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Deutsches Institut für
Entwicklungspolitik

German Development
Institute

Towards Sustainability Oriented Innovation Systems

The role of International Cooperation

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South African – German Dialogue for Sustainability Science

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- MDG 1: to achieve full and productive employment and decent work for all, including women and young people; to halve, between 1990 and 2015, the proportion of people who suffer from hunger

- MDG 7: to ensure sustainable development. In the implementation that means to integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources



1. Introduction – Beyond the MDG
2. Defining Sustainable Development as a global challenge
3. Achieving sustainable development – the role of knowledge from the perspective of global public goods
4. Knowledge in current cooperation lines
5. The way forward: creating strategic STI – fostering Sustainability oriented Innovation Systems



- Global challenge: similar impacts on the world population that cannot be addressed by single countries
- Single countries cannot bear the costs alone
- Beyond market failure
- Underprovision of global public goods

Knowledge in the perspective of global public goods



	degree of rivalry = 0	degree of rivalry = 1
degree of excludability = 0	<p>public goods</p> <p>published knowledge, basic research, open access source technologies and data bases</p>	<p>knowledge commons</p> <p>human resources (university graduates, public R&D staff etc.)</p>
degree of excludability = 1	<p>club goods</p> <p>data bases (restricted access), trade secrets, tacit knowledge</p>	<p>private goods</p> <p>patent protected technologies, R&D staff in private enterprises, encryption</p>

3 types of knowledge



1. Basic knowledge to understand the principles
2. Applied knowledge to foster technological market innovation
3. Knowledge about the social impacts as
 - a basis for policy making
 - ‚knowledge for cooperation‘
 - knowledge transfer and diffusion

How do we jointly govern knowledge?



	International organization	International Regimes	Club Governance	Global Funds	Regional Integration	Research networks	Interregional Cooperation
Explicit STI Policy	UNESCO UNCTAD UNSTD	WTO- TRIPS	G8/O5 Carnegie Group	UNFSCTD	EU-7. FP AMCOST SAMCOST	ICSU UNU	IBSA Trilateral Commission for S&T
	WIPO		OECD Global Science Forum		ASEAN S&T Network ERA	IAC GRA	G77 Consortium on STI AKP Dialogue on IPR
Implicit STI Policy	UNIDO		G20 planned STI Cooperation				
	ECOSOC WHO IEA IPCC	UN Conventions UNCBD UNFCC UNCCD	G8/O5 Gleneagles Dialogue	GEF GFATM		CGIAR HFSP	

