overall size of their technological development. (Nasir et al. 2011). It focuses on the countries technological performances based on their capabilities in creating and using technology. The countries in the TAI also divided into four sub-groups called as Leaders (TAI > 0,5), Potential Leaders (TAI = 0,35-0,49), Dynamic Adopters (TAI = 0,20-0,34), and Marginalized (TAI < 0,20) (Desai et al, 2002).

The components of the TAI consist of four main dimensions as total eight indicators. Each dimension has two indicators, and each of four dimensions and eight indicators has equal weight. Four main dimensions are Technology Creation (TC), Diffusion of Recent Innovations (DRI), Diffusion of Old Innovations (DOI), and Human Skills (HS). Two sub-indicators of each dimension in the TAI are summarized below.

- Technology creation represents by the sub-indicators' patents granted per capita and receipts of royalties and license fees from abroad per capita. These sub-indicators reflect respectively the current level of invention activities and the stock of successful past innovations that are still useful and therefore market value (Desai et al, 2002)
- Sub-indicators of diffusion of recent innovations are numbers of Internet hosts per 1000 people and high-andmedium technology exports as a share of all export.
- Diffusion of old innovations measured by telephones mainlines and cellular per 1000 people and electricity consumption per capita (kW per capita) (Desai et al, 2002)
- The two sub-indicators in the human skills are mean years of schooling of the population age 15 and above and gross tertiary science enrolment ratio. These two measures indicate the general level of basic educational skills in the population, in spite of the fact that education quality varies from country to country. (Desai et al, 2002)

In this study, technological capabilities and performances of 105 countries are analyzed and Technology Achievement Index (TAI-16) is calculated using most of the data of 2015. The internet users per 100 people are used instead of the internet hosts per 1000 people which sub-indicator of diffusion of recent innovation as it gives a more certain idea about the diffusion of internet among the population in our study. We also use the high technology exports as a share of all export instead of the high-and-medium technology exports in TAI-02 (Desai et al. 2002). Furthermore, the countries are classified as leaders, potential leaders, dynamic adopters and marginalized countries and created the TAI ranking of the 105 countries.

The rest of this study is organized as follows. Section two provides a brief review of the empirical literature. In the third section presents the data set and methodology, and in the fourth section, the findings and discussions are mentioned. These sections are followed by the conclusion part.

2. LITERATURE REVIEW

Technology creation, diffusion, and having human skills have been the key factors for economic growth, development, and global competition. For this reason, there are many studies evaluating the technological performances and progress of the countries using the different methods in the literature. Technology Achievement Index (TAI) developed by Desai et al. (2002) and called TAI-02, is one of these studies.

Desai et al. (2002) calculated the Technology Achievement Index (TAI-02) using data from 72 countries. In their study, they ranked 72 countries according to their TAI values and evaluated the technological performance of the countries based on their capability about creating and using technology but not focus on the overall size of their technological development. Thus, although Finland is a smaller country than USA, UK, and Germany, it has a higher ranking in TAI than those countries (Nasir et al. 2011) As a result, their study shows that there are great differences in technological progress among developing countries (Desai et. al. 2002)

Following TAI-02, TAI-09 was proposed by Nasir et all. (2011). TAI-09 differs from TAI-02 in that it analyzes the technology capacities and capabilities of 91 countries using the data of 2009. Furthermore, the main purpose of TAI-09 indicates the changes take place in the TAI rankings of various countries. Since the data for the two sub-indicators used in 2002 are no longer available, these two sub-indicators revised in TAI-09. The study also compares 56 countries which are included in both TAI-09 and TAI-02 in terms of their technological progress. Later on, The TAI-02 containing 72 countries modified and made compatible with TAI-09. In the result of the study, 20 countries within 56 countries moved up, 23 countries moved

down and 13 countries retained their ranking positions in the index and 4.7% reduction is observed in the TAI values from 2002 to 2009.

Archibugi and Coco (2004) presented a new indicator of technological capabilities (ArCo) for measure the developed and developing countries technological capabilities. Index took into account a number of other variables associated with technological change and it allowed for comparison between countries over time. When they developing the index, they benefited from the methodology including Technology Achievement Index, Human Development Report, and Industrial Performance Scoreboard.

Fan et al. (2008) indicated that technology achievement gap among countries could be affected by such effects as that Matthew effect, convergence effect, and balance effects, according to the time sequence. They calculated TAI of 134 developed and developing (regions) countries bu following the method in Technology Achievement Index and extended the index from single year to 21 years between 1985 and 2005. The result of their study indicated that technological gap among countries was getting shorter and to some extent developing countries' technology surpassing strategy was effective. This means that the overall trend was convergence and individual Matthew effect.

Xu et al. (2013) calculated the TAI of 21 innovative cities in the period of 2001-2008. According to their result of their study, TAI of 21 innovative cities and four sub-indicators showed an increasing trend. Furthermore, in terms of diffusion of recent innovations, diffusion of old innovation, and human skills there were no big differences among these cities, apart from the creation of technology which directly results in the differences of TAI among these innovative cities.

Burinskiene (2013) was investigated the relationship between international trade and technological innovations. Burinskiene examined the concept of innovations and presented the models of innovations linked to international trade by using different types of models in the study. Moreover, TAI was presented for 68 countries and the results of TAI were compared with achievements on e-commerce technology in different countries. In this comparison, TAI and the application of e-commerce technologies were conducted to reveal how TAI represents the application of e-commerce technology in countries. Also, the countries classified into groups representing the difference in technological achievement. The empiric study results showed that some countries are ranked higher according to TAI and lower in the application of e-commerce technology or vice versa.

Ali et al. (2014) proposed the TAI-13 OIC to reveal the technological progress of Muslim nations. They ranked 34 Muslim countries, and each sub-dimension of the index included in the ranking. They also made a comparative analysis of TAI ranking of 22 countries, common to the present and previous studies of 2011 under similar conditions, and presented information about the shift in the technological situation of these countries over a period of 5 years. They used the standard deviation approach to investigate the technological spread. Moreover, made a comparison such different indices as GCI, HDI, and GDP per capita in TAI-13 OIC.

TAI-15 proposed by Shahab is an another study in the Technology Achievement Index (2015). TAI scores of 167 countries calculated in TAI-15. Cluster analysis was used in the TAI-15 and update and enhance the technology achievement index with classification and grouping of the countries by using latest data. By using the cluster analysis countries are classified 31 countries as Leaders, 34 as Potential Leaders, 44 as Dynamic Adopters and 58 as Marginalized. All the features of Potential Leaders such as high levels of human skills and high diffusion of recent innovations in TAI-15 and TAI-02 are the same.

3. DATA AND METHODOLOGY

The methodology used to calculate the TAI-16 is based on the original study of Desai et al. TAI which consists of four main dimensions and eight sub-indicators of the dimensions calculate the average of the dimensions of the index based on the selected indicators. Each of four dimensions includes two sub-indicators. Equal weight is given of the indicators in each dimension and in the final index, the dimensions are given one-quarter (equal) weight. The observed minimum and maximum values among all countries with data are selected as goalposts for each of the indicators in these dimensions. The performance on each indicator is stated as a value between 0 and 1 applied the following general formula: (Human Development Report, 2001).

Actual Value – Observed Minimum Value

Indicator Index =

Observed Maximum Value – Observed Minimum Value

The data sources belong to the sub-indicators are stated below.

The indicators which used to measure technology creation are patents granted per capita and receipts of royalties and license fees from abroad per capita. World Bank World Development Indicators contains the data of receipts of royalties and license fees from abroad per capita. Patents granted per capita data is obtained from the European Patent Office (EPO)

The numbers of Internet hosts per 1000 people and high-and-medium technology exports as a share of all export used to measured the diffusion of recent innovation in the original study of Desai et al. TAI-02. In our study, the internet users per 100 people are used instead of the hosts per 1000 people. We also use the high technology exports as a share of all export instead of the high-and-medium technology exports in TAI-02 (Desai et al. 2002). The data of the internet users per 100 people are acquired from the World Bank World Development Indicators. High technology exports as a share of all exports data are obtained from World Bank World Development Indicators.

For the telephones mainlines and cellular per 1000 people and electricity consumption per capita (kW per capita) subindicators logarithm is taken and capped at OECD average levels in our study. Data regarding Electricity consumption per capita (kW per capita) is taken from World Bank Database. The data of the telephones mainlines and cellular per 1000 people derived from International Telecommunication Union (ITU).

To measuring the human skills dimension used mean years of schooling of the population age 15 and above and gross tertiary science enrolment ratio. The data of mean years of schooling of the population age 15 and above is gathered from the United Nation Devolepment Programme (UNDP) data. The data of gross tertiary science enrolment ratio' data is obtained from International Telecommunication Union (ITU).

4. FINDINGS AND DISCUSSIONS

TAI-16 is calculated using Desai's original institutional framework. 105 countries' technological capabilities and performances analyzed using the most of the data of 2015. The internet users per 100 people are used instead of the hosts per 1000 people which sub-indicator of diffusion of recent innovation as it gives a more certain idea about the diffusion of internet among the population in our study. We also use the high technology exports as a share of all export instead of the high-and-medium technology exports in TAI-02 (Desai et al. 2002). Moreover, two sub-indicators in the diffusion of old innovations telephones mainlines and cellular per 1000 people and electricity consumption (kW per capita) logarithm was taken and capped at OECD average levels.

Table 1 in appendix gives the TAI-16 ranking of 105 countries. The values indicate great differences between developed and developing countries within specific categories. While the highest TAI value is 0.813 for Switzerland, the lowest value is 0.028 for Ethiopia. Furthermore, TAI-16 values of the 105 countries are classified as Leaders (TAI > 0,5), Potential Leaders (TAI = 0,35-0,49), Dynamic Adopters (TAI = 0,20-0,34), and Marginalized (TAI < 0,20) following the methodology in TAI-02. According to this classification, 40 countries as Leaders, 38 countries as Potential Leaders, 17 countries as Dynamic Adopters, and 10 countries as Marginalized identified.

- Leader (TAI > 0,5): Technology creation and innovation capacity are important for all the countries and provide highest technological progress. Leaders as owners of the technological innovation get a big advantage in the global economy. This group is at the top of the technological innovation and mostly consist of the developed countries. They also have a high achievement in technology creation, diffusion, and skills. Such developed countries as Switzerland, Luxembourg, Netherlands, Sweden, Korea Rep., and the United States are including in the top ten among Leaders.
- Potential Leaders (TAI = 0,35-0,49): Most of the countries in Potential Leaders are developing countries. Potential Leaders comprise 38 countries include the countries as Turkey, Brazil, Chile, Chine, Colombia, Portugal, Thailand. Most of the countries in this group have used old technologies extensively and invested in high-level human skills. However, innovation level of these countries is low.
- Dynamic Adopters (TAI = 0,20-0,34): Seventeen countries such as Indonesia, Egypt, Cuba, Sri Lanka come under the Dynamic Adapters category. Some countries in this group have human skills levels and diffusion recent and old technologies comparable with Potential Leaders.
- Marginalized (TAI < 0,20): Marginalized countries consist of eleven countries include Pakistan, Senegal, Sudan, Ethiopia. These countries are lagging behind in almost every aspect of technological success. The countries in this group have low levels of technological advance and need to have a long way to go technology diffusion and human skill building. In large parts of these countries, people still do not have access to "old" technologies.

5. CONCLUSION

In this study, technological capabilities and performances of 105 countries were analyzed and Technology Achievement Index (TAI-16) was calculated using most of the data of 2015. TAI-16 was calculated based on Desai's original study. Moreover, TAI-16 values of the 105 countries were classified as Leaders (TAI > 0,5), Potential Leaders (TAI = 0,35-0,49), Dynamic Adopters (TAI = 0,20-0,34), and Marginalized (TAI < 0,20) following the methodology in TAI-02. According to TAI-16 classification, the countries were identified as follows; 40 countries as Leaders, 38 countries as Potential Leaders, 17 countries as Dynamic Adopters, and 10 countries as Marginalized. Furthermore, TAI ranking of the 105 countries was created. In this classification, while Switzerland had the highest with 0.813 TAI value, Ethiopia had the lowest value with 0,028 TAI value.

Following the TAI-02, TAI-09 and TAI-15 were proposed. All these studies investigated the countries technological performance. While TAI-02 analyzed 72 countries, TAI-09 investigated 91 countries and the TAI-15 analyzed 167 countries. The changes and developments in the technological performances of the countries within the years can be seen and compared in these studies. Looking at the rankings of Turkey in these indices, it has been observed that ranked 79th among Dynamic Leaders in 167 countries in TAI-15.

In our study, Turkey with 0,412 TAI value was included in Potential Leaders category and ranked in 66 among 105 countries. In this frame, when the countries are ranked according to four main dimensions of the index, Turkey was in the 38th place in Technology Creation index; 73rd place in Diffusion of Recent Innovation Index, 70th place in Diffusion of Old Innovation index and 21st place in the Human Skills index. The fact that the diffusion of recent innovation and diffusion of old innovation index values were low was one of the factors pushing down the ranking of technology achievement index of Turkey. Because the calculation of the diffusion of old innovations index by the logarithm function and the second derivative of the logarithm function is negative, the increasing in this sub-indicator that contributes to the TAI has a decreasingly growing course. Therefore, if Turkey attaches more importance to other sub-indices in order to increase TAI values, it is expected that TAI value will be reflected positively.

