

University and Techno-Parks Administrations' Policies on The Development of The Intellectual Property Rights

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Abstract

This study aims to articulate the importance of how university and technology parks administrations have affected the development of Intellectual Property Rights (IPR) in the changing environment of Turkish universities. The forty-five participants were selected from different startups at the university technology parks. Using a phenomenological analysis, seven research questions were answered in semi-structured interviews. The collected data were analyzed in Atlas.ti in order to make a more in-depth study. As a result, the data shows that the university and technology parks administrations have inevitably affected the IPR system in many ways. The transformation process of universities becoming more "entrepreneurial" has affected academicians and students to a greater degree. The academic profession, which is an umbrella term for working conditions for academics, has changed a lot. Most (85%) of the participants clarify that the university administration would develop a better network in order to increase the patent activities. Most (81%) claim that competitiveness is important not only for the universities but also for the academic people so that the university administration would change their performance criteria to prepare properly for the competitive global market. As a result, as most (91%) participants clarify that the university's administration plays an important and crucial role in controlling and managing these conflicts and inequalities to protect all the stakeholders, particularly those who do not have a strong background, like the PhD students.

Key Words: Higher Education, Technology Parks, University Administration and Management, Intellectual Property Rights

INTRODUCTION

The relationship between intellectual property rights (or lack thereof) and a country's economic growth is well documented. Gould and Gruben (1996) wrote "the evidence suggests that intellectual property protection is a significant determinant of economic growth", specifically that "stronger intellectual property rights protection corresponds to higher economic growth rates in a cross-country sample" and that this relationship is more pronounced in countries with more "open, competitive economies" [1]. Turkey's economy underwent heavy re-structuring, liberalization and an opening to the global markets during the 1980s. Part of this restructuring/liberalization process, which continues up until today, involves a change in Turkey's higher education sector, which has seen an explosive growth in both the number of private universities that have opened as well as a large increase in the number of techno-parks and similar partnerships that have opened in many campuses.

The result of what should happen to inventions and creations that are produced at these techno-parks and universities is still the result of some ambiguity. As Verspagen writes, "patents are normally intended to stimulate knowledge development by providing property rights, but universities operate also under a different incentive scheme, i.e. they receive public funds to perform socially useful knowledge"

[2]. In his study Verspagen was ultimately unable to determine if stronger or weaker IP regimes were beneficial for universities and their students or not; on one hand, there is "the potential beneficial impact on technology transfer", (which in turn can be highly beneficial for a nation's economy), but on the other hand, "the danger to the 'open culture of science', a potential incentive for universities to perform more applied (less 'basic') research (to become more like firms), and the potential of 'strategic' patents to block future progress in an area" are all problems that could arise from increased university patenting [2].

Of course, university administrations have a strong influence on Intellectual Property rights at the universities especially at those universities are state or private and thus have administrations that can receive extra pressure from the government. Using a 41-nation sample, Park found that "IPRs do not stimulate productivity growth directly, but do indirectly by stimulating R&D investments" and that the actual "mechanisms for enforcement and level of enforcement effectiveness" for IPRs (which many times fall practically under the purview of university administrations are actually more important in promoting growth and stimulating the investments than the legal provisions alone [3]. Park wrote that out of the different types of IPRs, it is specifically "patent protection and enforcement levels" that were generally conducive to promoting R&D activity and productivity [3].

In a 2012 survey carried out by the European Patent Office (EPO) and the Turkish Patent Institute (TPI) of 142 Turkish universities (out of the total number of 172), it was found that just 13,8% of the department heads indicated that they have IPR Policy at their universities but on the other hand, but “70,8% of the department heads of the universities do not know whether their university has any IPR Policy”. 83.4% of departments indicated that they needed training programs for their researchers regarding to intellectual property rights issues, and “only 3% of the universities indicated that they have patented inventions which are commercialized / licensed [and] have spin-off companies established based on the researches” [4]. However, most respondents replied that “‘Informing researchers about commercialization processes’, ‘Raising awareness of commercialization among researchers’ and ‘Creation / dissemination of commercialization support units’ are very important to increase the commercialization rates of research results”, which indicated a willingness (or at least an openness to the idea) of academicians for their research work and that of their students to be open to commercial profit.

