

THE IMPACT OF ENTREPRENEURIAL ACTIVITIES IN UNIVERSITIES ON THEIR REPUTATION

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Abstract

This article analyzes how university entrepreneurial activities impact the reputation of the institution. Higher education has seen an increase in the number of entrepreneurial initiatives such as the creation of startup incubators, industry partnerships, innovation centers as well as the provision of various entrepreneurial education programs. The purpose of this article is to assess how these initiatives affect the public perception of universities as well as their reputation. In order to produce this article, an analytical methodology was used in order to examine data on research activities conducted at universities, student enrollment at these universities as well as university rankings. Strong entrepreneurial ecosystems and a higher university reputation are positively correlated, according to the findings, which also emphasize the importance of stronger links with industry players, higher visibility and improved student satisfaction. The research offers suggestions for developing an innovative entrepreneurial culture on campus and explores the strategic ramifications for universities looking to enhance their reputation by promoting entrepreneurial activities.

Keywords: Entrepreneurship, Reputation, Startup Incubators, Students, University.

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1. INTRODUCTION

In the last thirty years, entrepreneurship has become what is probably the most powerful economic force the world has ever seen. Economic growth and even entrepreneurship programs provided in universities now place a much greater emphasis on entrepreneurship. An increasing number of studies seek to identify the elements that encourage entrepreneurial initiatives as a result of the growing interest in the role entrepreneurs play in economic systems (Raposo & Paço, 2011).

Globalization as well as the use of new technologies have generated an increase in stakeholder expectations (Ellerup Nielsen & Thomsen, 2018) complicating the management practices of international

companies (ReyMartí & Ribeiro-Soriano, 2015). As a result universities have come to have more roles than not being limited to conducting research and teaching. As a result we can see that universities have a particularly important social and economic impact in all modern societies (Schlesinger, Cervera & Iniesta, 2015). Through them they facilitate the transfer of knowledge to the private sector and promote an economic framework that is favorable to the development of entrepreneurial initiatives (Cattaneo, Meoli and Signori, 2016).

Higher education institutions (HEIs) are recently facing new challenges such as an ever-changing labour market and a growing need for creative approaches to teaching and learning as a result of globalization. Universities that focus on admitting the best candidates, recruiting the most qualified professors, collaborating with top companies, obtaining funding for creating modern campuses or funnizing the best curricula (Melewar, Nguyen, Wilson, Hemsley-Brown, & Plewa, 2016). Verčič, Verčič, & Žnidar, 2016; Ho, Conduit, & Karpen, 2016). Cattaneo and his partners (2016) state that "Recent financial pressures and declining transfers of government funding have presented significant challenges to the financial viability of colleges, forcing them to create new techniques to increase their attractiveness to students (p.88)."

More specifically, our study aimed to investigate how entrepreneurial activities provided through universities contribute to their reputation. From a university social identity perspective, this paper aims to understand how entrepreneurial activities contribute to the overall reputation of the university and how this, in turn, reinforces the sense of loyalty and belonging to the institution. At the same time we aim to identify the key resources and competencies that contribute to enhancing academic reputation and analyze the ways in which entrepreneurial activities impact the reputation of HEIs. In order to examine the connections between entrepreneurship and higher education reputation, at first, we will present a literature review of the theoretical background and previously published work.

2. THEORETICAL CONTEXT

The concept of reputation has attracted considerable attention due to its importance in both private and institutional settings (Ali et al., 2014). There are undeniable similarities, even though scholars have drawn attention to the inconsistencies by which corporate reputation has been conceptualized in the literature (Fombrun, 2012). More in-depth analyses of these theoretical underpinnings can be found in detailed assessments by Walker (2010) and Lange, Lee, and Dai (2011). Reputation, as defined by Walker (2010) on page 370, is an "aggregated, issue-specific, relatively stable perceptual representation of a company's past actions and future prospects relative to a given standard" and is conceptually distinct from corporate

perspective for the purposes of this study. Outlook is "an internal image projected to an external audience", although they are closely related concepts.

