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iamo

Leibniz Institute of Agricultural Development
in Transition Economies



VolkswagenStiftung



Transformation of agricultural value chains and collective action in irrigated areas

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Samarkand Conference

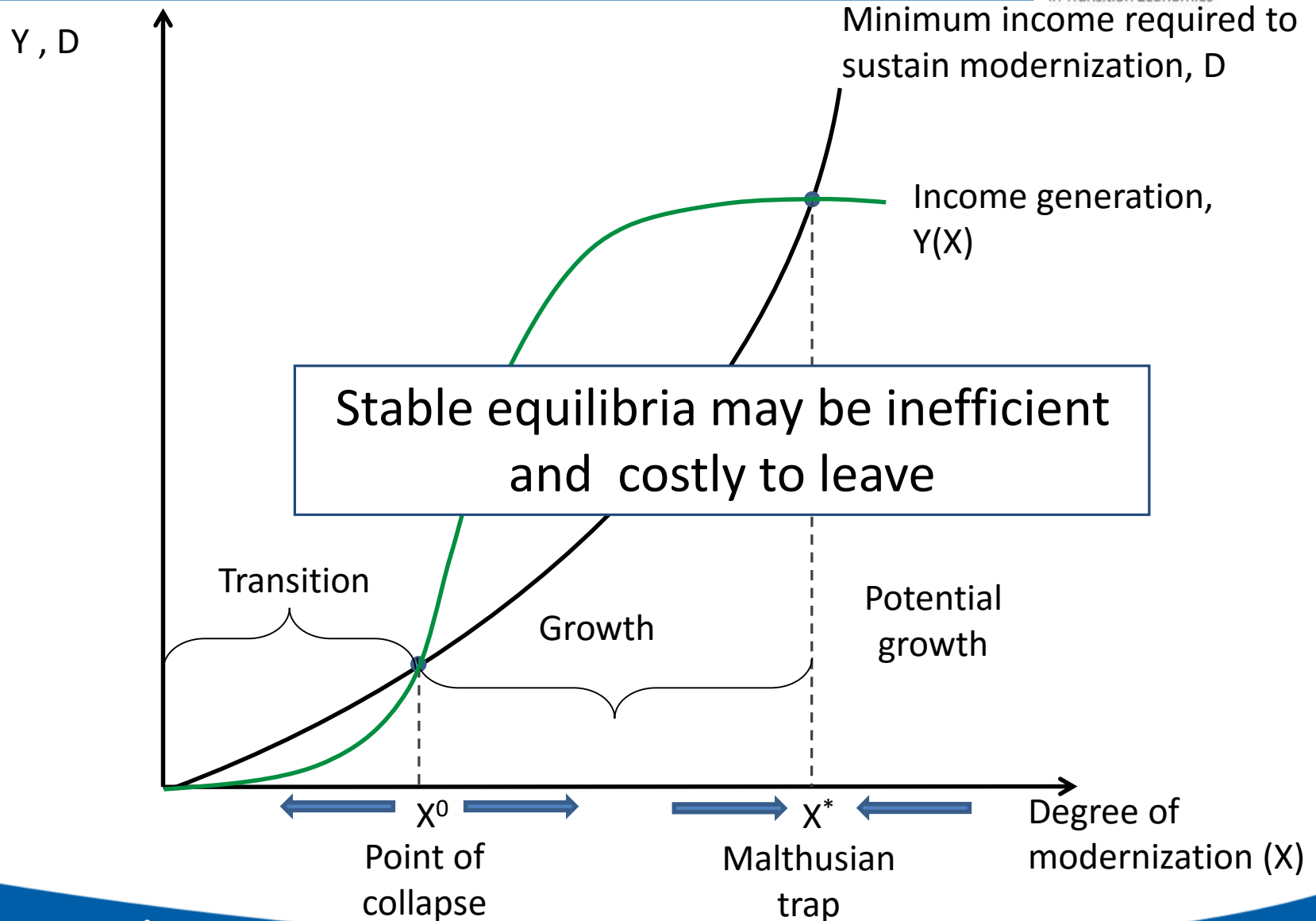
2 – 4 November 2016 | Uzbekistan

Institutional Change in Land-Labpr Relations in Irrigated Areas of Central Asia (AGRICHANGE)

- More into the project motivation
- Project profile
 - Objectives, research clusters, work packages
- Supply chain development
- Farmers' cooperation in water use

