

Research Proposal

Trust and Commitment in University-Industry Relationships: The role of Science and Technology Parks

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PURPOSE OF RESEARCH

ANALYZE

To **analyze university-industry relationships**, using the Triple Helix Model in order to identify the role of each actors (universities, industry and government).

REALIZE

To **realize** how **relationships between universities and industry** are established, who carries (and with which purpose) the first contact, and what assumptions underlie future relationships.

QUANTIFY

To **quantify** the **relationships** already established and identify their typology, taking also into account the influence of new supportive infrastructures (Science and Technology Parks, of which universities are part of) in the process.

INTRODUCTION

Cooperation between Universities and industry has been given a new and larger dimension, assuming industry the role of strategic partner institutions in higher education.

Research and development are no longer made within Industry' own laboratories, in secret; **now primacy is being given to collaboration with other actors, in a new form of "open innovation"** (Lambert, 2003).

INTRODUCTION

The establishment of **partnerships with different actors** also gave rise to the development of new projects, in which we highlight the Science Parks (SP) and Business Incubators (BI) .

Despite the work already made on **university-industry relationships**, there are still few studies on the genesis of this **relationship and on success factors** that are essential to their maintenance, as well as to the establishment of new partnerships. In the same way, and through the literature review conducted, there are no studies that have focused on the factors of trust and commitment and on its connection to the actors Science Parks.

RESEARCH QUESTIONS

To what extent does trust and commitment influence University-Industry relationships and what role do Science and Technology Parks have in this process?

How many **relationships** have been established between **Universities and Companies**? And what is the typology of those relationships?

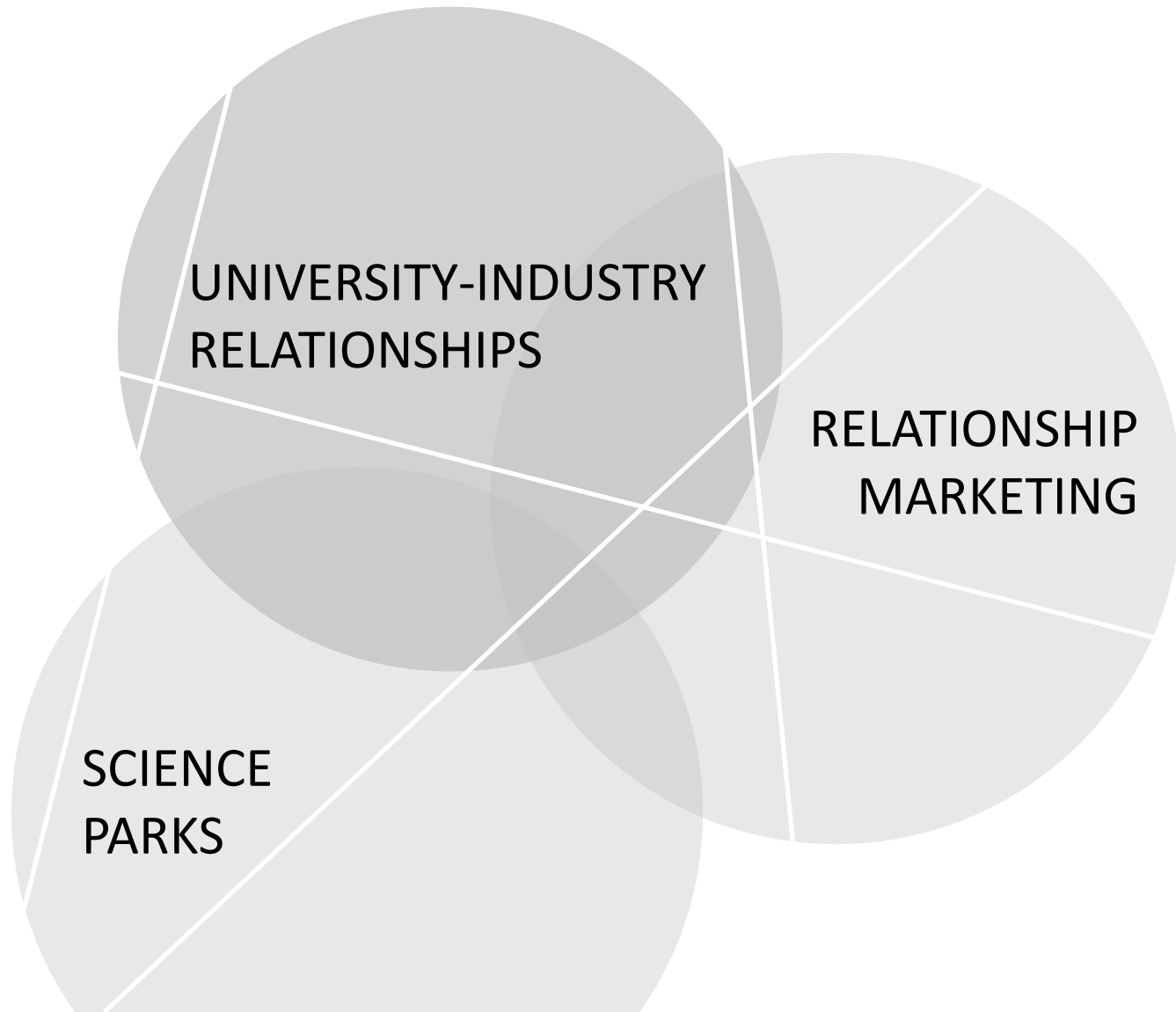
Which **motivations and expectations** were in the genesis of the relationship?

