

Comparative Analysis and Implications of Developing Country Risk

ISSN 2233-9140

Jin-Young Moon Research Fellow, Cooperation Policy Team, Department of International Cooperation Policy
(jymoon@kiep.go.kr)

Yoon Ok Kim Researcher, Cooperation Policy Team, Department of International Cooperation Policy
(yokim@kiep.go.kr)

Minyoung Lee Researcher, Cooperation Policy Team, Department of International Cooperation Policy
(mylee@kiep.go.kr)

The share of emerging markets and developing countries in the global economy is growing and the status of G20 in the international society is also being strengthened. Considering the trend, the economic and political rising of developing countries can be regarded as opportunities to replace developed markets whose growth potential is relatively declining. However, there are risk factors that developed markets do not have. Therefore, it is essential to measure and manage the risk in developing countries.

This study selected economic, political, and social indicators to measure risks, referencing the cases of professional country risk rating agencies, and developed an analytical framework to enable comparisons among countries. Furthermore, this study derived comprehensive country risk ranking by putting the indicators of economic, political, and social risks together and analyzed the impact of weight change on risk rating.

Data and Analysis Framework

This study selected 11 economic indicators and 22 political and social indicators to measure the country risk of 75 developing countries. Furthermore, it quantified the 33 indicators for comparison based on the methodology of the World Competitiveness Yearbook of the International Institute for Management Development (IMD) in Switzerland. In order to measure a risk (where $r = \text{sociopolitical, econ}$), x_{ir} , which is the indicator of each country; μ_{ir} , which is the mean; and σ_{ir} , which is the standard deviation, were employed. Using the variables, the random variable, Z_{ir} , which has the standard normal distribution, was derived.

$$Z_{ir} = \frac{x_{ir} - \mu_{ir}}{\sigma_{ir}}$$

If we calculate the probabilities of cumulative standard normal distribution, then it takes the values between 0 and 1. Therefore, this study multiplied 10 at the value and calculated the simple average by categories (economic category as well as political and social categories).

The two types of country risk were calculated by applying different weights. First, the equal weight for each category, which is 1:1, was applied. Then, different weights are applied between the two types of risk. If the risk score is higher, it indicates that the country has a higher country risk. The rank was also given based on the score.

Categorical Risk Assessment

Concentrating on the top-ranked countries based on the economic risks of 2013, Iran's economic risk was found to be the highest and African countries generally showed a high risk. In case of the political and social risks of 2013, the Democratic Republic of Congo, Zimbabwe, Nigeria, Ethiopia, and other African countries

appeared to have a higher risk. Emerging countries in Eastern Europe turned out to have generally low political and social risks except for Serbia because its score was around four points. Furthermore, Poland, Estonia, Lithuania, the Czech Republic, and Slovakia also turned out to have low risk. In addition, Singapore, Chile, and Uruguay positioned at the lowest rank in terms of political and social risks.

Political and social risks of emerging countries are more widely distributed, whereas economic risk is relatively and densely populated between five and six points. It can be interpreted that the variation of the political and social environments among the emerging countries is bigger. In case of countries with high economic risk, they had larger change in economic risk in the last three years compared to political and social risks. It indicates that economic risk can be changed for a short time, while political and social risks are relatively hard to change with the same duration. When we compare the regional characteristics between economic risk and social and political risks, India and countries in Africa, South Asia, Russia, and the Eurasia had high risk in both economic and political risks (see Table 1). In case of the Middle East, it showed lower risk because of rich oil-producing countries, such as Saudi Arabia and Qatar. For Eastern European countries, the political risk is significantly lower than other regions but the economic risk is somewhat high.

Country Risk Assessment and Comparative Analysis

1. Country Risk Assessment

This assessment is based on the baseline result obtained from the previous chapter that applied 1:1 ratio for economic risk and political

al and social risks. As a result, African and Southwest Asian countries showed the highest risk (see Figure 1).

