The Research Park at UIUC: Impacting the business location decision-making of enterprises

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Abstract

Research Parks are still a very popular phenomenon in the field of regional economic development because they seem to be an appropriate means to encourage innovation activity, nurture high-technology and further the growth of a region. However, many of the research or science parks created during the last decades could never really meet their expectations. This empirical work deals with the three year old research park that was founded in Champaign-Urbana next to the University of Illinois. It has shown a satisfying development in terms of its number of tenants and employees during this time. The parks profile and services that should make it attractive for firms are being compared with the companies' perception of the park. It is also questioned which factors were considered to be most important to settle down there. The results of the inquiry show that for the enterprises in the Park spatial proximity and networking with the University are perceived more important than other cost effective aspects like cheap and flexible leasing space or business related support services.

Acknowledgements

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Introduction

The creation of research parks throughout the United States and the world is a phenomenon that appeared with the overwhelming development of Silicon Valley. Since then, many scholars from different disciplines have been trying to explain the “secret” of its success. At the same time, many policy makers from other regions have been making big efforts to copy its concept by implementing research parks. This was meant to create an innovative environment attractive and supporting for high-technology innovation and research activities.

The University of Illinois has created several research parks in different locations. One of them is located in Urbana-Champaign\(^1\). The Research Park at the University of Illinois at Urbana-Champaign (RPUIUC) is located in the campus’ south-western corner. It has been opened in 2000 and compared to other research parks in the region and elsewhere in the US it has shown a satisfying start. Considering the number of tenants and the number of employees as a first measure to compare different research parks after almost three years there are 35 tenants and 702 employees in the RPUIUC. The average of all other Midwestern parks is 15.5 years with 48 companies and 1226 employees\(^2\). That leads us to the conclusion that in the RPUIUC there is already some sort of critical mass for further development.

But those figures shown above cannot answer in depth the question whether the RPUIUC is successful or not. We do not know if the firms in the Park just relocated from another part of the region or if the Park itself really has the potential to raise the already existing amount of regional innovative activities. Some people may raise the objection that after only three years of existence it was too early to find an answer to that question. Yet, I am convinced that even in this early stage it is possible to get some insights about the park useful to determine its development. They might additionally serve as a primary data base for further research.

The success of a research park is a complex of many individual components. As every research park is different we have to look what the RPUIUC has been designed for by the University cooperating with a private developer. According to the parks information brochure the goals of the RPUIUC are the following:

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\(^1\) University of Illinois at Urbana-Champaign is furthermore called UIUC

\(^2\) The data were provided by the Park Management of the Research Park. The data about the other research parks originally come from a survey conducted by the AURP. There are more comparing figures in Appendix IV, p. 29
• Encourage research, development and commercialization of the University’s intellectual assets
• Regional economic development and growth

In order to achieve those goals the RPUIUC offers a huge range of different services, opportunities and benefits for enterprises. It wants to provide them an “environment based on new relationships, partnerships and collaboration”.

The best way to determine the RPUIUC’s success is probably to find out how many of the enterprises in the Park would not exist today if there was no research park. The research question asked to the enterprises therefore is the following:

• What role does the Research Park play for the business location decision-making of enterprises?

By submitting this question I wanted to find out: Is there an advantage of being located in the RPUIUC instead of choosing a site outside the park? And, secondly, which are the features of the RPUIUC that are perceived as being important by the enterprises when they made their decision to locate there?

In a further step I made an assumption about what was the most important pull factor for the enterprises to be in this location. Based on the idea that the RPUIUC should be an environment of relationships and collaborations I formulated the following hypothesis:

• The linkages between the firms and the University are the most important location factor for the enterprises.

In the following I also tried to find out two facts: Which linkages are present today between the firms and the University and how important are they for the firms?

The research project was undertaken in fall 2003 while I was staying at the University of Illinois at Urbana-Champaign.

In the first part of this paper I will review some information that I collected about the RPUIUC. It will be necessary to understand its character and the purpose of the research question. In the second part the project will be described beginning with the
applied methodology which was mainly based on a questionnaire that I sent to the enterprises in the RPUIUC. Then, the results will be presented. In the conclusion, I will discuss the meaning of the results, the survey’s possible problems and limits. As this is a research project with an explorative character there will be no review of the scientific discussion in this paper.

1. The Research Park at the University of Illinois at Urbana-Champaign (RPUIUC)

1.1 Location, facts, and figures

Initially, there were plans to create a research park with two sites. One being the north Research Park next to the engineering campus in Urbana. The other, the south Research Park in the campus’ south-western corner in Champaign. Proposals were made approaching those sites quite differently: The north Research Park was meant to be an urban park in an urban setting. The strategy was to market the prospects and not to put capital into it until a tenant would have been found. Whatever the reasons were, the north Research Park has not been developed so far and no immediate activity is planned. The south Research Park at the University of Illinois that has been developed. Due to the rural surrounding the developer, Fox/Atkins, chose a different strategy. He invested capital in buildings and infrastructure and is obliged to market the building’s space at its own risk. Between the buildings there is a lot of green space, benches, trees and plenty of parking possibilities. All this might have a positive immediate visual impact on prospective tenants.

Next to the private funds, provided by the developer, the Park has been financed by the University of Illinois and by Governor Ryans VenturTECH program, designed to develop infrastructure and high-tech businesses.

In a regional context the RPUIUC is located next to the University of Illinois which in some fields is one of the major public research institutions. The population of the MSA of Champaign with 179,500 inhabitants is rather small. It is situated at comparable distances to Chicago, Indianapolis and St. Louis.

The RPUIUC was founded in 2000. Motorola, relocating from Urbana to the south center, was the first tenant to move into the park in January of 2001. The park’s
establishment has been divided into three steps. In the first phase 18 acres of land were developed, five buildings constructed. Among these, there are 3 multi-tenant facilities with modern equipment and flexible space, one building built by Motorola on its own and finally the incubator building which serves as nursery for start-up enterprises. The second phase of development will start with the relocation of the south farms, adding an 20 acres tract. In the third phase the Park may develop up to 100 acres.

1.2 Mission and goal of the RPUIUC

It is difficult to find an appropriate definition applying to all research parks. For that reason one should first try to find out about the RPUIUC’s character. Secondly, it is important to find out about the mission of the park and the goal that the stakeholders want to reach and how they want to achieve it.