Government policies can also affect entrepreneurial initiatives by passing laws and influencing educational programs. Educational programs appear to be crucial for promoting entrepreneurship for several reasons (Reynolds, Hay and Camp, Sánchez, 2010a; 1999). First, education provides people with feelings of independence, autonomy and self-confidence. Second, through education, people become aware of alternatives to employment. Finally, education contributes to broadening people's perspectives, which provides a greater ability to see opportunities and, last but not least, through education people have access to information that they can use to create advantages in entrepreneurial activities (Raposo & Paço, 2011).

In recent times we are witnessing a transition phase where entrepreneurial activities are having an increasing impact on the reputation of higher education institutions. A university with a good reputation that offers mentoring services to its students to help them create their own business plans will have graduates who will integrate into the labor market and beyond.

2.1. Relationships between reputation and legitimacy

Corporate reputation and organizational legitimacy are closely related concepts. Some authors use these two concepts interchangeably (Staw & Epstein, 2000) and they are relevant intangible assets (Fombrun, 1996; Poldony, 2005). However, there are distinctions between the concept of legitimacy and corporate reputation. The first distinction is that although stakeholders may be willing to deal with less reputable institutions, they are only willing to interact with authorized companies (Deephouse et al., 2017). Second, an organization can be considered authentic or not (Deephouse & Carter, 2005). Since legitimacy is a binary term, organizations can achieve different levels of favorable or unfavorable reputation (Fombrun, 2005; Fombrun & Van Riel, 2004). Thirdly, the idea of legitimacy is non-rival and homogenizing; it focuses on commonalities and is achieved through isomorphism (Bitektine & Haack, 2015; Deephouse & Carter, 2005). Unlike legitimacy, reputation is a relative construct that is based on comparing performance on multiple topics (Deephouse & Carter, 2005).

In terms of perceived approval of an organization's actions, this can be attributed to both legitimacy and reputation. The notion that an organization follows widely accepted norms gives it legitimacy. Reputation is the idea that a company stands out favorably among its peers. Thus, we can argue that both functional requirements (inclusion and distinctiveness) are based on the social identities adopted by an organization or its social identity referents, which are defined as membership in social categories in this context. This may seem like a contradiction on the surface. Social identities serve as a reference point for an organization and provide stakeholders with a set of criteria against which the organization can be

assessed. The minimum accountability requirements for the social identity, or a social category, described as a typical member, are operationally linked to the idea of the legitimacy profile. In other words, the institutionalized quality of a social category is represented by its validity, the given social form or its members. Selecting a specific social identity will very often expose the organization to the demands of that social category (Zuckerman, 1999). As we can see, a necessary condition for legitimacy is recognition, which is closely related to the fact that it stems from an organization's compliance with the minimum requirements that define that specific type of organization. (Raposo & Paço, 2011).

2.2. Entrepreneurial activities undertaken by universities

Higher education institutions (HEIs) are increasingly being encouraged to contribute to economic development mainly through innovation (Benneworth, 2007), as highlighted in the work of Lazzeretti and Tavoletti (2005) and Lenger (2008). Several governments have made legislative efforts towards finding ways to commercialize directly or indirectly the results of university research. As a result, the current requirement to improve the economic performance of the ecosystems in which universities are located has replaced their former role as centers of teaching and research.

This also alters the conventional understanding of the aims and objectives of a university, which emphasize learning (Kenny, 1987), knowledge for the sake of knowledge, and making research results available to all (Behrens and Gray, 2001). Instead, the focus on the creation and direct exploitation of the economic value of research for the university is more important in the new entrepreneurial paradigm for higher education (Behrens and Gray, 2001; Harman, 2006). This new situation risks creating conflicts between teaching and theoretical research activities impacting the traditional academic reputation of a university and its new role in economic development (Jarzabkowski, 2005). Wright et al. (2004) propose a number of formal and informal EBA mechanisms, such as licensing and realizing technology transfer, that could be used to promote knowledge development and sharing. Startups and spinoffs, business incubators or joint ventures are just some of the structures that universities can use to do this (see Berggren and Lindholm Dahlstrand, 2009). However, Birley (2002) also draws attention to possible obstacles related to university management and leadership that could undermine this new paradigm of an entrepreneurial-oriented institution (e.g. see Bok, 2003; Etzkowitz, 2003; Morrison, 2004).

