Academic Identity & Academic Labour in the Neoliberal Knowledge Production Process: The Example of Ankara's Technocities [i]

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Abstract

Since the 1990s neo-liberal policies in Turkey have been reflected in the university. University-industry cooperation policies and the establishment of technology development zones (technocities). These are indicators of neoliberal policies. Firms operating in Technocities are supported in various ways in cooperation with the university and gain some advantages over other firms. An important component of this collaboration is the academics, their academic labour. This article aims to reveal how the technology development zones have impacted on the employment, and the individual and academic identities of university staff and academic staff. The study on which this article is based, was designed as qualitative research, semi-structured interviews were held with the company owners and academics operating in the technopolises. Academics, who can produce practical solutions, those who adapt quickly to changes, who keep themselves behind the company, and who can be young and easily directed, are liked by the companies. Especially in applied sciences, academics see companies as a field of work and they see it as necessary to cooperate with companies in order to produce knowledge, due to the lack of laboratories and equipment of universities. However, it was understood that they had some difficulties in maintaining the balance between the objective and ethical conditions of this cooperation.

Keywords: *University, neoliberalism, akademic labour, academic identity, scientific production.*

Introduction

In the modern world, faith is replaced by knowledge; and the idea of 'divine subject' has given way to 'human subject'. "The courage to use your own reason"[iii] has also formed the ground for the development of social sciences. In addition, labour was liberated. It was emancipated from the feudal order of slaves or serfs. This was also the birth of bourgeois society in the Marxist sense. In this bourgeois society no social process could essentially be immune without commodification: within two hundred years, almost all of the relations between people became open to commodification (Marx & Engels, 2007, 9; Marx & Nicolaus, 1973, 13-18; Wallerstein, 1983, 13-43; Holloway, 2001, 36-42; Giddens, 1973).

Bureaucracy, which Weber portrayed as a "factory of rational conduct" in the nineteenth century, in a sense, which is the basis of the modern state, is now seen by Bauman (2011, 40-52) as the "solid modernity". According to Bauman, modernism has started to become liquefied today, and the state of rationalizing working obsessively and professionalism which is the core of modern bureaucracy is now ending. Today, a kind of "universal strategy" of power struggles rules the world: "Whoever is close to the sources of uncertainty rules." With flexible groups, with many options and standing in an unpredictable place, there is a struggle for power among fixed groups who are stuck in a routine and feel an overwhelming sense of insecurity in the face of uncertainty. In this portrait, Henry Ford’s modelling of the capital class, which is immersed in heavy and bulky machines, locked into high factory walls in a mutual needy relationship with the working class is a thing of the past. The bosses, who left the job of management, which is a serious job, to the real power of professional

executives for a long time, and paying these professionals to do this, are now using their best card of extending the contract period, which is now subject to competition. While the concepts of ‘control’, ‘leadership’ and ‘management’ are replaced by ‘cultures’, ‘networks’, ‘teams’ and ‘coalitions’, the institutions of the "experience economy" era, which emphasize subjectivity, acting and performance, give messages of ‘volatility’, ‘fluidity’, ‘flexibility’ and ‘short lifespan’. The employees of these institutions are looking forward to finding new evidence that they are still welcomed against the threat of not extending their contracts. The less strict and more ready to be replaced, the better the business institutions of today are, and this is a discreet adaptation to the conditions of today's global economy (Bauman, 2011,45-50).

According to Bauman (1999, 69-70), education and science also take their share of the "liquefaction" of modernism. According to Bauman, Friedman's definition of "modernists without modernism", which sheds light on today's modern scientist, meets the globalized and thus increasingly disconnected knowledge elite and learned class who embrace the neo-liberal vision of ‘no society’ understanding. These modernists refuse "without any vision of a global state of affairs essentially better than the one in existence or any determination to help that better world into being” that also the beginning point of modernism. The liquefied state of the modern world and modern science causes the “diminishing social responsibility” and to becoming “demoralized” and “selfish”.

Scientific knowledge production has gone through a period in which research has been accepted without question, and it has moved towards an atmosphere that continues with inquiries against the values of science and underestimates the importance of science today. A process in which Enlightenment values have been questioned (e.g. Ben-David, 1971). The commodification of knowledge

under the influence of the capitalist understanding of commodification and the transformation of it into a product produced and shared around the market reveal the most important implications of this process. For example, the cost of translating software into a digital language is often high, but unlimited production and reproduction of software can be accomplished at very insignificant costs. This is a threat to capitalism's understanding of commodifying knowledge.