On its website I found that the research park’s mission is subdivided into two aspects:

- Encourage research, development and commercialization of the University’s intellectual assets, to contribute to the success of faculty recruitment
- And to foster economic growth by stimulating the regional economy by attracting research and technology related companies, expanding the pool of opportunities for students, alumni, and staff of the University.

Behind the park’s concept there are two different motivations. As the research park is a public private partnership between the University and the private developer Fox/Atkins the view on the Research Park differs to a certain degree.

If we look at the University’s motivations there are two aspects of mayor importance. First, the Park is to help the University attract and retain the best faculty members and students who are working in high technology fields by offering them job and career opportunities and creating economic development in the community. According to Peter Fox, one of the most difficult issues for the University is to keep the best faculty.

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3 Website of the Research Park: www.tech.com
“The reason is that there is a lot of other competitors in the United States with attractive geographical locations, not to mention the attractive academic opportunities. The faculty won’t stay unless there is opportunity for their spouses, opportunities to augment their University compensation without having to travel extensively and then we can create some amenities that are not in the community currently”\(^4\).

Second, the University wants to commercialize its technology. By putting it to the market place it hopes to generate new funds for further research activities. According to a survey done by the Association of the University Technology Managers (AUTM) the University of Illinois is the country’s number three for start-up companies. Scott Pickard, manager of Enterprise Works\(^5\), said that it was the best to fill the park with companies coming out of the University’s research rather than letting other firms in. Other firms might not have the appropriate quality that is required in the park. In this regard, it was also critical to have an incubator supporting start-up enterprises to overcome some early-stage problems and allowing them to have a soft landing into the graduation space provided within the other buildings of the research park. “The goal is to get things ready for the private sector to take over”\(^6\).

Mike Fritz, director of the Office of Technology Management (OTM), uttered that the process of clarifying the Parks mission was still in progress and that the different opinions were probably not matching up. “I believe the purpose of the Research Park was to foster the long term economic development activities. In other words providing a location for companies to have some kind of relationship directly or indirectly with the University, also provide a location for companies who start up around University owned and licensed intellectual property.”

The University’s mission, namely ‘education’, ‘research’ and ‘service’, had to be broadened and added by a fourth piece, ‘economic development’. The University had to define what ‘economic development’ means. According to Mike Fritz, it was technology commercialization of the university’s research activity. As a result, the University had to change both the way it used to license technology and the system of resources in order to be able to do technology commercialization. The technology commercialization system will be discussed in the following chapter.

\(^4\) Interview Peter Fox
\(^5\) Enterprise Works runs the incubator
\(^6\) Interview David Chicoine
The fourth mission is not meant to change the research character of the University with its civic obligation to acquire and create knowledge to be accessible to everybody. Mike Fritz hopes that the new mission and the mechanism for technology commercialization are not going to change the way research has been done so far at the University: “I don’t think that we will do research for the endgame of economic development. The economic development is a byproduct of good research.”

The developer Fox/Atkins on the other hand, is a private and profit oriented enterprise. This company already runs an office park in Champaign filled in the past and now running out of land. According to Peter Fox, the RPUIUC’s goal was not just to offer real-estate because for an enterprise it was very easy to get a building permit in Illinois. In order to make the site more attractive it was planned as a mixed use development with modern space for firms and other amenities, like a conference center with a hotel, a modest amount of retail, housing, leisure activities and a golf course. According to the contract between the University and Fox/Atkins the RPUIUC is designed for tenants that are “substantially research- and technology-oriented”. This means that they must be involved in research, product development or high technology. Manufacturing or office functions are accepted if they support those three activities. Peter Fox underlines that at least some opportunities for light manufacturing should be offered. He also stated that the RPUIUC will be most successful if it is possible to get the right kind of tenants which in his opinion are not necessarily the start-up firms as uncertainty about their success is rather high. “I would much rather have a Siemens with a 100 people. They can skill the students perfectly, they have good business skills and the chance getting to some place. So we need more bigger companies, a pharmaceutical, an IT-company, a couple of larger manufacturers …”.

Neither the University nor the developer think that it is enough to offer real-estate, a collection of buildings. In order to make the RPUIUC successful they both want to create an environment based on relationships, partnerships and collaboration between the firms and the University with its intellectual capacity.

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7 Interview Mike Fritz
8 See article of the News-Gazette
1.3 Legal structure and mechanism of technology transfer

The legal structure that has been established around the Research Park is complex and it is not the aim of this chapter to get into every detail. But there are some aspects that seem to be helpful or even necessary to understand more about the RPUIUC’s character.

The University of Illinois is a public institution. A state law authorizes the University to create research parks. The Board of Trustees is the only legal body to form a University of Illinois Research Park LLC\(^9\) which is owned by the University and lead by the Board of Managers of the LLC. A Services and Management Agreement between the LLC and the Board of trustees specifies which services will be provided on behalf of the University and what resources the University will provide to the LLC in exchange. The agreement consists of three parts, each of them dealing with one of the three Research Parks. Part one is about the RPUIUC and specifies the responsibilities of the Vice-Chancellor for Research and Development at Urbana-Champaign Charles Zukoswky. Another agreement existing between the LLC and the private developer Fox/Atkins is about the RPUIUC’s development. The campus itself is not a legal entity and therefore cannot enter into legal agreements. The agreement can either be done by the board of trustees or by one of its legal bodies that the board of trustees established in order to enter into a legal agreement.

The organization chart (figure 1) shows that the Vice-President of economic development has the oversight over IllinoisVenture. The Vice-Chancellor for Research holds the same function concerning the Research Park Management Office and the Office of Technology Management (OTM)\(^10\). Between the Vice-president and the Vice-chancellor there is no direct hierarchical connection but an informal exchange.

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\(^9\) LLC (Limited Liability Corporation)

\(^10\) Further explanation is provided in Chapter 1.4
The RPUIUC is a public-private partnership with the University of Illinois and the developer Fox/Atkins as its partners. The relationship is based on an agreement about the Research Park.

The developer has a 50 year lease on the land which is owned by the University. It is, however, possible to renew this contract for another 25 years. The agreement about the Research Park foresees that the developer shall build a minimum average of 120,000 sqft of leaseable floor every three years, and no less than 20,000 sqft/year, unless it has that much vacant space available. Another obligation is to provide some infrastructure and free parking space for the tenants and to manage the buildings as well as the Park.
The University owns and manages the incubator. Therefore it is obliged to put money in telecommunications, utilities and other infrastructure like roads and sidewalks around the incubator and to pay for gas and water.

