

The Performances between Advanced Economies and Emerging and Developing Economies in Economic Energy Efficiency are Well-Matched

According to the International Monetary Fund (IMF), there are 34 countries that are in the category of Advanced Economies (AE). Therefore, the rest of the 95 countries in the present report all belong to the category of Emerging and Developing Economies (EDE). However, due to the global shortage of fossil energy, most of the countries are highly focused on improving energy efficiency. Based on the latest economic energy efficiency index (EEEI), global energy efficiency improved 6.03% in 2009 compared to the base year of energy efficiency in 2005. Within that, the AE have made considerable effort in improving energy efficiency of 3.37% since the Kyoto Protocol came into effect on February 16, 2005. On the other hand, energy efficiency goes up by 2.65% for EDE, which is also a remarkable outcome in 2009.

In 2009, the share of global population for AE was only about 15%; however, the share of global GDP for AE was about 72% and the share of final energy consumption was about 43%. These numbers show that AE is actually enjoying the economic fruits and using up the majority of the energy resources from mother earth. Therefore, the responsibility to improve economic energy efficiency should be better than the performance of the above 3.37% so as to lead the world. Looking into the geographic performance in AE, the North American region leads with 1.68%, followed by the European region with 1.32%, the Asian region with 0.28%, and Oceania with 0.09%.

The leading country in North America is the United States that contributed 1.59% to economic energy efficiency in 2009. The United States has tried hard to switch from being an energy waste country in the 1990s to becoming the top ranking EEEI country in the world. The economic potential and technological strength of the United States cannot be ignored by the world. Germany is the leading country in terms of EEEI in Europe with a contribution of 0.32% in 2009. The practice of either energy saving or new energy developing in Germany is always highly acknowledged by the world. One of the most impressive issues is that the new energy and energy efficiency business has not slowed down the economic growth in Germany. In the Asian region, the new leading country in terms of EEEI is Korea, with a contribution of 0.19% in 2009, because Japan has fallen sharply in terms of economic energy efficiency in the same year. The major reason for the low performance in Japan is not because of energy wastage but because of the severe reduction in economic growth due to the financial crisis in 2009. Nevertheless, the recent economic energy efficiency performance of Korea is strong and stable, and serves as a good example and mirror for Taiwan as well as other Asian

countries.

Parallel with the classification of INF, there are six regions for EDE which are: the Commonwealth of Independent States, Developing Asia, Central and Eastern Europe, Sub-Saharan Africa, Latin America and the Caribbean, and the Middle East and North Africa. In 2009, the performances in terms of economic energy efficiency were: 1.22% for the Commonwealth of Independent States, 1.14% for Developing Asia, 0.29% for Central and Eastern Europe, 0.16% for Sub-Saharan Africa, 0.04% for Latin America and the Caribbean, and -0.20% for the Middle East and North Africa.

Among the regions in terms of EDE, the most notable countries are China, Russia, and the Ukraine. The energy resources, especially for coal, natural gas, and oil resources, are abundant in these countries. The populations of China (about 1.35 billion) and Russia (about 0.14 billion) are also very large in the world. However, the performances in terms of economic energy efficiency of these countries are unique and impressive. The contribution of EEEI for China is 1.33%, ranking it second in the world in 2009. The improvement of economic energy efficiency in China is mostly from the industrial sector. The contribution of EEEI for Russia is 0.53%, ranking it third in 2009. The services sector is the main reason for Russia's improvement. The contribution of EEEI for the Ukraine is 0.27%, ranking it fifth in the world. Both the industrial and services sectors make the contribution. The world center of gravity has gradually moved to Developing Asia and the Commonwealth of Independent States regions.

