Effective Implementation of S&T ODA to Attain SDGs

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Introduction

- **Need for STI4SD**
  - To establish a permanent observatory of changes and trends in new, emerging and potential future technologies for SDGs, and set up a grassroots surveillance framework for ongoing evaluation of STI4SD policies

- **To attain SDGs**
  - *Domestic policies* to be pursued by all countries to improve their national conditions (human rights, governance, rule of law, education, health, income equality within nations, environmental protection, etc.)
  - *Domestic policies and actions that have an impact on other regions and countries* (consumption and production patterns, GHG emissions, resource use, agriculture and fisheries, transboundary environmental pollution, etc.)
  - *International policies* (development cooperation, trade, migration, financial systems, etc.)

Source: European Commission(2015)

Importance and Roles of S&T ODA

- **Addis Ababa Action Agenda(AAA): 2015**

- The role of new innovations, technologies and associated know-how, including the transfer of technology on mutually agreed terms, as powerful drivers of economic growth and sustainable development
- The need to craft policies that incentivize the creation of new technologies, that foster research and that support innovation in developing countries
- The importance of an enabling environment at all levels, including enabling regulatory and governance frameworks, in nurturing science, innovation, the dissemination of technologies, particularly to micro, small and medium-sized enterprises, as well as industrial diversification and value added to commodities
- A commitment to promote social innovation to support social well-being and sustainable livelihoods
- Knowledge-sharing and the promotion of cooperation and partnerships between stakeholders, including between governments, firms, academia and civil society, in sectors contributing to the achievement of the SDGs

Source: European Commission(2015)

Importance and Roles of S&T ODA

▪ Addis Ababa Action Agenda(AAA)

- The important role of public finance and policies in research and technological development, as well as the use of public funding to enable critical projects to remain in the public domain, and open access to research for publicly funded projects
- The need to step up international cooperation and collaboration in science, research, technology and innovation, including through public-private and multi-stakeholder partnerships, and on the basis of common interest and mutual benefit, focusing on the needs of developing countries and the achievement of the SDGs
- Areas for special attention, such as research and development of vaccines and medicines, preventive measures and treatments for the communicable and non-communicable diseases, food security, agricultural productive capacity in developing countries, marine technology in order to improve ocean health

Source: European Commission(2015)

Importance and Roles of S&T ODA

- **Possible Actions in the Field of STI4SD**

- Increase bilateral, regional and multilateral cooperation on science, technology and innovation, and solutions-oriented research
- Raise awareness of how to use Intellectual Property Rights to stimulate growth for government, business and researchers
- Strengthen capacities in science, technology, innovation, research and digitisation in developing countries and promote worldwide and cross-sector mobility and open access to publications from publicly-funded research
- Improve access to education and training in developing countries to support the development the skills needed for innovation, job creation and growth
- At UN level, facilitate access to information on existing technology and promote coherence and coordination between technology-related mechanisms including any new technology mechanisms

Source: European Commission(2015)