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Appendix

-				Technolog	y Creation (TC)		Diffusion of Recent Innovations(DRI)			
Ta TAI Rank	ble 1: Technology Achieve	ement Index 2016 Category	TAI 2016	Patents Receipts of granted royalty and to license resident fees(US\$ TC (per per1000 million people) ^b people) ^a		TC Index	Internet User (per 100 people) ^c	High- technology exports (%of manufactured exports) ^d	DRI Index	
1	Switzerland	Leaders	0,813	366,48	1.952.204,76	0,842	87,97	26,84	0,6978081	
2	Luxembourg	Leaders	0,766	368,63	2.827.320,93	1	97,33	6,82	0,5596317	
3	Netherlands	Leaders	0,745	117,97	2.307.474,64	0,568	93,10	19,90 ^e	0,6600475	
4	Sweden	Leaders	0,685	197,88	900.901,56	0,427	90,61	14,26	0,5934678	
5	Ireland	Leaders	0,682	58,18	1.606.854,93	0,363	80,12	26,76	0,6548525	
6	Singapore	Leaders	0,673	22,58	596.570,74	0,136128	82,10	49,28	0,8776447	
7	Denmark	Leaders	0,666	122,97	364.518,69	0,231	96,33	15,96	0,6403547	
8	Korea, Rep.	Leaders	0,661	39,26	122.460,72	0,074908	89,90	26,84	0,7081995	
9	Germany	Leaders	0,658	173,46	179.149,12	0,266958	87,59	16,66	0,5998605	
10	United States	Leaders	0,635	46,51	387.858,43	0,131676	74,55	19,01	0,5517483	
11	Finland	Leaders	0,633	135,72	437.736,90	0,261499	92,65	8,73	0,5523547	
12	Norway	Leaders	0,626	49,85	98.177,09	0,084977	96,81	20,52	0,6858808	
13	France	Leaders	0,622	81,32	224.128,77	0,149937	84,69	26,85	0,6802542	
14	Japan	Leaders	0,619	83,37	288.528,58	0,164106	93,33	16,78	0,6319112	
15	Austria	Leaders	0,617	120,89	102.533,20	0,182105	83,93	13,35	0,5489564	
16	Australia	Leaders	0,616	13,88	32.929,44	0,02465	84,56	13,51	0,5538807	
17	Belgium	Leaders	0,604	76,73	282.996,32	0,154121	85,05	13,02	0,5519132	
18	Israel	Leaders	0,597	47,37	130.793,28	0,087382	78,89	19,66	0,58127	
19	New Zealand	Leaders	0,596	11,1	66.271,05	0,026776	88,22	9,62	0,5368918	
20	Malta	Leaders	0,589	44,05	652.647,01	0,175166	76,18	31,90	0,6820629	
21	Iceland	Leaders	0,582	84,64	694.103,78	0,237553	98,20	19,90	0,6875388	
22	Estonia	Leaders	0,576	7,62	8.521,55	0,011843	88,41	11,40	0,5546536	
23	Kazakhstan	Leaders	0,575	0,23	50,48	0,000321	72,87	41,19	0,7517113	
24	Russian Federation	Leaders	0,563	0,53	5.039,46	0,00161	73,41	13,76	0,4961583	
25	Greece	Leaders	0,562	2,03	4.997,40	0,003637	66,84	10,99	0,4346122	
26	Czech Republic	Leaders	0,557	7,01	44.159,03	0,017318	81,30	14,90	0,5494236	
27	Slovenia	Leaders	0,556	31,5	28.196,99	0,047712	73,10	6,42	0,4253179	
28	Hong Kong SAR, China	Leaders	0,549	3,7	0,00	0,005019	84,95	10,71	0,5295148	
29	United Kingdom	Leaders	0,546	32,19	269.296,40	0,091286	92,00	20,81	0,6627299	
30	Malaysia	Leaders	0,536	0,73	3.038,81	0,001528	71,06	42,80	0,7571824	
31	Lithuania	Leaders	0,535	3,78	7.853,54	0,006516	71,38	11,85	0,4672394	
32	Spain	Leaders	0,534	11,25	34.750,27	0,021405	78,69	7,15	0,4622644	
33	Latvia	Leaders	0,531	4,04	3.364,92	0,006075	79,20	15,05	0,5394998	
34	Slovak Republic	Leaders	0,526	2,03	4.837,48	0,003609	85,02	10,29	0,5259626	
35	Poland	Leaders	0,522	3,95	10.921,20	0,007289	68,00	8,78	0,4200476	
36	Belarus	Leaders	0,521	0	2.407,23	0,000426	62,23	4,31	0,3469423	
37	Hungary	Leaders	0,516	3,86	152.723,72	0,032244	72,83	13,74	0,4928515	
38	Italy	Leaders	0,507	40,72	50.134,09	0,064098	65,57	7,34	0,3934654	
39	Argentina	Leaders	0,506	0,3	3.941,89	0,001104	69,40	9,01	0,4297863	
40	Canada	Leaders	0,506	21,09	115.097,04	0,04896	88,47	13,83	0,57794	

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Incekara, Sengun, Guz

41	Croatia	Potential leaders	0,499	1,42	10.805,47	0,003837	69,80	8,98	0,4316911
42	Chile	Potential leaders	0,499	0,89	4.879,51	0,00207	64,29	5,90	0,3729536
43	Ukraine	Potential leaders	0,496	0,04	1.880,61	0,000387	49,26	7,27	0,3049207
44	Bulgaria	Potential leaders	0,492	0,98	6.950,41	0,002558	56,66	7,65	0,348336
45	Bahrain	Potential leaders	0,491	0	0	0	93,48	0,96	0,4836099
46	Cyprus	Potential leaders	0,482	12,01	0	0,01629	71,72	6,15	0,4153491
47	Saudi Arabia	Potential leaders	0,478	1,55	0	0,002102	69,62	0,77	0,3533541
48	Qatar	Potential leaders	0,47	0,89	0	0,001207	92,88	3,41	0,5034845
49	Serbia	Potential leaders	0,468	0	0	0,001128	65,32	0	0,3229051
50	Portugal	Potential leaders	0,467	4,45	8.573,89	0,007552	68,63	4,59	0,3839719
51	Brunei Darussalam	Potential leaders	0,458	0	0	0	71,20	17,93	0,5235925
52	Costa Rica	Potential leaders	0,451	0	0	0	59,76	16,83	0,4515897
53	Philippines	Potential leaders	0,443	0,04	111,14	0	40,70	53,06	0,6903662
54	Kuwait	Potential leaders	0,442	0,77	0	0,001044	82,08	2,72	0,4387832
55	Oman	Potential leaders	0,439	0	0,00	0	74,17	4,13	0,4094845
56	Georgia	Potential leaders	0,437	0	154,06	0	45,16	5,57	0,2667987
57	Romania	Potential leaders	0,436	0,45	4.494,71	0,001405	55,76	7,50	0,3421426
58	Brazil	Potential leaders	0,426	0,35	2.795,71	0,000969	59,08	12,31	0,4052662
59	Azerbaijan	Potential leaders	0,424	0	0	0	77,00	2,53	0,4097025
60	Armenia	Potential leaders	0,423	0	0	0	58,25	5,27	0,3345424
61	Thailand	Potential leaders	0,422	0,07	1.245,89	0,000315	39,32	21,44	0,3849261
62	China	Potential leaders	0,419	1,03	790,97	0,001537	50,30	25,75	0,4847135
63	Jordan	Potential leaders	0,416	0	1.680,23	0,000297	53,40	1,82	0,2758538
64	Macedonia, FYR	Potential leaders	0,414	0	4.449,03	0,000787	70,38	2,99	0,3783237
65	South Africa	Potential leaders	0,413	1,07	1.876,35	0,001783	51,92	5,88	0,3061673
66	Turkey	Potential leaders	0,412	2,77	0	0,003757	53,74	2,16	0,2809341
67	Albania	Potential leaders	0,41	0	662,81	0,000117	63,25	1,49	0,3258044
68	Moldova	Potential leaders	0,407	0	1.260,50	0,000223	49,84	3,99	0,2771243
69	Kyrgyz Republic	Potential leaders	0,404	0	234,02	0	30,25	11,86	0,2458114
70	Vietnam	Potential leaders	0,402	0,04	0	0	52,72	26,93e	0,5088412
71	Uruguay	Potential leaders	0,401	0,58	47,79	0,000795	64,60	13,85	0,4495217
72	Panama	Potential leaders	0,394	0,51	1.494,98	0,000956	51,21	0	0,24691
73	Lebanon	Potential leaders	0,392	0	4.083,90	0,000722	74,00	2,07e	0,389165
74	Colombia	Potential leaders	0,386	0,08	1.086,29	0,000301	55,90	9,49	0,3616408
75	Mauritius	Potential leaders	0,385	6,34	1.043,55	0,008784	50,14	0,06	0,2417258
76	Mexico	Potential leaders	0,377	0,33	2.423,07	0,000876	57,43	14,69	0,4188336
77	Mongolia	Potential leaders	0,365	0	806,67	0,000143	21,44	4,03	0,1245657
78	Tunisia	Potential leaders	0,35	0,27	1.959,67	0,000713	48,52	6,33	0,2920672
79	Bosnia and Herzegovina	Dynamic Adopters	0.342	0.26	3,383,61	0.000951	65.07	2,82	0.3481141
80	Botswana	Dynamic Adopters	0.34	0	53.90	0	27.50	0,63	0.1251941
50		2,	3,3 1	5	33,30	5	,50		0,1=01011

Incekara, Sengun, Guz

81	Dominican Republic	Dynamic Adopters	0,339	0	0	0	51,93	3,83	0,286907
82	Jamaica	Dynamic Adopters	0,334	0	2.025,55	0,000358	43,18	0,09	0,2044683
83	Indonesia	Dynamic Adopters	0,308	0	211,46	0	21,98	6,97 ^e	0,155168
84	Egypt, Arab Rep.	Dynamic Adopters	0,308	0,02	0	0	35,90	0,78	0,1718573
85	Sri Lanka	Dynamic Adopters	0,308	0	0	0	29,99	0,84	0,1405213
86	El Salvador	Dynamic Adopters	0,307	0	4.756,89	0,000841	26,92	4,39	0,1574091
87	Peru	Dynamic Adopters	0,306	0,06	694,97	0,000204	40,90	4,74	0,2360495
88	Morocco	Dynamic Adopters	0,304	0	96,21	0	57,08	3,54	0,3118722
89	Bolivia	Dynamic Adopters	0,275	0	2.091,54	0,00037	45,10	6,46	0,2748943
90	Cuba	Dynamic Adopters	0,256	0,7	0	0,000949	31,11	0	0,1386685
91	Guatemala	Dynamic Adopters	0,25	0	1.008,23	0,000178	27,10	5,02	0,1643815
92	Nepal	Dynamic Adopters	0,248	0	0	0	17,58	0,62	0,0716875
93	India	Dynamic Adopters	0,229	0,14	355,86	0,000253	26,00	7,52	0,182001
94	Honduras	Dynamic Adopters	0,226	0	107,75	0	20,36	2,42 ^e	0,1035528
95	Zimbabwe	Dynamic Adopters	0,207	0	145,35	0	16,36	2,89	0,0865094
96	Cote d'Ivoire	Marginalized Countries	0,195	0	0	0	21,00	4,79	0,1293436
97	Cameroon	Marginalized Countries	0,181	0	0	0	20,68	3,71	0,1174618
98	Bangladesh	Marginalized Countries	0,157	0	7,42	0	14,40	0	0,0486859
99	Senegal	Marginalized Countries	0,154	0	0,00	0	21,69	3,62	0,1220409
100	Pakistan	Marginalized Countries	0,151	0	79,40	0	18,00	1,56	0,0827494
101	Mozambique	Marginalized Countries	0,147	0	0	0	9,00	11,61	0,1290274
102	Sudan	Marginalized Countries	0,124	0	0,01	0	26,61	0	0,1144707
103	Тодо	Marginalized Countries	0,104	0	0	0	7,12	0,41	0,0133526
104	Tanzania	Marginalized Countries	0,098	0	3,70	0	5,36	0,76	0,0071346
105	Ethiopia	Marginalized Countries	0,028	0	0	0	11,60	4,00	0,0713306

