

Fall 2008 NEURUS Seminar

University of Illinois
at Urbana-Champaign

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Bachelor's Thesis Project:

“Academic Collaboration in Technology Parks –

The Triangle Universities Center for Advanced Studies Inc.”

1. Motivation and Introduction
2. Theoretical Framework
3. The TUCASI
4. Questions and Methods

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2. Theory
3. The TUCASI
4. Questions and Methods

"If one man starts a new idea, it is taken up
by others and combined with suggestions of
their own; and thus it becomes the source of
further new ideas"
(MARSHALL 1890 cit. aft. HENDERSON
2001, 244)



1. Introduction
2. Theory
3. The TUCASI
4. Questions and Methods

1. What are the processes that induce knowledge creation and innovation?
2. Are there means to support these processes?

Why Regional Economic Development?

Local and regional wellbeing depends upon the sustained increase in employment, income and productivity, integral to economic development. (STORPER 1997)

Local ties of knowledge- based activity are increasing. (KRÄTKE 2004)



Economic development beyond Solow and Ford:

Technological advance no longer an external factor (FRANZ 2004)

Change in paradigm from Fordism to Post-Fordism leads to emerging importance of **innovation**. (KRUGMAN 1991)

“New Economic Geography”:

The embeddedness of business activity into an **institutional framework** determines economic growth. (MARTIN 2000)

(National and regional) innovation systems:

“(...) network of institutions in the public and private sectors whose **interactions** initiate, import, modify and diffuse new technologies.” (FREEMAN 1987, 1)

The innovative milieu:

Creates innovation in a self-amplifying process as a result of a **network** of interacting entrepreneurs, politicians, scientists and planners. (CAMAGNI 1991)

Example: **technology parks**

Critical: **knowledge spill-over**

The role of universities:

“In an economy, where information is becoming an increasingly fundamental commodity and the very basis of production is becoming more knowledge-intensive, the role of universities in **retaining and transmitting knowledge** becomes ever more crucial.” (FELDMAN 2006, 360)

Mechanisms of university knowledge-transfer:

Sponsored Research
Licences
Hiring of Students
Spin-off Firms
Serendepity



The role of Humboldt University concerning it's related tech-park in Adlershof
(results of a survey by WEBER-BLEYLE 2005) :

Degree of networking between the tech-parks companies and HU-institutes is very low.

Companies prefer networking to other companies inside the tech-park and to the Technical University outside the tech-park.

How could the degree of networking between business and science be improved?

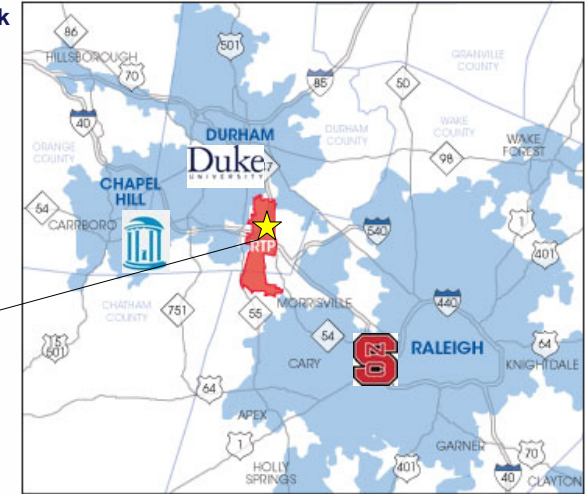


The Research Triangle Park

Created 1959
Largest tech-park in US
Very successful

Unique:

The TUCASI



The Triangle Universities Center for Advanved Studies Inc.



Created in 1975, funded by the Research Triangle Foundation

Joint collaboration among DUKE, NCSU and UNC-CH

Managed by a board of trustees, consisting of mostly university representatives



The Triangle Universities Center for Advanved Studies Inc.

Institutes located on TUCASI-campus:



National Humanities Center
-increase the intellectual life of the region



Microelectronics Center of North Carolina
-build NC's technical infrastructure for science based economic development



North Carolina Biotechnology Center
-support of biotechnology research, business and education



The Triangle Universities Center for Advanced Studies Inc.

Institutes located on TUCASI-campus:

National Institute for Statistical Sciences

-research in areas where statistics is central to the studies

Other TUCASI related Institutes located off-campus:

Triangle Universities Library Network

North Carolina Network Initiative

Sigma Xi

(Triangle Universities Licensing Consortium)



The Triangle Universities Center for Advanced Studies Inc.

Effects on the triangle region:

Brings together faculty and researchers that would not have met otherwise!

Attracts companies to locate in the Research Triangle Park!

Enhances collaboration between business and science!



Question 1: What are the **effects** on the local economy, especially in the sense of knowledge-transfer and spill-over, that the TUCASI is accountable for?

Question 2: As **how important** estimate experts the bundling function of the center concerning the technology park's focus?

Question 3: What **feedback mechanisms** are working to ensure the effectiveness of the center?

Question 4: Which **preconditions** are critical for the establishment of a center like TUCASI?



Potential interviewees: William Little (former TUCASI president)
Rick Weddle (CEO of RTF)
Albert Link (Author "From Seed to Harvest")
...

Literature: Link, Albert N.: *From Seed to Harvest: The History of the Growth of the Research Triangle Park.*

Hamler, Siler, George Associates: *The Research Triangle Park: The First Forty Years.*
...

Others: Manuscripts Department at Wilson Library (UNC)



Outlook:

Is the idea of bundling a regions academic research and providing it to a technology park *useful? Successful? **Transferable?***