



Mobilizing University Resources

The role of non-teaching units in developing and supporting firms

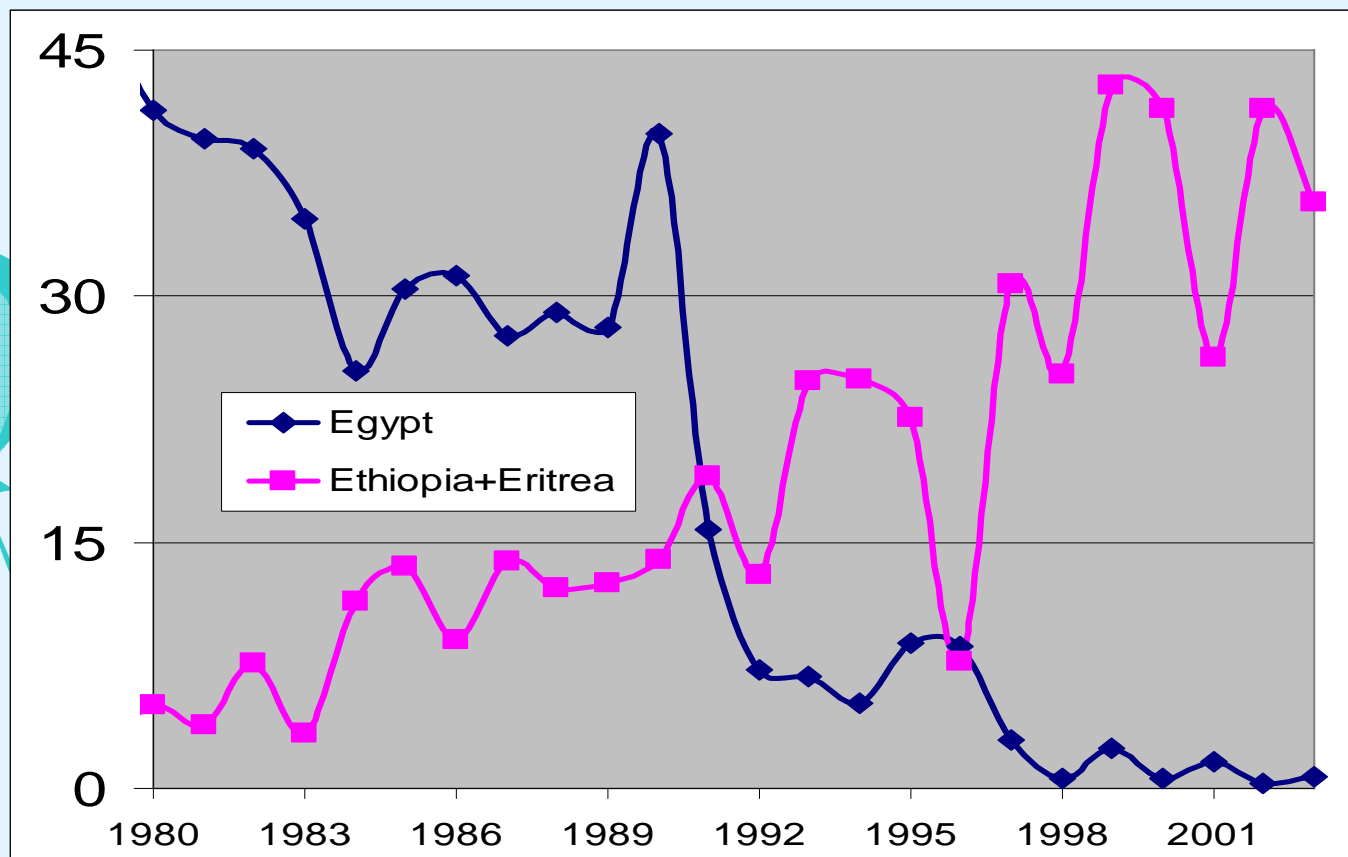
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Development Forum**