Which **actors were involved** in the relationship?

To what extent do Science and Technology Parks **induce new projects of cooperation between universities and companies** and what factors underlie such cooperation?

How do **different actors** approach in this process?

LITERATURE REVIEW



LITERATURE REVIEW

University-Industry Relationships

Universities play a key role in society, being a source of knowledge. This knowledge is essential to increasing competitiveness of enterprises and consequent economic growth.

There are several factors that lead to the establishment of links between universities and companies, and these connections can, likewise, have different types, and the approach can be initiated by any of the actors. Previous studies on university-industry relationships focus the topic of technology and knowledge transfer only on licensing, patents, and on the support of creation of new businesses, but there are other aspects to consider:

LITERATURE REVIEW

University-Industry Relationships

Authors	Types of Linkage/cooperation	Main Characteristics
D'Este & Patel (2007); Braun & Hadwiger (2011); Raesfeld, Geurts, Jansen, Boshuizen, & Luttge (2012); Perkmann & Walsh (2007); Boardman & Ponomariov (2009); Braun & Hadwiger (2011); Olmeda-Gómez et al., (2008)	Human resource training	A major form of knowledge transfer involves the training of students who will be working in the companies.
	Patenting and Licensing	The most common and known way of knowledge and technology transfer. Universities are increasingly investing in protecting their intellectual property rights in order to valorize and license them.
	Spin-offs creation	Universities support entrepreneurs from the academia (researchers and/or students) to create their own companies. If they intend to, the spin-off could be integrated in the University Incubator or Science and Technology Park.
	Cooperative research/Join research projects	In this case, the main focus goes to the government-funded projects that can be developed in partnership.
	Service delivery	Universities can provide several services to the companies taking into account the different skills of the researchers.
	Consultancy and training	These services may also be provided in the form of consultancy or training directly in the company or at the university
	Meetings and conferences	Attendance at Industry sponsored meetings and conferences with industry and university participation where it is possible to establish contacts and acquire information about industry needs and university (researchers/departments) skills.