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Incekara, Sengun, Guz

Table 1: Technology Achievement Index 2015 Telephone technology achievement Index 2015 Mean from an anticipation of the periods consumption of the period					Diffusio	n of Old İnnovatio	ons(DOI)	Development of Human Skills				
TAł Rank Country. Category TAI 2016 1 Switzerland Leaders 0,813 1867,2 7.807,31 0,983406 12,8 57.229 0,73 2 Luxembourg Leaders 0,766 1994,8 14.193,17 1 11,7 19.407 0,51 3 Netherlands Leaders 0,665 1670,5 13.870,39 1 12,1 62.353' 0,72 5 Ireland Leaders 0,666 1582,6 6.039,61 0,957419 12,7 81.51e' 0,68 7 Denmark Leaders 0,666 1582,6 6.039,61 0,957419 12,7 81.51e' 0,88 8 Korea, Rep. Leaders 0,655 1716,4 7.019,01 0,972674 13,1 68.255 0,779 10 United States Leaders 0,656 1254,9 7.325,75 0,925412 13,6 6.362 0,673 11 Finland Leaders 0,661 1707,5 </th <th>Tab</th> <th>le 1: Technology Achiever</th> <th>ment Index 2</th> <th>016</th> <th>Telephone (mainlines + cellular per 1000 people)^f</th> <th>Electricity consumption (kwh per capita)^g</th> <th>DOI Index</th> <th>Mean years of schooling^h</th> <th>Gross enrolment ratio, tertiary (%of tertiary school-age population)^k</th> <th>DHS Index</th>	Tab	le 1: Technology Achiever	ment Index 2	016	Telephone (mainlines + cellular per 1000 people) ^f	Electricity consumption (kwh per capita) ^g	DOI Index	Mean years of schooling ^h	Gross enrolment ratio, tertiary (%of tertiary school-age population) ^k	DHS Index		
1 Switzerland Leaders 0.813 1867.2 7.807.31 0.983406 12.8 57.22 ⁹ 0.73 2 Luxembourg Leaders 0.766 1994.8 14.193.17 1 11,7 19.407 ⁷ 0.51 3 Netherlands Leaders 0.765 13.870.39 1 12,1 62.51 ³ 0.72 6 Singapore Leaders 0.662 1445.8 5.701.90 0.918054 12,2 77.627 0.79 6 Singapore Leaders 0.666 1582.6 6.039.61 0.957419 12,7 81.516 ⁷ 0.83 7 Denmark Leaders 0.668 1706,4 7.019.01 0.927674 13.1 68.2455 0.63 9 Germary Leaders 0.658 1716,4 7.019.01 0.927874 10.3 87.289 0.75 10 United States Leaders 0.626 129.49 23.25.75 0.925412 12.6 7.66646 0.81 <t< th=""><th>TAI Rank</th><th>Country</th><th>Category</th><th>TAI 2016</th><th></th><th></th><th></th><th></th><th></th><th></th></t<>	TAI Rank	Country	Category	TAI 2016								
2 Luxembourg Leaders 0,765 1994,8 14.193,17 1 11,7 19.407 0,51 3 Netherlands Leaders 0,745 1648,1 6.821,06 0,969789 11,9 78.501' 0,78 4 Sweden Leaders 0,682 1445,8 57.01,90 0,318054 12,2 77.627' 0,79 5 Ireland Leaders 0,666 1582,6 6.039,61 0,957419 12,7 81.516' 0,88 7 Denmark Leaders 0,665 1582,6 6.039,61 0,972674 13,1 68.265 0,79 10 United States Leaders 0,633 1452,9 15.509,73 0,98154 10,3 85.726 0,86 11 Ininda Leaders 0,622 1625,2 7.373,88 0,977648 11,1 64.390' 0,68 14 Japan Leaders 0,617 1985,9 8513,01 0,992131 11,5 63.362' 0,77	1	Switzerland	Leaders	0,813	1867,2	7.807,31	0,983406	12,8	57.229 ^j	0,73		
3 Netherlands Leaders 0,745 1648,1 6.821,06 0,969789 11,9 78.501 ⁴ 0,78 4 Sweden Leaders 0,682 1475,8 5.701,90 0,918054 12,2 77.626 ⁷ 0,79 6 Singapore Leaders 0,661 1582,6 6.039,61 0,957419 12,7 81.516 ¹ 0,88 7 Denmark Leaders 0,661 1765,2 10.427,89 1 11,9 95.345 0,86 9 Germany Leaders 0,661 1559,9 12.988,26 0,994535 12,9 85.796 0,86 10 United States Leaders 0,626 1294,9 23.325,75 0,925121 12,6 7.628 0,71 12 Norway Leaders 0,617 195,9 8.513,01 0,992131 11,5 63.362 ² 0,77 13 Japan Leaders 0,617 195,9 8.513,01 0,992131 11,5 63.362 ² 0,77<	2	Luxembourg	Leaders	0,766	1994,8	14.193,17	1	11,7	19.407 ¹	0,51		
4 Sweden Leaders 0,685 1670,5 13.870,39 1 12,1 62,33 ¹ 0,72 5 Ireland Leaders 0,682 1445,8 5.701,90 0,918054 12,2 77,626 ¹ 0,79 6 Singapore Leaders 0,661 1582,6 6.039,61 0,9957419 11,1 95,345 0,686 9 Germary Leaders 0,661 1765,2 10,477,89 1 11,9 95,345 0,86 10 United States Leaders 0,663 176,4 7.019,01 0,972674 13,1 68,265 0,79 110 United States Leaders 0,635 1559,9 12,988,26 0,994535 12,9 85,796 0,881 113 France Leaders 0,612 1767,7 7.385,60 0,937648 11,1 63,302 0,67 15 Austria Leaders 0,619 1767,5 10,133,86 1 13 90,306 0,89 <td>3</td> <td>Netherlands</td> <td>Leaders</td> <td>0,745</td> <td>1648,1</td> <td>6.821,06</td> <td>0,969789</td> <td>11,9</td> <td>78.501¹</td> <td>0,78</td>	3	Netherlands	Leaders	0,745	1648,1	6.821,06	0,969789	11,9	78.501 ¹	0,78		
5 Ireland Leaders 0,682 1445,8 5.701,90 0,918054 12,2 77.626 0,79 6 Singapore Leaders 0,673 1824,1 8.839,71 0,995928 10,6 69,811 ¹ 0,683 7 Denmark Leaders 0,661 1765,2 10.427,89 1 11,9 95,345 0,863 9 Germary Leaders 0,663 1716,4 7.019,01 0.972674 13,1 68,265 0.79 10 United States Leaders 0,633 1452,9 15,509,73 0,968154 10,3 87.289 0,75 11 Finland Leaders 0,622 1625,2 7.373,98 0,977648 11,1 64.390 ¹ 0,675 12 Norway Leaders 0,616 1707,5 10.133,86 1 13 90,306 0,89 14 Japan Leaders 0,591 1765,5 6.58,72 0,96633 12,5 80,812 ¹ 0,76 <td>4</td> <td>Sweden</td> <td>Leaders</td> <td>0,685</td> <td>1670,5</td> <td>13.870,39</td> <td>1</td> <td>12,1</td> <td>62.353^j</td> <td>0,72</td>	4	Sweden	Leaders	0,685	1670,5	13.870,39	1	12,1	62.353 ^j	0,72		
6 Singapore Leaders 0,673 1824,1 8.839,71 0.995928 10.6 69,811 ¹ 0.68 7 Denmark Leaders 0,666 1582,6 6.039,61 0,957419 12,7 8.1516 ¹ 0,83 8 Korea, Rep. Leaders 0,661 1765,2 10.427,89 1 11,9 95,345 0,666 0,79 10 United States Leaders 0,653 1559,9 12,988,26 0,99535 12,9 85,796 0,86 11 Finland Leaders 0,626 1294,9 23,325,75 0,925412 12,6 76,696 0,81 13 France Leaders 0,617 1995,9 8,513,01 0,92131 10.8 81,540 0,75 16 Austria Leaders 0,617 1995,9 8,513,01 0,92131 10.8 81,540 0,75 16 Austria Leaders 0,596 1620,8 9,084,22 0,956535 12,5 66,181 ¹ <	5	Ireland	Leaders	0,682	1445,8	5.701,90	0,918054	12,2	77.626 ^j	0,79		
7 Denmark Leaders 0,666 1582,6 6.039,61 0,957419 12,7 81.516 ¹ 0,83 8 Korea, Rep. Leaders 0,651 1765,2 10.427,89 1 11,9 95.345 0,86 9 Germany Leaders 0,633 1559,9 12,988,26 0.994535 12,9 85.796 0.86 11 Finland Leaders 0,632 1559,9 12,988,26 0.994535 12,9 85.796 0.86 11 Finland Leaders 0,612 1625,2 7.37,38 0.9757648 11,1 64.330 ¹ 0.81 13 France Leaders 0,617 1995,9 8.513,01 0.992131 10,8 81.540 0.75 16 Australia Leaders 0,616 1707,5 10.133,86 1 13 90.306 0.88 17 Belgium Leaders 0,596 1520,8 9.084,22 0.998679 11,3 73.318 ¹ 0,737 </td <td>6</td> <td>Singapore</td> <td>Leaders</td> <td>0,673</td> <td>1824,1</td> <td>8.839,71</td> <td>0,995928</td> <td>10,6</td> <td>69,811[']</td> <td>0,68</td>	6	Singapore	Leaders	0,673	1824,1	8.839,71	0,995928	10,6	69,811 [']	0,68		
8 Korea, Rep. Leaders 0,661 1765,2 10.427,89 1 11,9 95.345 0,86 9 Germany Leaders 0,653 175,9 12.988,26 0,994535 12,9 85.796 0,86 11 Finland Leaders 0,633 1452,9 15.509,73 0,968154 10.3 87.289 0,75 12 Norway Leaders 0,626 1294,9 23.325,75 0.926412 12,6 76.696 0,81 13 France Leaders 0,619 1767,7 7.335,60 0,983771 11,5 63.362 ¹ 0,75 16 Australia Leaders 0,616 1707,5 10.133,86 1 13 90.306 0,89 17 Belgium Leaders 0,597 1765,5 6.558,72 0,965835 12,5 66.18 ¹ 0,76 18 Israel Leaders 0,597 1765,5 6.558,72 0,998679 12,5 69.550 0,77	7	Denmark	Leaders	0,666	1582,6	6.039,61	0,957419	12,7	81.516 ^j	0,83		
9 Germany Leaders 0.658 1716,4 7.019,01 0.972674 13,1 68.265 0.79 10 United States Leaders 0.635 1559,9 12.988,26 0.994535 12,9 85.796 0.66 11 Finland Leaders 0.626 1294,9 23.325,75 0.925412 12,6 76.696 0.81 13 France Leaders 0.619 176,77 7.835,60 0.983771 11,5 63.362 0,7 15 Austria Leaders 0.611 1707,5 10.133,86 1 13 90.306 0.83 17 Belgium Leaders 0.616 1707,5 10.133,86 1 13 90.306 0.83 18 Israel Leaders 0.597 1755,5 6.588,72 0.965835 12,5 66.181 ¹ 0,76 19 New Zealand Leaders 0.597 1765,5 6.568,72 0.995835 12,5 66.181 ¹ 0,77 <td>8</td> <td>Korea, Rep.</td> <td>Leaders</td> <td>0,661</td> <td>1765,2</td> <td>10.427,89</td> <td>1</td> <td>11,9</td> <td>95.345</td> <td>0,86</td>	8	Korea, Rep.	Leaders	0,661	1765,2	10.427,89	1	11,9	95.345	0,86		
10 United States Leaders 0,635 1559,9 12.988,26 0,994335 12,9 85.796 0,68 11 Finland Leaders 0,633 1452,9 15.509,73 0,968154 10,3 87.289 0,75 12 Norway Leaders 0,626 1294,9 23.325,75 0,925412 12,6 76.696 0,81 13 France Leaders 0,619 1767,7 7.835,60 0,983771 11,5 63.362 ¹ 0,75 15 Austria Leaders 0,616 1707,5 10.133,86 1 13 90.306 0,89 17 Belgium Leaders 0,597 1765,5 6.558,7 0,965835 12,5 66.181 ¹¹ 0,76 18 Israel Leaders 0,596 1620,8 9.084,22 0,998679 12,5 80.882 ¹ 0,82 20 Malta Leaders 0,556 1789,7 6.664,66 0,96745 12,5 69.550 0,77	9	Germany	Leaders	0,658	1716,4	7.019,01	0,972674	13,1	68.265	0,79		
11 Finland Leaders 0,633 1452,9 15,509,73 0,968154 10,3 87.289 0,75 12 Norway Leaders 0,626 1294,9 23.325,75 0,925412 12,6 76.696 0,81 13 France Leaders 0,622 1625,2 7.373,98 0,977648 11,1 64.390 ¹ 0,68 14 Japan Leaders 0,617 1995,9 8.513,01 0,92131 10,8 81.540 0,75 16 Australa Leaders 0,616 1707,5 10.133,86 1 13 90.306 0,89 17 Belgium Leaders 0,597 1765,5 6.558,72 0,965835 12,5 66.181 ¹ 0,76 18 Israel Leaders 0,596 1620,8 9.084,22 0,998679 12,5 80.882 ¹ 0,82 20 Malta Leaders 0,576 1789,7 6.664,66 0,96745 12,5 69.550 0,77	10	United States	Leaders	0,635	1559,9	12.988,26	0,994535	12,9	85.796	0,86		
12 Norway Leaders 0,626 1294,9 23.325,75 0,925412 12,6 76.696 0,81 13 France Leaders 0,622 1625,2 7.373,98 0,977648 11,1 64.390 ⁱ 0,68 14 Japan Leaders 0,617 1995,9 8.513,01 0,992131 10,8 81.540 0,75 16 Austraia Leaders 0,616 1707,5 10.133,86 1 13 90.306 0,89 17 Belgium Leaders 0,604 1558,3 7.966,69 0,979597 11,3 73.318 ^j 0,73 18 Israel Leaders 0,597 1765,5 6.558,72 0,965835 12,5 66.181 ^j 0,76 19 New Zealand Leaders 0,596 1620,8 9.084,22 0,998679 12,5 80.882 ^j 0,82 20 Malta Leaders 0,561 1789,7 6.664,66 0,96745 12,5 69.550 0,77	11	Finland	Leaders	0,633	1452,9	15.509,73	0,968154	10,3	87.289	0,75		
13 France Leaders 0,622 1625,2 7.373,98 0,977648 11,1 64.390 ¹ 0,68 14 Japan Leaders 0,619 1767,7 7.835,60 0,983771 11,5 63.362 ¹ 0,7 15 Austria Leaders 0,617 1995,9 8.513,01 0,992131 10,8 81.540 0,75 16 Australia Leaders 0,616 1707,5 10.133,86 1 13 90.306 0,89 17 Belgium Leaders 0,597 1765,5 6.558,72 0,965835 12,5 66.181 ¹ 0,73 18 Israel Leaders 0,597 1765,5 6.558,72 0,965835 12,5 80.882 ¹ 0,82 20 Malta Leaders 0,592 1620,8 9.084,22 0,998679 12,5 80.882 ¹ 0,57 21 Iccland Leaders 0,557 1789,7 6.664,66 0,96745 12,5 69.550 0,77 <	12	Norway	Leaders	0,626	1294,9	23.325,75	0,925412	12,6	76.696	0,81		
14 Japan Leaders 0,619 1767,7 7.835,60 0,983771 11,5 63.362 ¹ 0,7 15 Austria Leaders 0,617 1995,9 8.513,01 0,992131 10,8 81.540 0,75 16 Australia Leaders 0,616 1707,5 10.133,86 1 13 90.306 0,89 17 Belgium Leaders 0,604 1558,3 7.966,69 0,979597 11,3 73.318 ¹ 0,73 18 Israel Leaders 0,596 1620,8 9.084,22 0.998679 12,5 80.882 ¹ 0,82 20 Malta Leaders 0,582 1639,5 54.799,17 1 10,6 81,2c ¹ 0,4 22 Estonia Leaders 0,575 1816,1 4.892,50 0.936282 11,4 46.039 0,61 24 Russian Federation Leaders 0,555 1407,2 6.284,79 0,917822 12,3 66.017 0,77	13	France	Leaders	0,622	1625,2	7.373,98	0,977648	11,1	64.390 ^j	0,68		
15 Austria Leaders 0,617 1995,9 8.513,01 0,992131 10,8 81.540 0,75 16 Australia Leaders 0,616 1707,5 10.133,86 1 13 90.306 0,89 17 Belgium Leaders 0,604 1558,3 7.966,69 0,979597 11,3 73.318 ¹ 0,73 18 Israel Leaders 0,597 1765,5 6.558,72 0,968335 12,5 66.181 ¹ 0,76 19 New Zealand Leaders 0,596 1620,8 9.084,22 0,998679 12,5 80.882 ¹ 0,82 20 Malta Leaders 0,582 1639,5 54.799,17 1 10,6 81,26 ¹ 0,4 21 Iceland Leaders 0,575 1816,1 4.892,50 0,936282 11,4 46.039 0,61 22 Estonia Leaders 0,557 1846,7 6.539,21 0,965534 12 78.6533 0,77 23 Kazakhstan Leaders 0,557 1407,2 6.284,79	14	Japan	Leaders	0,619	1767,7	7.835,60	0,983771	11,5	63.362 ^j	0,7		