Africa's technology gaps at a glance

	Income gap (GDP per capita)	Technology generation gap (Patents appl~ns/person)	Technology ownership gap (Royalty/licensing receipts (\$/person))
North America	100.0	100.0	100.0
Europe	73.3	35.0	62.1
LAC	9.9	1.4	0.6
<i>Africa</i>	<i>2.3</i>	<i>1.3</i>	<i>0.3</i>
Asia	3.9	3.5	0.4

Food aid shipments to Egypt and Ethiopia + Eritrea*) (as percentage of Africa's total receipts)



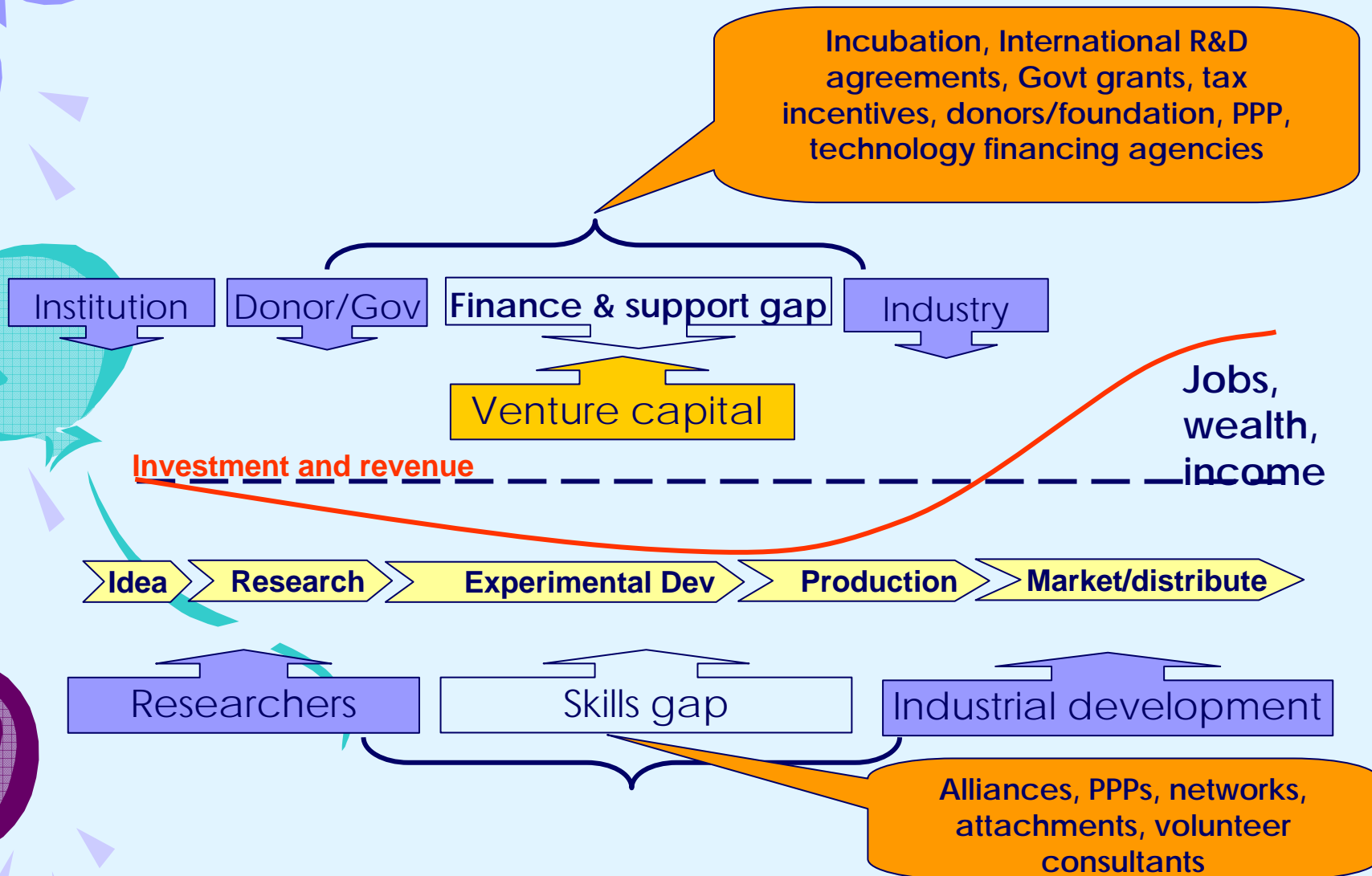
*Ethiopia and Eritrea been added for comparison only.