LITERATURE REVIEW

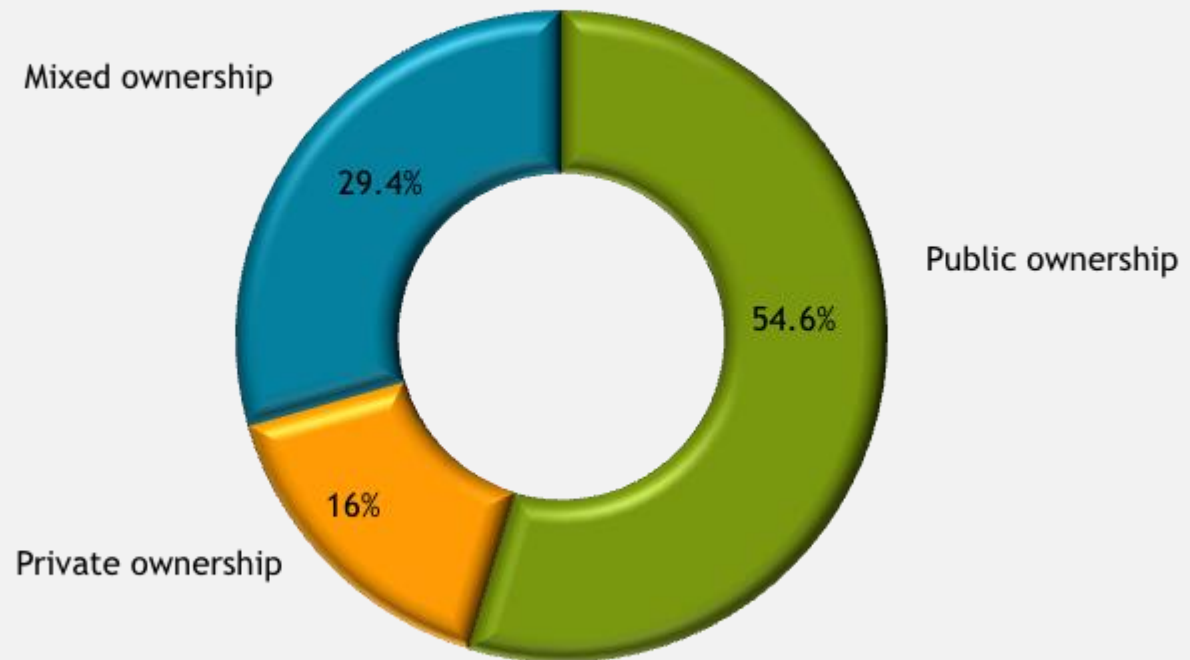
Science-Parks

“Science Park is an organization managed by specialized professionals whose main aim is to increase the wealth of its community by promoting the culture of innovation and competitiveness of its associated businesses and knowledge based institutions. To enable these goals to be met, a Science Park manages the flow of knowledge and technology amongst universities, R&D institutions, companies and markets; it facilitates the creation and growth of innovation-based companies through incubation and spin-off processes; and provides other value-added services together with high quality space and facilities.”

International Association of Science Parks

LITERATURE REVIEW

Science-Parks - Ownership



International Association of Science Parks

LITERATURE REVIEW

Science-Parks

Through an analysis of the most cited papers (using *Science Park* as keyword) it is possible to conclude that those studies have addressed the performance and promotion of innovative activity of enterprises through the creation of SP and / or BI. There are however no studies that analyze the factors of trust and commitment among the different actors.

LITERATURE REVIEW

Science-Parks – Portuguese Scenario

According to the AICEP Portugal Global report (2011) there are 22 Science and Technology Parks in Portugal, which mainly have an associative structure that includes the participation of universities, as well as governmental entities (municipalities and business support institutions).

Existing studies on science parks in Portugal are scarce, and the most relevant were developed by Durão et al. (2005) and Ratinho & Henriques (2010). The first study aimed to present and explain the tools developed by *Taguspark*, and the second study focused on the role of science parks and incubators in promoting economic growth.

LITERATURE REVIEW

Triple Helix Model

The Triple Helix model was developed by Etzkowitz and Leydesdorff's in 1996.

“The triple helix denotes the university-industry-government relationship as one of relatively equal, yet interdependent, institutional spheres which overlap and take the role of the other.” (Etzkowitz, 2002)

LITERATURE REVIEW

Relationship Marketing

Change of paradigm (Grönroos, 1994).

Relationship Marketing comprises marketing activities that attract, maintain and enhance customer relationships (Bhattacharya & Bolton, 2000).