2.3. Facilities, consultancy contracts and contract research

Contract-based research can help create spin-offs (Van Looy et al., 2011), improve relationships with industry companies (Prince, 2007; Woolgar, 2007), strengthen other knowledge exchange activities (Landry et al., 2010; Van Looy et al, 2011), and benefit the local region more than the (inter)national one,

besides providing a short-term financial gain for the university (Schartinger et al., 2002). Powell (2012) complements that SMEs can stimulate innovation and achieve sustainable growth by collaborating with universities. Universities can also charge fees for the use of their facilities and equipment, which allows them to collect money while promoting entrepreneurial activity and earning revenue (Etzkowitz, 2003; Mian, 1996). In fact, Huffman and Quigley (2002) argue that one of the contributing factors to the success of Silicon Valley has been the availability of Stanford University's buildings and equipment to businesses, as well as the university's establishment of an industrial park on its property to promote business cooperation, localization, and improved knowledge exchange and diffusion. For these precise reasons, it should not be surprising that many universities now have science parks and new business incubators.

2.4. Spin-offs and start-ups

In the last few years, many institutions have implemented a variety of specialized programs and policies aimed at encouraging academic entrepreneurship to facilitate technology transfer processes. Running a business idea competition is one of the fairly common programs, however, these initiatives, especially business plan competitions aim to encourage researchers to pursue entrepreneurial initiatives. The development of spin-offs is another related strategy to capitalize on university research.

Creating spin-offs is another way in which universities can monetize the results of research activities, with universities wanting to use spin-offs to leverage their research for personal financial gain (Shane, 2004). Although a relatively recent development, the inclusion of alternative start-up models, such graduate start-ups, in the entrepreneurial university paradigm makes sense, given the growing inclination of universities to develop entrepreneurs through entrepreneurship education initiatives.

2.5. Supporting measures for university start-ups, university incubators and other related centers and procedures for the creation of new firms

The roles of entrepreneurs in higher education must be seen in the light of the complicated public policy framework and the expectations it places on both parties (Keast, 1995). The relationship between entrepreneurship and universities can be explained simply as follows: the former sees itself as a tool for job creation, balanced regional development and economic growth, while the latter hopes to fulfill its responsibilities in research, teaching and entrepreneurship, while at the same time serving as a friendly and supportive environment for the development of new processes and products (Laukkanen, 2000). In this context, Keast (1995), Van Vught (1999), Zaharia (2002), Etzkowitz (2004) and Grandi and Grimaldi (2005) clarify the different tools that universities have developed to support the establishment of new firms,

both internally and externally. These tools include small university-developed business centers, research facilities, research firms or clusters, liaison offices, technology transfer offices and business incubators.

3. RESEARCH METHODOLOGY

For this article we used an analytical research methodology to examine the impact of entrepreneurial activities carried out by universities on their reputation. The main steps and methods used to collect and analyze the data are described below:

3.1. Research design

The research adopted a descriptive and analytic approach, focusing on examining the relationship between entrepreneurial initiatives and indicators of university reputation, such as research outcomes, student enrollment and university rankings.

3.2. Data collection

To obtain relevant data, the following sources were used: international databases tracking the academic and entrepreneurial performance of universities (QS World University Rankings, Times Higher Education). Official reports and university statistics on involvement in entrepreneurial activities, such as the establishment of start-up incubators, collaborations with industry players and entrepreneurship education programs.

4. ENTREPRENEURIAL ACTIVITIES AND UNIVERSITY REPUTATION

The reputation of a university is a complex construct influenced by a variety of internal and external factors, entrepreneurial activities, including start-up creation, technology transfer, industry collaboration and commercialization of research, have become increasingly important in confirming the reputation of universities globally. These activities offer universities the opportunity to extend their influence beyond traditional academic boundaries, contributing to their prestige both within the academic community and in the wider public domain. Through this chapter we aim to take a deeper look at how entrepreneurial activities influence university reputation but also key mechanisms such as academic and public perception, rankings, and economic and community engagement. Entrepreneurial activities play a crucial role in shaping both academic and public perceptions of universities. Institutions known for fostering entrepreneurship are often perceived as innovative, forward-thinking and impactful, these attributes

contributing positively to their reputation among multiple stakeholder groups including students, faculty, industry partners, policy makers and the media.