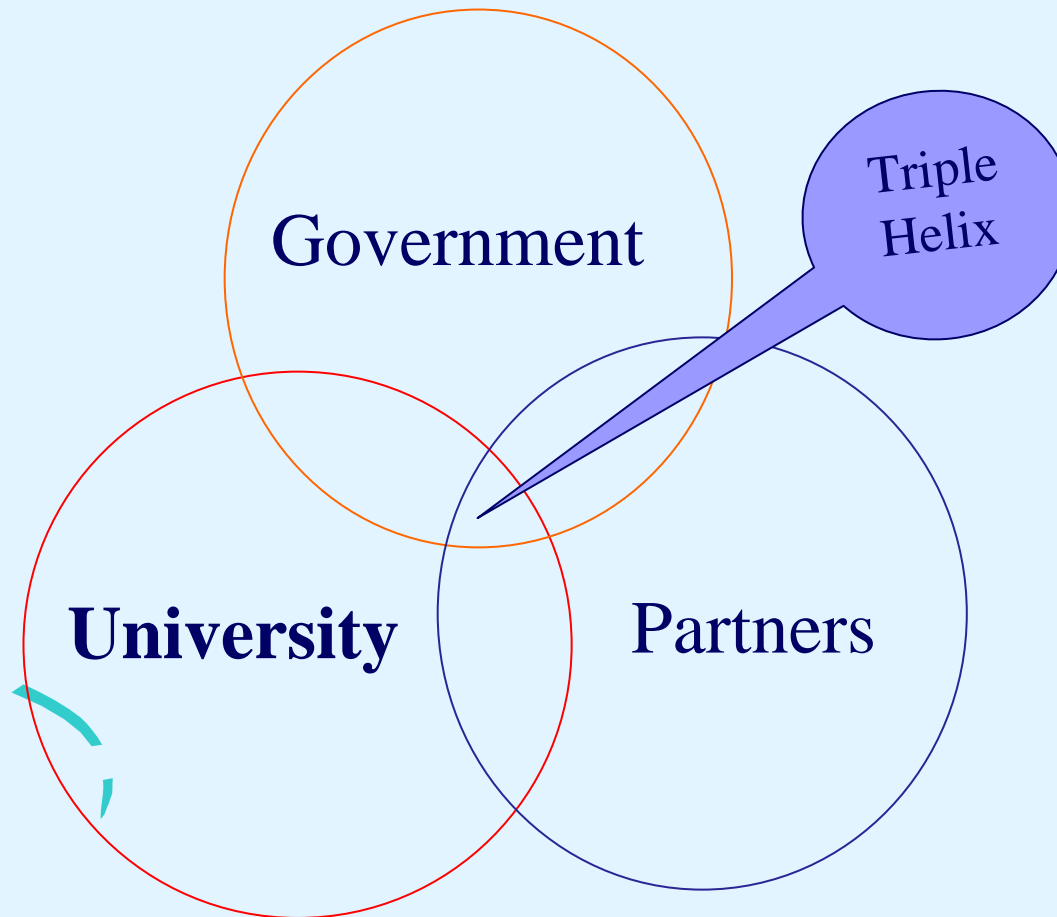
The deafening silent message

- Universities are not producing enough research
- Industries are not innovating
- In other cases, industry do not exist
- Governments, donors are providing temporary measures???
- Many opportunities for entrepreneurs
- Universities may have to produce and support firms, and development