Apart from the University and the developer there is a third owner in the RPUIUC: Motorola with its own building.

The Research Park Management Office is run by the Park Director John Parks and five fulltime employees. Half of them are working for Enterprise works which is responsible for running the incubator. The other part is working for the research park. The office is a division of the Vice-chancellor for Research and Development Charles Zukosky. He is responsible for all kind of research activities on the campus and for those units which assist in conducting research like the research park’s office.

**Figure 2:** Organization chart of the Research Park Management Office

![Organization Chart]

John Parks – Director of RPUI & Enterprise Works

Tara Smith  
Asst.

Dan Dobell  
Business Director

Scott Pickard  
Manager Enterprise Works

Receptionist

It is also important to know that the park was supported by the state. 8 million USD were provided by Gov. Ryan’s VentureTECH program\(^\text{11}\) and used for planning and construction, recurring operation and staffing support. Further public subventions are granted by the city’s and state’s governments in the shape of tax abatements and incentives. Property taxes are for example abated for a period of five years after the construction of a new building.

\(^{11}\) The VentureTECH program has been set up to develop infrastructure and high-tech businesses
1.4 Technology transfer system of UIUC

When the fourth mission of the University, ‘economic development’, was formulated the process of technology commercialization had to be adapted. Today, there is a system that consists of three parts.

First, there is the Office of Technology Management (OTM) identifying new highly potential technologies which have been created in the departments and can be put to the market place. The office is also responsible for protecting, marketing and licensing the technology to start-up enterprises. In order to be able to do justice to all these tasks, the OTM has 21 fulltime employees. From time to time, the University decides to give a license to a bigger firm which might be more reliable. Sometimes, bigger companies buy one of the small start-ups. Motorola and SAIC are two nice examples.

Second, there is IllinoisVenture, a start-up services company which arose out of the board of trustees. Its mission is to accelerate company’s development in three ways: general consulting, developmental work and seed capital.

The third part is called Enterprise works which is the organization that runs the incubator in the Research Park owned by the University.

1.5 Services, benefits and opportunities of the RPUIUC

The RPUIUC offers different services, benefits and opportunities that might be of serious interest for an enterprise. There is a list on the park’s website which summarizes those different features and which I reproduced in figure 3. The first category, benefits, describe the advantages of the site of the RPUIUC. Secondly, there are University related services that the firms may use under certain conditions and, finally, the opportunities which combine different other aspects. When I asked the firms about the features of the Research Park which were most important for them to locate there I used some of those items for my questionnaire.
Figure 3: Benefits, Services and Opportunities of the Research Park

Benefits:
- Excellent proximity to campus
- Attractive high-quality multi-tenant facilities
- Free on-site parking
- Conference room facilities
- Access to bus transportation (every 10 minutes)
- Flexible lease arrangements

University Services – The Research Park can provide:
- Access to University specialized stores purchasing
- Fee-based access to University shops and facilities
- Fee-based access to University research equipment
- Access to the University Library
- Access to University sporting events at faculty rates
- University telecommunications
- Fee-based High Speed Internet Access
- Access to wide-band Internet connections
- Referrals for fee-based hazardous waste disposal
- Referrals for fee-based lab support services

Opportunities also exist for Research Park companies, including:
- Undergraduate student internships
- Faculty consulting and graduate student employment
- Invitations to technical seminars & symposia in the company-designated areas of interest
- Access to and listings in the University Faculty/Staff Directory
- Possibilities for adjunct faculty participation for key company employees in accordance with university policies
- Serve as part of advisory teams for student papers and projects, as appropriate
- Employees to pursue advanced degrees
- On-site continuing education and staff development programs
- Ability to reserve space in University facilities for meetings and conferences, on a space available basis and in accordance with facility policies
- Faculty and student interactions tailored to Tenant’s research interests
- Assistance in identifying University programs and resources in synergy with tenant’s research program
- Membership in the University of Illinois Employees Credit Union
First, however, I want to analyze what the interviewed experts said about the importance of the different features. The diverse statements about the importance of spatial proximity will be displayed in the next chapter.

Another important issue was the question of whether, in their opinion, there would be a difference if the research park did not exist.

David Chicoine, Vice-President of Economic Development, said that it was most important to have all the support for the new firms and the assessment that happened in the new technology management. The “determination of direction a technology can be most effectively commercialized, advices to establish a firm or is it unique enough to start a company. You need development support that happens through our IllinoisVentures to get early business development in place, to get the license into that company, the finances, get management. At that point there is no reason to have real estate.” Chicoine stresses the importance of technology commercialization and business support for new enterprises. But still, concerning the research park he said that a low cost subsidized incubator was an important part of that chain. When a company matures it needed some graduation space provided by the research park to guarantee a soft landing for the firm. This was important to make sure that a viable enterprise can manage the change.

Scott Pickard, Manager of Enterprise Works, said that there were a lot of factors which made the research park a special place. Each of those factors had a different weight but in their combination they made it. “The answer is it has to be all those things. But they are not just off the shelves. When somebody comes along with something they really need what happens is that there is an extra special effort to focus on the customer’s needs.” All these efforts are packaged and priced in a way that meets the firm’s budget. According to Pickard, the environment had to be nice and aesthetic, comfortable and with a modern standard. “It has to be the kind of space where you walk in and become impacted.” Other critical needs like reliable power were very important, too. As a third point he mentioned the interns, a very desirable kind of working force for the fact of being economical as well as talented. This resource was made more accessible by the Research Park Management which sorts out and takes over some part of the hiring process. Especially for the commuting people, the interns and the researchers, the research park had to be in proximity of the University. But “if you are really asking the question if taking away the Research Park did they [ the firms ] exist we still would have Motorola, Icyt,
Caterpillar and Powerworld. But when the answer is yes would they have the same level of interconnectivity with the UI? Would there be as much interaction back and forth by faculty staff? I would say no\textsuperscript{12}.

Dan Dobell, Business Director for the Research Park, argued that for a small business it was just too expensive to build its own facility. They also highly appreciated to have access to specialized facilities on campus and access to the University’s intellectual resources (e.g. student talent pool, professors, patents, intellectual property).