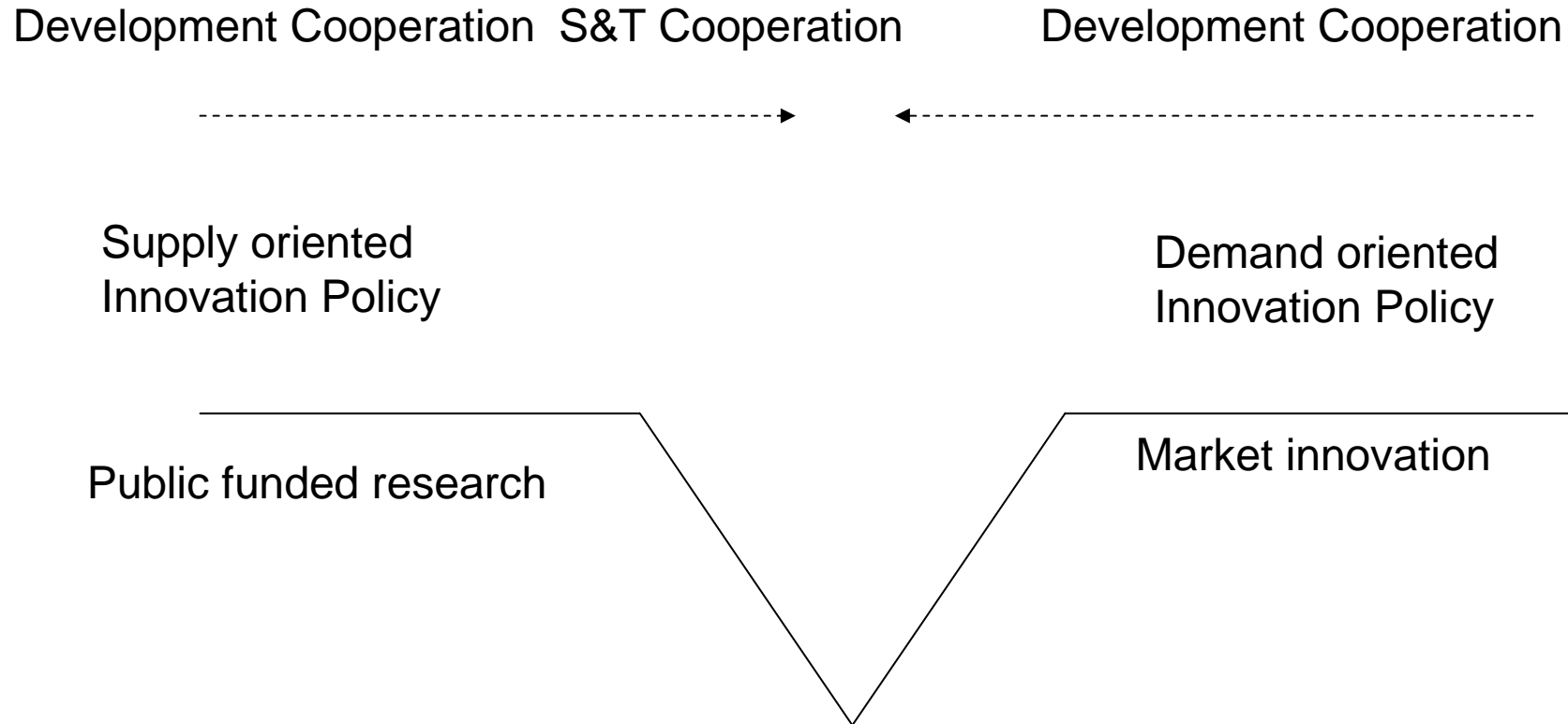


- Revival of knowledge in the German development cooperation portfolio
- Internationalization of German S&T Cooperation
- Increase of the policy field in Multilateral Cooperation



- Open Innovation Systems
- Nature of a double market failure
- Threat for market innovation by a ‚valley of death‘
- Contribution to global public goods
- Linking demand and supply side innovation policy

Bridging the ,Valley of death‘





S&T and Development Cooperation are complementary

- Supply side – strengthened by S&T Cooperation
- Demand side – new role for Development Cooperation

To create basic, applied and societal relevant knowledge to address the global challenge of sustainable development in the long term

- Strengthen multilateral governance mechanisms
- Creation of joint institutions

References



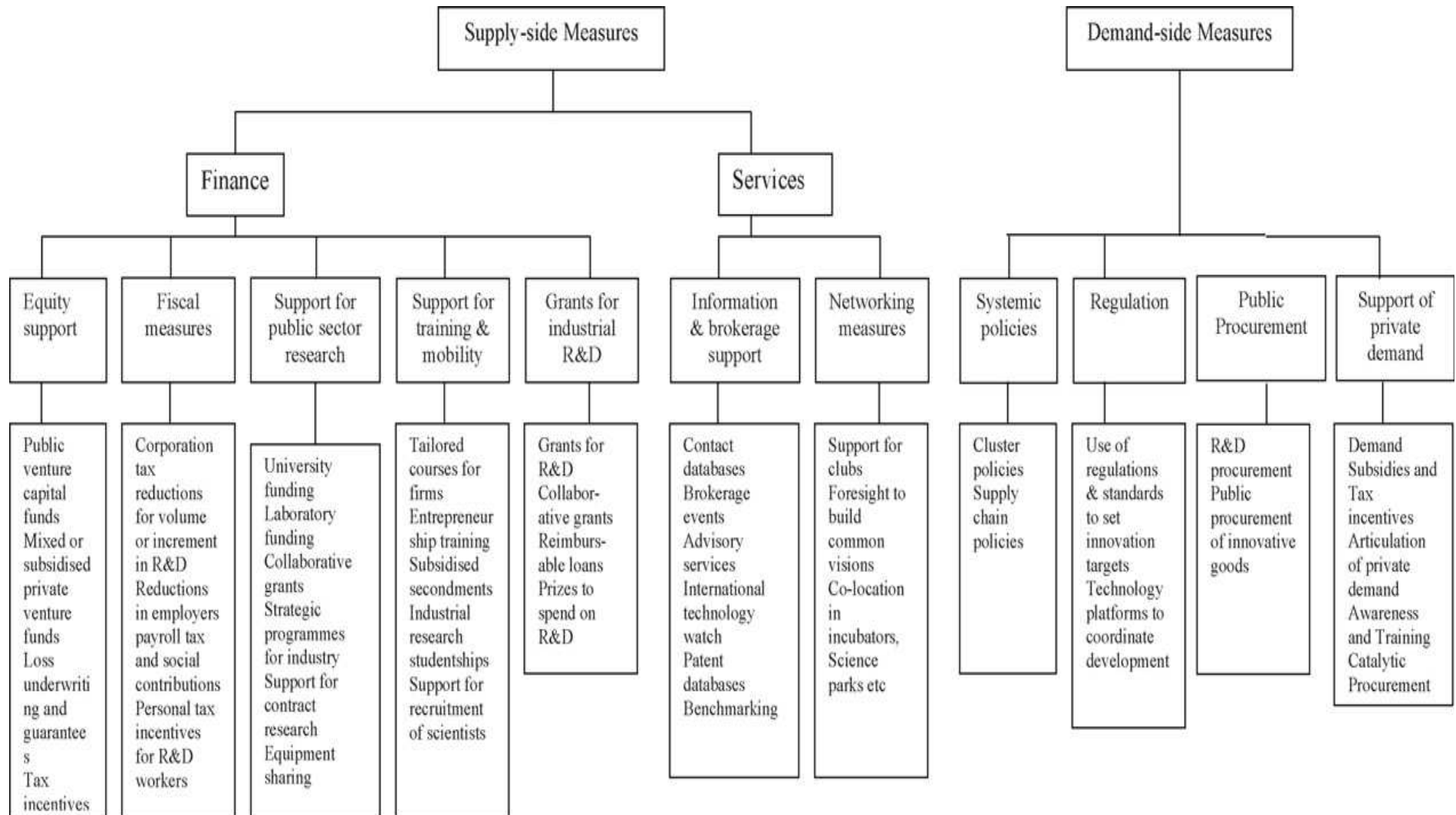
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Many thanks for your attention!