4.1. Attracting students and teachers

A university's ability to attract elite students and faculty is key to its reputation, with entrepreneurial programs providing an incentive for ambitious and innovative students who seek not only academic knowledge but also practical experience in launching projects or developing new technologies. Universities such as Stanford, MIT or Cambridge, are recognized for their entrepreneurial ecosystems that attract some of the brightest minds globally, thus also enhancing their academic standing (Bercovitz & Feldman, 2008), in addition, entrepreneurial activities carried out by students and alumni often create lasting legacies that elevate the university's brand.

4.2. Media and public visibility and impact on university rankings

Increased media coverage is one of the benefits that successful universities enjoy, with entrepreneurial initiatives often also receiving increased media coverage, which enhances their visibility and public image. Amplifying a university's entrepreneurial achievements through the media is particularly important in an era where institutions compete for international recognition and resources (Fini et al., 2010).

Through media promotion of high-profile success stories, such as the emergence of Silicon Valley start-ups (Stanford) or biotech firms at MIT, positions these universities as world leaders in innovation, with the media coverage associated with these projects helping to reinforce their reputation as institutions that are not only academically strong but also deeply embedded in social and economic transformation.

4.3. Knowledge transfer and commercialization values

Among the most important ways in which entrepreneurial activities influence rankings is the successful transfer of knowledge from academia to industry. Universities that excel in technology transfer, as measured by the number of patents filed, research licenses granted, and spin-off companies created, often see a reputational boost in rankings that highlight commercialization efforts. One of the reasons why institutions such as Stanford, MIT and the University of Cambridge have consistently performed well in global rankings is largely due to the ability to successfully commercialize research results (Siegel et al., 2003). Stanford's Office of Technology Licensing (OTL), which has generated billions of dollars in revenue through patent licensing and start-up projects, has played a critical role in maintaining the university's high position in global rankings (Kenney & Goe, 2004). Similarly, the effects of the entrepreneurial impact on

MIT through initiatives such as the Martin Trust Center for MIT Entrepreneurship has contributed to its reputation as one of the world's top universities for fostering innovation (Roberts & Eesley, 2009).

4.4. Involvement of industry stakeholders

The involvement of industry stakeholders in universities' entrepreneurial activities also influences university rankings. Universities that succeed in forging strong partnerships with the private sector for collaborative research and development projects are often rewarded with higher rankings. These collaborations, in addition to being a source of financial revenue, also contribute to the institution's reputation as a leader in translating academic knowledge into practical solutions to industry challenges (Perkmann et al., 2013).

Universities' strong links with industry players can translate into higher levels of funding, access to cutting-edge technologies and the ability to offer students unique experiential learning opportunities. These are factors that further enhance the attractiveness of universities for potential students or teachers, helping to strengthen their reputation as an innovative and entrepreneurial center.

4.5. Job creation and economic impact

By supporting the creation of start-ups and spin-off companies, universities contribute directly to economic development by creating jobs, attracting investment, stimulating innovation in the local economy, thus strengthening the role of the university as an engine of economic growth (Audretsch, Lehmann and Wright, 2019). For example, universities located in innovation hotspots - such as Cambridge, Massachusetts (MIT) or Silicon Valley (Stanford) - have played a key role in transforming these regions into global centers for technology transfer and entrepreneurship. In terms of the wider economic impact of the entrepreneurial activities promoted by universities, this often extends beyond the immediate geographical area, not least because successful start-ups or commercialization efforts can attract international investment, raising the global profile of the institution and further enhancing the reputation of the university as an entrepreneurial hub.