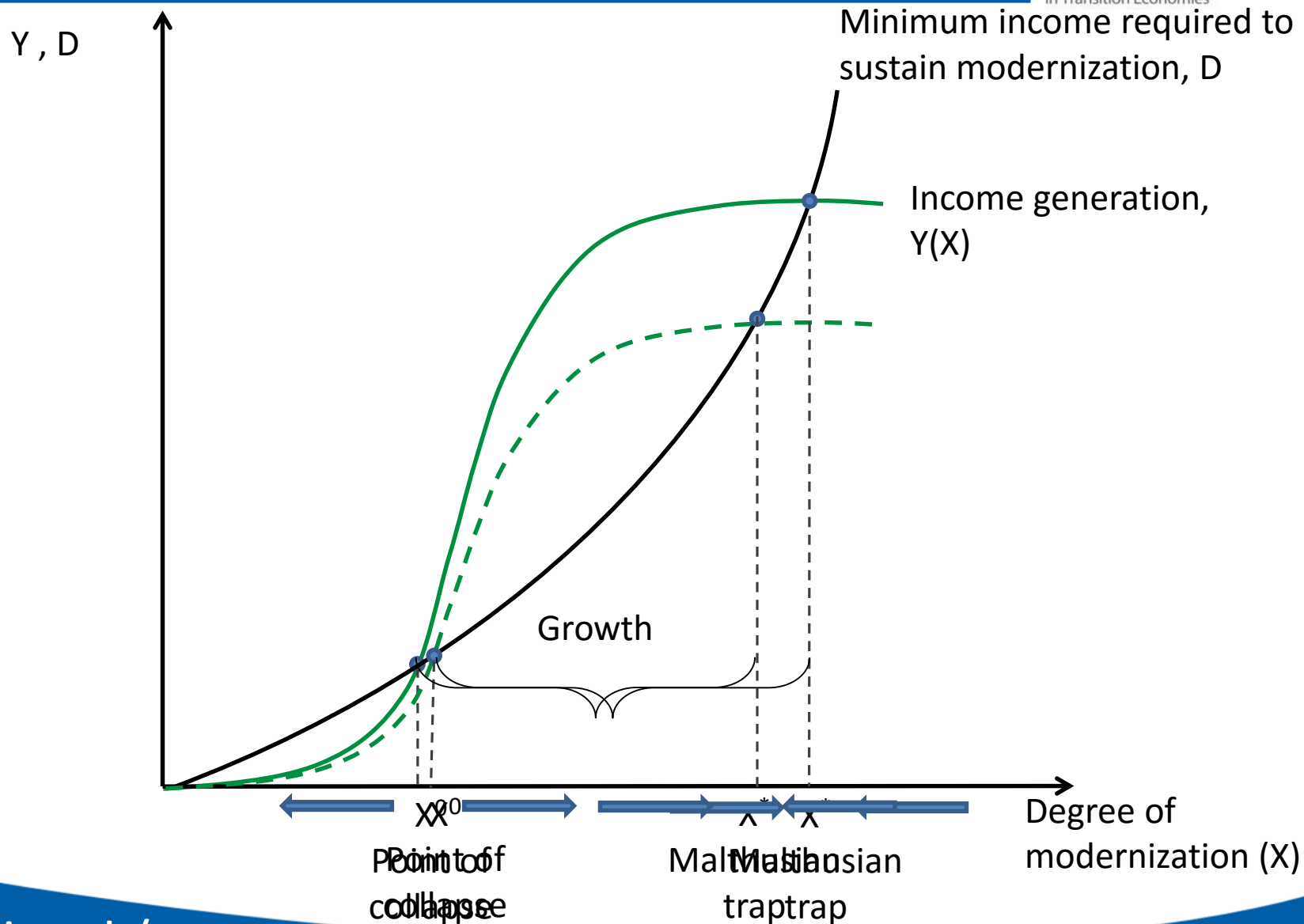
Reinterpreting 'Malthusian Trap'