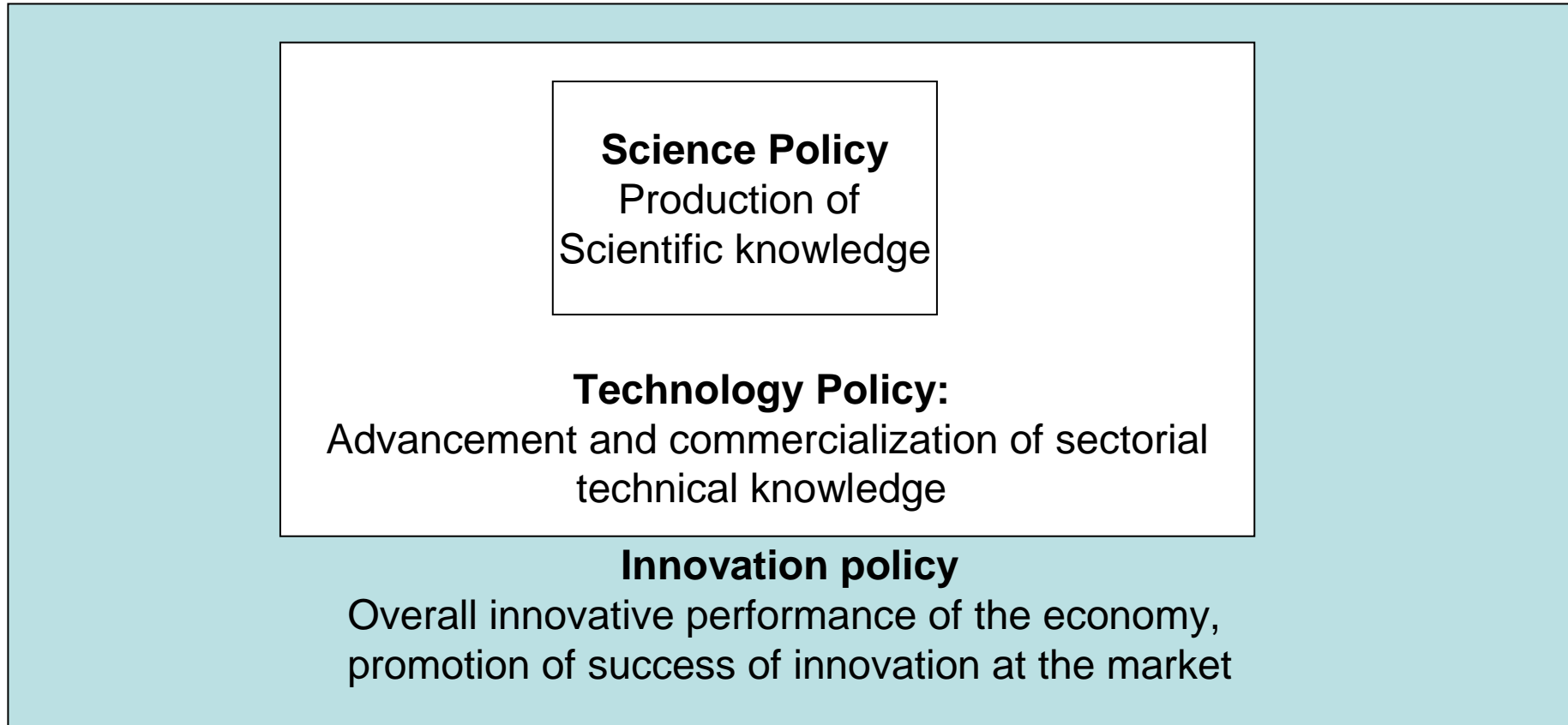
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Annex 1: Demand and Supply Oriented IP



Source: Edler/ Gerghiou 2007

Annex 2: Definition STI Policy



(Lundvall/ Borrás 2005)

Two overall objectives of STI policy

- Promotion of STI
- Regulation to prevent harm and abuse of STI, protect IP

(Mayntz 2009)