16 Australia Leaders 0,616 1707,5 10.133,86 1 13 90.306 0,89 17 Belgium Leaders 0,604 1558,3 7.966,69 0,979597 11,3 73.318 ¹ 0,73 18 Israel Leaders 0,597 1765,5 6.558,72 0,965835 12,5 66.181 ¹ 0,76 19 New Zealand Leaders 0,596 1620,8 9.084,22 0,998679 12,5 80.882 ¹ 0,82 20 Malta Leaders 0,589 1826,9 4.735,77 0,932999 10,3 46.973 0,57 21 Iceland Leaders 0,576 1789,7 6.664,66 0,96745 12,5 69.550 0,77 23 Kazakhstan Leaders 0,557 1816,1 4.892,50 0,936282 11,4 46.039 0,61 24 Russian Federation Leaders 0,557 1407,2 6.284,79 0,917822 12,3 66.017j 0,75 25 Greece Leaders 0,557 1407,2 6.2	15	Austria	Leaders	0,617	1995,9	8.513,01	0,992131	10,8	81.540	0,75		
17 Belgium Leaders 0,604 1558,3 7.966,69 0,979597 11,3 73.318 ⁱ 0,73 18 Israel Leaders 0,597 1765,5 6.558,72 0,965835 12,5 66.181 ⁱ 0,76 19 New Zealand Leaders 0,596 1620,8 9.084,22 0,998679 12,5 80.882 ⁱ 0,82 20 Malta Leaders 0,589 1826,9 4.735,77 0,932999 10,3 46.973 0,57 21 Iceland Leaders 0,576 1789,7 6.664,66 0,96745 12,5 69.550 0,77 23 Kazakhstan Leaders 0,575 1816,1 4.892,50 0.936282 11,4 46.039 0,61 24 Russian Federation Leaders 0,557 1816,1 4.892,50 0,93057 10,3 113.871j 0,87 25 Greece Leaders 0,557 1407,2 6.284,79 0,917822 12,3 66.017j 0,71 26 Czech Republic Leaders 0,556 1494,4	16	Australia	Leaders	0,616	1707,5	10.133,86	1	13	90.306	0,89		
18 Israel Leaders 0,597 1765,5 6.558,72 0,965835 12,5 66.181 ¹ 0,76 19 New Zealand Leaders 0,596 1620,8 9.084,22 0,998679 12,5 80.882 ¹ 0,82 20 Malta Leaders 0,589 1826,9 4.735,77 0,932999 10,3 46.973 0,57 21 Iceland Leaders 0,576 1789,7 6.664,66 0,96745 12,5 69.550 0,77 23 Kazakhstan Leaders 0,557 1816,1 4.892,50 0,936282 11,4 46.039 0,61 24 Russian Federation Leaders 0,557 1816,1 4.892,50 0,936282 11,4 46.039 0,61 24 Russian Federation Leaders 0,557 1407,2 6.284,79 0,917822 12,3 66.017 0,75 25 Greece Leaders 0,556 1494,4 6.833,17 0,948577 11,9 82.926 j </td <td>17</td> <td>Belgium</td> <td>Leaders</td> <td>0,604</td> <td>1558,3</td> <td>7.966,69</td> <td>0,979597</td> <td>11,3</td> <td>73.318^j</td> <td>0,73</td>	17	Belgium	Leaders	0,604	1558,3	7.966,69	0,979597	11,3	73.318 ^j	0,73		
19 New Zealand Leaders 0,596 1620,8 9.084,22 0,998679 12,5 80.882 ¹ 0,82 20 Malta Leaders 0,589 1826,9 4.735,77 0,932999 10,3 46.973 0,57 21 Iceland Leaders 0,582 1639,5 54.799,17 1 10,6 81,26 ¹ 0,4 22 Estonia Leaders 0,575 1816,1 4.892,50 0,936282 11,4 46.039 0,61 24 Russian Federation Leaders 0,563 1849,7 6.539,21 0,965534 12 78.653j 0,79 25 Greece Leaders 0,557 1407,2 6.284,79 0,917822 12,3 66.017j 0,75 26 Czech Republic Leaders 0,556 1494,4 6.833,17 0,948577 11,9 82.926j 0,88 28 Hong Kong SAR, China Leaders 0,546 1761,5 5.407,29 0,94637 13,1 61n	18	Israel	Leaders	0,597	1765,5	6.558,72	0,965835	12,5	66.181 ^j	0,76		
20 Malta Leaders 0,589 1826,9 4.735,77 0,932999 10,3 46.973 0,57 21 Iceland Leaders 0,582 1639,5 54.799,17 1 10,6 81,26 ¹ 0,4 22 Estonia Leaders 0,576 1789,7 6.664,66 0,96745 12,5 69.550 0,77 23 Kazakhstan Leaders 0,575 1816,1 4.892,50 0,936282 11,4 46.039 0,61 24 Russian Federation Leaders 0,563 1849,7 6.539,21 0,965534 12 78.653j 0,79 25 Greece Leaders 0,557 1407,2 6.284,79 0,917822 12,3 66.017j 0,75 26 Czech Republic Leaders 0,556 1494,4 6.833,17 0,948577 11,9 82.926j 0,88 28 Hong Kong SAR, China Leaders 0,536 1585,4 4.511,97 0,94637 13,1 61n	19	New Zealand	Leaders	0,596	1620,8	9.084,22	0,998679	12,5	80.882 ^j	0,82		
21 Iceland Leaders 0,582 1639,5 54.799,17 1 10,6 81,26 ¹ 0,4 22 Estonia Leaders 0,576 1789,7 6.664,66 0,96745 12,5 69.550 0,77 23 Kazakhstan Leaders 0,575 1816,1 4.892,50 0,936282 11,4 46.039 0,61 24 Russian Federation Leaders 0,563 1849,7 6.539,21 0,965534 12 78.653j 0,79 25 Greece Leaders 0,557 1407,2 6.284,79 0,917822 12,3 66.017j 0,75 26 Czech Republic Leaders 0,556 1494,4 6.833,17 0,948577 11,9 82.926j 0,8 28 Hong Kong SAR, China Leaders 0,546 1761,5 5.407,29 0,94637 13,1 61n 0,48 30 Malaysia Leaders 0,536 1585,4 4.511,97 0,928118 10 26.074 0,46 31 Lithuania Leaders 0,531 1582,6	20	Malta	Leaders	0,589	1826,9	4.735,77	0,932999	10,3	46.973	0,57		
22EstoniaLeaders0,5761789,76.664,660,9674512,569,5500,7723KazakhstanLeaders0,5751816,14.892,500,93628211,446.0390,6124Russian FederationLeaders0,5631849,76.539,210,9655341278.653j0,7925GreeceLeaders0,5621602,35.029,000,93905710,3113.871j0,8726Czech RepublicLeaders0,5571407,26.284,790,91782212,366.017j0,7527SloveniaLeaders0,5561494,46.833,170,94857711,982.926j0,828Hong Kong SAR, ChinaLeaders0,5461761,55.407,290,9463713,161n0,4830MalaysiaLeaders0,5361585,44.511,970,9281181026.0740,4631LithuaniaLeaders0,5311582,63.663,670,90701712,468.531j0,7133LatviaLeaders0,5311450,33.472,540,86920511,567.039j0,7134Slovak RepublicLeaders0,5261381,95.202,470,8920312,252.923j0,6835PolandLeaders0,5221663,83.937,650.9143911.871.15810.75	21	Iceland	Leaders	0,582	1639,5	54.799,17	1	10,6	81,26 ¹	0,4		
23KazakhstanLeaders0,5751816,14.892,500,93628211,446.0390,6124Russian FederationLeaders0,5631849,76.539,210,9655341278.653j0,7925GreeceLeaders0,5621602,35.029,000,93905710,3113.871j0,8726Czech RepublicLeaders0,5571407,26.284,790,91782212,366.017j0,7527SloveniaLeaders0,5561494,46.833,170,94857711,982.926j0,828Hong Kong SAR, ChinaLeaders0,5492879,15.933,630,95573611,268.4750,7129United KingdomLeaders0,5361585,44.511,970,9281181026.0740,4630MalaysiaLeaders0,5351582,63.663,670,90701712,468.531j0,7632SpainLeaders0,5311450,33.472,540,86920511,567.039j0,7133LatviaLeaders0,5261381,95.202,470,8920312,252.923j0,6835PolandLeaders0,5221663,83.937,650.9143911,871.15810.75	22	Estonia	Leaders	0,576	1789,7	6.664,66	0,96745	12,5	69.550	0,77		
24Russian FederationLeaders0,5631849,76.539,210,9655341278.653j0,7925GreeceLeaders0,5621602,35.029,000,93905710,3113.871j0,8726Czech RepublicLeaders0,5571407,26.284,790,91782212,366.017j0,7527SloveniaLeaders0,5561494,46.833,170,94857711,982.926j0,828Hong Kong SAR, ChinaLeaders0,5461761,55.407,290,9463713,161n0,4830MalaysiaLeaders0,5361585,44.511,970,9281181026.0740,4631LithuaniaLeaders0,5311497,25.401,050,9255579,689.6700,7333LatviaLeaders0,5311450,33.472,540,86920511,567.039j0,7134Slovak RepublicLeaders0,5261381,95.202,470,8920312,252.923j0,6835PolandLeaders0,5261381,95.202,470,8920311,871.15810.75	23	Kazakhstan	Leaders	0,575	1816,1	4.892,50	0,936282	11,4	46.039	0,61		
25GreeceLeaders0,5621602,35.029,000,93905710,3113.871j0,8726Czech RepublicLeaders0,5571407,26.284,790,91782212,366.017j0,7527SloveniaLeaders0,5561494,46.833,170,94857711,982.926j0,828Hong Kong SAR, ChinaLeaders0,5461761,55.407,290,9463713,161n0,4830MalaysiaLeaders0,5361585,44.511,970,9281181026.0740,4631LithuaniaLeaders0,5351582,63.663,670,90701712,468.531j0,7632SpainLeaders0,5311450,33.472,540,86920511,567.039j0,7134Slovak RepublicLeaders0,5261381,95.202,470,8920312,252.923j0,6835PolandLeaders0,5221663,83.937,650.9143911.871.1580.75	24	Russian Federation	Leaders	0,563	1849,7	6.539,21	0,965534	12	78.653j	0,79		
26Czech RepublicLeaders0,5571407,26.284,790,91782212,366.017j0,7527SloveniaLeaders0,5561494,46.833,170,94857711,982.926j0,828Hong Kong SAR, ChinaLeaders0,5492879,15.933,630,95573611,268.4750,7129United KingdomLeaders0,5461761,55.407,290,9463713,161n0,4830MalaysiaLeaders0,5361585,44.511,970,9281181026.0740,4631LithuaniaLeaders0,5351582,63.663,670,90701712,468.531j0,7632SpainLeaders0,5311450,33.472,540,86920511,567.039j0,7133LatviaLeaders0,5261381,95.202,470,8920312,252.923j0,6835PolandLeaders0,5221663,83.937,650.9143911,871,1580,75	25	Greece	Leaders	0,562	1602,3	5.029,00	0,939057	10,3	113.871j	0,87		
27SloveniaLeaders0,5561494,46.833,170,94857711,982.926j0,828Hong Kong SAR, ChinaLeaders0,5492879,15.933,630,95573611,268.4750,7129United KingdomLeaders0,5461761,55.407,290,9463713,161n0,4830MalaysiaLeaders0,5361585,44.511,970,9281181026.0740,4631LithuaniaLeaders0,5351582,63.663,670,90701712,468.531j0,7632SpainLeaders0,5311450,33.472,540,86920511,567.039j0,7133LatviaLeaders0,5261381,95.202,470,8920312,252.923j0,6835PolandLeaders0,5221663,83.937,650.9143911,871.1580.75	26	Czech Republic	Leaders	0,557	1407,2	6.284,79	0,917822	12,3	66.017j	0,75		
28 Hong Kong SAR, China Leaders 0,549 2879,1 5.933,63 0,955736 11,2 68.475 0,71 29 United Kingdom Leaders 0,546 1761,5 5.407,29 0,94637 13,1 61n 0,48 30 Malaysia Leaders 0,536 1585,4 4.511,97 0,928118 10 26.074 0,46 31 Lithuania Leaders 0,535 1582,6 3.663,67 0,907017 12,4 68.531j 0,76 32 Spain Leaders 0,531 1497,2 5.401,05 0,925557 9,6 89.670 0,73 33 Latvia Leaders 0,531 1450,3 3.472,54 0,869205 11,5 67.039j 0,71 34 Slovak Republic Leaders 0,526 1381,9 5.202,47 0,89203 12,2 52.923j 0,68 35 Poland Leaders 0,522 1663,8 3.937,65 0.91439 11,8 71,158 0.75	27	Slovenia	Leaders	0,556	1494,4	6.833,17	0,948577	11,9	82.926j	0,8		
29 United Kingdom Leaders 0,546 1761,5 5.407,29 0,94637 13,1 61n 0,48 30 Malaysia Leaders 0,536 1585,4 4.511,97 0,928118 10 26.074 0,46 31 Lithuania Leaders 0,535 1582,6 3.663,67 0,907017 12,4 68.531j 0,76 32 Spain Leaders 0,534 1497,2 5.401,05 0,925557 9,6 89.670 0,73 33 Latvia Leaders 0,531 1450,3 3.472,54 0,869205 11,5 67.039j 0,71 34 Slovak Republic Leaders 0,526 1381,9 5.202,47 0,89203 12,2 52.923j 0,68 35 Poland Leaders 0,522 1663.8 3.937.65 0.91439 11.8 71.158 0.75	28	Hong Kong SAR, China	Leaders	0,549	2879,1	5.933,63	0,955736	11,2	68.475	0,71		
30 Malaysia Leaders 0,536 1585,4 4.511,97 0,928118 10 26.074 0,46 31 Lithuania Leaders 0,535 1582,6 3.663,67 0,907017 12,4 68.531j 0,76 32 Spain Leaders 0,531 1497,2 5.401,05 0,925557 9,6 89.670 0,73 33 Latvia Leaders 0,531 1450,3 3.472,54 0,869205 11,5 67.039j 0,71 34 Slovak Republic Leaders 0,526 1381,9 5.202,47 0,89203 12,2 52.923j 0,68 35 Poland Leaders 0,522 1663.8 3.937.65 0.91439 11.8 71.158 0.75	29	United Kingdom	Leaders	0,546	1761,5	5.407,29	0,94637	13,1	61n	0,48		
31 Lithuania Leaders 0,535 1582,6 3.663,67 0,907017 12,4 68.531j 0,76 32 Spain Leaders 0,534 1497,2 5.401,05 0,925557 9,6 89.670 0,73 33 Latvia Leaders 0,531 1450,3 3.472,54 0,869205 11,5 67.039j 0,71 34 Slovak Republic Leaders 0,526 1381,9 5.202,47 0,89203 12,2 52.923j 0,68 35 Poland Leaders 0,522 1663.8 3.937.65 0.91439 11.8 71.158 0.75	30	Malaysia	Leaders	0,536	1585,4	4.511,97	0,928118	10	26.074	0,46		
32 Spain Leaders 0,534 1497,2 5.401,05 0,925557 9,6 89.670 0,73 33 Latvia Leaders 0,531 1450,3 3.472,54 0,869205 11,5 67.039j 0,71 34 Slovak Republic Leaders 0,526 1381,9 5.202,47 0,89203 12,2 52.923j 0,68 35 Poland Leaders 0,522 1663.8 3.937.65 0.91439 11.8 71.158 0.75	31	Lithuania	Leaders	0,535	1582,6	3.663,67	0,907017	12,4	68.531j	0,76		
33 Latvia Leaders 0,531 1450,3 3.472,54 0,869205 11,5 67.039j 0,71 34 Slovak Republic Leaders 0,526 1381,9 5.202,47 0,89203 12,2 52.923j 0,68 35 Poland Leaders 0,522 1663.8 3.937.65 0.91439 11.8 71.158 0.75	32	Spain	Leaders	0,534	1497,2	5.401,05	0,925557	, 9,6	89.670	0,73		
34 Slovak Republic Leaders 0,526 1381,9 5.202,47 0,89203 12,2 52.923j 0,68 35 Poland Leaders 0,522 1663.8 3.937.65 0.91439 11.8 71.158 0.75	33	Latvia	Leaders	0,531	, 1450.3	3.472.54	0,869205	11.5	67.039i	0.71		
35 Poland Leaders 0.522 1663.8 3.937.65 0.91439 11.8 71.158 0.75	34	Slovak Republic	Leaders	0,526	1381.9	5.202.47	0,89203	12.2	52.923i	0.68		
	35	Poland	Leaders	0.522	1663.8	3,937.65	0.91439	11 8	71,158	0.75		