In the view of Peter Fox the main task was to find out how to persuade enterprises “to send somebody to Sibiria”. It was not enough to offer real-estate to the enterprises. He said that the Park was probably better thought as a mixed-use development (see p. 8) but also offering access to highly specialized research equipment of the University at reduced fees for tenants that helps them saving on equipment expenditures. They also could purchase with the University’s reduced rates.

In the brochures about the RPUIUC some further positive characteristics to attract new firms are mentioned. The value of flexible leasing contracts that depends on the firm’s research goals and which is regarded as being very appealing to high-tech enterprises. A business can even own its own building. The Research Park offers access to the University’s intellectual capacity. The incubator program offers business counseling or assistance with business plans, access to seed and venture capital funding or market research, human resources and other support services.

1.6 Role of spatial proximity and importance of linkages

In this chapter I want to present some opinions about spatial proximity between firms and between firms and the University.

In the brochure about the research park proximity is named as a major reason to stay in the RPUIUC: “Proximity to the University of Illinois is the important key. With face-to-face frequent interactions, your problems become our problems, and your interests become our interests. Together, we turn problems into opportunities and interests into collaborative efforts.”

\textsuperscript{12} Scott Pickard
The importance of linkages between different agents is a major element in different theories of economic geography. The approach of the ‘innovative milieu’ states that the existence of a network of linkages is the most important location factor that helps a region to develop an innovative economic activity.  

Most of the interviewed persons considered spatial proximity an important factor for the whole project. David Chicoine said that especially new companies still needed to be close to the raw science. “If the inventor of a technology that was being commercialized through the start-up of a new company continue to be a science advisor to that company and they had to travel to California, no I think proximity is important”.  

Dan Dobell stressed that for bigger companies proximity to the campus had an additional value in case of an interesting technology to arise.

It seems that there is some interaction between the firms of the RPUIUC. Enterprise Works tries to facilitate this interaction within the incubator with the help of common educational programs. During the monthly meetings they offer lectures on accounting systems or presentation of early stage investments. Sometimes they also invite experts to talk about topics like insurance or lab safety. In the business part of the meetings the firms are informed about changes in the incubator and in the services. According to John Parks there is a very high attendance with about 85%. He also stated that interaction in the incubator was more frequently than in the research park where they just knew each other from sight. SAIC seems to be an exception as they really want to work with companies of the research park. Other events are organized by the Center for Entrepreneurial Development (CED), e.g. Christmas parties, receptions, a chamber of commerce event and social hours, seminars and training sessions. “Tech mix” is another meeting which takes place on every month’s first Tuesday, here, every participant gets his first beer for free.

Scott Pickard agrees that there is only little interaction going on. “It is like anything you have to put a focus in to make things happen”. He supposes that the firm’s managers of the firms talked to each other than other people of the companies. He was not sure if there was a real benefit from that.

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13 More information about the innovative milieu approach can be found in: Camagni, Roberto (Ed.) (1991): Innovation networks, London
14 Interview David Chicoine
To what I have heard, there is a very tight relationship between Caterpillar and NCSA and the College of Engineering or Phonak which has a good relationship with Beckman Institute.

2 Methodology

In this chapter the goal is to explain what methods I applied in order to answer the research question which I introduced in the introduction. I made a quantitative and a qualitative inquiry by using a questionnaire and personal interviews with experts.

2.1 Questionnaire

In the literature about empirical methods there is a lot of reasoning about the best application of different survey methods like questionnaires, personal or telephone interviews. Personal interviews require more time but their results and the answers can be considered more reliable and detailed (Wessel 1996). A questionnaire is useful if dealing with a bigger population as in this case, the costs and the amount of time necessary to reach them all personally is too high.

In the case of the RPUIUC there are only 29 business firms\(^{15}\). Considering this a pretty small population, several reasons can be brought up that speak against use of a questionnaire. However, on the other hand there are some important reasons that at the end made me choose the questionnaire\(^{16}\). As researchers and business people are short of time and not waiting for questionnaires I decided to keep the survey short. Five to ten minutes should be sufficient to fill it in. In my opinion it would have been more difficult to arrange personal interviews than to send the questionnaire to leave it up to the target person when to fill it in. A pretest was made when several people had read through the questionnaire by giving valuable hints for its improvement. Four weeks after the distribution of the questionnaire a follow-up letter was sent to the firms. I added addressed envelopes which could be sent back by campus mail. The only problem I did not know about at that time was that only the firms in the incubator have access to campus mail but not those of the research park. Some of the latter firms were so kind to send the completed questionnaires by

\(^{15}\) At that time the Research Park had 35 tenants from which I subtracted those institutions that are not profit oriented and having a supportive mission

\(^{16}\) A copy of the questionnaire is added at the end of the paper.
regular mail. All together I reached a response rate of 48.3% (14 out of 29). Whether the small number of questionnaires could be regarded as being a problem to get valid data about the Park will be discussed in the paper’s conclusion.

2.2 Interviews with experts

During seven interviews with experts, listed at the end of the paper, I asked explorative as well as very specific questions to get more qualitative information. Among the group of the experts there were some city planners from Urbana and Champaign. The majority was however members of the University and the private developer Peter Fox. These interviews were very helpful to get a deeper understanding of the research park’s structure. The interviews were conducted in December 2003 only after the questionnaires had been sent to the firms. In retrospective, it would have been better to make it the other way round as during the interviews some useful points came up which would have been of use for the questionnaire.

3. Results

Regarding the questionnaire the intention was to ask two or three questions that could provide an answer to the research question. Further questions should give some background information about the firms. This latter information might become useful for the statistical analysis which is to sort out different categories of firms with different needs. In this chapter the solving of the research question will be the center of attention.

3.1 Business-location decision making of the enterprises

The questionnaire’s fourth question dealt with the location factors. I wanted to find out which features of the RPUIUC were most important for the enterprises at the time when they made their decision to locate in the park. I extracted 14 items from the list of services, benefits and opportunities that the park offers (see p. 13) and combined them with a Lickert scale. I also provided space for further remarks in order to make
sure that other features except those from the list could be added. The fifth question was taken from another survey about the US research parks\textsuperscript{17} asking if the enterprises would have located in the region if there was no research park. The sixth question was intended to find out the kind of linkages existing between the firms and the University at the time when the research was done. I used a list of links from a survey about a British research park\textsuperscript{18} which were classified under informal links, human resources links and formal links\textsuperscript{19}.