Table 1. Regional Risk Average

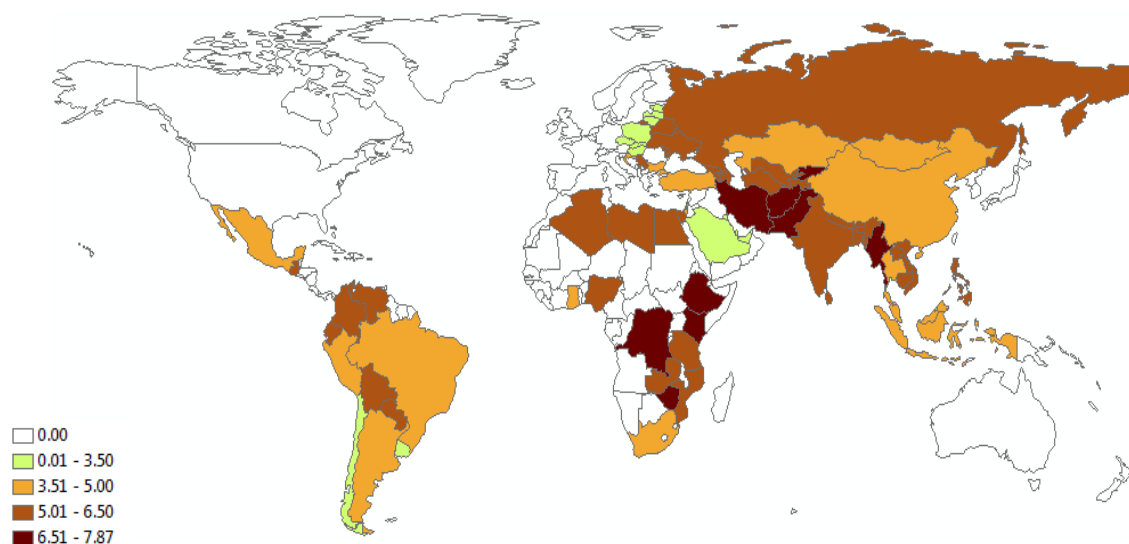
Region	Economic Risk	Political-Social Risk
India & South Asia	5.21	6.86
South East Asia	4.40	5.11
Except Singapore	4.63	5.61
Russia & Eurasia	5.26	5.90
Africa & Middle East	4.85	5.99
Africa	5.36	6.73
Middle East	3.74	4.37
Latin & Caribbean	4.87	4.30
Central & East Europe	5.24	1.99

Source: Author.

Low-risk countries are mainly distributed in Eastern Europe, Latin America, and Asia, and they showed a moderate level of risk. Furthermore, there are three high-risk countries, which have a risk index of more than seven points, including Iran, the Democratic Republic of the Congo, and Pakistan. In contrast, there are nine low-risk countries, which have a risk index of less than three points, and these are Brunei, Poland, Slovakia, Uruguay, Chile, Estonia, Qatar, and Singapore.

Furthermore, this research also studied the effect of weight change on country risk. First, 1:2 ratio is applied, which employed higher weight for political and social risks. Then, increased weight for economic risk, such as 2:1 and 3:1 ratios, is applied. Comparing to the baseline (1:1 ratio for economic risk and poli-

Figure 1. Emerging Countries' Risk (2013)



Source: Author.

tical and social risks), it had a bigger number of high-risk countries and low-risk countries, which has a risk index of more than 7 or less than 3. That is, it means that the risk variation became larger and it is probably because of the increase in weight of political and social

risks, which has a larger variation. On the contrary, in case of the increased weight for economic risk, the whole variation of country risk might have become smaller, but country risk of Central and Eastern European countries increased overall. Countries with high political