Incekara, Sengun, Guz

Belarus Leaders 0.221 172.6.8 3.648.22 0.006055 11.2 8.7.940 0.833 Brungry Leaders 0.516 1501.3 3.890.29 0.839.44 11.6 50.66 0.63 Bit Hungry Leaders 0.506 1705 3.93.35 0.89057 9.8 8.2917 0.71 Ganda Leaders 0.506 1705 3.754.27 0.857886 11 66.544 0.67 Localers Outerital leaders 0.499 1486.5 3.878.91 0.889106 9.8 8.577 0.73 43 Ukraine Poterital leaders 0.492 125.54 4.800.23 0.893357 11.3 8.2305 0.77 44<										
37 Iungary Leaders 0,56 150,3 3.890,29 0,893,49 11,6 50.662 0,64 38 Italy Leaders 0,56 1751,7 51.51,31 0,41634 10,1 63.0091 0,71 40 Canada Leaders 0,506 1706 3.075,17 0.898056 11 6 0.071 41 Croatia Potential leaders 0,409 148,2 3.875,27 0.839616 11.8 8.307 0.7334 0.771 43 Ditaria Potential leaders 0,491 1252,4 4.803,71 0.917126 10.6 7.334 0.771 44 Buigaria Potential leaders 0,491 1252,4 4.803,71 0.917126 10.6 0.7334 0.773 45 Buhrain Potential leaders 0,492 1252,4 4.803,71 0.91111,10 0.703 0.7334 0.7213 0.7334 0.7213 46 Catria Potential leaders 0,472 1252,4 0	36	Belarus	Leaders	0,521	1726,8	3.648,32	0,906695	12	87.940	0,83
38malyLaeders0,5071751.75.159.180,4013410,116.3.0970,8339ArgentinaLeaders0,50612053.09.330.800579.88.2.170.7.141CroatiaPotential leaders0,4991.384.73.754.270.8598861.116.9.54.40.7.742ChilePotential leaders0,4991.485.93.875.910.8950169.88.8.5770.7.743UkrainePotential leaders0,4921.524.44.033.710.9121551.08.2.090.7.744BulgariaPotential leaders0,4921.524.44.033.710.9121551.08.7.370.4.845CyprusPotential leaders0,4921.215.98.874.70.9121551.18.7.120.7.745Saud ArabiaPotential leaders0,471.767.215.470,9919.11.7.2190.3.746CyprusPotential leaders0,4611.678.41.555.60.8430778.43.5.290.5.551Burne DanzsahnPotential leaders0,4111.774.41.555.60.843778.43.5.290.5553PotragiaPotential leaders0,4311.572.44.650.78.43.5.290.5554KuwaiPotential leaders0,4311.572.41.551.50.843778.43.5.290.5155Cosis RicaPotential leaders0,4422.56	37	Hungary	Leaders	0,516	1501,3	3.890,29	0,89349	11,6	50.862	0,64
39AggentinaLeaders0,5617063,093,350,890579,88,217'0,7140CaradaLeaders0,5612551551,340,91741360.54'0,741ContiaPotential leader0,491346,93,574,210,8286169,888.5770,7342UkrainePotential leader0,491265,43,602,230,9053711,382.305'0,7743BulgariaPotential leader0,492125,544,637,110,911,1510,60,1010,60344BulgariaPotential leaders0,4921221,93,594,790,81210111,660,1010,60445Saudi ArabiaPotential leaders0,4781891,28,747,20,923058,26,567'0,5546QatarPotential leaders0,4611762,91,442,20,923058,26,567'0,5551Brunei DarassalaPotential leaders0,4611762,41,565,60,843778,43,5200,61252Cost RPotential leaders0,4421,545,54,685,050,843768,43,5220,51253Brunei DarassalaPotential leaders0,4422451,61,410,5317,44,3120,41254KawaitPotential leaders0,4421263,50,843761,033,3220,61255OmanPotential leaders0,4421264,50,77735<	38	Italy	Leaders	0,507	1751,7	5.159,18	0,941634	10,1	63.095 ^j	0,63
40 Canada Leaders 0,506 1265 15.519,34 0,91674 1.3 60" 0,48 41 Croatia Potential leaders 0,499 1384,7 3.755,27 0,58586 11 6.9544 0,77 43 Ukraine Potential leaders 0,490 1656,4 3.600,23 0,905357 11,3 8.23051 0,77 44 Bulgaria Potential leaders 0,491 1525,4 4.639,71 0,912165 10,6 7.334 0,77 45 Bahrain Potential leaders 0,491 1231,9 3.547,7 0,5121 1,1 6.10 0,653 46 Cyrun Potential leaders 0,471 173,7 0,5121 1,1 1,1 1,213 0,337 0,337 0,337 473 Saudi Arabia Potential leaders 0,471 167,4 167,473 0,423 0,353 0,43767 848 0,3644 0,423 574 Ronalia Potential leaders 0,471 <	39	Argentina	Leaders	0,506	1706	3.093,35	0,890057	9,8	82.917 ^j	0,71
1 Craatia Petential leaders 0,499 1384,7 3.754,27 0,898616 9,8 88,577 0,73 42 Chile Petential leaders 0,499 1486,9 3.878,91 0,898616 9,8 88,577 0,73 43 Ukraine Petential leaders 0.492 1525,4 4.685,71 0.915375 11.6 8.23,09 0.77 44 Balgrain Potential leaders 0.492 1252,4 4.68,12 1 9,4 37.375 0.481 45 Sanit Arabia Potential leaders 0.492 123,19 359,73 0,612101 1.61 6.0101 6.69 46 Cyprus Potential leaders 0.47 176,2 154,70 9.032305 0.81210 1.01 7.219 0.337 470 Potential leaders 0.47 176,2 15470,9 0.932305 0.88 0.85 0.85 580 Potential leaders 0.455 156,9 0.443,0 <th1.3< th=""> <th1.3< th=""> 0.432</th1.3<></th1.3<>	40	Canada	Leaders	0,506	1265	15.519,34	0,91674	13	60 ^m	0,48
42ChilePotential leaders0,4991486.93.878,910,8896169,888.5770,7343UkrainePotential leaders0,4921525,44.639,710,90335711.38.2.30510,7744BulgariaPotential leaders0,4921525,44.639,710,91716510.673.9340,7745BuharinPotential leaders0,4821231,93.594,790,81210111.66.01010,6947Saudi ArabiaPotential leaders0,471767,215470,9919.153.2870,63148OatarPotential leaders0,471767,51.6465,050,9230058.26.56070,55350PortugalPotential leaders0,4611545,54.685,050,9230058.43.04240,42251Brunei DarusahanPotential leaders0,4511.675,41.954,550,8880428.83.04240,42352Costa RicaPotential leaders0,4311.678,41.954,550,8880428.83.0220,5330,5553Brunei DarusahanPotential leaders0,4321.626,32.498,750,8880428.83.12220,33354GrunaPotential leaders0,4321.563,32.498,550,9880431.683.5200,52455OrmanPotential leaders0,4321.563,32.498,510,955548.83.15220,23355 <t< td=""><td>41</td><td>Croatia</td><td>Potential leaders</td><td>0,499</td><td>1384,7</td><td>3.754,27</td><td>0,859886</td><td>11</td><td>69.544^j</td><td>0,7</td></t<>	41	Croatia	Potential leaders	0,499	1384,7	3.754,27	0,859886	11	69.544 ^j	0,7
44UkrainePotential leaders0.496155.643.600.230.90335711.382.3050.7744BulgariaPotential leaders0.492152.544.639.710.91716510.67.9340.0745BahrainPotential leaders0.492123.93.394.790.812101.66.01010.6947Saudi ArabiaPotential leaders0.478123.193.547.420.9948018.76.30660.5648QatarPotential leaders0.4781563.94.741.420.9948018.76.56.070.5350PortugalPotential leaders0.4761545.54.865.00.923058.26.56.070.5551Brunei DarussalanPotential leaders0.451157.41.954.50.4832078.43.0420.5152Costa RicaPotential leaders0.451157.41.954.50.4832078.43.0220.51353PhilippinesPotential leaders0.422.451.61.401.5517.22.7010.3354KuwaPotential leaders0.422.451.61.401.551.81.31.28.3220.33255OmanPotential leaders0.421.264.22.945.30.9484611.21.44.34.90.5355MaralPotential leaders0.421.264.22.945.30.9484611.244.34.90.5356GeorgiaPotential leaders<	42	Chile	Potential leaders	0,499	1486,9	3.878,91	0,889616	9,8	88.577	0,73
44BulgariaPotential leaders0,4921525,44.639,710,91716510,67.3.9340,7145BahrainPotential leaders0,4912055,618.2.16,6219,437.3750,48146CyprusPotential leaders0,472131,93.594,790.8.1210111,660.100,6948CatarPotential leaders0,4731362,1215.470,9919,117.2190,3749SerbiaPotential leaders0,4671565,94.444,220,923510.558.2870,6350PortugalPotential leaders0,4511569,94.444,220,92358,8453.6290,5151Brune DisussalaPotential leaders0,4511574,41.954,560,8437678,453.6290,5153PhilippinesPotential leaders0,4311189,2692,060,632888,935.7530,4454KuwaitPotential leaders0,4321261,214.910,5817,227.0270,3355OmariaPotential leaders0,4321269,32.499,550,844547,743.4190,4555GergiaPotential leaders0,4241269,32.499,530,78636310.853.2200,6256GrorpiaPotential leaders0,4241269,32.499,550,844547,743.3920,4657RomariaPotential leaders0,424 <td>43</td> <td>Ukraine</td> <td>Potential leaders</td> <td>0,496</td> <td>1656,4</td> <td>3.600,23</td> <td>0,905357</td> <td>11,3</td> <td>82.305^j</td> <td>0,77</td>	43	Ukraine	Potential leaders	0,496	1656,4	3.600,23	0,905357	11,3	82.305 ^j	0,77
45BahrainPotential leaders0,4912058,618.216,6219,49,73750,48146CyprusPotential leaders0,482131,93.594,790.81210111,660.1010,6947Saudi ArabiaPotential leaders0,4781891,28.741,420.9948018.715,1117.2190,3749SerbiaPotential leaders0,4681569,94.444,220,923510,558.2670,63350PortugalPotential leaders0,4631150,99.703,550.8880428.830.8440,4251Brunel DarussalanPotential leaders0,4331189,2692,060,632888,935.7530,45353PhilippinesPotential leaders0,4341189,2692,060,632888,931.9220,9354KuwaitPotential leaders0,4371510,22.459,750.84461412,143.4190,6355OmaniaPotential leaders0,4371502,22.459,750.8446747,748.2790,6355GeorgiaPotential leaders0,4231343,31.870,200,77835310,943.3920,6456GraniaPotential leaders0,4231343,31.870,200,77835510,943.3920,6456GraniaPotential leaders0,4231343,31.870,200,77835510,943.3920,6457Marcinia FNR	44	Bulgaria	Potential leaders	0,492	1525,4	4.639,71	0,917165	10,6	73.934	0,7
46 Cyprus Potential leaders 0,482 1231,9 3.594,79 0.812101 11.6 6.0101 0.69 47 Saudi Arabia Potential leaders 0,47 1891,2 8.741,42 0.994801 8.7 6.3066 0.56 48 Qatar Potential leaders 0,467 1565,9 4.442,2 0.92305 8.2 6.507 ¹ 0.515 50 Portugal Potential leaders 0.468 1569,9 4.442,2 0.92305 8.2 6.507 ¹ 0.55 51 Brunei Darussalan Potential leaders 0.461 1574,4 1.954,56 0.843767 8.4 3.542,9 0.553 53 Philippines Potential leaders 0.442 2.545,1 1.491,91,8 1.7,2 2.70271 0.33 54 Kwait Potential leaders 0.437 1510,2 2.493,75 0.843461 12,1 43,419 0.633 55 Oman Potential leaders 0.422 1266,3 2.493,30 0.786363	45	Bahrain	Potential leaders	0,491	2058,6	18.216,62	1	9,4	37.375	0,48
47Saudi ArabiaPotential leaders0,4781891,28.741,420.9948018.763.0660,5648QatarPotential leaders0,471767,215470.9919,117.2190,3749SerbiaPotential leaders0,4681569,94.444,220,923510.558.2870,6350PortugalPotential leaders0,4581170,99,703,550.8880428.830.8440,4252Costa RicaPotential leaders0,431170,99,703,550.8437678.453.6290,51354KuwaitPotential leaders0,441189,2692,060.632888.935.7530,45554KuwaitPotential leaders0,431510,22.459,750.849611.2143.4190,63255OmanPotential leaders0,421269,32.494,530,78636310.853.2200,62155RomaniaPotential leaders0,4241299,62.092,540,77740311.225.4830,51256ArreniaPotential leaders0,4231343,31.870,200,77835510.944.8090,54256ArreniaPotential leaders0,4141165,73.755,500.789779,33.95940,4457MaranPotential leaders0,4141163,73.555,500.789779,33.95940,4456South AfricaPotential leaders0,	46	Cyprus	Potential leaders	0,482	1231,9	3.594,79	0,812101	11,6	60.101	0,69
48QatarPotential leaders0,471767,215.470,9919,117.2190,3749SerbiaPotential leaders0,4681569,94.444,220.9230510,558.2870,6350PortugalPotential leaders0,4711545,54.685,050,9230058,265.6070,52551Brunei DarussalanPotential leaders0,4711167,41.954,560,8437678,453.6290,5153PhilippinesPotential leaders0,431189,2692,060,632888,935.7530,3354KuwaitPotential leaders0,431170,22.459,750,84467412,143.4190,3355GeorgiaPotential leaders0,431269,32.494,530.7665311,22.549,30,5155RomaniaPotential leaders0,42129,62.092,540,7740311,22.5430,5156GeorgiaPotential leaders0,42129,62.092,540,7740311,22.5430,5156AzerbaijanPotential leaders0,42129,62.092,540,7740311,22.5430,5157MareiaPotential leaders0,41105,73.556,500,789779,33.556,90,520,5256JordanPotential leaders0,41116,73.556,500,789779,33.55,90,520,5256JordanPotential	47	Saudi Arabia	Potential leaders	0,478	1891,2	8.741,42	0,994801	8,7	63.066	0,56
