

The most critical information relevant for USL 0.5 (boosting national school math average by 1 year) or USL1 (boosting by 2 years within 2-4 years of reform-time) that all the governments and Ministries/Departments of Education should be aware of.

The vast scope of difficulty from BAU that USL1 will transcend quickly:

1. **The annual public school expenditure** of most of the countries is about 5% of the GDP and that for the public school math is about 0.5% of GDP. If the private sectors are included this will be 0.6-0.8% of GDP annually.) For the U.S.A., this means over 100 billion US\$ annually.
2. In spite of the spending 0.5%-0.8% of GDP annually for math education, the progress has been devastatingly disappointing and slow (PISA data).
3. **Time it takes normally:** according to PISA data, even the fastest countries will need at least 25-30 years to boost 2 years of national average school math level up, and even if they progress without interruption and most will take 50-100 years and the slow ones 100-200 years.
4. Collectively speaking, the **OECD countries currently spend about 1 Trillion US\$ annually** for their public school math education each year.

The following statements are all equivalent to what USL1 does and our compiled evidences are up, but the simplified version will be all available online by mid-first week of March 4th, 2015.

1. To boost the PISA or TIMSS math **scores of 1 standard deviation is equivalent to advance the 2 years of school levels in math** or science (which is out of the entire gamut of the world school math skill level differences according to the world cross-country assessments such as PISA or TIMSS): so it worths about sweeping through 40% of the entire global gamut in school math skill sets.
2. To **boost 2% of the surplus Real GDP per capita growth rate** (while the entire world gamut of the Real GDP per capita growth rate difference due to math skill differences by countries is roughly about 5%): so about 40% of the entire global gamut in the real GDP per capita induced by education.
3. **The costs of the annual education investment per GDP needed to boost 2 year math is about 8 times larger** than the current costs of the corresponding countries, e.g. as the world average public education expenditure is about 5% of GDP, and the total pre-tertiary education expenditures are about half of this, i.e. 2.5%, $2.5\% \times 8 =$ about 20% of GDP annually needed to achieve the USL1 effect.
4. **The GDP per capita (in PPP) will rise about 8 times over or more much faster than the next half a century** with the 2 year national average school math level boosts than without.
5. For the school attainments, 2 years of advancing the school math skill average corresponds to **about 3.5 years of more schoolings** (at least from the human capital-induced GDP growth's point of view).

According to the 20th century economic history, **to boost the GDP per capita (in PPP) 8 times requires the minimum of 30-40 years for the fastest. The average will take 70-100 years and the typical least developed countries will need over 2 centuries.** How rapidly this national average boosts of the math skill set by boosting 2 years of math take place (which is about 40% of the entire gap of the global school math skill level spectrum) will ultimately determine the economic growths and the well-being of the corresponding countries more than anything else and largely varies.

What will you choose? 1) To stagnate with the rest or 2) try to boost by spending 8x more on your annual math school education (4-6% of your GDP if you prefer) for decades or 3) 8x more on your annual national school attainments by adding another 3.5 years or 4) boosting 8x more on your annual pre-tertiary education costs (40-50% of GDP, which is obviously not going to happen) or 5) to embrace the USL and start participating in the massive transformation and even if it achieves only half of what it says, still the benefits far outweigh annually at least dozens of times and will be hundreds of times larger than the investments as time elapses.