4.6. Community involvement and societal contributions

Universities offering entrepreneurship programs enhance their reputation through community engagement. By addressing societal challenges through innovation, universities demonstrate their commitment to helping solve real-world problems, which can improve their standing both locally and globally. Thus, universities that focus on developing technologies in areas such as renewable energy, health, education, etc. contribute not only to economic development, but also to the well-being of society. Adhering to the

needs of society strengthens the reputation of the university as a socially responsible institution (Slaughter & Rhoades, 2004).

Engaging with local businesses, governments and non-profit organizations further strengthens the university's role in the community, with collaborative efforts to address local economic and social challenges enhancing the university's reputation, particularly in regions where the institution plays a central role in stimulating innovation and ensuring economic prosperity.

5. CASE STUDIES

Through case studies of institutions that have successfully integrated entrepreneurial activities into their academic or research mission, we can best understand the impact of entrepreneurial activities on university reputation. These case studies provide valuable insights into how universities use entrepreneurial programs to enhance their reputation, attract top faculty and students, and stimulate economic development in their communities. This chapter examines three top institutions: The University of Cambridge, Stanford University, and the Massachusetts Institute of Technology (MIT), all of which are recognized worldwide for their contributions to innovation and entrepreneurship.

5.1. Stanford University

Stanford University is often regarded as one of the most successful examples of a university that has successfully integrated entrepreneurship into its academic ecosystem. Being located in close proximity to Silicon Valley, Stanford's involvement in the technology industry, its historic commitment to innovation have established it as a global leader in promoting start-ups and spin-offs.

5.2. Role of the Stanford Office of Technology Licensing (OTL)

Stanford's Office of Technology Licensing (OTL) plays a particularly important role in the university's reputation as a center for entrepreneurial activities. The OTL facilitates the commercialization of university research by assisting the university in patenting innovations and licensing university-developed technologies to private companies. Since its inception in 1968, OTL has been able to generate billions of dollars in revenues for the university and has been instrumental in the creation and development of some of the world's most successful companies (Kenney & Goe, 2004). Among the most important companies that have emerged through Stanford's entrepreneurial ecosystem are Google, Hewlett-Packard and Sun Microsystems. The growth of these companies has not only brought substantial financial benefits to the university, but has also contributed to its reputation as an ideal place to develop transformative

technologies. For example, Google, which was founded by students Larry Page and Sergey Brin, has become one of the most valuable companies in the world, and its link with Stanford has significantly contributed to the university's status as a leader in innovation.

5.3. Working with industry and venture capital

Stanford's success in entrepreneurship is also attributed to its close ties with industry-leading companies and venture capital. The university has fostered an environment in which collaboration among researchers, academics, students and industry partners work together in research partnerships and projects. These types of partnerships have enabled the university to attract considerable funds that have been directed towards research, through which, breakthroughs have been made in areas such as artificial intelligence, biotechnology and computer science.

In addition, the university's link with the venture capital community has been crucial to the success of its entrepreneurial initiatives. Venture capital firms located in Silicon Valley often fund startups launched by Stanford students or faculty, providing the financial resources needed to scale these businesses. The combination of academic innovation and venture capital support has created a dynamic entrepreneurial ecosystem that reinforces Stanford's global reputation as a leader in technology development and entrepreneurship (Bercovitz & Feldman, 2008).

5.4. Massachusetts Institute of Technology (MIT)

Another university that has successfully positioned itself as a leader in entrepreneurship and innovation is MIT. Through its emphasis on technology transfer, the creation of new companies and various industrial partnerships, MIT has consistently ranked among the top universities in promoting entrepreneurial initiatives.

5.5. MIT Martin Trust Center for Entrepreneurship

The Martin Trust Center for MIT Entrepreneurship is a central component of MIT's entrepreneurial ecosystem. This center provides programs, resources, and mentoring to students and faculty interested in starting their own businesses. The center's support activities have led to the creation of hundreds of successful companies, such as Dropbox, HubSpot, and iRobot (Roberts & Eesley, 2009). The impact of the center can also be seen in the quality of the businesses, with many MIT-affiliated companies becoming leaders in their respective industries.