Importance and Roles of S&T ODA

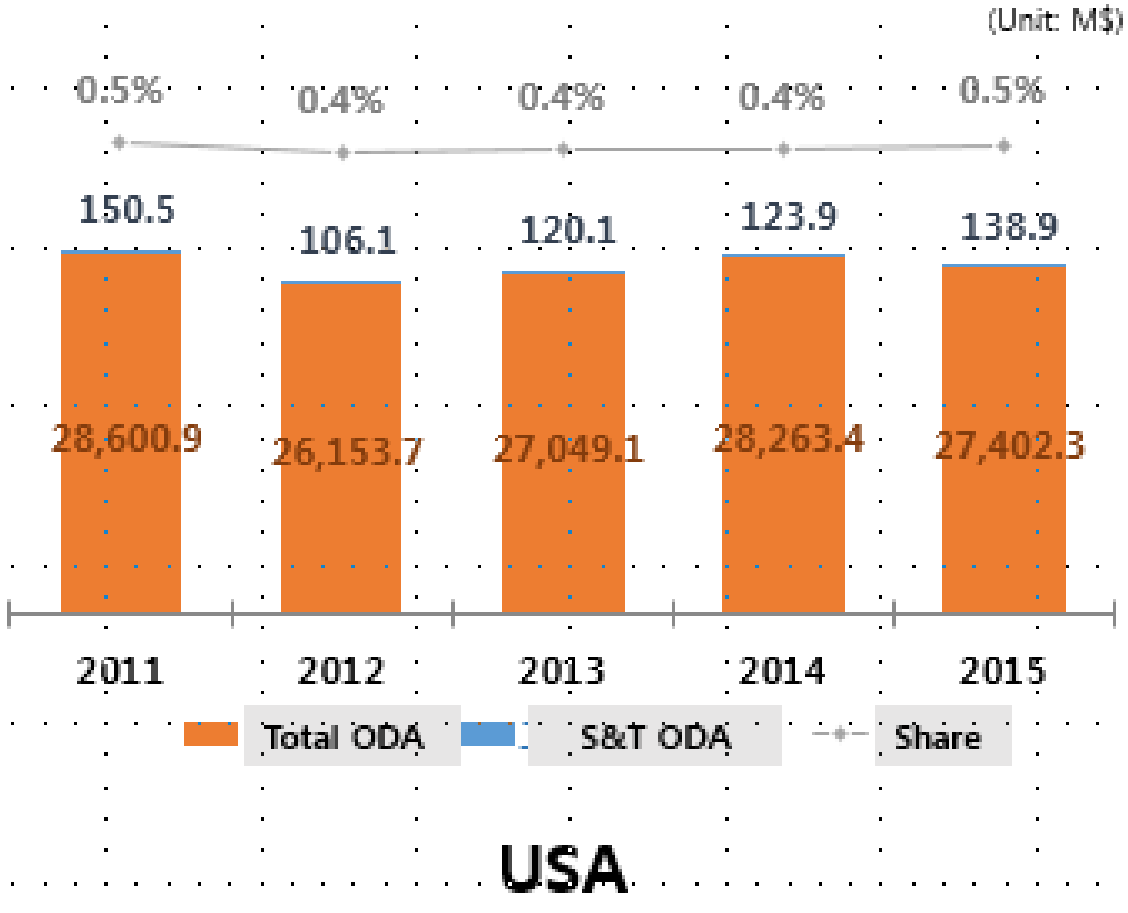
- **Technological learning and innovation capacity**
  - Cross-cutting issue for inclusive development
  - Technological challenge and global public goods
  - Crucial driver of rising prosperity and improved national competitiveness
  - Well-functioning STI ecosystem includes political stability, institutions, educated workforce, sound research and education infrastructure
  - Linkages between public and private innovation actors
- **Technology and innovation for catch-up growth**
  - Technological change, particularly in developing countries, is not only about innovating at the frontier, but also about adapting existing products and processes to achieve higher levels of productivity as applicable to their local contexts.
  - The ability of local firms and enterprises to access technological know-how is fundamental to shaping their ability to provide products and services, both of the kind that are essential to improve living standards, and that could also promote growth and competitiveness.
  - Bridging the technological divide through access to technologies