Under these circumstances, the exchange value of information is determined by the practical capacity to limit its free circulation (Gorz, 2010). Restricting access to information also restricts the conditions for the production of information because it has a presence above a certain accumulation. What determines whether the information produced today is valuable is its potential to be sold in the market, and the information that is worth researching, although it does not have this potential, is ignored. While all this is happening, the academic who produces information changes his/her quality by taking his/her share from the commodification in the labour market.

The University in the Neoliberal Age, Academic Identity and Academic Labour

The years when public expenditure and education expenditure -even those in favor of capital accumulation- were undertaken by states were over together with ending the Fordist organization of production (Ünal, 2011, 94-95). States started to reduce their expenditure on education and culture. Thus, the commodification of education and science has increased. With the weakening of the social state, the "regulatory state", which is said to be "weak" in terms of the interests of the sovereign groups that are in front lines of the society, is being replaced by market laws (Gorz, 2001, 21). For Turkey's economy, the country was ushered in a new era in economic history in 1980 by the January 24th

decisions. These decisions ended the industrialization policy based on import substitution. Neoliberal themes such as rolling back of the state, export promotion, privatization and liberal competitive individualism replaced the popular policies of the previous two decades. The authoritarian structure established in the country by the military coup on 12 September following the 24 January decisions eliminated the possibility of an organized opposition. The implementation of neo-liberal policies brought further integration of Turkey's economy into the world capitalist system. Following the abandonment of the public sector in favor of the private sector, global capital adaptation processes put into effect through the GATS (General Agreement on Trade in Services), which came into force in 1995. Therefore, these events has a special role in the neoliberal transformation in Turkey's economy (Aksoy, 2005).

In this process, which can also be called the transition from industrial capitalism to information capitalism or the post-industrial capitalist process, intangible labour, the producers of intangible items such as information, communication, affection, desire, enter a new form of association with capital as wage labour (Vatansever & Yalçın, 2015, 36-38). The knowledge produced by the academic is reduced from the Usage Value to Exchange Value and the value of the academic is measured based on the exchange value of the information he/she produces. The exchange value of scientific and technical knowledge today largely depends on market demands and the administrative/ military/ colonial strategies of developed countries (Gümüş & Kurul, 2011, 16; Aksoy, 2003, 5).

The Impact on Universities

So how are universities affected by this change? The results of identifying science production with the capitalist production process are not very good for universities. Callinicos (2006) explains the implications of starting to consider these two production areas the same with the concept of "information

capitalism" and reminds that the competition will have both winners and losers at universities that operate or are operated under market rules and asks: "What happens to the losers?". To be on the losing side of competition for a university means using fewer resources, less qualified education and worse conditions for both students and academics. Sometimes “underdeveloped” country universities, or rural universities that are behind in terms of adaptation to the market, and sometimes occupational fields that cannot find a place in the market, and especially social and human science fields will be among the losers. Perhaps, in the longer term and despite the potential to provide public benefit, some fields will have a decrease in the number of students or even come under a threat of closure over time. Principles such as “rational and efficient use of resources” will be frequently mentioned in determining the resources transferred to the public through the market. The “industrialization” target, which was expressed in the past as the legitimacy source of the practices regarding the market-oriented information production process, will be replaced by the “qualified labour force required by the information society” (Ünal, 2011, 94-95).

Today in the world of science which establishes a faulty bond with the real-life and the problems of human existence, academic labour is also excluded from real-life problems. Bernal (1939) sees the modern man, a product of the modern world; desperate against human-made disasters such as technological unemployment and scientific warfare, and completely ignorant and passive against natural phenomena such as drought or epidemic diseases. According to Bernal (1939), when the scientist shows a little more interest than what was expected from them in social or political issues and expresses an interest outside the established order, it creates a perception that it is biased and its scientific work cannot be trusted. On the other hand, due to the asymmetric power

relations in the production of information and access to information, many people think that “what cannot be counted cannot be true”.