MIT's emphasis on entrepreneurship is also evident in its curriculum, with the university offering courses specifically designed to teach students how to commercialize their research and build successful

businesses. Through its emphasis on practical application, it has contributed to the high rate of entrepreneurship among MIT graduates, further enhancing the university's reputation for innovation and real-world impact.

5.6. MIT Technology Licensing Office (TLO)

MIT's Technology Licensing Office (TLO) has played a critical role in the university's ability to commercialize research results and stimulate innovation. The TLO's role is to help professors and students patent their inventions and license those patents to established companies or newly formed start-ups. Since its founding, TLO has facilitated the creation of numerous spin-off companies that have helped to cement the university's reputation as a leader in technology transfer (Siegel et al., 2003).

Among MIT's best-known entrepreneurial endeavors is the development of biotech companies in the Kendall Square area of Cambridge, Massachusetts. Often referred to as "the most innovative square mile on the planet," Kendall Square is home to a dense concentration of biotech firms, many of which have their origins in research conducted at MIT. This cluster of startups has significantly enhanced MIT's position as a leader in areas such as life sciences, technology, and life sciences, attracting global attention and investment.

5.7. University of Cambridge

The University of Cambridge is one of the oldest and most prestigious universities in the world. The university has increasingly embraced entrepreneurial activities in recent decades, it is historically recognized for its academic research activities, the university has made significant progress in technology transfer and the creation of start-ups, particularly through the Cambridge Enterprise initiative.

5.8. Cambridge Enterprise and technology transfer

Cambridge Enterprise, the commercial arm of the university, supports the translation of academic research into commercial products and/or services. The organization works with faculty and students to patent innovations, license technologies and create spin-off companies. Through Cambridge Enterprise, the university has facilitated the spin-out of more than 1,000 companies, many of which are located in one of the UK's leading innovation hubs, Cambridge Science Park (Fini et al., 2010).

ARM Holdings is one of the most notable companies to emerge from the entrepreneurial ecosystem created by Cambridge, which has become a global leader in semiconductor technology. The success of ARM Holdings has brought a spotlight to the university and demonstrated Cambridge's ability to compete with universities such as Stanford or MIT in innovation and entrepreneurship.

5.9. Cambridge Science Park

The Cambridge Science Park was established in 1970 and is one of Europe's most recognizable innovation hubs, home to a wide range of technology companies, many of which have their origins in university research. The Park provides a collaborative environment between academics, entrepreneurs and companies, facilitating knowledge transfer and the commercialization of cutting-edge research. The presence of the Cambridge Science Park has enhanced the university's reputation as a leading institution for entrepreneurship and innovation programs, both in the UK and globally (Audretsch, Lehmann and Wright, 2019).

Cambridge's entrepreneurial success has consistently contributed to a consistently high ranking in global university rankings. The university's ability to commercialize research results and encourage start-up creation has been recognized in metrics such as knowledge transfer but also engagement with different industries, helping Cambridge to maintain its reputation as one of the best universities in the world (Hazelkorn, 2015). Cambridge's focus on entrepreneurship has attracted significant investment from venture capital firms and industry partners in recent years, further strengthening its position as a leader in innovation.

6. CONCLUSIONS

The institutional reputation is significantly influenced by the entrepreneurial activities carried out within universities, which facilitate knowledge transfer and promote economic development. Thus, universities that manage to successfully integrate entrepreneurship into their programs tend to enjoy higher rankings, greater media attention and stronger relationships with industry and community partners. Balancing entrepreneurial activities with academic integrity, and addressing potential ethical concerns, remain challenges that universities need to navigate carefully. In the end, a university's ability to have blended both traditional academic endeavors and entrepreneurial activities will likely determine its reputation and success.

This research is limited by: access to detailed data for all the universities analyzed, especially those related to technology transfer activities as well as involvement in start-up initiatives and generalizability of the results because the data analyzed come mainly from European and American universities, where entrepreneurial activities may be different from other regions.

The findings of this paper show how entrepreneurial resources such as startups, business incubators seek to guide universities in the strategic allocation of resources, policy development and implementation of practices that lead to enhancing the reputation of universities.

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