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CAPES – Coordination for the Improvement of Higher Education
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North Carolina State University
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Universidade Nove de Julho
Business Administration Program
Main field: Innovation
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Universidade Nove de Julho

Dissertation subject: technology transfer between university and industry
UNINOVE - São Paulo
EDUCATION

• Continuing Education – American Language Program - California State University East Bay – Hayward – CA – U.S.A., 1999

• B.A. in Business Administration – Santa Catarina Federal University – Florianópolis – SC – Brazil, 2002

• Master in Business Administration (dissertation Title: “Sustainable development and the consequences of cleaner production on the production planning: a case study in a metal-mechanical company”) – Santa Catarina Federal University, 2005
UFSC – SANTA CATARINA
EMPLOYMENT
Assistant Professor, Mato Grosso do Sul Federal University, Aquidauana – MS – Brazil, Since 2009 - Under Graduation Program in Business Administration Coordinator – 2010-2012

TEACHING EXPERIENCE (undergraduate)
Operations Management; Logistics; Supply Chain Management - Mato Grosso do Sul Federal University – UFMS – since 2009
UFMS – MATO GROSSO DO SUL
RESEARCH INTERESTS

Technology transfer (specially between university and industry), innovation, operations management and sustainable innovation

Research groups

• Interdisciplinary Studies in Management of Production and Costs – Santa Catarina Federal University – UFSC
• Strategy and Competitiveness – UNINOVE
• Strategic Management of Educational Projects - UNINOVE
THE CONTINGENT EFFECTIVENESS MODEL OF TECHNOLOGY TRANSFER INTO THE AGRICULTURAL TECHNOLOGY TRANSFER PROCESSES: A MULTIPLE CASE STUDY CASES IN BRAZIL AND IN THE UNITED STATES OF AMERICA

Daniela Althoff Philippi

PhD Dissertation Proposal

Business Administration PhD Program – Universidade Nove de Julho
INTRODUCTION

The research problem → question

EUA        USA

BRASIL     Brasil

Different contexts

AGRICULTURE

THE CONTINGENT EFFECTIVENESS MODEL OF TECHNOLOGY TRANSFER
(Bozeman, 2000)

How is the application of the Bozeman’s Contingent Effectiveness Model of Technology Transfer into the agricultural technology transfer processes between universities and industry in Brazil and in the United States of America?
INTRODUCTION

Goals

General goal
To apply the Bozeman’s Contingent Effectiveness Model of Technology Transfer into the agricultural technology transfer processes between universities and industry in the United States of America and in Brazil

Specific goals

• To identify the technology transfer effectiveness broad dimensions and criteria such as their variables;

• To propose dimensions, criteria and variables to integrate the Technology Transfer Effectiveness Model starting from a literature review;

• To verify, empirically, the Technology Transfer Effectiveness Model dimensions, criteria and their variables – and the additional ones – which are applied by the selected agricultural technology transfer processes in the United States of America and in Brazil;

• To describe how the Technology Transfer Effectiveness Model dimensions, criteria and their variables – and the additional ones – are adopted by the selected agricultural technology transfer processes between universities and industry in the United States of America and in Brazil.
Justification for the proposal research

**TT U-I**

- Limited case studies - Brazil and the USA
- Bozeman’s Contingent Effectiveness Model of TT ➔ few empirical studies
- Agribusiness in Brazil
- U-I prominence (Segatto-Mendes e Sbragia, 2002).

**WHY AGRICULTURAL TECHNOLOGY?**

*Agriculture is an activity economically expressive in Brazil*

- Agribusiness - about 22.3% of gross national product and agriculture activity – 70.4% and the livestock 29.6% of the this total of agribusiness percentage)
- Brazil in the next 10 years: the main exporters ➔ an increasing of the consumption
- Emerging countries/economies

The human population growth and the increasing consumption (Brazil, 2013)

Technology by TT U-I ➔ higher agribusiness productivity
LITERATURE REVIEW

The Bozeman’s Contingent Effectiveness Model of TT (Bozeman, 2000)

TRANSFER AGENT
- Who?
  - Technological Niche
  - Mission
  - Sector
  - Resources
  - Geographic location
  - S&T HC
  - Organizational Design
  - Management Style
  - Political Constraints

TRANSFER MEDIA
- How?
  - Open Literature
  - Patent, Copyright
  - License
  - Absorption
  - Informal
  - Personnel Exchange
  - On-site Demonstration
  - Spin-off

TRANSFER OBJECT
- What?
  - Scientific Knowledge
  - Physical Technology
  - Technological Design
  - Process
  - Know-how, Craft

DEMAND ENVIRONMENT
- Why?
  - Existing Demand for Transfer Object
  - Potential for Induced Demand
  - Economic Character of Transfer Object

TRANSFER RECIPIENT
- For who?
  - S&T HC
  - Resources
  - Manufacturing Experience
  - Marketing Capabilities
  - Geographic Location
  - Diversity
  - Business Strategies

TRANSFER OBJECT USE
- Out-the-Door
  - Opportunity Cost
  - Scientific & Technical Human Capital
  - Political
  - Economic Development
  - Market Impact
METHODS AND PROCEDURES

- Qualitative research (Minayo et al, 1994; Flik, 2004; Eisenhardt, 1989).

- Multiple case study: explanatory (Yin, 2001, p.32; Eisenhardt, 1989).

- Non-probabilistic intentional sample (Selltiz et al, 1974).

- Data analysis: qualitative content analysis - categories (Kude, 1999; Minayo, 1999).
METHODS AND PROCEDURES

About the selected universities

SAO PAULO STATE UNIVERSITY - USP

Luiz de Queiroz College of Agriculture - USP
ESALQ USP

Departments:
Agri-food Industry; Food and Nutrition; Animal Science; Biological Sciences; Biosystems Engineering; Crop Science; Economics, Administration and Sociology
Entomology and Acarology; Forest Sciences; Genetics Math; Chemistry and Statistics; Plant Pathology and Nematology; Soil Science (USP, 2013b).

Structure TT U-I
• Innovation Agency, Technological Incubator, Agricultural Productor’s house (ESALQ USP, 2013b);
• Esalq USP does not integrate the Science Park of the city where is located - Piracicaba (SÃO PAULO, 2013).
About the selected universities

NORTH CAROLINA STATE UNIVERSITY

COLLEGE OF
Agriculture & Life Sciences
ACADEMICS ▪ RESEARCH ▪ EXTENSION
About the selected universities

College of Agriculture and Life Sciences Departments
4-H Youth Development and Family & Consumer Sciences; Agricultural and Extension Education; Agricultural and Resource Economics; Animal Science; Applied Ecology; Biological and Agricultural Engineering; **Crop Science; Entomology; Food, Bioprocessing and Nutrition Sciences;** Horticultural Science; Molecular and Structural Biochemistry; Plant & Microbial Biology; Plant Pathology; Prestage Dept of Poultry Science; Soil Science; Statistics (NCSU, 2013).

Structure of TT U-I

- Office of Technology Transfer – OTT and a Technological incubator (NCSU, 2013); - Extension;
- 130 research partners; more than 100 start-ups and 400 commercialized products (NCSU, 2013).