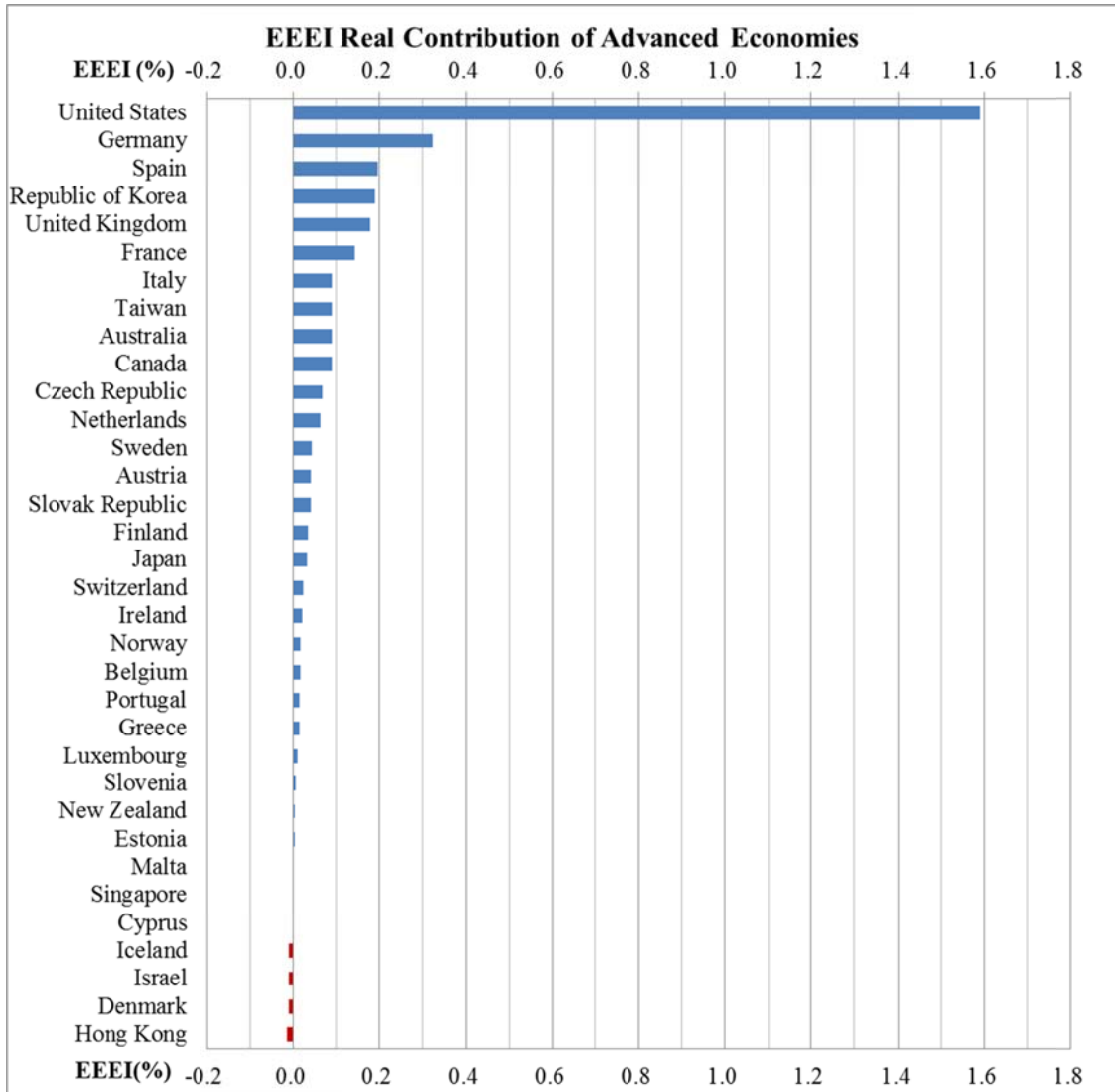


Figure 1: EEEI Real Contribution of Advanced Economies

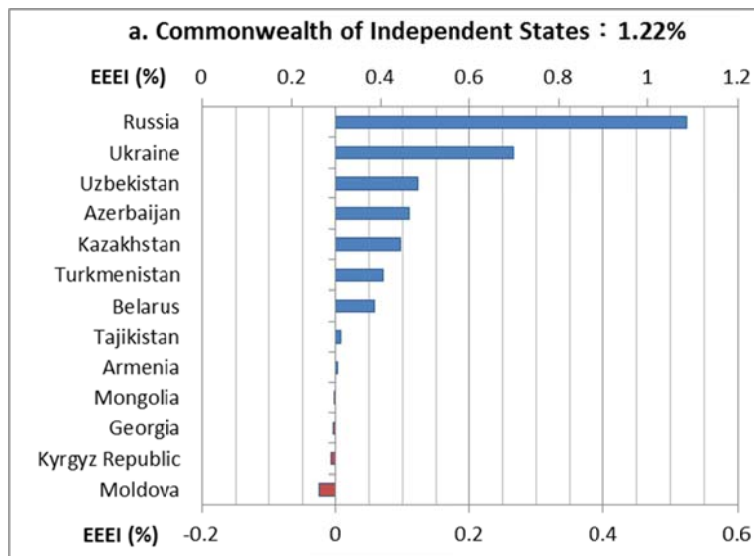


Figure 2a: EEI Real Contribution of Emerging and Developing Economies