Business as usual



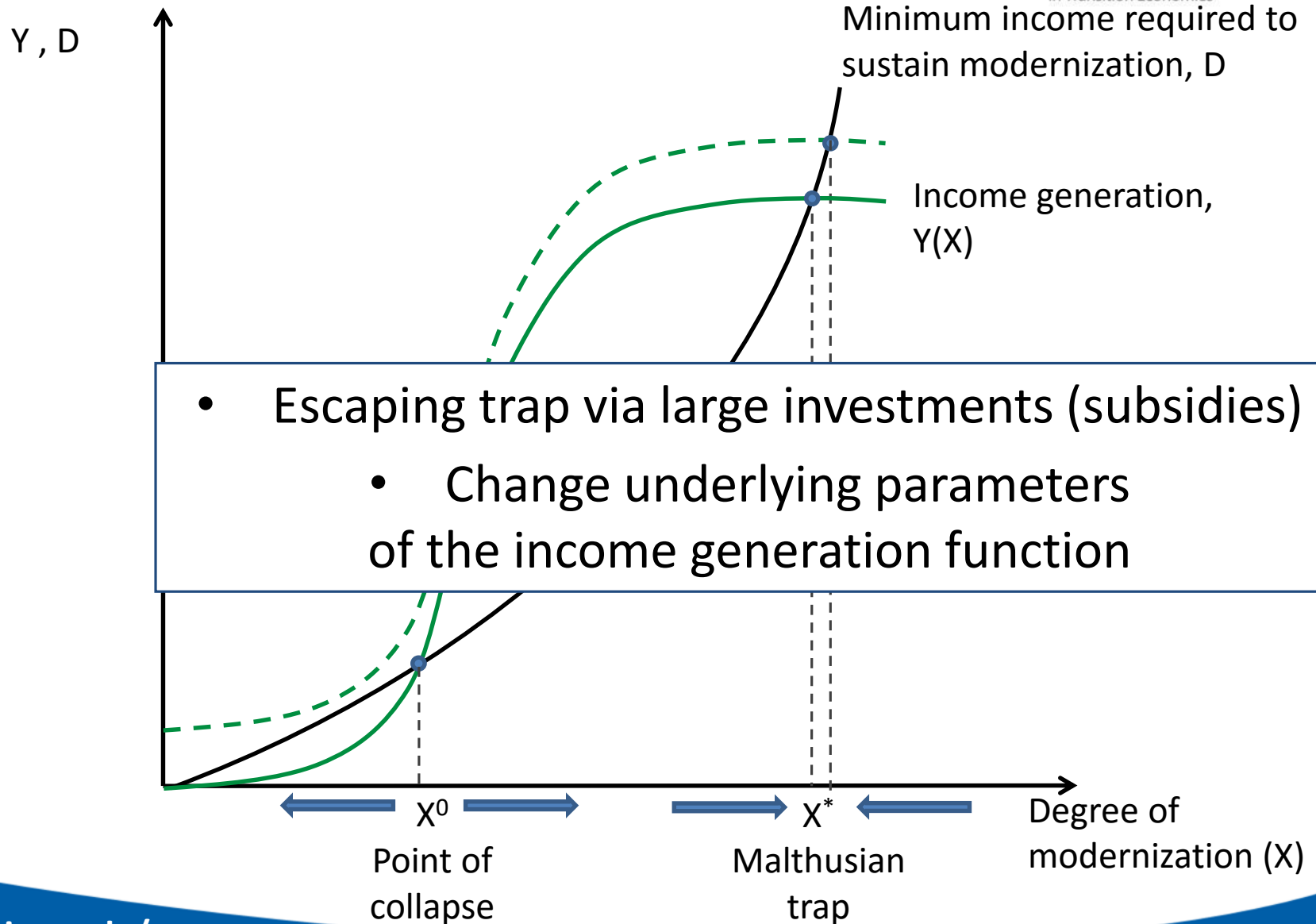
Reinterpreting 'Malthusian Trap'