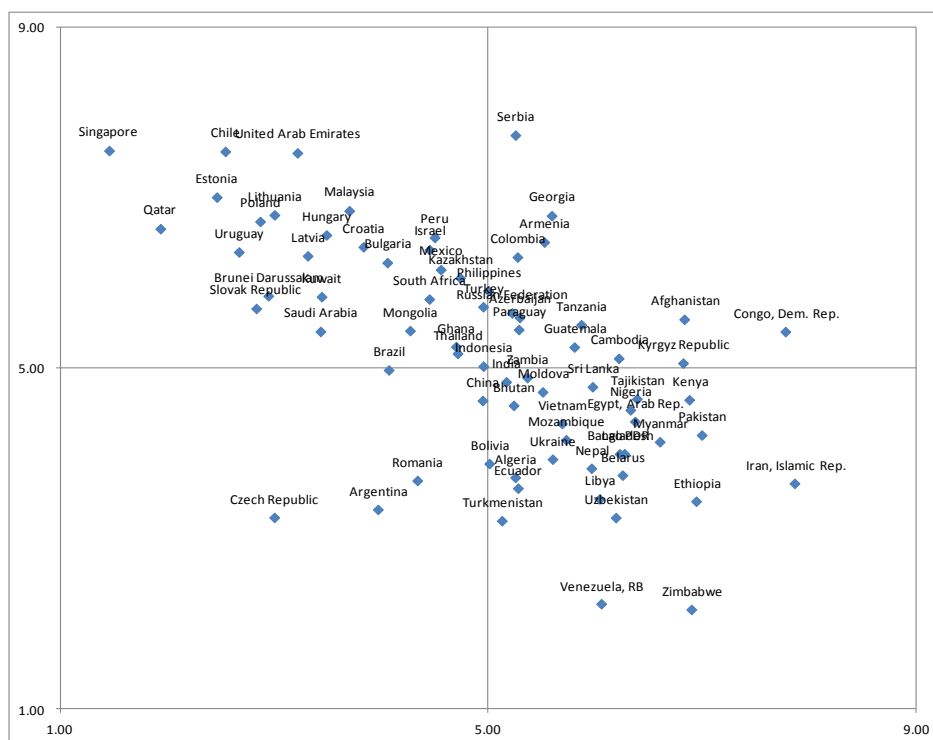
and social risks, such as China, Turkmenistan, Uzbekistan, Myanmar, Saudi Arabia, Nigeria, Zimbabwe, and Afghanistan are affected more by the weight change. Meanwhile, effects of weight changes to Iran, Mozambique, India, Mexico, and Bhutan are very slight.

2. Comparative Analysis

Low country risk does not necessarily mean that the country has a favorable investment environment. Therefore, this study derived the correlation between investment attractiveness and country risk, and created a matrix to group the countries. Furthermore, suitability of this study's methodology is also examined by comparison with foreign advanced agencies.

Investment attractiveness is generated by using 17 indices from the Economic Freedom Index of Heritage Foundation and Global Competitiveness Index of the World Economic Forum. In order to generate a score for investment attractiveness ranging from 1 to 10, it followed the same methodology that used to generate county risk. As a result, Serbia, Singapore, Chile, United Arab Emirates, Estonia, Eastern European countries, and some Latin American countries located at the Pacific coast had high levels of investment attractiveness. In case of regional average, Southeast Asia, the Middle East, and Central and Eastern Europe showed a high degree of investment attractiveness. Also, the correlation coefficient between country risk and investment attractiveness was -0.59 in 2013, which is a negative correlation (see Figure 2).

Figure 2. Correlation Between Investment Attractiveness (Vertical) and Country Risk (Horizontal) of Emerging Countries (2013)



Source: Author.

Comparing the results of this study with those of professional country risk rating agencies, there is no significant difference. This is especially the case given that the correlation coefficients between the results of this study and those of the EIU are generally high. The coefficient was 0.784 for 1:1 weight ratio, 0.717 for 1:2, 0.835 for 2:1, and 0.838 for 3:1. Specifically, if larger weight is applied for the economic risk category, then the results are more similar to those of the EIU.

In case of Euromoney Country Risk (ECR), which mainly does qualitative evaluations, the results were generally similar to this study except for Uruguay, Egypt, among others. The reason behind these exceptions is probably the fact that ECR reflects opinions from external experts for their evaluation.

Implications

Risk-rated countries need to provide more transparent and accurate information about their own political and social factors. The results of country risk researches can vary depending on the departments in charge or

individuals who evaluate. For this, providing transparent information to external rating agencies can enhance the reliability of the providing nations not only for themselves but for the international society as well.

Second, the country risk is different depending on regions and nations. The instability of doing business in countries with high political risk can be larger because of political connection. For businesses that entered into regions with high economic risk, they should seek various instruments to hedge such risk. Furthermore, in case of businesses that are interested in regions or nations that have restrictive indicators about country risk or attractiveness, such as Myanmar, they should do more thorough risk assessment and market research in advance.

Third and lastly, research about country risk of developing countries should continue in a long-term perspective rather than ending in fragmentary analysis. The change in the economic condition of developing countries is more rapid than that of developed countries so it is necessary to supplement risk assessment methodology and to check the changes regularly. **KIEP**