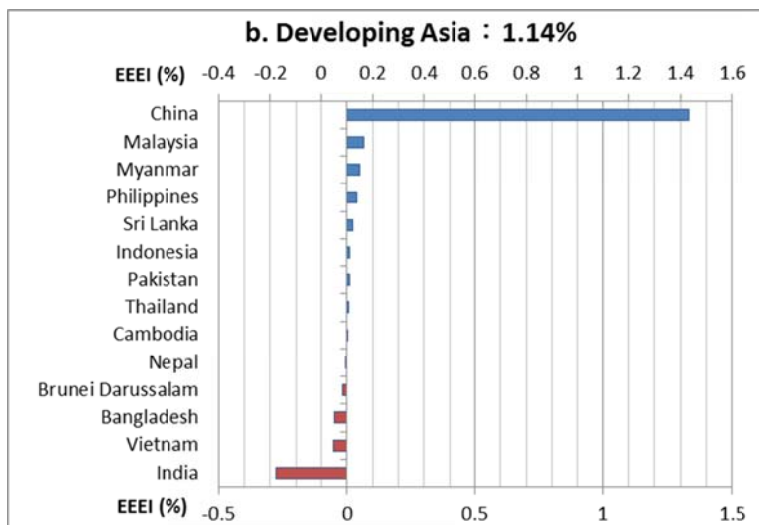


Figure 2b: EEI Real Contribution of Emerging and Developing Economies

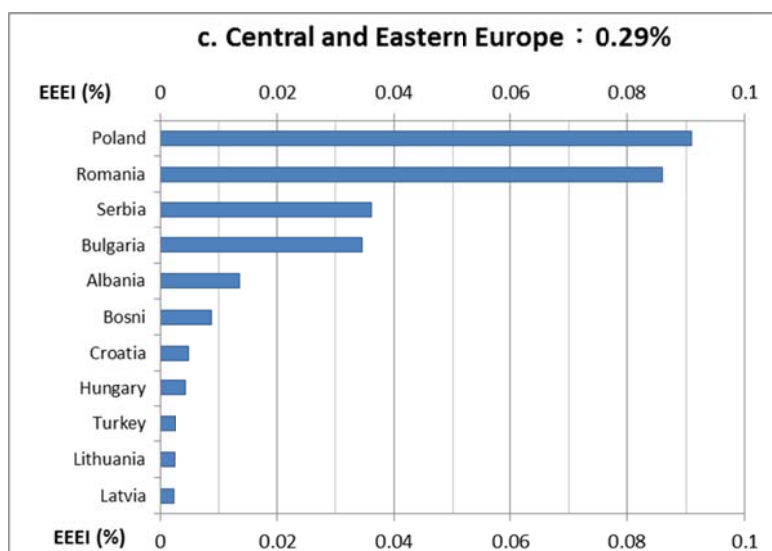


Figure 2c: EEI Real Contribution of Emerging and Developing Economies