49SerbiaPotential leaders0.4681569.94.44,220.9230510,558.2870.6350PortugalPotential leaders0.4671545,54.685,050.9230058,265.6070.5551Brunet DarussamPotential leaders0.4511709.99.703,550.8880428,830.8440.42152Costa RicaPotential leaders0.4411189.2692,060.632288,935.7310.45354KuwaitPotential leaders0.4422451,614.910,5817.227.02710.33155OmanPotential leaders0.4301703,25.981,450.956545831.9220.66256GeorgiaPotential leaders0.4361269,32.494,530.78648311.0853.2200.66157RomaniaPotential leaders0.4261480,42.529,300.8448417.149.2790.65356BrazilPotential leaders0.4221606,12.470,770.8673987.348.8570.43356ArmeniaPotential leaders0.4121163,13.556,50.7898779.39.594,30.66156IrrakPotential leaders0.4121163,12.556,500.7898779.39.594,30.66156JordanPotential leaders0.4121163,12.556,500.7898779.39.594,30.66156TrakeyPotential leaders<	48	Qatar	Potential leaders	0,47	1767,2	15.470,99	1	9,1	17.219	0,37
50PortugalPotential leaders0,4671545,54.685,050,9230058,265.6070,5551Brunei DarussalanPotential leaders0,4581170,99.703,550.8880428,430.8440,4252Costa RicaPotential leaders0,4431189,2692,060.632888,935.7530,81553PhilippinesPotential leaders0,4431189,2692,060.632888,931.9220,33155OmanPotential leaders0,4421251,614.910,58112,143.4190,63356GeorgiaPotential leaders0,4361269,32.499,750,84946112,143.4190,63157RomaniaPotential leaders0,4261480,42.529,300.8448747,749.2790,62158BrazilPotential leaders0,4221269,32.092,540,7735510,944.3090,58350AzerbaijanPotential leaders0,4221269,32.092,540,773551,944.8970,43959AzerbaijanPotential leaders0,4221266,12.470,770,8673987,348.8570,43960ArmeniaPotential leaders0,4141163,73.556,00,770947,543.3920,54461ThallandPotential leaders0,4141163,73.556,00,783439,99,3750,340,55464Maceonia,FY	49	Serbia	Potential leaders	0,468	1569,9	4.444,22	0,9235	10,5	58.287	0,63
51 Brunei Darussalam Potential leaders 0,458 1170,9 9,703,55 0,888042 8,8 30.844 0,421 52 Costa Rica Potential leaders 0,431 1189,2 692,06 0,63288 8,9 35,733 0,451 54 Kuwait Potential leaders 0,431 1189,2 692,06 0,63288 8,9 35,733 0,453 55 Oman Potential leaders 0,439 170,2 2,459,75 0,849646 12,1 43,419 0,662 56 Georgia Potential leaders 0,426 1480,4 2,529,30 0,84874 7,7 49,279 0,453 57 Romania Potential leaders 0,422 1480,4 2,529,30 0,84874 7,7 49,279 0,454 58 Brazil Potential leaders 0,422 1606,1 2,707,7 0,807308 7,3 48,857 0,43 50 Arrenia Potential leaders 0,412 1163,7 3,55,50 0,778094 <td>50</td> <td>Portugal</td> <td>Potential leaders</td> <td>0,467</td> <td>1545,5</td> <td>4.685,05</td> <td>0,923005</td> <td>8,2</td> <td>65.607^j</td> <td>0,55</td>	50	Portugal	Potential leaders	0,467	1545,5	4.685,05	0,923005	8,2	65.607 ^j	0,55
52 Costa Rica Potential leaders 0,451 1678,4 1.954,56 0,843767 8,4 53.629 0,51 53 Philippines Potential leaders 0,43 1189,2 692,06 0,63288 8,9 35.753 0,43 54 Kuwait Potential leaders 0,43 1703,2 5.981,45 0,956545 8 31.922 0,33 55 Oman Potential leaders 0,43 1510,2 2.459,75 0,84961 12,1 43.419 0,63 57 Romania Potential leaders 0,426 1480,4 2.529,30 0,84863 10,9 2.43,30 0,518 58 Brazil Potential leaders 0,422 1480,4 2.092,54 0,777403 11,2 2.54,83 0,518 60 Arrenaia Potential leaders 0,422 1606,1 2.470,77 0,867,398 7,3 48.857 0,433 61 Thaland Potential leaders 0,41 1163,7 3.556,50 0,789877	51	Brunei Darussalam	Potential leaders	0,458	1170,9	9.703,55	0,888042	8,8	30.844	0,42
53PhilippinesPotential leaders0,4431189,2692,060,632888,935,7530,4354KuwaitPotential leaders0,4422451,614.910,5817,227.0270,3355OmanPotential leaders0,4371510,22.459,750,84946112,143.4190,66357RomaniaPotential leaders0,4361269,32.494,530,78636310,853.200,6258BrazilPotential leaders0,4261480,42.529,300,848747,749.2790,51860ArmeniaPotential leaders0,421393,31.870,200,77835510,944.3090,5861ThailandPotential leaders0,421394,31.870,200,77835510,944.8690,41362ChinaPotential leaders0,4121666,12.470,770,8673987,348.8570,41363JordanPotential leaders0,4141163,73.556,500,7898779,33.95940,40464Macedonia, F/RPotential leaders0,4111110,12.514,800,7462619,358.1090,51267AlbaniaPotential leaders0,4021392,51.887,020,744331,6658.1090,55168MoldovaPotential leaders0,4011392,51.887,020,744331,650,00,27170VietnamPotential leaders<	52	Costa Rica	Potential leaders	0,451	1678,4	1.954,56	0,843767	8,4	53.629	0,51
54KuwaitPotential leaders0,4422451,614.910,5817,227.0270,3355OmanPotential leaders0,4391703,25.981,450.956545831.9220.3956GeorgiaPotential leaders0,4371510,22.459,750.84946112,143.4190,6357RomaniaPotential leaders0,4361269,32.494,530,7863310,853.2200,6458BrazilPotential leaders0,421299,62.092,540,7743311,22.54.830,5160ArmeniaPotential leaders0,421343,31.870,200,77835510,944.3090,5861ThaliandPotential leaders0,421066,13.762,080,8613987,948.8670,4362ChinaPotential leaders0,4121106,12.740,770,8673989,944.8690,5463JordanPotential leaders0,4121106,13.756,080,7893779,39.5940,5464Macedonia,FYRPotential leaders0,414113,73.556,500,7893779,39.5940,5465South AfricaPotential leaders0,414113,472.531,890,7462619,358.1090,55166HurkyPotential leaders0,4041399,51.887,020,7947310,645.9170,5567AlbaniaPotential leaders0,404	53	Philippines	Potential leaders	0,443	1189,2	692,06	0,63288	8,9	35.753j	0,45
55OmanPotential leaders0,4391703,25.981,450,956545831.9220,3956GeorgiaPotential leaders0,4371510,22.459,750,84946112,143.4190,6357RomaniaPotential leaders0,4361269,32.494,530,78636310,853.2200,6258BrazilPotential leaders0,4261480,42.529,300,8448747,749.2790,4559AzerbaijanPotential leaders0,4221299,62.092,540,77743511,22.54830,5160ArmeniaPotential leaders0,4221606,12.470,770,8673987,348.8570,42461ThallandPotential leaders0,4121166,13.762,080,770947,543.3920,42462ChinaPotential leaders0,4141163,73.55,500,7898779,33.59440,40463JordanPotential leaders0,4141103,73.55,500,7898779,33.59440,40464Macedonia,FYRPotential leaders0,4121110,12.744,840,7462517,686.30910,5565South AfricaPotential leaders0,4141134,72.531,890,7462469,358.1090,5566TurkeyPotential leaders0,4141134,72.531,890,7462469,358.1090,5567AlbaniaPotential lea	54	Kuwait	Potential leaders	0,442	2451,6	14.910,58	1	7,2	27.0271	0,33
56GeorgiaPotential leaders0,4371510,22.459,750,84946112,143.4190,6357RomaniaPotential leaders0,4361269,32.494,530,78636310,853.2200,62458BrazilPotential leaders0,4261480,42.529,300,8448747,749.27910,4559AzerbaijanPotential leaders0,4241299,62.092,540,7740311,22.54830,5160ArmeniaPotential leaders0,4231343,31.870,200,77835510,944.3090,5861ThailandPotential leaders0,4221606,12.470,770,8673987,348.8570,4362ChinaPotential leaders0,4191086,63.762,080,7700947,543.3920,4263JordanPotential leaders0,4141163,73.556,500,7898779,33.5594j0,4464Macedonia,FYRPotential leaders0,4141163,73.556,500,7898779,33.5594j0,4265South AfricaPotential leaders0,4121110,12.744,840,746217,68.309j0,5766MoldovaPotential leaders0,401139,51.887,020,7947310,645.917j0,5767AlbaniaPotential leaders0,401139,51.887,020,79447310,645.917j0,5768MoldovaPoten	55	Oman	Potential leaders	0,439	1703,2	5.981,45	0,956545	8	31.922	0,39
57RomaniaPotential leaders0,4361269,32.494,530,78636310,853.2200,62458BrazilPotential leaders0,4261480,42.529,300,8448747,749.279j0,4559AzerbaijanPotential leaders0,4241299,62.092,540,77403511,22.54830,5160ArmeniaPotential leaders0,4231343,31.870,200,77835510,944.3090,5861ThailandPotential leaders0,4221606,12.470,770,8673987,348.8570,4362ChinaPotential leaders0,4191086,63.762,080,770947,543.3920,4263JordanPotential leaders0,4141163,73.556,500,7898779,33.9594j0,4464Macedonia,FYRPotential leaders0,4141163,73.556,500,7289879,33.5594j0,4265South AfricaPotential leaders0,4141163,73.556,500,7289379,33.559,400,5766TurkeyPotential leaders0,4141103,72.531,890,7462619,35.81090,5767AlbaniaPotential leaders0,4041399,51.887,020,7947310,645.9170,5768MoldovaPotential leaders0,4041399,51.887,020,7443115,600,2770VietnamPotential	56	Georgia	Potential leaders	0,437	1510,2	2.459,75	0,849461	12,1	43.419	0,63
58 Brazil Potential leaders 0,426 1480,4 2.529,30 0,844874 7,7 49.279j 0,45 59 Azerbaijan Potential leaders 0,424 1299,6 2.092,54 0,777403 11,2 25.483 0,51 60 Armenia Potential leaders 0,423 1343,3 1.870,20 0,778355 10,9 44.309 0,58 61 Thailand Potential leaders 0,422 1606,1 2.470,77 0,867398 7,3 48.857 0,43 62 China Potential leaders 0,414 168,7 3.752,08 0,770094 7,5 43.392 0,42 63 Jordan Potential leaders 0,414 1163,7 3.556,50 0,789877 9,3 39.594j 0,42 64 Macedonia, FYR Potential leaders 0,412 1110,1 2.744,84 0,746251 7,6 86.309j 0,55 65 South Africa Potential leaders 0,401 139,5 1.887,02	57	Romania	Potential leaders	0,436	1269,3	2.494,53	0,786363	10,8	53.220	0,62
59AzerbaijanPotential leaders0,4241299,62.092,540,77740311,225.4830,5160ArmeniaPotential leaders0,4231343,31.870,200,77835510,944.3090,5861ThailandPotential leaders0,4221606,12.470,770,8673987,348.8570,4362ChinaPotential leaders0,4191086,63.762,080,770947,543.3920,4263JordanPotential leaders0,4141163,73.556,500,7898779,339.594j0,4964Macedonia, FYRPotential leaders0,4131722,34.325,520,9238639,919.375j0,4265South AfricaPotential leaders0,4121110,12.744,840,7462517,686.309j0,6266TurkeyPotential leaders0,4141134,72.531,890,7462469,358.1090,5768MoldovaPotential leaders0,4041399,51.887,020,79447310,645.917j0,5770VietnamPotential leaders0,4021369,61.305,580,7493157,52.83550,380,3371UruguyPotential leaders0,4011924,72.985,060,8864648,500,2772PanamaPotential leaders0,39211223.194,070,7654939,338.7390,4873LebanonP	58	Brazil	Potential leaders	0,426	1480,4	2.529,30	0,844874	7,7	49.279j	0,45
60ArmeniaPotential leaders0,4231343,31.870,200,77835510,944.3090,5861ThailandPotential leaders0,4221606,12.470,770,8673987,348.8570,4362ChinaPotential leaders0,4191086,63.762,080,770947,543.3920,4263JordanPotential leaders0,4161842,32.103,860,851199,944.8690,5464Macedonia, FYRPotential leaders0,4141163,73.556,500,7898779,33.9594j0,4265South AfricaPotential leaders0,4121110,12.744,840,7462517,686.309j0,6266TurkeyPotential leaders0,4121110,12.531,890,7462469,358.1090,5768MoldovaPotential leaders0,4071430,31.352,790,76899611,241.2130,5869Kyrgyz RepublicPotential leaders0,4041399,51.887,020,79447310,645.9170,5770VietnamPotential leaders0,4021369,61.305,580,7493157,52.8350,3371UruguayPotential leaders0,4011924,72.985,060,8864648,500,2772PanamaPotential leaders0,3941.997,52.038,000,8479839,33.8.7390,4873LebanonPotentia	59	Azerbaijan	Potential leaders	0,424	1299,6	2.092,54	0,777403	11,2	25.483	0,51
61ThailandPotential leaders0,4221606,12.470,770,8673987,348.8570,4362ChinaPotential leaders0,4191086,63.762,080,7700947,543.3920,4263JordanPotential leaders0,4161842,32.103,860,851199,944.8690,5464Macedonia, FYRPotential leaders0,4141163,73.556,500,7898779,33.95940,4965South AfricaPotential leaders0,4121110,12.744,840,7462517,686.3090,6266TurkeyPotential leaders0,4121113,72.531,890,7462469,358.1090,5768MoldovaPotential leaders0,4041393,51.352,790,76899611,241.2130,5869Kyrgyz RepublicPotential leaders0,4021369,61.305,580,79447310,645.9170,5770VietnamPotential leaders0,4011924,72.985,060,8864648,500,2771UruguayPotential leaders0,391897,52.038,000,8479839,338.7390,4873LebanonPotential leaders0,3911223.194,070,7654937,355.5890,4675MauritusPotential leaders0,381300,91.177,110,7197657,355.5890,4674ColombiaPotential lea	60	Armenia	Potential leaders	0,423	1343,3	1.870,20	0,778355	10,9	44.309	0,58