The results of the fourth question asking how important the different features of the Research Park were are summarized in table 1. Very high values for the category ‘Very important’ and ‘Important’ as well as those for ‘Unimportant’ are marked in yellow.

**Table 1**: How important did you consider the role of the Research Park to gain a better access to the following advantages?

<table>
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<th></th>
<th>Very Important</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
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<td>28.6</td>
<td>7.1</td>
<td>7.1</td>
<td>7.1</td>
<td></td>
</tr>
<tr>
<td>Access to faculty consulting</td>
<td>28.6</td>
<td>35.7</td>
<td>7.1</td>
<td>0</td>
<td>28.6</td>
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<td>Access and listing in the University Faculty/Staff directory</td>
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<td>21.4</td>
<td>21.4</td>
<td>21.4</td>
<td>28.6</td>
<td></td>
</tr>
<tr>
<td>Courses and training for employees</td>
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<td>7.1</td>
<td>42.9</td>
<td>28.6</td>
<td>14.3</td>
<td></td>
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<td>Student internships</td>
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<td>7.1</td>
<td>14.3</td>
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</tr>
<tr>
<td>Spatial proximity to campus and other R&amp;D related firms</td>
<td>64.3</td>
<td>21.4</td>
<td>14.3</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Interactions with other on-park firms</td>
<td>28.6</td>
<td>7.1</td>
<td>14.3</td>
<td>21.4</td>
<td>28.6</td>
<td></td>
</tr>
<tr>
<td>Business-Planning Assistance</td>
<td>7.1</td>
<td>14.3</td>
<td>14.3</td>
<td>21.4</td>
<td>42.9</td>
<td></td>
</tr>
<tr>
<td>Access to university facilities and research equipment</td>
<td>57.1</td>
<td>28.6</td>
<td>7.1</td>
<td>0</td>
<td>7.1</td>
<td></td>
</tr>
<tr>
<td>Reduced costs</td>
<td>42.9</td>
<td>21.4</td>
<td>14.3</td>
<td>7.1</td>
<td>14.3</td>
<td></td>
</tr>
<tr>
<td>Existence of incubator facilities</td>
<td>35.7</td>
<td>21.4</td>
<td>28.6</td>
<td>7.1</td>
<td>7.1</td>
<td></td>
</tr>
<tr>
<td>Expectation that number of on-park firms will grow</td>
<td>14.3</td>
<td>28.6</td>
<td>7.1</td>
<td>21.4</td>
<td>28.6</td>
<td></td>
</tr>
<tr>
<td>Sport facilities of the University</td>
<td>0</td>
<td>0</td>
<td>28.6</td>
<td>28.6</td>
<td>42.9</td>
<td></td>
</tr>
<tr>
<td>Prestige of being located in the Research Park</td>
<td>21.4</td>
<td>21.4</td>
<td>21.4</td>
<td>7.1</td>
<td>28.6</td>
<td></td>
</tr>
</tbody>
</table>

\textsuperscript{18} Vedovello, p. 333
\textsuperscript{19} See the classification on p.28
In order to get a broader picture of the results I added the values of ‘Very important’ and ‘Important’. I then extracted those items that reach a significant amount of approval (above 60%): table 2 shows the highest ranked values from top down which are e.g. ‘spatial proximity to campus and to other firms’ or ‘access to University facilities’ and ‘access to skilled workforce’. These items also have exceptional high rates of approval in the category ‘Very important’. There was no ‘Unimportant’ in the case of ‘spatial proximity’. Other important aspects were having ‘access to faculty consulting’, ‘access to students as interns’ and finally the advantage of ‘reduced costs through subsidized modern space and flexible leasing rates’.

Table 2: Highest ranked features

<table>
<thead>
<tr>
<th></th>
<th>Very important</th>
<th>Cumulated values for very important and important</th>
<th>Unimportant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spatial proximity to campus / firms</td>
<td>64,3</td>
<td>85,7</td>
<td>0</td>
</tr>
<tr>
<td>Access to UI facilities / equipment</td>
<td>57,1</td>
<td>85,7</td>
<td></td>
</tr>
<tr>
<td>Access to skilled workforce</td>
<td>50</td>
<td>78,6</td>
<td></td>
</tr>
<tr>
<td>Access to faculty consulting</td>
<td></td>
<td>64,3</td>
<td></td>
</tr>
<tr>
<td>Student internships</td>
<td></td>
<td>64,3</td>
<td></td>
</tr>
<tr>
<td>Reduced costs</td>
<td></td>
<td>64,3</td>
<td></td>
</tr>
</tbody>
</table>

Then I extracted the high values for ‘Unimportant’. The lowest ranked items are listed in table 3. One of them is ‘interaction with other on-park firms. Remembering that ‘spatial proximity to campus and firms’ from table 2 was ranked very high we can conclude that spatial proximity to the campus and the University is regarded as being much more important than proximity and interaction with other firms of the Research Park.

Other low ranked features were ‘business planning assistance’ and ‘access to sport facilities of the University’.

Table 3: Lowest ranked features

<table>
<thead>
<tr>
<th></th>
<th>Very important</th>
<th>Cumulated values for very important and important</th>
<th>Unimportant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interaction with other on-park firms</td>
<td>28,6</td>
<td>35,7</td>
<td>28,6</td>
</tr>
<tr>
<td>Business planning assistance</td>
<td>7,1</td>
<td>21,4</td>
<td>42,9</td>
</tr>
<tr>
<td>Sport facilities of University</td>
<td>0</td>
<td>0</td>
<td>42,9</td>
</tr>
</tbody>
</table>
The results of the other items were already listed in table 1 although they are not of peculiar significance in the one or the other direction.