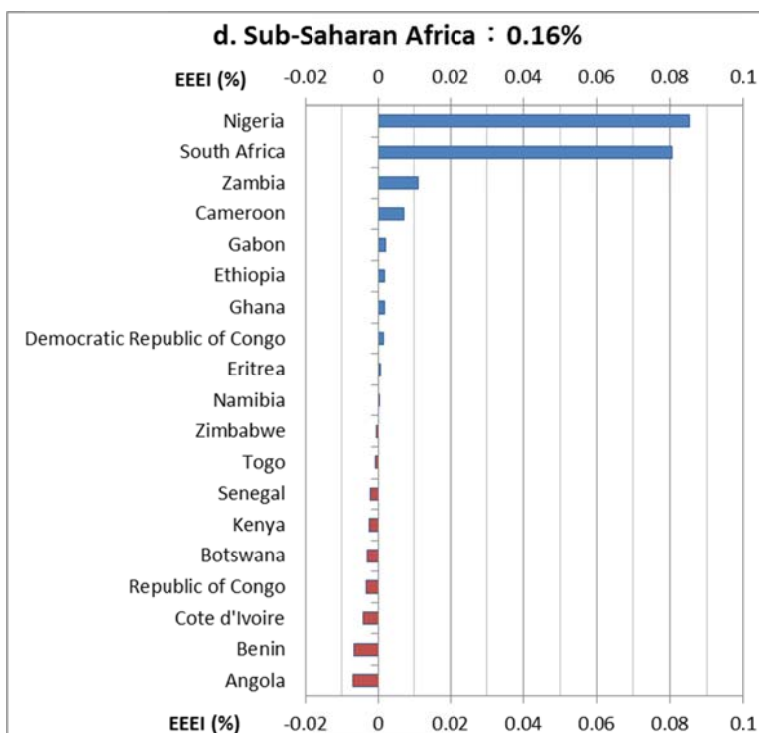


Figure 2d: EEEI Real Contribution of Emerging and Developing Economies

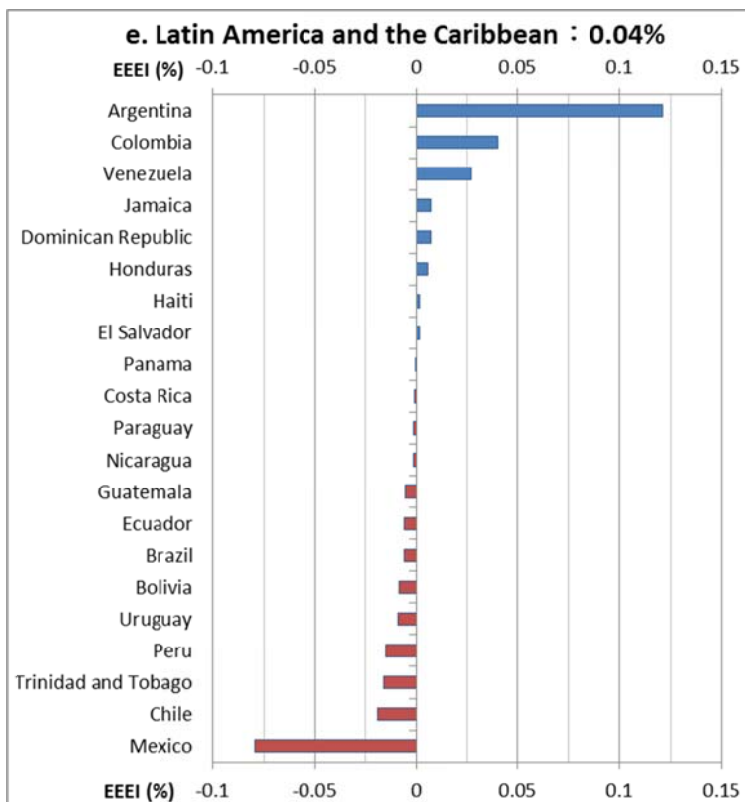


Figure 2e: EEEI Real Contribution of Emerging and Developing Economies