Two major gaps



The TH modified





Types of universities

- Teaching university
 - Research university
 - Entrepreneurial university
 - A development(al) university
 - help meet development goals
 - promote entrepreneurship beyond students/professors
 - Corporate university
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University of Zambia

- Evolution of management structure
- Interdisciplinary nature as natural
- Historic linkages with industry
- Historic linkages with government
- Commercial properties
- Invisible commercial activities
- Recent developments and reasons

Computer Centre: Developing and supporting firms

1. Internet development in Zambia

- The process, partners, incubation---

- The role of Government

Freedom, credibility, licensing and regulations

- The role of partners

Funding, equipment, software, designs etc

- The role the University

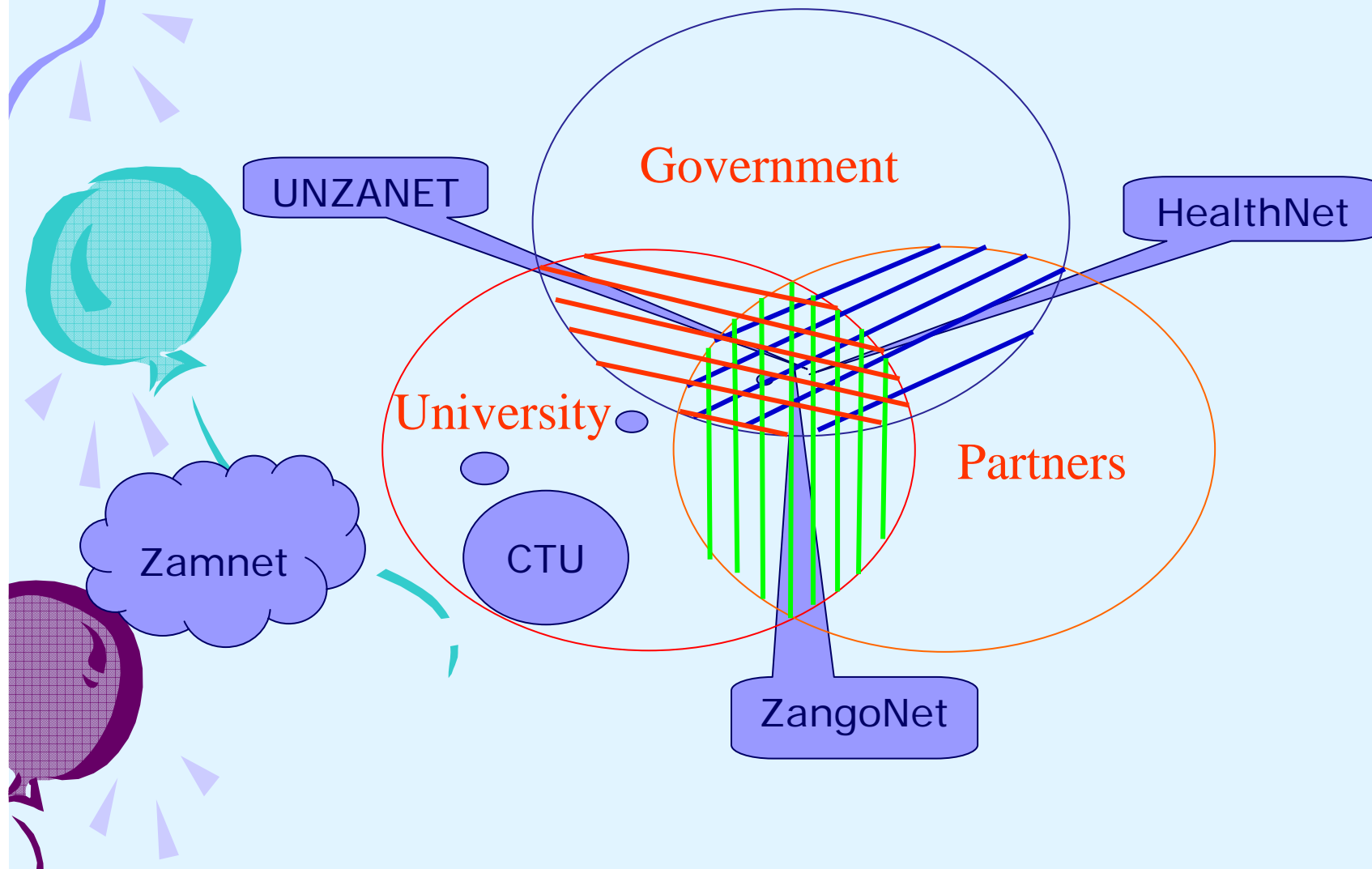
Pooling partners; provision of space, manpower, management and credibility