62ChinaPotential leaders0,4191086,63.762,080,7700947,54.3.3920,4263JordanPotential leaders0,4161842,32.103,860,851199,944.8690,5464Macedonia, FYRPotential leaders0,4141163,73.556,500,7898779,33.9.594j0,4965South AfricaPotential leaders0,4131722,34.325,520,9238639,919.375j0,4266TurkeyPotential leaders0,4121110,12.744,840,7462517,686.309j0,5767AlbaniaPotential leaders0,4141134,72.531,890,7462469,358.1090,5768MoldovaPotential leaders0,4041399,51.887,020,79447310,645.917j0,5770VietnamPotential leaders0,4041399,51.887,020,79447310,645.917j0,5771UruguayPotential leaders0,4011924,72.985,060,8864648,500,2772PanamaPotential leaders0,39211223.194,070,7654937,93.8.7390,4873LebanonPotential leaders0,3861300,91.177,110,7197657,355.5890,4675MauritusPotential leaders0,3851708,92.148,330,8532988,53.6.6670,4374ColombiaPotential l	61	Thailand	Potential leaders	0,422	1606,1	2.470,77	0,867398	7,3	48.857	0,43
63JordanPotential leaders0,4161842,32.103,860,851199,944.8690,5464Macedonia, FYRPotential leaders0,4141163,73.556,500,7898779,339.594j0,4965South AfricaPotential leaders0,4131722,34.325,520,9238639,919.375j0,4266TurkeyPotential leaders0,4121110,12.744,840,7462517,686.309j0,6267AlbaniaPotential leaders0,411134,72.531,890,7462469,358.1090,5768MoldovaPotential leaders0,4071430,31.352,790,7689611,241.2130,5869Kyrgyz RepublicPotential leaders0,4021369,61.305,580,79417310,645.917j0,5770VietnamPotential leaders0,4011924,72.985,060,8864648,500,2771UruguayPotential leaders0,3941897,52.038,000,8479839,338.7390,4873LebanonPotential leaders0,3861300,91.177,110,7197657,355.5890,4675MauritiusPotential leaders0,3851708,92.148,330,8532988,536.6670,4374ColombiaPotential leaders0,3651137,11.908,940,718549,368.5670,4375MauritiusPot	62	China	Potential leaders	0,419	1086,6	3.762,08	0,770094	7,5	43.392	0,42
64Macedonia, FYRPotential leaders0,4141163,73.556,500,7898779,339.594j0,4965South AfricaPotential leaders0,4131722,34.325,520,9238639,919.375j0,4266TurkeyPotential leaders0,4121110,12.744,840,7462517,686.309j0,5267AlbaniaPotential leaders0,4111134,72.531,890,7462469,358.1090,5768MoldovaPotential leaders0,4071430,31.352,790,76896611,241.2130,5869Kyrgyz RepublicPotential leaders0,4041399,51.887,020,79447310,645.917j0,5770VietnamPotential leaders0,4021369,61.305,580,7493157,528.8350,3371UruguayPotential leaders0,4011924,72.985,060,8864648,500,2772PanamaPotential leaders0,39211223.194,070,7654939,338.7390,4873LebanonPotential leaders0,3861300,91.177,110,7197657,355.5890,4475MauritiusPotential leaders0,3851708,92.148,330,8532988,536.6670,4374ColombiaPotential leaders0,3771018,72.056,960,6852648,529.940j0,4476MexicoPot	63	Jordan	Potential leaders	0,416	1842,3	2.103,86	0,85119	9,9	44.869	0,54
65South AfricaPotential leaders0,4131722,34.325,520,9238639,919.375j0,4266TurkeyPotential leaders0,4121110,12.744,840,7462517,686.309j0,6267AlbaniaPotential leaders0,411134,72.531,890,7462469,358.1090,5768MoldovaPotential leaders0,4071430,31.352,790,76899611,241.2130,5869Kyrgyz RepublicPotential leaders0,4041399,51.887,020,79447310,645.917j0,5770VietnamPotential leaders0,4021369,61.305,580,7493157,528.8350,3571UruguayPotential leaders0,4011924,72.985,060,8864648,500,2772PanamaPotential leaders0,3941897,52.038,000,8479839,338.7390,4873LebanonPotential leaders0,39211223.194,070,7654937,938.4840,4274ColombiaPotential leaders0,3851708,91.148,330,8532988,536.6670,4375MauritiusPotential leaders0,3771018,72.056,960,6852648,529.940j0,4477MongoliaPotential leaders0,3651137,11.908,940,7185549,368.5670,6276MexicoPotential l	64	Macedonia, FYR	Potential leaders	0,414	1163,7	3.556,50	0,789877	9,3	39.594j	0,49
66TurkeyPotential leaders0,4121110,12.744,840,7462517,686.309j0,6267AlbaniaPotential leaders0,411134,72.531,890,7462469,358.1090,5768MoldovaPotential leaders0,4071430,31.352,790,76899611,241.2130,5869Kyrgyz RepublicPotential leaders0,4041399,51.887,020,79447310,645.917j0,5770VietnamPotential leaders0,4021369,61.305,580,7493157,528.8350,3371UruguayPotential leaders0,4011924,72.985,060,8864648,500,2772PanamaPotential leaders0,3941897,52.038,000,8479839,338.7390,4873LebanonPotential leaders0,39211223.194,070,7654937,938.4840,4274ColombiaPotential leaders0,3851708,92.148,330,8532988,536.6670,4375MauritiusPotential leaders0,3771018,72.056,960,6852648,529.940j0,477MongoliaPotential leaders0,3651137,11.908,940,7185549,368.5670,6278TunisiaPotential leaders0,351383,11.434,620,762466,834.6060,35	65	South Africa	Potential leaders	0,413	1722,3	4.325,52	0,923863	9,9	19.375j	0,42
67AlbaniaPotential leaders0,411134,72.531,890,7462469,358.1090,5768MoldovaPotential leaders0,4071430,31.352,790,76899611,241.2130,5869Kyrgyz RepublicPotential leaders0,4041399,51.887,020,79447310,645.917j0,5770VietnamPotential leaders0,4021369,61.305,580,7493157,528.8350,32571UruguayPotential leaders0,4011924,72.985,060,8864648,500,2772PanamaPotential leaders0,3941897,52.038,000,8479839,338.7390,4873LebanonPotential leaders0,39211223.194,070,7654937,938.4840,4274ColombiaPotential leaders0,3861300,91.177,110,7197657,355.5890,4675MauritiusPotential leaders0,3851708,92.148,330,8532988,536.6670,4376MexicoPotential leaders0,3651137,11.908,940,7185549,368.5670,6277MongoliaPotential leaders0,3651137,11.908,940,7185549,368.5670,6277MongoliaPotential leaders0,3651383,11.434,620,762466,834.6060,35	66	Turkey	Potential leaders	0,412	1110,1	2.744,84	0,746251	7,6	86.309j	0,62
68MoldovaPotential leaders0,4071430,31.352,790,76899611,241.2130,5869Kyrgyz RepublicPotential leaders0,4041399,51.887,020,79447310,645.917j0,5770VietnamPotential leaders0,4021369,61.305,580,7493157,528.8350,3571UruguayPotential leaders0,4011924,72.985,060,8864648,500,2772PanamaPotential leaders0,3941897,52.038,000,8479839,338.7390,4873LebanonPotential leaders0,39211223.194,070,7654937,938.4840,4274ColombiaPotential leaders0,3861300,91.177,110,7197657,355.5890,4675MauritiusPotential leaders0,3851708,92.148,330,8532988,536.6670,4376MexicoPotential leaders0,3651137,11.908,940,7185549,368.5670,6278TunisiaPotential leaders0,351383,11.434,620,762466,834.6060,35	67	Albania	Potential leaders	0,41	1134,7	2.531,89	0,746246	9,3	58.109	0,57
69Kyrgyz RepublicPotential leaders0,4041399,51.887,020,79447310,645.917j0,5770VietnamPotential leaders0,4021369,61.305,580,7493157,528.8350,3571UruguayPotential leaders0,4011924,72.985,060,8864648,500,2772PanamaPotential leaders0,3941897,52.038,000,8479839,338.7390,4873LebanonPotential leaders0,39211223.194,070,7654937,938.4840,4274ColombiaPotential leaders0,3861300,91.177,110,7197657,355.5890,46375MauritiusPotential leaders0,3851708,92.148,330,8532988,536.6670,43376MexicoPotential leaders0,3651137,11.908,940,7185549,368.5670,6277MongoliaPotential leaders0,351137,11.908,940,7185549,368.5670,6278TunisiaPotential leaders0,351383,11.434,620,762466,834.6060,35	68	Moldova	Potential leaders	0,407	1430,3	1.352,79	0,768996	11,2	41.213	0,58
70VietnamPotential leaders0,4021369,61.305,580,7493157,528.8350,3571UruguayPotential leaders0,4011924,72.985,060,8864648,500,2772PanamaPotential leaders0,3941897,52.038,000,8479839,338.7390,4873LebanonPotential leaders0,39211223.194,070,7654937,938.4840,4274ColombiaPotential leaders0,3861300,91.177,110,7197657,355.5890,4675MauritiusPotential leaders0,3851708,92.148,330,8532988,536.6670,4376MexicoPotential leaders0,3651137,11.908,940,7185549,368.5670,6278TunisiaPotential leaders0,351383,11.434,620,762466,834.6060,35	69	Kyrgyz Republic	Potential leaders	0,404	1399,5	1.887,02	0,794473	10,6	45.917j	0,57
71UruguayPotential leaders0,4011924,72.985,060,8864648,500,2772PanamaPotential leaders0,3941897,52.038,000,8479839,338.7390,4873LebanonPotential leaders0,39211223.194,070,7654937,938.4840,4274ColombiaPotential leaders0,3861300,91.177,110,7197657,355.5890,4675MauritiusPotential leaders0,3851708,92.148,330,8532988,536.6670,4376MexicoPotential leaders0,3771018,72.056,960,6852648,529.940j0,4277MongoliaPotential leaders0,3651137,11.908,940,7185549,368.5670,6278TunisiaPotential leaders0,351383,11.434,620,762466,834.6060,35	70	Vietnam	Potential leaders	0,402	1369,6	1.305,58	0,749315	7,5	28.835	0,35
72PanamaPotential leaders0,3941897,52.038,000,8479839,338.7390,4873LebanonPotential leaders0,39211223.194,070,7654937,938.4840,4274ColombiaPotential leaders0,3861300,91.177,110,7197657,355.5890,4675MauritiusPotential leaders0,3851708,92.148,330,8532988,536.6670,4376MexicoPotential leaders0,3771018,72.056,960,6852648,529.940j0,477MongoliaPotential leaders0,3651137,11.908,940,7185549,368.5670,6378TunisiaPotential leaders0,351383,11.434,620,762466,834.6060,35	71	Uruguay	Potential leaders	0,401	1924,7	2.985,06	0,886464	8,5	0	0,27
73LebanonPotential leaders0,39211223.194,070,7654937,938.4840,4274ColombiaPotential leaders0,3861300,91.177,110,7197657,355.5890,4675MauritiusPotential leaders0,3851708,92.148,330,8532988,536.6670,4376MexicoPotential leaders0,3771018,72.056,960,6852648,529.940j0,4277MongoliaPotential leaders0,3651137,11.908,940,7185549,368.5670,6278TunisiaPotential leaders0,351383,11.434,620,762466,834.6060,35	72	Panama	Potential leaders	0,394	1897,5	2.038,00	0,847983	9,3	38.739	0,48
74ColombiaPotential leaders0,3861300,91.177,110,7197657,355.5890,4675MauritiusPotential leaders0,3851708,92.148,330,8532988,536.6670,4376MexicoPotential leaders0,3771018,72.056,960,6852648,529.940j0,477MongoliaPotential leaders0,3651137,11.908,940,7185549,368.5670,6378TunisiaPotential leaders0,351383,11.434,620,762466,834.6060,35	73	Lebanon	Potential leaders	0,392	1122	3.194,07	0,765493	7,9	38.484	0,42
75 Mauritius Potential leaders 0,385 1708,9 2.148,33 0,853298 8,5 36.667 0,43 76 Mexico Potential leaders 0,377 1018,7 2.056,96 0,685264 8,5 29.940j 0,4 77 Mongolia Potential leaders 0,365 1137,1 1.908,94 0,718554 9,3 68.567 0,62 78 Tunisia Potential leaders 0,35 1383,1 1.434,62 0,76246 6,8 34.606 0,35	74	Colombia	Potential leaders	0,386	1300,9	1.177,11	0,719765	7,3	55.589	0,46
76 Mexico Potential leaders 0,377 1018,7 2.056,96 0,685264 8,5 29.940j 0,4 77 Mongolia Potential leaders 0,365 1137,1 1.908,94 0,718554 9,3 68.567 0,62 78 Tunisia Potential leaders 0,35 1383,1 1.434,62 0,76246 6,8 34.606 0,35	75	Mauritius	Potential leaders	0,385	1708,9	2.148,33	0,853298	8,5	36.667	0,43
77 Mongolia Potential leaders 0,365 1137,1 1.908,94 0,718554 9,3 68.567 0,62 78 Tunisia Potential leaders 0,35 1383,1 1.434,62 0,76246 6,8 34.606 0,35	76	Mexico	Potential leaders	0,377	1018,7	2.056,96	0,685264	8,5	29.940j	0,4
78 Tunisia Potential leaders 0,35 1383,1 1.434,62 0,76246 6,8 34.606 0,35	77	Mongolia	Potential leaders	0,365	1137,1	1.908,94	0,718554	9,3	68.567	0,62
	78	Tunisia	Potential leaders	0,35	1383,1	1.434,62	0,76246	6,8	34.606	0,35