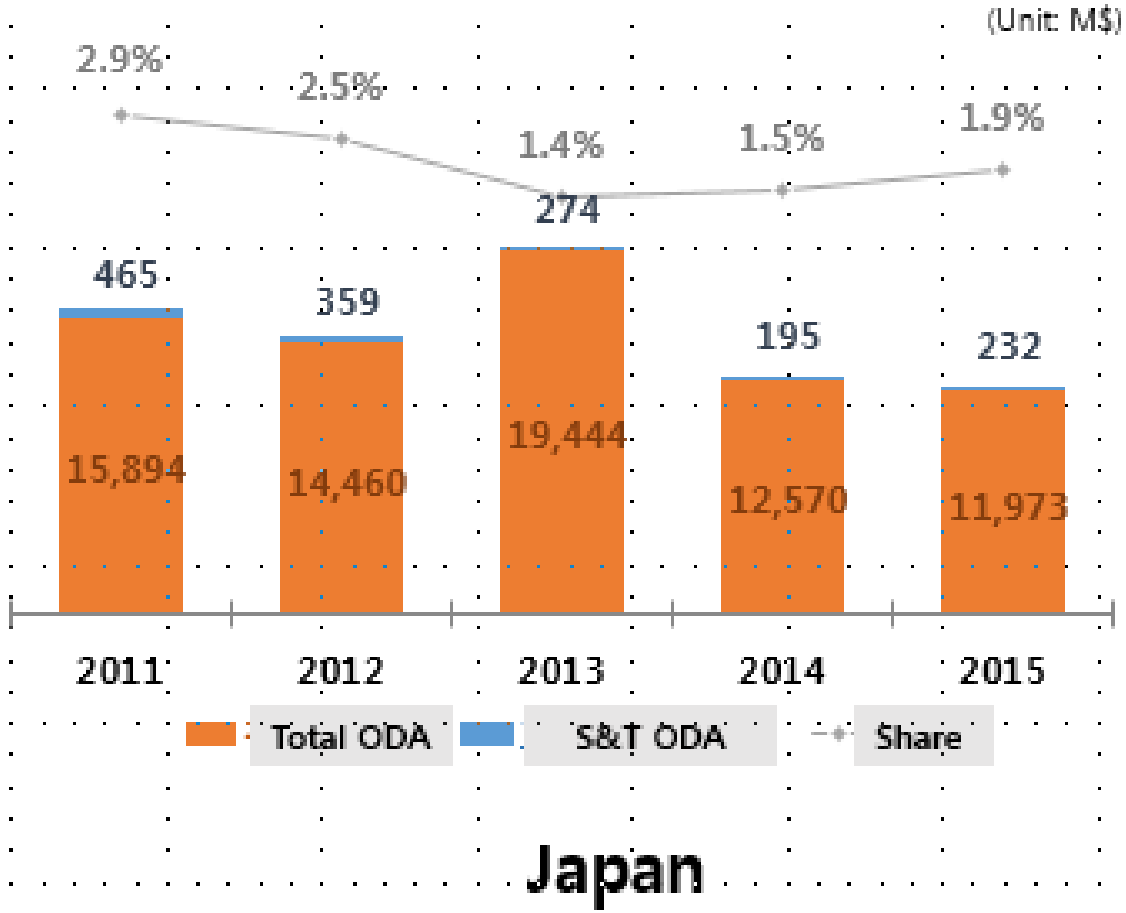
Importance and Roles of S&T ODA

Extraction from the OECD QWIDS database

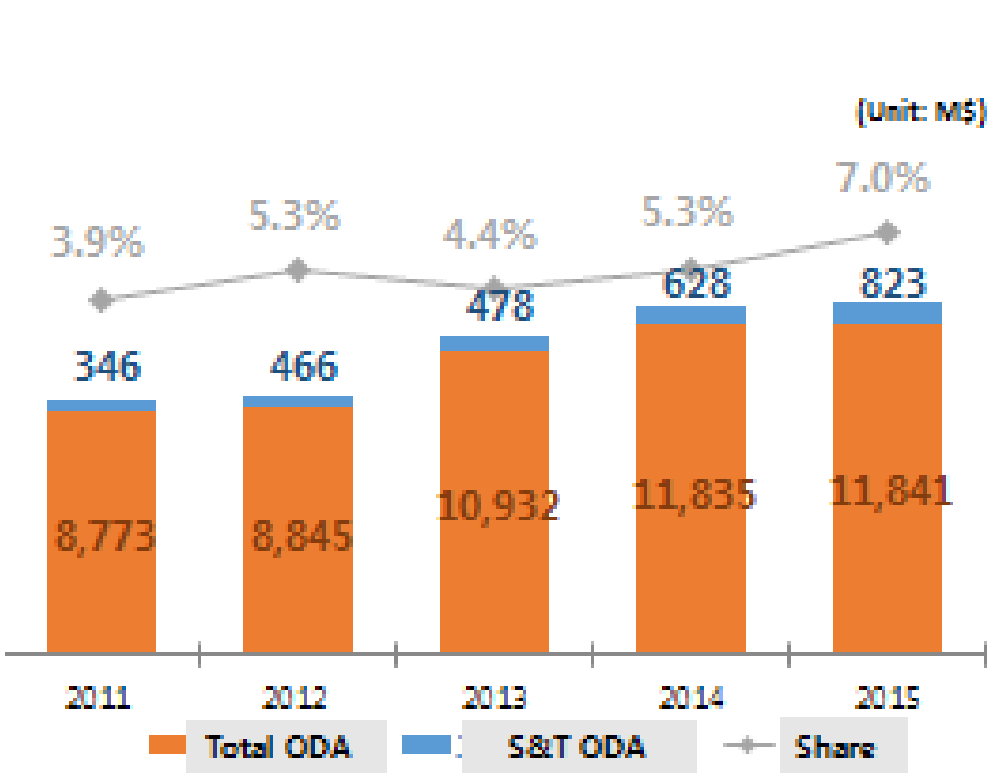
Broad Sector		Detailed Sector	Codes
Social Infrastructure & Services	Health	Medical education/training	12181
		Medical research	12182
		Health personnel development	12281
	Population Policies/Programmes & Reproductive Health	Personnel development for population & reproductive health	13081
	Water Supply & Sanitation	Education and training in water supply and sanitation	14081
Economic Infrastructure & Services	Transport & Storage	Education and training in transport & storage	21081
	Communications	Information and communication technology	22040
	Energy	Energy education/ training	23181
		Energy research	23182
Production Sectors	Agriculture, Forestry, Fishing	Agricultural education/training	31181
		Agricultural research	31182
		Forestry education/training	31281
		Forestry research	31282
		Fishery education/training	31381
		Fishery research	31382
	Industry, Mining, Construction	Industrial development	32120
		Small and medium-sized enterprises (SME) development	32130
		Cottage industries & handicraft	32140
		Agro-industries	32161
		Forest industries	32162
		Textiles-leather & substitutes	32163
		Chemicals	32164
		Fertilizer plants	32165
		Cement/lime/plaster	32166
		Energy manufacturing	32167
		Pharmaceutical production	32168
		Basic metal industries	32169
		Non-ferrous metal industries	32170
		Engineering	32171
		Transport equipment industry	32172
		Technological research & development	32182
Multi-Sector	General Environment Protection	Environmental education/training	41081
		Environmental research	41082
	Other Multisector	Multisector education/training	43081
		Research scientific institutions	43082