Taking the highest and lowest ranked items from table 2 and 3 I made a ‘mind map of the enterprises’ at the time when they made their decision to locate in the RPUIUC:

**Figure 4**: The mind map of the enterprises

Some of the highest ranked features deal with the relationship between the firms and the University. For that reason they are shown within the two big horizontal arrows. There are flows in two directions, from the University to the business firms and vice versa. Then there is the high ranked feature of reduced costs which is linked closely to the RPUIUC where the enterprises are located.
The features that have been identified as part of the relationship between the firms and the University that I placed into the two horizontal arrows as well as the feature ‘spatial proximity’ are, in my opinion, not necessarily linked to the existence of the RPUIUC itself. An enterprise which decides to stay outside the Park would probably also be able to develop those linkages with the same benefits. Among the high ranked features there is only one aspect which is closely connected to the existence of the RPUIUC: reduced costs for the space that the firms need and some other adjacent services.

As a first result the mind map of the enterprises shows that in the perception of the enterprises the RPUIUC was not very decisive for the success of their economic activity. Much more importance is laid into the linkages to the University. The last chapter will discuss those findings in more detail.

The fifth question was meant to confirm the findings on the importance of the RPUIUC by asking if the firms would have located in Champaign-Urbana without the existence of the research park. Figure 5 reveals the answer: There is a clear tendency that also without the RPUIUC they would exist in Champaign-Urbana.

**Figure 5**: Would you have located in Champaign-Urbana if there were no Research Park?
3.2 Recent linkages between firms and the University

In the introductory part of this paper the expectation was formulated that the linkages between the firms and the University are of much importance. The findings shown in the last chapter support this hypothesis. Keeping that in mind I wanted to know more about the linkages existing today and about their importance for the enterprises.

In table 4 I summarized the results from the sixth question. Again the highest values are marked in yellow. One can see that ‘personal contact’ with face-to-face interaction is regarded as very important (57.1%). The same is true for ‘access to University research equipment’, ‘recruitment of graduates or more experienced scientists’, ‘establishment of research contract’, ‘University staff for consultancy’ and ‘joint research with the University’. On the other hand the offer for further training, education and participation at conferences is not judged to be of much importance. There was only one enterprise that marked ‘not applicable’ because this kind of link does not exist at all.

| Table 4: In your opinion, how important are these links for your business today? |
|-----------------------------------------------|---|---|---|---|---|
| Personal contact with university academic staff | Important | 1 | 2 | 3 | 4 | Unimportant | 5 | Not applicable |
| Access to university equipment | 57.1 | 14.3 | 14.3 | 7.1 | 7.1 | 0 |
| Engagement of university academic staff for consultancy | 28.6 | 42.9 | 7.1 | 0 | 21.4 | 0 |
| Access to university department research | 14.3 | 28.6 | 35.7 | 0 | 7.1 | 0 |
| Recruitment of recent graduates/more experienced scientists | 50 | 21.4 | 7.1 | 0 | 14.3 | 7.1 |
| Establishment of research contract | 21.4 | 50 | 7.1 | 7.1 | 14.3 | 0 |
| Attendance at seminars and conferences | 14.3 | 14.3 | 28.6 | 14.3 | 28.6 | 0 |
| Formally organized training of firm’s personnel in university | 7.1 | 7.1 | 35.7 | 7.1 | 42.9 | 0 |
| Analysis and testing in university department | 21.4 | 35.7 | 21.4 | 14.3 | 7.1 | 0 |
| Student’s involvement in projects | 28.6 | 21.4 | 21.4 | 14.3 | 14.3 | 0 |
| Establishment of joint research with UIUC | 21.4 | 42.9 | 21.4 | 0 | 14.3 | 0 |
| Attendance at general education/training programs at UIUC | 7.1 | 21.4 | 35.7 | 7.1 | 28.6 | 0 |
| Interaction with other firms in the Research Park | 21.4 | 28.6 | 0 | 35.7 | 14.3 | 0 |

---

The whole list of linkages and the different categories are listed in the annex.
4. Conclusions

On the previous pages I have presented the questionnaire’s results out of which one can recognize the factors important for the business location decision-making of the enterprises. It turned out that proximity to the campus and the linkages to the University were considered as most important. Today, all these enterprises have such links which are often very important for their economic activity. This means that the hypotheses presented in the introduction has not to be rejected. Other services and benefits that were listed in figure 3 (p. 13) were regarded as less important. However, the items concerning proximity to the campus and the relationship between the firms and the University are not necessarily dependent on the existence of the RPUIUC but rather of the existence of the University. In the view of the enterprises, the impact of the research park on the firm’s business location decision-making was considered very low.

Interpreting these results there may be some unknown variables whose decisiveness I cannot determine. The outcome from this inquiry does not fit together with the information given to me that under normal market conditions 93% of the new companies throughout the US fail. But if the firms start their commercial life through an incubator the rate of success is about 75%. If this statement is correct it indicates the enormous importance of the incubator for the company’s success. The data presented in this paper were collected by means of a questionnaire and it is not possible to say something about the function hold by the person who filled it out. It might be possible that a scientist who cares about technical inventions does not care much about microeconomics and its importance for the company’s survival. Gerhard Raetz who is the Manager of the incubator in Berlin – Adlershof has another explanation. He said that it was a normal psychological effect that after having built up a company successfully people tended to forget the importance of the initial help. They were rather proud of their of their own company’s performance: a fact positive in a sense that they were self-conscious for the further development. It is obvious that there is an enormous potential for further research in this direction.

But if we take the results as they are and if we accept that they reflect the perspective of the entrepreneurs one has to draw the following conclusions. From the
enterprises’ point of view, the value of being located in the RPUIUC consists of a patchwork of many different aspects.

Connections to the University are regarded as being very important and they are actively sought by the enterprises. Today, most enterprises have intensive connections to the University which are important for the development of their business. The high appreciation of linkages can be explained by the firms origin: figure 10 (p. 32) shows that 50% of the firms participating in the inquiry are start-up enterprises resulting from university based research. According to the approach of the ‘innovative milieu’ the linkages between the University as a major research institution and the firms play a significant role for the development of the region’s internal innovative potential. The University seems to be well prepared be the innovative part on the side of academic research. And if we take into account the high interconnectivity with the firms then I have to state that there is a solid basis for further development. The RPUIUC, as a strategy, could facilitate and further actively the value of possible linkages between firms and the University. It also could stronger communicate the image of a location with excellent collaboration possibilities.