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Incekara, Sengun, Guz

	Bosnia and									
79	Herzegovina	Dynamic Adopters	0,342	1103,8	3.219,01	0,760206	8,3	38 ⁿ	0,26	
80	Botswana	Dynamic Adopters	0,34	1768	1.563,51	0,821259	8,9	27.513 ^j	0,41	
81	Dominican Republic	Dynamic Adopters	0,339	948,4	1.516,52	0,627983	7,6	47.515j	0,44	
82	Jamaica	Dynamic Adopters	0,334	1205	1.126,47	0,686903	9,7	27.220	0,45	
83	Indonesia	Dynamiz Adopters	0,308	1411	787,68	0,709421	7,6	31.102j	0,37	
84	Egypt, Arab Rep.	Dynamic Adopters	0,308	1183,5	1.697,47	0,721564	6,5	36.228	0,34	
85	Sri Lanka	Dynamic Adopters	0,308	1258	525,88	0,626073	10,8	19.796	0,47	
86	El Salvador	Dynamic Adopters	0,307	1599,5	915,00	0,767238	6,5	28.852j	0,31	
87	Peru	Dynamic Adopters	0,306	1192,1	1.269,77	0,69498	9	0	0,29	
88	Morocco	Dynamic Adopters	0,304	1334,2	866,24	0,698229	4,4	28.143	0,2	
89	Bolivia	Dynamic Adopters	0,275	1001,7	705,29	0,571091	8,2	0	0,25	
90	Cuba	Dynamic Adopters	0,256	411,7	1.425,48	0,31194	11,5	36.280	0,57	
91	Guatemala	Dynamic Adopters	0,25	1220,5	555,04	0,62028	5,6	18.325l	0,22	
92	Nepal	Dynamic Adopters	0,248	997,3	128,15	0,828465	3,3	14.940	0,09	
93	India	Dynamic Adopters	0,229	800,5	765,00	0,496045	5,4	25.535j	0,24	
94	Honduras	Dynamic Adopters	0,226	1014,4	720,98	0,577986	5,5	21.184j	0,22	
95	Zimbabwe	Dynamic Adopters	0,207	870,1	531,75	0,490323	7,3	8.433	0,25	
96	Cote d'Ivoire	Countries	0,195	1206,1	252,38	0,536408	4,3	9.155	0,11	
97	Cameroon	Marginalized Countries	0,181	763,6	278,06	0,37648	6	17.478	0,23	
98	Bangladesh	Marginalized Countries	0,157	824,4	293,02	0,410208	5,1	13.440j	0,17	
99	Senegal	Marginalized Countries	0,154	1019,6	219,25	0,459859	2,5	10.386	0,04	
100	Pakistan	Marginalized Countries	0,151	688	449,97	0,386309	4,7	9.927	0,14	
101	Mozambique	Marginalized Countries	0,147	745,7	435,60	0,412935	3,2	5.974j	0,05	
402	C. J.	Marginalized	0.424	700.0	450.00	0.204000	2.4	46.220	0.00	
102	Sudan	Marginalized	0,124	708,3	158,66	0,291998	3,1	16.320J	0,09	
103	Тодо	Countries	0,104	684,4	147,50	0,271903	4,5	10.625	0,13	
104	Tanzania	Marginalized Countries	0,098	761,3	89,48	0,261036	5,1	3.647	0,13	
		Marginalized		- ,-	, -	-,	-,		-, -	
105	Ethiopia	Countries	0,028	436,6	64,62	0,021795	2,4	8.126j	0,02	

Notes:

a Related to the year of 2015 data is obtained from European Patent Office

b Data on patents and royalties are missing for these countries. Lack of data for these countries generally indicates little formal innovation occurring. Therefore, a value '0' for the missing indicates has been used for these countries in the present study. Related to the year of 2015 data is derived from World Bank Database

c Related to the year of 2015 data is derived from World Bank Database.

d In TAI-02 (Desai et al.2002), data of high and medium technology exports as percentage of manufactured export was used. However, in spite of extensive internet search data for medium tecnology exports could not be traced. Related to the year of 2015 data is derived from World Bank Database.

e For purposes of calculating the TAI, the nearest available data of year 2014 was used for countries for which no data were available.

Related to the year of 2014 is derived from World Bank Database

f Related to the year of 2015 derived from International Telecommunication Union (ITU). For purposes of calculating the TAI, the weighted average value for OECD countries (1583,034) was used.

g For purposes of calculating the TAI, the nearest available data of year 2013 was used for countries, and the weighted average value for OECD countries (9204) was used. Related to the year of 2013 is derived from World Bank Database

h Related to the year of 2014 derived from United Nation Devolepment Programme (UNDP).

j Related to the year of 2014 derived from International Telecommunication Union (ITU).

k Related to the year of 2015 derived from International Telecommunication Union (ITU).

I Related to the year of 2013 derived from International Telecommunication Union (ITU).

m The nearest available data of the year 2011 was used. Tha data derived from 2014 Human Devolopment Report.