A major reason for this may be due to the fact that in recent years universities have attempted many different ways to diversify their revenue streams. Improving property rights and developing/encouraging entrepreneurial activities in their universities is a major way universities can achieve greater financial independence from the state – especially as the state has cut funding for higher education in recent years. Therefore, despite the relatively low rate of knowledge amongst Turkish academicians with regards to Intellectual Property rights, there is a general consensual among many that increased commercialization and stronger IP rights would be beneficial in general for their universities, at least in a financial sense. Likewise, many governments around the world have begun to notice the positive relationship with stronger IP rights, which leads to the commercialization of university research results, which leads in turn to economic growth, and therefore have begun to increasingly enact policies which encourage this university-industry technology transfer, according to WIPO Director General Kamil Idris (2007). In this same paper from the WIPO, several case studies from East Asian nations were examined. In these countries, the “development and expansion of U-I relationships during the last decade has been a result of goal-oriented and deliberate public policy efforts”, which included specifically “defining the legal status of universities and their professors, relaxing or removing regulations that prevented faculty members from working with companies, developing policies on intellectual property rights, establishing technology transfer offices, creating funding schemes, and ensuring adequate financial resources for research and development activities at universities.” (It can be assumed that similar strategies have been undertaken by the Turkish government in order to encourage such partnerships at Turkish universities; even though funding as a whole to universities may be cut, funds especially earmarked for encouraging R+D may be preserved in general.) This WIPO report also concluded that “a key challenge for governments and institutions is to adequately support the technology transfer process through various mechanisms, including the use of IP rights, while not losing sight of, and reinforcing, the educational and research mission of universities” [5].

While this study does not focus on one particular sector or academic discipline, Beyhan, Pamukcu, and Erdil's (2011) survey of Nano-science and nanotechnology academics employed by Turkish universities found that that the “organizational resources/capabilities” of universities significantly influence the “formation of links between universities and industry.” [6] This study also found that roughly “7 percent of Nano-scientists explain that their relation with industry is based on direct commercialization of research results, i.e. joint patenting with private companies; licensing and starting up a new firm” and that “the extent to which a Nano-scientist's [even Nano-scientists that are employed at universities] research outcomes meet the needs of industry positively influence her/his proclivity to engage in KTT [knowledge technology transfer] activity” [6].

This paper aims to focus specifically on the effects the university and technology park managements have on IPRs in Turkey. The WIPO paper points out several risks and areas where university administrations need to be careful when encouraging University-Industry partnerships. “Universities must still fulfill their primary mission to teach students, and this goal cannot be compromised under any circumstance.... While university professors are given greater freedom to work with the private sector than before, it is not to suggest that there should be no separation between their academic activities and their commercial ones,” the paper suggests. Specifically, administrations should ensure that professors do not neglect their students or teaching duties for their researches, and need to be aware that research priorities may become “skewed towards applied research that tends to produce immediate financial benefit” [5]. It is paramount, WIPO wrote, that universities that encourage these U-I partnerships also take multiple steps to ensure that no conflicts of interest arise, including misusing students (particularly undergraduate students) as cheap labor, using university resources to directly serve a company or firm, purchasing equipment from a firm that a researcher has an interest in, and transmitting privileged or otherwise classified information to a firm or company [5].

METHODOLOGY

The forty-five participants were selected from different start-ups at the university technology parks. A phenomenological analysis was chosen due to its advantages in gathering in-depth information or “pure” data as experienced by subjects of a phenomenon, and in gathering data on issues that have not been extensively covered in depth before. Under the chosen phenomenological research concept, semi-structured interview format was chosen, as this method is able to balance gathering in-depth information while still remaining relevant to a certain research topic.

Eight research questions were initially asked in these semi-structured interviews. The initial seven questions, from which respondents could give at-length answers and branch off from, were:

To what extent, in your opinion, does your university's administration or management influence the quality or quantity of research, IP rights, and UI partnerships at your university?

How much do you know about your university's IPR policy?

What is your opinion on IP rights?

What would the advantages and disadvantages of IPR be at your university?

Would increased or stronger IPR be a good or bad thing, overall, for your university?

What have been the effects of your university's administration on research at your university? Do you believe your university does an adequate job of protecting Intellectual Property?

What recommendations could you give to your university's management on the topic of IP rights?

The collected data was analyzed in Atlas.ti 7 in order to partially quantize the results and to make a more comprehensive study.