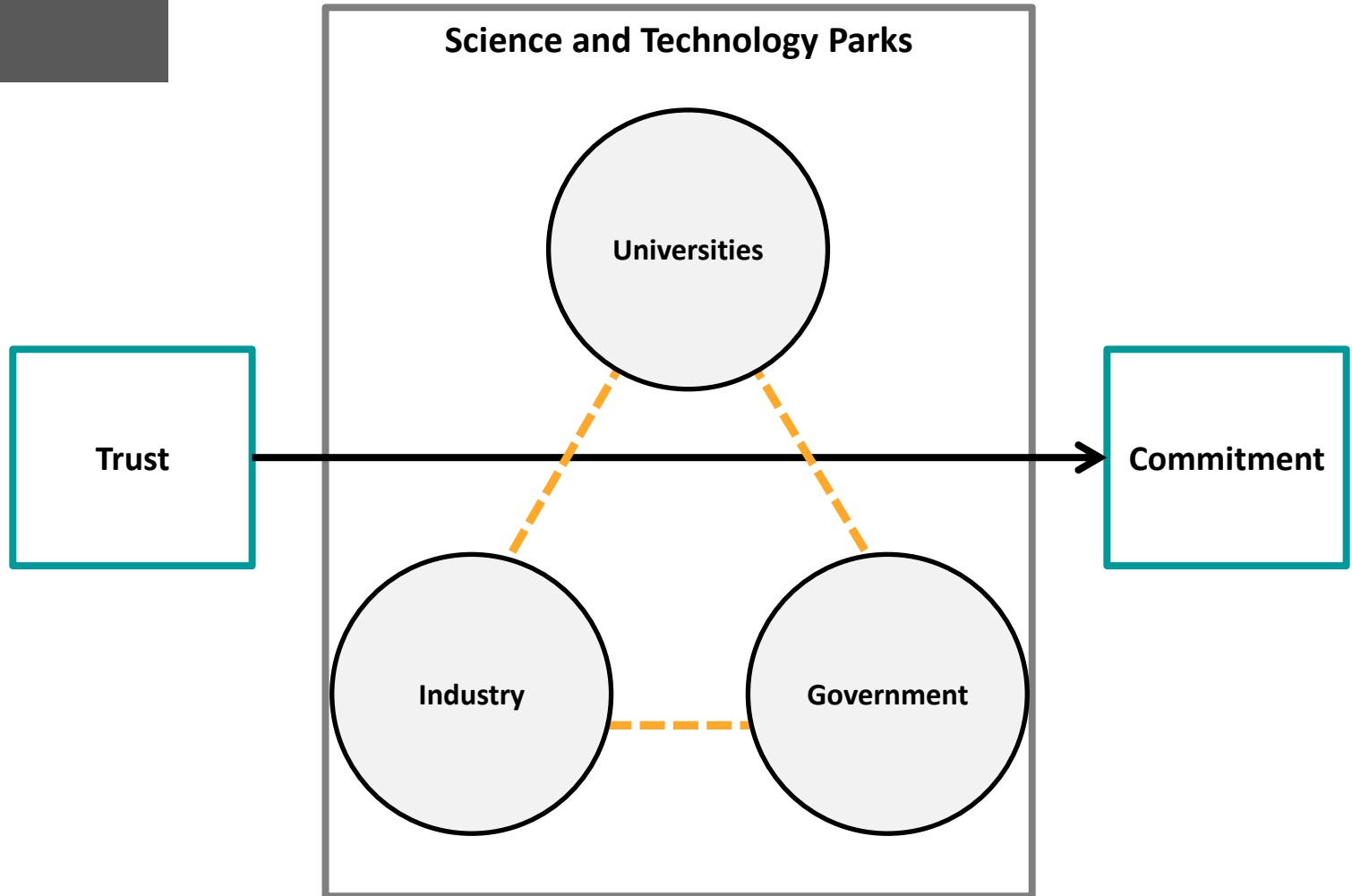
Trust concerns the will of a person or group of people to relate to others in the belief that the actions to be developed will be beneficial to both parties. (Child, 2001).

Commitment is “an exchange partner believing that an ongoing relationship with another is so important as to warrant maximum efforts at maintaining it; that is, the commitment party believes the relationship is worth on to ensure that it endures indefinitely” (Morgan & Hunt , 1994).

Communication, since the frequency and transparency of communication’ contents will influence members trust and thus the relationship of present and future cooperation (Lin, 2007).

LITERATURE REVIEW

CONCEPTUAL MODEL



METHODOLOGY

Methodological Approach

Exploratory study

Positivist approach, in that it is intended to explain the existing national reality. This approach believes that reality is objective, singular and independent from the researcher (Collis & Hussey, 2009).

METHODOLOGY

Data Collection

Universities and supporting infrastructures and companies will be interviewed in order to find out how the first relationships took place and how the approach by different actors was made, in order to maintain these relationships in future projects.

At this stage all Portuguese public universities will be contacted, as well as all SPs that incorporate an university in their structure.

Then a questionnaire will be produced and distributed to companies that have had some kind of relationship with a university.

METHODOLOGY

Data Analysis

Qualitative Data analysis (interviews) will be performed using the WebQDA. This software follows the theoretical structural design of other frequently used programs available on the market - NVivo, Atlas.ti, MaxQDA - differentiating itself from all these by providing collaborative online works in real time and a service to support research (Souza Costa, & Moreira, 2011).

Quantitative data (questionnaires) will be analyzed using the SPSS software.

METHODOLOGY

Ethical Issues

Prior to data collection information will be given to the interviewees in a clear and perceptive way, about the essential elements of their participation in the study.

Permission to record the interviews will be requested, and a copy of the transcript will be sent to the interviewee for validation and in order to obtain approval for future publication.

If the interviewee makes any correction in the document, or deletes any transcript, only the final, validated version, will be used.

Later, a copy of the study will be sent, so that they are aware of the final work before its public presentation.

CONCLUSIONS

This research aims to:

Provide effective **contributions** to the different actors involved in university-industry relationships, thus enabling the development of **new approaches and marketing strategies** that foster new relationships, based on previous experiences, as well as on current approaches.

Present some **theoretical contributions** on the level of cooperation between universities and companies, that can be replicated in future similar studies and that, through its practical application, foster university-industry liaison.

CONCLUSIONS

Limitations of the research project

The sample size is not very high, so if the response rate is low, the results may not be sufficiently representative.

The fact that we want to interview and investigate the highest managers of the different actors identified may bias the results, since the first contact by the university or by the industry, may not have been started by neither of the aforementioned.

This limitation will try to be overcome during the interviews, in which we will obtain information on the responsible of the first contact.

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Thank you!