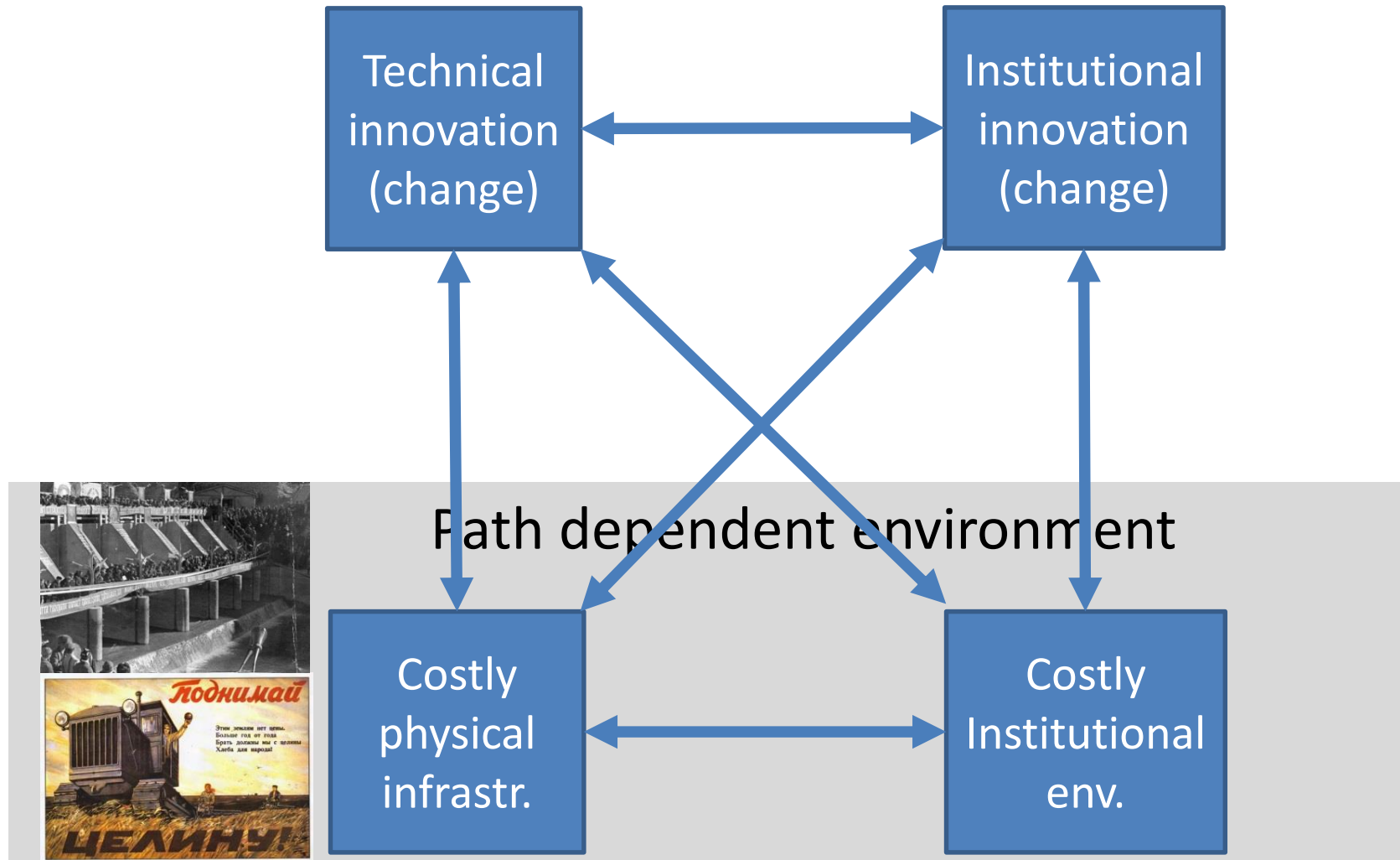
Degradation of resources

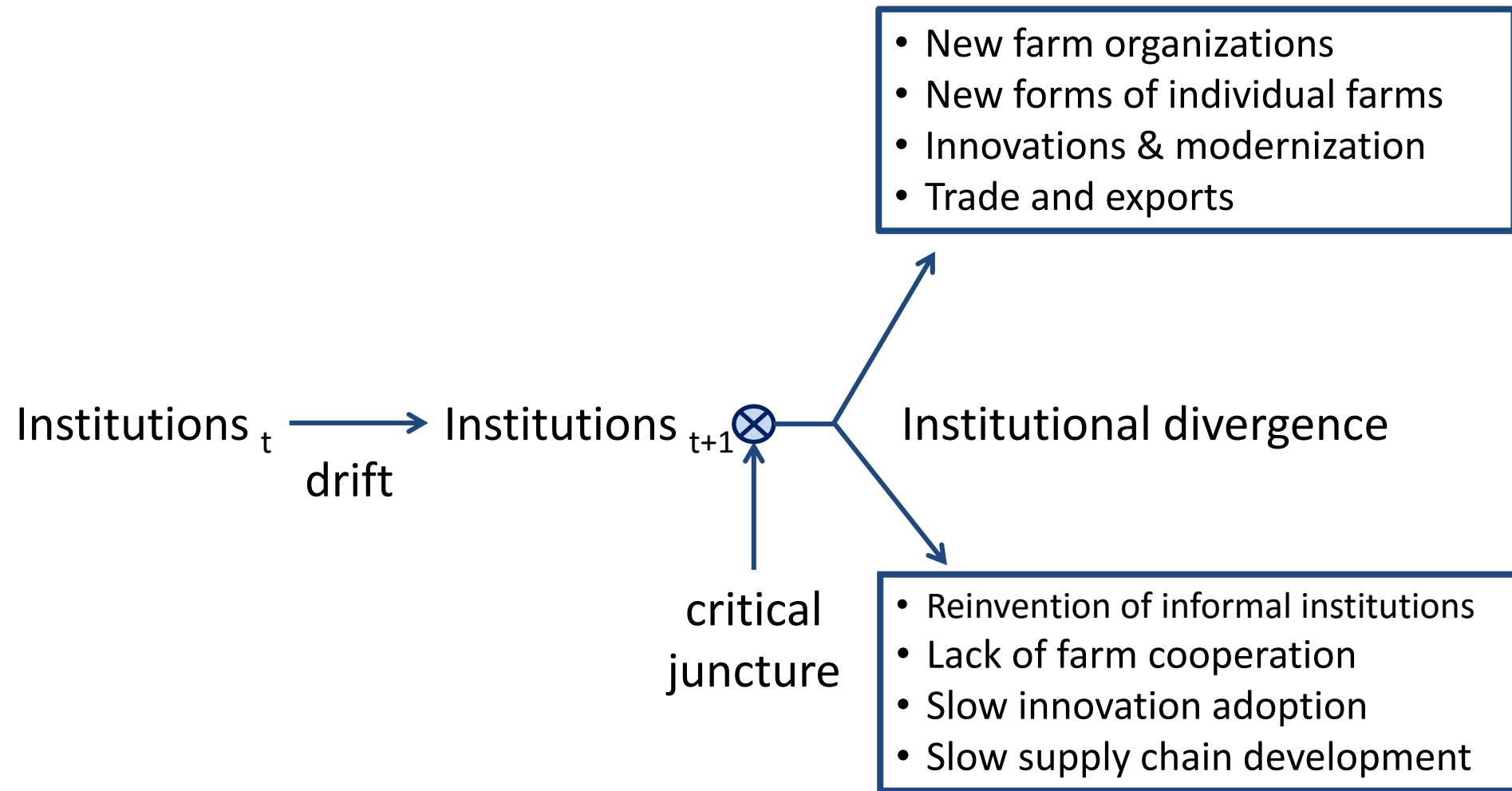


Reinterpreting 'Malthusian Trap'

The Innovation enters!







- 1. Analyse institutional change** in Central Asian agriculture, based on a comparison of two irrigation-dependent farming regions in Kazakhstan and Uzbekistan
2. Understanding the institutional change by **promoting theory development**, fertilised by multidisciplinary empirical insight
- 3. Integrate local universities** into international academic networks

Institutional change in:

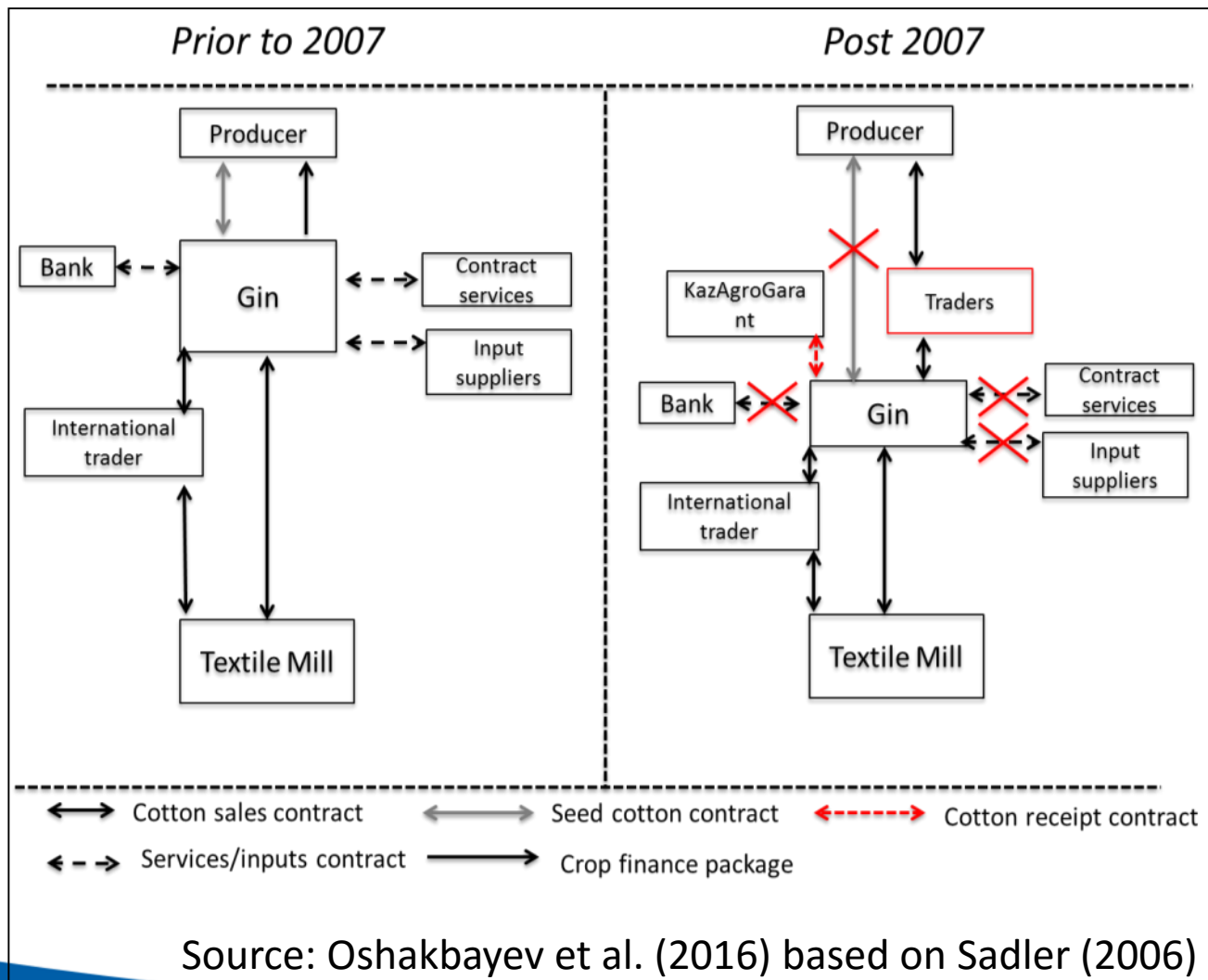
Type of interaction	Institution
Farmer – Processor	Contracts in supply chains
Farmer – Farmer	Water use cooperation
Farm manager – Farm worker	Labor effort incentives

Key research questions:

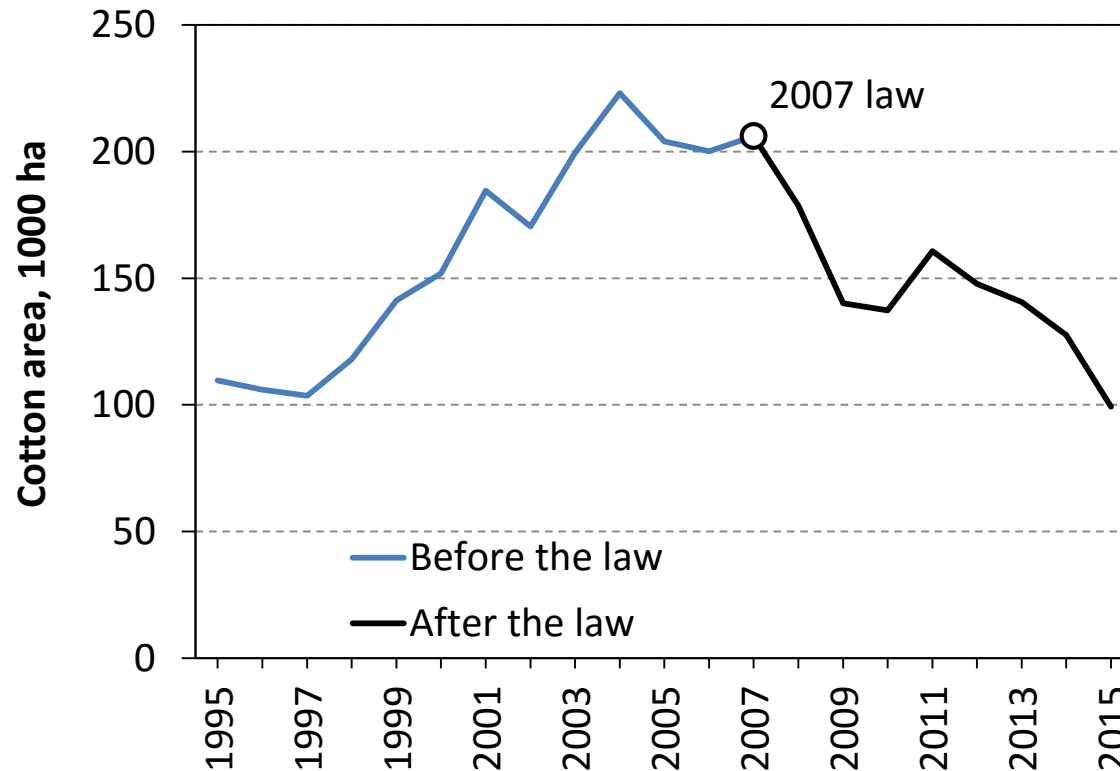
- How has the organization of value chains evolved and how can these changes be explained?
- What is the impact of contract farming on farm income and performance?
- What are the determinants of collective action among farmers in supply chains?