In parallel with this perception, personal profit opportunities appear along with a process that reduces the performance of an academic's labour to the number of publications. Thus, the interest of academics moves away from more challenging issues intellectually (Waters, 2004, 8-9; Bok, 2003). Today's academic labour is flexible and precarious labour under contractual and temporary employment, under the pressure of continuous publication, under the threat of processes called precarization and Taylorization, evaluated by the volume of scientific work it publishes (Bernal, 1939, 112; Evans, 2002, 147; Waters, 2004, 45-47; Vatansever & Yalçın, 2015, 51-52). They are not free; they are afraid, they don't ask big questions, they don't ask why things are so (Waters, 2004, 47).

The university's right to organize its internal affairs as an institution is defined as “academic autonomy” and the university's ability to freely carry out activities such as teaching and research that transcend itself as an institution is defined as “academic freedom” (Evans, 2002). It seems that academic freedoms are under threat today. Various dimensions of this threat have been voiced by some social scientists. Since government funds are replaced by private funds, universities have become incorporated in both their internal operations, their management, and their reward systems. Companies take place in decision making positions in terms of information management and training planning (Evans, 2002; Hardt & Negri, 2012). At universities, the emphasis is placed on the cultural change implied by encouraging them to provide "business" education not only in "management" courses[iv] (Evans, 2002). In Turkey, the Higher Education Law that was proposed as draft in 2012 proposed that universities would be managed by a company, which would include representatives of the companies. The

proposed "university council", was considered among the practices threatening academic autonomy- (Aksoy, 2012). The draft was not put into effect due to the lack of approval by universities and civil society components. The draft did not come into force due to the lack of approval by universities and civil society components.

One of the important factors that plays a role in the internalization of business and entrepreneurial information generation systems for universities to create their finances is university-industry cooperation projects, R&D studies carried out by the university and industry within these projects, and Technology Development Regions, where these studies are realized. “University-industry cooperation”, which is defined as “the whole of systematic studies carried out by combining the existing opportunities of universities with the existing opportunities of industry” to progress in terms of scientific, technological and economic aspects, is especially addressed through the contributions of cooperation to the industry. The contributions of this cooperation to the university have a little place beside their contributions to the industry (Çam Tosun, 2013, 33). The benefits for the university from this collaboration are based only on factors such as “applying scientific research, increasing efficiency in education and training, additional income for the university and faculty members, ease of finding a job for graduates, providing universities with the opportunity to fulfil their social duties and responsibilities”. On the other hand, universities, which are shaped by capital, turn into a factory of ideas that can be consumed quickly, away from living with original and social ideas. Education and research, which are among the basic functions of the university, differ from each other. There is an increase in interest in the short-term interests of the market, breaking with the universal principles of science (Çam Tosun, 2013, 33-34).

Technology development zones, which first came under the scope of University-Industry collaboration in the 1990s for Turkey and legalized in 2001, are identified as “Centers where enterprises and organizations based on information technologies and advanced technologies operate to produce, develop and transfer technology, and are managed in a way to provide the environment and conditions suitable for the realization of these objectives” (Reyhanlıoğlu, 2006, 100). Today, many companies producing in the fields of robotics, electronics, medicine, defence, medical, software, industrial products, energy systems, simulation and so on, are carried out with state incentives based of R&D studies in technology development regions established under the names of technocity, technopark and cyberpark within universities.

Technology development zones are an important and growing investment area for national and international companies through university-industry cooperation projects. The companies benefit from the technical infrastructure and equipment of the universities, as well as the labour of the academicians working in the university and the students working as trainees at low cost. For this reason, as well as the transformation of knowledge production here, the transformation of academic labour working in these areas is among the topics that should be examined. This research, and this paper, aims to reveal how the technology development zones, which emerged as a reflection of these practices and university-industry cooperation, reflected on the employment, individual and academic identities of university staff and academic staff. In this context, answers to the following questions will be sought:

(1) What are the qualifications expected from academics within the scope of university-industry cooperation in technology development regions?
(2) What are the working conditions of academics cooperating with companies operating in technology development regions?

(3) How do university-industry cooperation practices conducted in technology development regions affect academic employment and academic identity?