The Case: time line

- 1990, The 1st Email network
- 1991-4, Three projects develop
- 1994. The birth of Zamnet Com. Ltd
- 1994-6, Incubation of Zamnet (operate from UNZA office)
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- 1998. Zamnet leaves the incubator to an independent office in town centre.
- 1999-2002, Zamnet establishes three regional offices

A win-win situation: Exit routes



Technology Development and Advisory Unit (TDAU)

The Case of TDAU: Historic overview

- Founded in 1975 by Sch. of Eng.
- Initially to deliver engineering solutions to industry
- Activity: Design, fabrication, consult/advise
- Focus: Intermediate technology
- The challenges:
 - 1. Large firms found TDAU products too basic
 - 2. Small firms are too few and unreliable clients
 - 3. Government support was disappearing
- UNZA had to shed TDAU as a 'self-sustaining unit'
- An MOU was signed between UNZA and TDAU



TDAU:

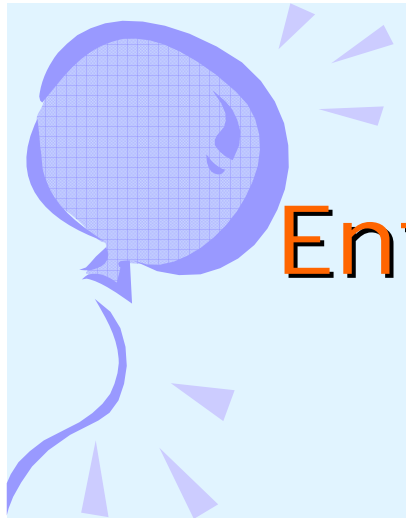
Its current orientation/performance

1. Demand-driven- *develops products on request*
2. Diversified its client base- (*industry, NGOs, donors and Govt.*)
3. Advertises and bids for contracts
4. Many hire UNZA staff to meet its objectives



Success factors

- Enjoys greater independence and freedom of operation
- Is required to repay back half the salaries it draws
- It has to meet all its operational costs
 - Can declare bonuses for its staff
 - Re-invests its extra resources
- Can recruit staff from outside UNZA



Characteristics of Entrepreneurial universities

Expected

UNZA

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1. Strengthen Steering Core-----**Emerging**
 2. Expanded Developmental Periphery-----**None**
 3. Stimulated Academic Heartland-----**Traditional**
 4. Integrated Entrepreneurial Culture-----**Localized**
 5. Diversified Funding Base-----**Narrow**

The role of non-teaching units

- Concentrate human capital
- Breakdown walls/boundaries within institutions
- Serve as bridge between University and industry or Govt
- Concentrate resources
- Reduce red tape
- They are easier to reorganize, rearrange
- Strength in size of network not building



The challenges

- Managing internal conflicts
- Managing national transitions
- Remaining relevant in a rapidly changing business environment
- Reconciling differences in needs
 - Large firms, SMEs, Govt, citizenery
- Being or, at least appearing to care
- Limited resources vs vast demands



The opportunities and benefits

- Wide support for academic entrepreneurship
 - High concentration of skilled human capital
 - Academic, development or commercial research? Great potential in all.
 - Have good relations with Govt and industry
 - Easily isolate from business interests
 - Help improve the reputation/funding
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Way Forward

"Road to development has no lanes or signs"

(Source: ATDF)