How has the organization of value chains evolved and how can these changes be explained?

Example: Cotton supply chain in Kazakhstan



Effect of the 2007 law



Source: Oshakbayev et al. (2016)

What is the impact of contract farming on farm income and performance?

- Emergence of contract farming played a prominent role in the development of supply chains in both regions

Examples:

- cotton producers and gins/traders in South Kazakhstan
- vegetable/fruit producers and processors in Uzbekistan

Although contract farming is often linked to productivity increases, technological transfer etc., establishing a definitive causal relationship is challenging

(Dries and Swinnen, 2004; Gow and Swinnen, 2001).

What are the determinants of collective action?

Through the lens of transaction economics

	Individual Farmers	Bargaining Association	Marketing Cooperative	New Generation Cooperative	Investor-Owned Farm
<i>Intensity & Mechanisms of Control:</i>	<i>Price</i>	<i>Minimal Equity</i>	<i>Medium Equity</i>	<i>High Equity</i>	<i>Hierarchy</i>
Asset Specificity	Very Low (1)	Low (2)	Intermediate (3)	High (4)	Very High (5)
Frequency	Very Low (1)	Low (2)	Intermediate (3)	High (4)	Very High (5)
Uncertainty	Very Low (1)	Low (2)	Intermediate (3)	High (4)	Very High (5)
Externalities	Very Low (1)	Low (2)	Intermediate (3)	High (4)	Very High (5)

Key research questions:

- What are the determinants of cooperative behaviour among Central Asian farmers?
- What institutional setting enables better cooperative result? And how does it happen?
- What synergy of institutions could lead the current decentralized irrigation water management of the region into cooperative solution?