Methodology

Research Model

The qualitative research approach is adopted in this research, which focuses on understanding how academic staff from university components are affected by neoliberal information generation processes. It is possible to state that the research is a survey model and is based on qualitative data. The survey researcher who wants to understand social reality deeply, tries to give the profile of individuals who make up the social world, and accepts that this creation process is an exposition and explanation activity both by the individuals and the researcher her/himself may also try to understand. The survey researcher try to understand the behavior, attitude, belief and opinions, personal characteristics, expectations, perceptions and information that interviewer have in his/her research. The researcher can ask his questions to the working group directly face to face; also he/ she can use different tools such as mail, phone, web environment (Neuman, 2007, 168-169). In this regard, a qualitative research approach based on asking questions about the social life of micro-units, which is the target of the research problem, was followed.

Working Group

The research was carried out in two of the universities with technology development zones in Ankara due to the researcher's location and limited accessibility. Considering that public universities will be more responsible than private universities for producing information that favours public interest, both universities are preferred to be public universities. It is understood that each of

these technology development regions, which are mostly hosted by software companies in Ankara, actually aims to meet the general needs of the industry in a specific sector and they want to develop in this direction. Toprak (means soil in Turkish as anonimised) University Technocity, which is thought to be an important source in terms of getting to know the site, has been determined as a prototype because it is located in a more institutionalized place that looks closer to the "vision definition" determined within this framework; Ateş (means Fire in Turkish as anonimised) University Technocity was also included in the research as a second university that attracts attention with its rapid change and transformation created within the university and with its active working system in terms of ensuring diversity and inclusion. To ensure that the specialized information of the people and companies in the research is not shared, it was deemed appropriate to name these two universities by coding as "Toprak University" and "Ateş University" in the research.

To meet in selected technocities, two groups, namely (1) company owners and/or managers, and (2) academics who provide external consultancy services to companies, operate as a company owner or as a company partner or conduct the execution of a particular project Teknokent Inc. in line with the directives of their managers, companies and academicians were contacted by the relevant units by e-mail and telephone, and voluntary individuals and companies were visited. Interviews continued until data saturation. In this framework, 12 academics and 12 company owners and/or managers from both universities were interviewed.

The talks lasted from May 2015 to August 2015. In the research, interviews were made with people between the ages of 26 and 66. The age range of the interviewed company owners varies between 26-64 and the age range of academics is between 38-66. All of the company managers involved in the

research stated that they are also shareholders of the company- all managers are shareholders. The fact that there are only 2 women as the company manager in the research group suggests that more men tend to establish or own a company in the technocity compared to women. 4 of the company owners have a bachelor's degree; 6 of them have a master's degree and 2 of them have a doctorate. 6 of the owners of the companies interviewed operate in the fields of informatics, 4 in defence and 2 in biomedical devices and health technologies. Although specific R&D studies are being prioritized by technocities in Turkey, it can be observed that these studies are mostly in fields those software companies work on. Considering this, the distribution of fields of activity is in parallel with technocities those studies being worked on.

Duties that constitute the research group and both external consultants and project executives; Both academics who are in contact with the industry by establishing a company in technocity consists of men. As seen in Table 1, 7 of the 12 academics are company owners or company partners; the connections of the remaining 5 academics with companies are in the form of project management or consultancy.

Table 1.

Cooperation Types of Interviewed Academicians with Industry

	Ateş U.	**Toprak U.**	**Total**
Company Owner	2	5	**7**
Consultant / Project manager	4	1	**5**
Total	**6**	**6**	**12**

Distribution of the interviewed academicians according to their titles are given in Table 2. According to this, 6 of them are professors and 4 of them are the owner of the company; 2 are associate professors, one is the owner of the company and 3 are assistant professors, 2 are the owner of the company. An academic interviewed is a graduate of the Academy of Engineering and Architecture, is not the owner of the company and is assigned by the university to a company operating in technocity.

Table 2.

Academic Titles of the Academics Interviewed

Academics	**Ateş U.**	**Toprak U.**	**Total**
Professor	2	4	**6**
Associate professor	1	1	**2**
Assistant professor	2	1	**3**
Instructor	1	-	**1**
Total	**6**	**6**	**12**

Most of the academic community interviewed works in Engineering Faculties; only 2 of them work at the Faculty of Medicine and one at the Technical Vocational School.