However, the low level of interaction between firms reveals a veritable deficiency because this kind of networking is considered as well to be of much importance for innovation. The fact that interaction between firms in the research park is not very significant is, in my opinion, not a question of whether it is more important to have big firms or small start-up enterprises as tenants. I might rather be due to the fact that the firm’s activity is oriented towards many different economic sectors which makes it difficult for them to find a point of contact. Still, in the approach of the ‘innovative milieu’ contact between firms that belong to different economic sectors is considered to be highly significant for new innovations. However, in the RPUIUC there are not enough firms of one specific economic sector which could form a cluster, e.g. IT-technology. Such a cluster could serve as a nucleus for interaction between firms and then there also should arise linkages between firms of different clusters. Therefore, it could be helpful to sharpen the park’s profile by creating clusters of competence which should be backed by the University’s major research fields. Special efforts should be made to attract those firms which have one of the cluster’s profiles.

Other features that are closely related to the RPUIUC, e.g. ‘business planning support’ or ‘subsidized and flexible space’ rank behind the linkages. It is however difficult to determine the extent to which they are of minor importance. It might be
that those other features are also important. But if the firm lacks any technical progress and success (which is related to the networking activity with the University) there is also no need for a business plan. In this sense David Chicoine’s utterance could be interpreted that the research park was part of the sufficient conditions and not of the necessary conditions.

Still, the research park’s original idea is a good one and the development has been satisfying so far. I hope that the survey’s results brought up some proposals that could be useful to strengthen its potential.
References

- Vedovello, Conceição (1997): Science parks and university-industry interaction: geographical proximity between the agents as a driving force. Technovation 17, No. 9, 491 – 502
- Wessel, Karin (1996): Empirisches Arbeiten in der Wirtschafts- und Sozialgeographie, Paderborn

Other sources of Information:

- The News-Gazette, local newspaper of Champaign

Appendix I: The interviewed experts

Chicoine, David: vice President for Technology and Economic Development
Dobell, Dan: Business Director for the Research Park
Fox, Peter: Developer of the Research Park
Fritz, Mike: Director of the Office of Technology Management
Knight, Bruce: City of Champaign, Planning Department
Parks, John: Director of the Research Park at UIUC
Pickard, Scott: Enterprise Works Manager
Tyler, Elizabeth: Director of the City of Urbana Community Development Services Department

I want to assure that I tried to use all statements of the interview partners in the sense they were meant.
Appendix II: List of tenants

**Incubator**

- Arisphere
- AsterTEK
- Caviton Inc., Analytical Instrumentation and sensors
- Center for Entrepreneurial Development (CED), Entrepreneurial Development
- Chemsensing
- CU Aerospace, Aerospace
- D & E Technical
- Distant Focus Corporation
- Iguana Robotics, Computer Technology
- IllinoisVENTURES, LLC
- INI Power Systems, Inc., alternative energy sources – fuel cell research
- IT24, Information technology
- Kim Laboratories, Inc., Biotechnology – R&D for rapid detection system
- Mimosa Acoustics, Medical instrument
- Obiter Research, Chemistry / Medicinal
- Pathogen
- Renew Power, Inc., Energy
- Technical Service Associates, Inc., University Technology Commercialization
- Vision Technologies
- Xindium Technologies, Inc., Semiconductor

**Research Park**

- Bayer Cropscience, Biotech Plants
- Caterpillar, Manufacturing – capital goods
- iCyt Visionary Bioscience, Inc., Biotechnology, instruments for life sciences
- Illinois Natural History Survey
- Illinois State Geological Survey
- Motorola
- NCSA
- Phonak
- PowerWorld, Software for Energy Systems, Electric power
- SAIC
Appendix III: Classification of linkages after Vedovello\textsuperscript{21}

Informal links
- Personal linkages
- Access to specialized literature
- Access to university department research
- Attendance at seminars and conferences
- Access to university equipment
- Attendance at general education/training programmes

Human resources links
- Student’s involvement in projects
- Recruitment of recent graduates
- Recruitment of more experienced scientists and engineers
- Formally organized training of firm’s personnel in university

Formal links
- Engagement of university academic staff for consultancy
- Analysis and testing in university department
- Establishment of research contract
- Establishment of joint research

Appendix IV: Further results from the survey\textsuperscript{22}

Figure 6: When did the firm locate in the RPUIUC?

\textsuperscript{21} Vedovello (1997), p. 495
\textsuperscript{22} Some of these results have not been verbally addressed in this paper
Table 5: Number of Interns working with the firms

<table>
<thead>
<tr>
<th>Number of interns</th>
<th>0</th>
<th>2 to 5</th>
<th>38</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firms in %</td>
<td>50</td>
<td>42.8</td>
<td>7.1</td>
</tr>
</tbody>
</table>

Figure 7: Provenance of Employees

- Employees recruited from UIUC: 57%
- Employees recruited from other businesses in UC: 18%
- Employees recruited from other sources in UC: 7%
- Employees recruited from branches of organization not located in UC: 7%
- Employees recruited from other sources not in UC: 11%

23 The vast majority of all interns are enrolled at UIUC
Figure 8:

Employees this month

<table>
<thead>
<tr>
<th>Frequency</th>
<th>8 - 15</th>
<th>15 - 23</th>
<th>23 - 30</th>
<th>30 - 38</th>
<th>38 - 45</th>
<th>45 - 53</th>
<th>53 - 60</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Figure 9:

Employees when starting in RP

<table>
<thead>
<tr>
<th>Frequency</th>
<th>8 - 15</th>
<th>15 - 23</th>
<th>23 - 30</th>
<th>30 - 38</th>
<th>38 - 45</th>
<th>45 - 53</th>
<th>53 - 60</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10</td>
<td>8</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

31
Table 6: Activity of the enterprises

<table>
<thead>
<tr>
<th></th>
<th>Basic research</th>
<th>Applied Research</th>
<th>Product development</th>
<th>Prototype development</th>
<th>Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest effort</td>
<td>7.1</td>
<td>14.3</td>
<td>28.6</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>Second highest effort</td>
<td>0</td>
<td>53.8</td>
<td>30.8</td>
<td>7.7</td>
<td>7.7</td>
</tr>
</tbody>
</table>

Figure 10: Character of enterprise
### Appendix V: Comparison of research parks in the US:

<table>
<thead>
<tr>
<th></th>
<th>Illinois</th>
<th>Midwest</th>
<th>Adjusted National</th>
<th>Super Parks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>2.7</td>
<td>15.5</td>
<td></td>
<td>26</td>
</tr>
<tr>
<td>Acreage</td>
<td>220</td>
<td>257</td>
<td>267</td>
<td>2541</td>
</tr>
<tr>
<td>Sq. Ft.</td>
<td>314,000</td>
<td>593,531</td>
<td>483,032</td>
<td>6,951,111</td>
</tr>
<tr>
<td>Employees</td>
<td>702</td>
<td>1226</td>
<td>1263</td>
<td>17689</td>
</tr>
<tr>
<td>Companies</td>
<td>35</td>
<td>48</td>
<td>33</td>
<td>93</td>
</tr>
<tr>
<td>% Univ./Govt.</td>
<td>30.5%</td>
<td>25%</td>
<td>17.2%</td>
<td>17%</td>
</tr>
<tr>
<td>MSA Pop.</td>
<td>179,500</td>
<td>557,219</td>
<td></td>
<td>1,864,716</td>
</tr>
</tbody>
</table>

Source: National AURP Survey, provided by the Park Management Office

The data of the nine largest parks are grouped in the category called “Super Parks” (including Research Triangle Park, Cummings, Princeton). By factoring out the statistics from these 9 Parks the “Adjusted national average” has been developed for the remaining parks. The data from the Midwestern parks are grouped in a separate category and the last one called Illinois contains the data from the Research Park at UIUC.

The survey was sent to 195 parks throughout North America. The response rate was 48.6%. Almost three quarters of these research parks had incubators.

### Appendix VI: The questionnaire
QUESTIONNAIRE

Research Park Study

For business firms in the Research Park
at the University of Illinois

This questionnaire should take no longer than ten minutes to complete.

I very much appreciate your willingness to complete this questionnaire. Please return it in the enclosed, self-addressed and prepaid envelope.

Address: Moritz Weber-Bleyle
Dept. of Urban and Regional Planning
111 Temple Hoyne Buell Hall, MC-619
611 Taft Drive
Champaign, IL 61820

If you have any questions write an email to weber-bleyle@gmx.de

Company name:

Name of person completing this questionnaire:

Phone number of person completing questionnaire:
1a. When did the firm / organization locate in the Research Park? _______ / _______ (month/year)

1b. Where was the firm founded?  
- [ ] Inside the Research Park  
- [ ] Outside the Research Park

2a. How many people are employed in your enterprise?

This month: ____________

When starting activity in the Research Park: ____________ (estimate if necessary)

2b. How many employees are interns?

Total # of interns: ____________  

# of interns enrolled at UIUC: ____________

3. Where has the present professional workforce been recruited from (Please fill in the total numbers if possible, otherwise approximate values in percent, but please don’t include the interns)?

<table>
<thead>
<tr>
<th>University of Illinois at Urbana-Champaign</th>
<th>absolute #</th>
<th>or in percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other businesses in Champaign-Urbana</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other sources in Champaign-Urbana</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Branches of your organization not located in Champaign-Urbana</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other sources not in Champaign-Urbana</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Please think about the time when you made your decision to locate in the Research Park rather than in a site outside the Park. At that time, how important did you consider the role of the Research Park to gain a better access to the following advantages?

<table>
<thead>
<tr>
<th>Very Important</th>
<th>Unimportant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to skilled workforce</td>
<td></td>
</tr>
<tr>
<td>Access to faculty consulting</td>
<td></td>
</tr>
<tr>
<td>Access and listing in the University Faculty/Staff Directory</td>
<td></td>
</tr>
<tr>
<td>Courses and training for employees</td>
<td></td>
</tr>
<tr>
<td>Student internships</td>
<td></td>
</tr>
<tr>
<td>Spatial proximity to campus and other R&amp;D related firms</td>
<td></td>
</tr>
<tr>
<td>Interactions with other on-park firms</td>
<td></td>
</tr>
<tr>
<td>Business-Planning Assistance</td>
<td></td>
</tr>
<tr>
<td>Access to university (academic) facilities and research equipment</td>
<td></td>
</tr>
<tr>
<td>Reduced Costs (e.g. infrastructure, leasing rates)</td>
<td></td>
</tr>
<tr>
<td>Existence of incubator facilities (e.g. laboratories)</td>
<td></td>
</tr>
<tr>
<td>Expectation that number of on-park firms will grow in the future</td>
<td></td>
</tr>
<tr>
<td>Sport facilities of the University</td>
<td></td>
</tr>
<tr>
<td>Prestige of being located in the Research Park</td>
<td></td>
</tr>
<tr>
<td>Other advantages. Please specify:</td>
<td></td>
</tr>
</tbody>
</table>
5. Would you have located in Champaign-Urbana if there were no Research Park?

☐ Very likely  ☐ Likely  ☐ Maybe  ☐ Unlikely  ☐ Very Unlikely

☐ Would not exist at all

6. The list below summarizes a variety of different links that could emerge between a firm and the university and other firms. In your opinion, how important are these links for your business TODAY?
Please read the following list of different links, then rank them:

<table>
<thead>
<tr>
<th>Important</th>
<th>Unimportant</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

Personal contact with university academic staff
Access to university equipment
Engagement of university academic staff for consultancy
Access to university department research
Recruitment of recent graduates / more experienced scientists
Establishment of research contract
Attendance at seminars and conferences
Formally organised training of firm’s personnel in university
Analysis and testing in university department
Students’ involvement in projects
Establishment of joint research with UIUC
Attendance at general education/training programs at UIUC
Interaction with other firms in the Research Park

7. Which business sector does your firm belong to? (e.g. Biotechnology, Medical Instruments, ...)
(Alternatively please describe field of activity or research)

8. Can your enterprise be described as a

☐ branch of a larger organization?  ☐ spin-off of university based research?

☐ spin-off of another firm?  ☐ Other (Please specify): 

9. Please indicate what describes the most what your firm is doing:

1 = Highest Effort,  2 = Second highest Effort

☐ Basic Research  ☐ Product Development  ☐ Standard production  ☐ Sales

☐ Applied Research  ☐ Prototype Development  ☐ Administration  ☐ Distribution

10. If you are interested in the outcome of the survey and if you would like get the results sent to you please put an email address:

THANK YOU VERY MUCH! Please return this questionnaire to: Moritz Weber-Bleyle, Dept. of Urban and Regional Planning, 111 Temple Hoyne Buell Hall, MC-619, 611 Taft Drive, Champaign, IL 61820