RESULTS

Most (91%) participants responded that the management style of their university's administration played an important role with regards to IP rights and knowledge commercialization, particularly with regards to performance indicators since they are used to assess and measure individuals, departments and universities against each other. While IRP awareness is still not universal, it is growing in importance among academic people and students. However, a large number (84%) of the participants do not possess an in-depth knowledge about the various details of IPR, dovetailing with the TPO-EPI survey that also found low rates of patent and IP rights awareness among department heads. This statistic also correlates to Manderieux's finding that Turkey currently possesses a "a diversified university IP landscape" and that "there is space for major improvement in two areas: in the integration of IP education in universities' curricula, and in the interrelated issue of networking and cooperation between IP communities of Turkish Universities" [7].

More importantly, a large number (91%) said that they believe that these activities related to IPR increase collaboration and cooperation among academics. Another significant proportion of the respondents (94%) agree that the effects of ongoing changes in the higher education sector would be different for the elite universities compared to the "socially disadvantaged" universities (ones with less prestige and smaller endowments/operating budgets), particularly ones located in Anatolia as opposed to the better-resourced coastal Marmara and Mediterranean regions. One respondent (n.40) pointed out that these universities in the wealthier coastal regions already receive a higher proportion of funds to begin with, so there is a danger of these advantages "snowballing" with outside firms preferring to work at the already advantaged universities. In order to correct this, equitable funding must be ensured, and "less favored" universities need to be especially careful to strengthen their IRP policies, in order to "compensate" for their less prestigious position within the Turkish university system.

76% of the participants point out that the future of higher education has been changing in terms of faculty organizations, particularly with new IRP policies. That is, this large majority have noticed or sensed a change in recent years with regards to their administration's IRP policies and

regarding commercialization of knowledge as a whole. Most (85%) of the participants clarify that the university administration should develop a better network in order to increase the patent activities. Most (78%) participants articulated both positive and negative feelings with regards to IRP; particularly that it can bring in much needed financial support but also that increased commercialization of knowledge and U-I partnerships have the ability to change the culture of academic world. Most (81%) claim that competitiveness is important not only for the universities but also for the academic people so that the university administration would change their performance criteria to prepare properly for the competitive global market. These (61%) participants strongly point out that employability of their students after graduation is – or should be – an important priority for universities. By improving intellectual property rights and entrepreneurial activities, universities can increase their funding. Hence, they take into account technology parks as the places to develop strategies for different activities to increase income. Finally, most (92%) participants mention that more financial autonomy would make the universities more aggressive in the 'market', due to the fact that the government is increasingly reducing the support for the higher education.

Even though some (29%) participants point out that IRP may increase conflicts and inequalities, the rest (71%) agree that with a proper role and style of management, university administrations could mitigate or prevent these potential problems and reduce the amount of conflicts and inequalities. Some participants gave specific examples or suggestions as to how university administrations could prevent or mitigate these problems. As mentioned above, a suggestion expressed by a majority of the respondents was that universities should work to develop a clearly defined, specific IRP policy, and then disseminate information about this policy more concretely to academic staff and students. One respondent (n.7) said it was important for administrations to include specific provisions on sharing revenue from commercialized projects, as well as specific criteria for "ownership" of these projects and intellectual property, especially on joint ventures. Were these criteria to be specifically laid out and widely known amongst academic staff, they would be more comfortable entering into U-I partnerships and producing research that could be commercialized, the respondent said. Another respondent (n.24) said administrations could use patents, licenses, and use of the IPR system as incentives for career advancements at universities, although they should not necessarily become mandatory requirements. Staff that is especially trained in IP issues, that could then educate staff at a number of universities, was suggested by another academician (n.2). It is important to note that many of these suggestions were also brought up by the WIPO report [5]. In general, a very large majority of the participants (91%) clarified that the university's administration plays an important and crucial role in controlling and managing potential conflicts and inequalities, and should work to protect all stakeholders of the universities and techno-parks, particularly those who do not have a strong background and may be in danger of having their work be taken advantage of, like the PhD students.

CONCLUSION

In conclusion, the phenomenological research results from this study generally confirmed what multiple studies and other works of literature on this subject have postulated: that university administrations and managements have many responsibilities with regards to IP rights. A majority of respondents agreed that administrations need to strengthen their IPR policies at the universities, because an increased rate of both U-I partnerships and commercialized research would be ultimately beneficial for their universities (as well as, some respondents and research studies postulated, good for the nation's economy as well). However, with these increased partnerships come several concerns, such as possible conflict of interest and negative effects being passed onto students. University management should not only increase awareness of IP rights, as well as articulate a specific IPR policy and educate their staff and students about it, but should also work to mitigate any potential drawbacks that may occur while working to maximize the positive effects of knowledge transfer.

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