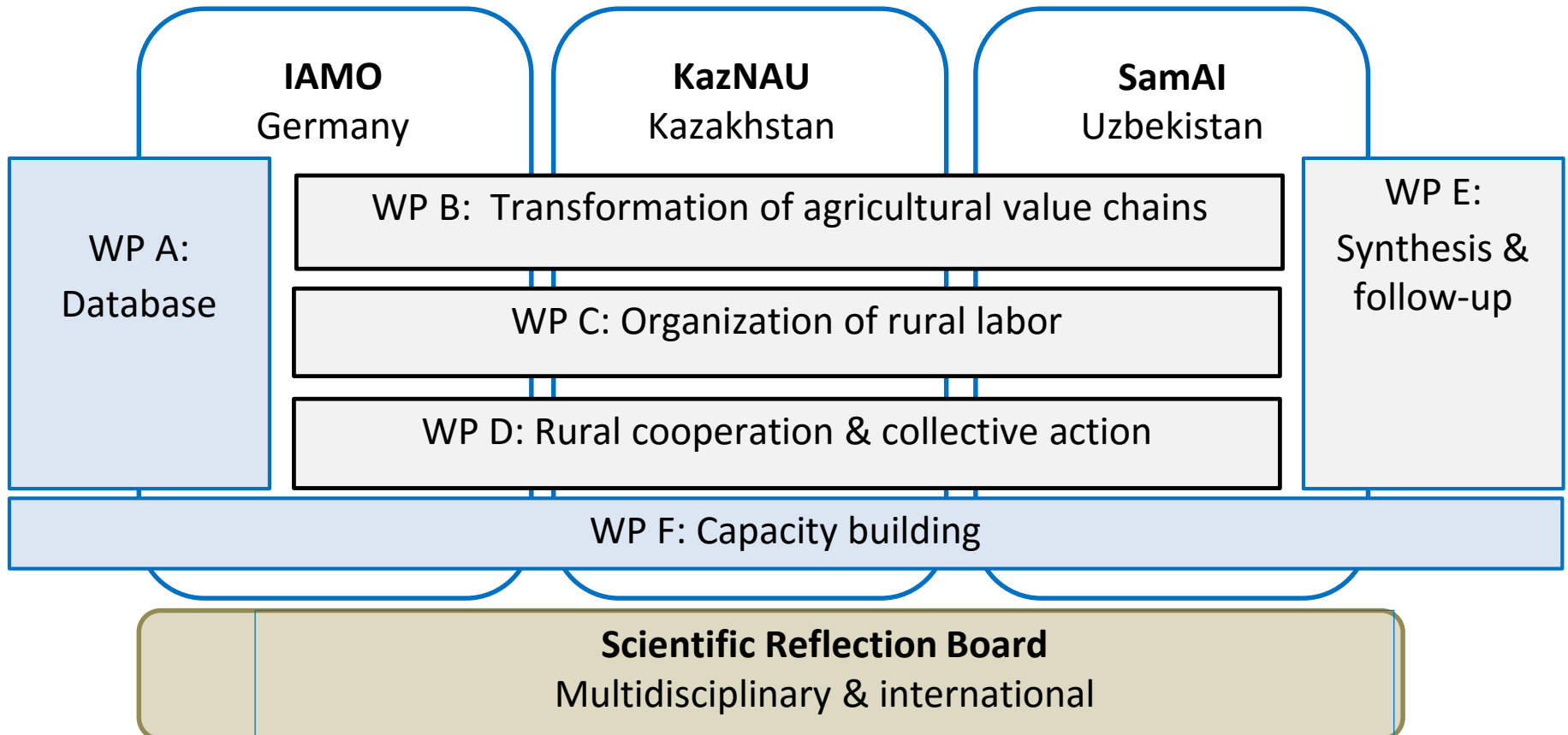
Simplified overview of Central Asian irrigation water governance path

Irrigation management	Governance structure	How did it function?	How coordination was approached
7-19 centuries (Traditional settings)	Market-community-state-synergy	<ul style="list-style-type: none"> -<i>Election-sanctioning</i> by the water users; -Reliance on water users' free labor (hashar) -Federation of water management -Supportive legal env. 	Institutional complementarity -successfully and continuously handled the coordination
19 century (Tsarist intervention)	State community-synergy	<ul style="list-style-type: none"> -Irrigation staff – civil servant -Reliance on water users' free labor (annual hashar) 	Institutional crowding out leading to weak community-failed to handle the coordination

Simplified overview of Central Asian irrigation water governance path

Irrigation management	Governance structure	How did it function?	How coordination was approached
20 th century (Soviet and early post-soviet years)	State (and created communities –kolkhozes)	<ul style="list-style-type: none"> -Irrigation staff- civil servant (fixed wage) -Water user – worker with fixed wage 	Coercive coordination of cooperation
Present time	Market-community-state-synergy	<ul style="list-style-type: none"> -Irrigation staff/WUA – civil servant (fixed wage); -Reliance on water users' contribution (hashar) and payment - Legal supportive environment 	????

Project structure



- Land market development and its influence on agricultural land use in Kazakhstan
- Transformation of agricultural value chains
- Organization and management of farm labor
- Access to agricultural services and impact on farm productivity in Samarkand
- Modernization of public administration in of agrisector in Kazakhstan
- Options for promoting farm cooperation in water use in Samarkand
- Rural cooperation and collective action in irrigated areas of Central Asia

- Literature review
- Historical analysis
- Longitudinal data from official statistics
- Cross-sectional farm surveys
- Qualitative interviews with key stakeholders
- Innovative methods
such as experiments, participant observation, group
discussions



Thank you!

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