S&T ODA in Major Countries

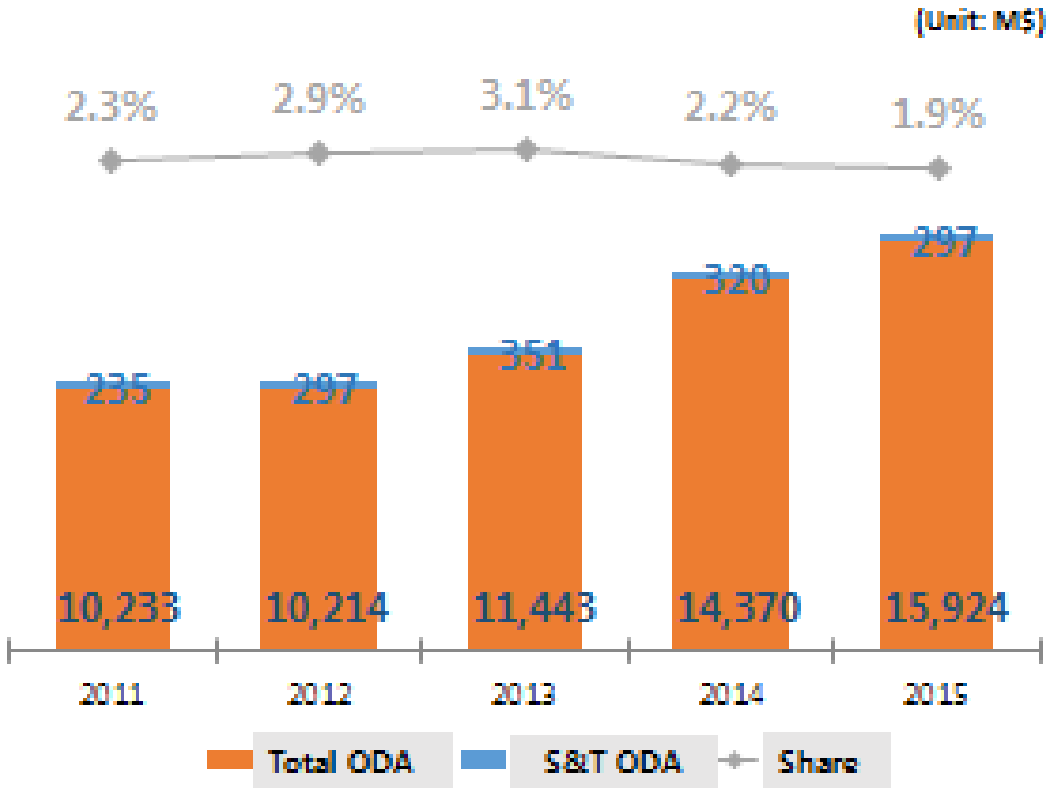




S&T ODA in Major Countries

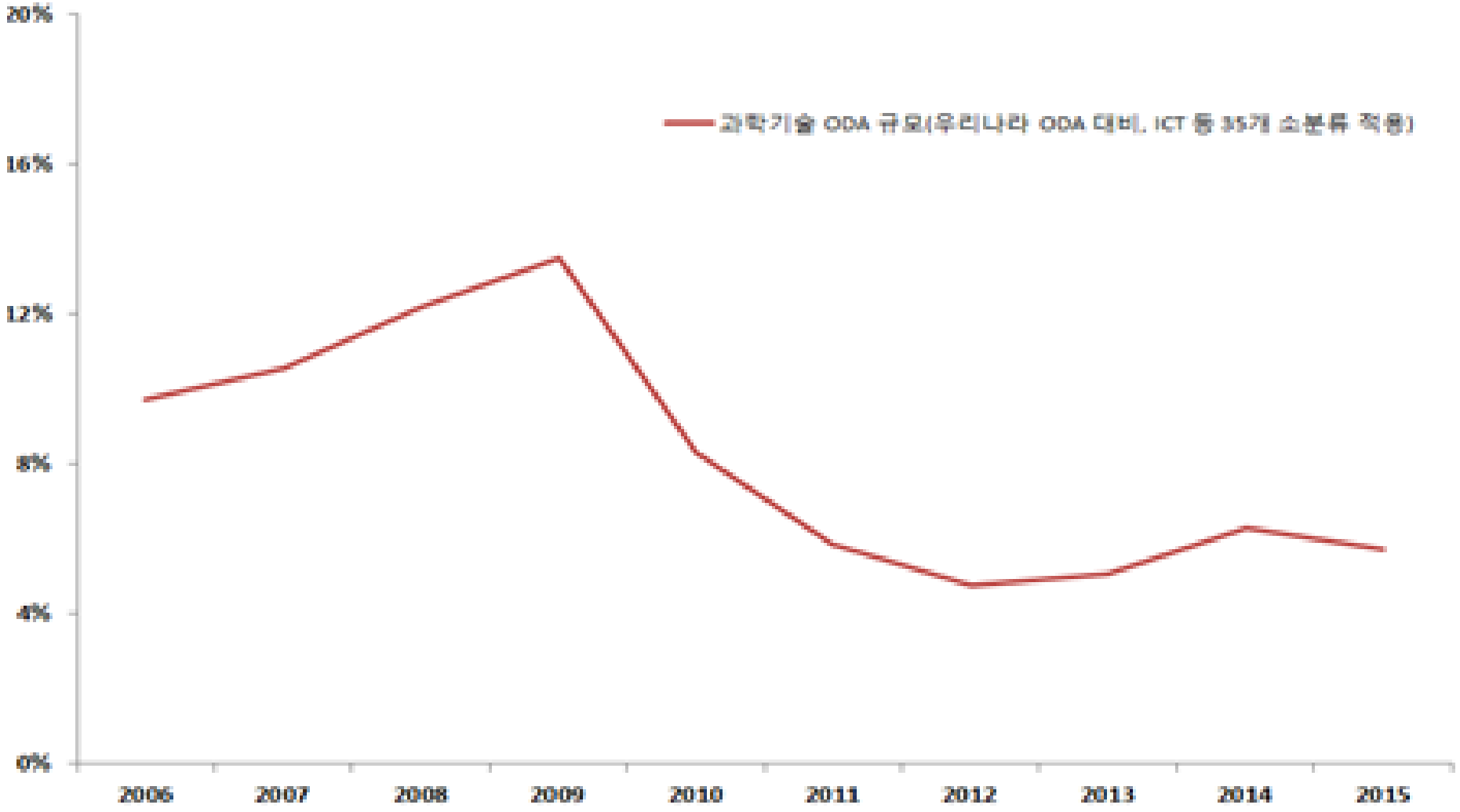


UK



Germany

S&T ODA of Korea



S&T ODA of Korea

- **Vietnam-Korea Technology Cooperation Center (VIKOTECH)**

  - Building research-capability of the Vietnam National Center for Technology Development (NACENTECH) in Laser Optoelectronics, Microelectronics, Information technology, Biotechnology, New Materials Technology, and R&D Planning & Management
  - Project Period: 1996~1998
  - Project amount: US$2.9 million (Korean side)

- **V-KIST**

  - V-KIST will play an important role in supporting Vietnam's endeavors to establish a research institute that can lead future technology and develop capacity of human resources
  - Project Period: 2014~2019
  - Project amount: US$35 million (out of US$70million)
  - First President: Dong-Hwa Keum (Ex-president of KIST)

How to Enhance the Effectiveness

- Selection of the most suitable/urgent sectors in the recipient countries
- Selection of the competent fields of Korea (e.g. ICT)
- Long-term involvement
- Active participation of
- Transparency of budget execution in recipient countries

Conclusion

- Innovation driven growth is no longer the prerogative of high income countries alone, some developing countries have achieved significant economic growth through the creation and deployment of STI capacity.
- STI policy has often been pursued independently of the broader developmental agenda; it is important that STI be integrated into public policy goals, giving particular focus to the nexus between STI, culture, education and development.