Data Collection Tool

In the research, the documentary research method was used to collect statistical data and to deal with the legal aspects of the subject. Also semi-structed interviews with academics to collect the other data were carried out. Documents are important sources of information that should be used effectively in

qualitative research, and facilitate researchers to obtain data without the need for observation and interview. In the research, after the policies related to university-industry collaboration with *documentary research* were presented in general terms, the interview method was applied. Interview, as one of the basic data collection tools of qualitative research, is seen as a good way of understanding the perceptions, meanings, definitions and constructions of people about reality (Punch, 1998). The unstructured interview was used to identify important variables in the research area, and the semi-structured interview method was used to analyze the main problems of the research area in depth. In the research, for the data collected through semi-structured interviews, firstly, interview forms were prepared for each research group, these data tools were presented to some academics from the fields of social science together with the research purposes, and the necessary forms were made in line with the opinions received from them and the interview forms were finalized. Thus, the validity and reliability level of the interviews were asked to be increased.

During the interviews, a voice recording was taken with the approval of the interviewers. All the interviewees showed maximum effort to answer the researcher's questions. The interviews were foreseen to last between 20-40 minutes and the participants were given this preliminary information. However, it can be said that these periods were often exceeded and the interviewing process extended from 40 minutes to 120 minutes.

Analysis of Data

During the interviews, notes were taken over the voice recordings, and limited parts of the interviews were transcribed.. During the transfer of the interviews to the article, attention was paid not to share the information of the individuals and companies interviewed, and to use the coding of university-duty-gender-ranking information in reporting. In the analysis of the interviews, direct quotations

were made from what the individuals said, sticking to the original forms of the data, and a descriptive analysis was attempted based on the descriptive approach, based on the words, expressions, language used, the structure and characteristics of the dialogues, the symbolic expressions and the analogies used.

Results

Findings in response to the research questions are discussed here under separate headings.

Qualifications Expected from Academicians in the Scope of University-Industry Cooperation

The general conditions of the cooperation that academic continue as long as they are positioned as a technocity company owner or consultant/project manager are based on certain foundations. Academics who work as owner or partner of a technocity company continue their R&D studies in addition to certain tax advantages and legal obligations within the scope of Technocities Law, provided that they pay the rental fee determined by the technocity. Within the scope of these R&D studies, like all other R&D companies, they can benefit from state or EU Project supports such as STRCT (The Scientific and Technological Research Council of Turkey/TÜBİTAK in Turkish) / TIGPD (Technology and Innovation Grant Programs Directorate/ TEYDEB in Turkish), SMIDOF (Small and Medium Industry Development Organization Funds / KOSGEB in Turkish), IND-THE (The Industrial Graduate Thesis / SAN-TEZ in Turkish).

It is understood that the companies benefiting from academic as consultants within the framework of university-industry cooperation have gained an advantage in this way in obtaining various R&D project supports. According to

the information received from one of the company managers and one of the academicians in Toprak University, the fact that the name of an academician is mentioned has a positive effect especially in the support of STRCT projects. In this regard, an academician points out that they can think of the academics to whom the company owners consult as a tool to acceptance their projects:

> […] By typing your name into STRCT projects, you can pass it down the board. Can we anticipate this from the beginning? Most of the time, we could not. Because there are long meetings in the project writing phase… It is a good thing TTO organizes these meetings and provides a smooth text as a result. I don't know how much the company cares about it. But the thing is, of course, many companies write your name, take the project, and after that, they have little relation to you during the project… Especially those things ... they happen in small companies, they already manage what they do in their messy order. Although we write things to improve the company there; Even if we write things such as recruiting staff, using this software and proceeding with an R&D systematic, we have observed that they do follow their gut. That's why… you are not… satisfied anymore. Because after a certain point, the connection is completely severed, like you speak a different language. (AAM3)

On the other hand, there are two opinions that working with academics slows down the work and that academic support "remains theoretical". A company manager, who shares the view that getting academic support has a slowing effect for the company, connects this slowness to the work system in the academy and the work that academics have to do for the university, and suggests that undergraduate courses should be taught with non-doctoral academic staff to overcome this slowness and adapt university conditions to the industry. The company manager shares his thoughts on this matter with the following sentences:

> […] I see this: I send the e-mail to the academician, I say "There is this thing, it had an application on the 25th of May'. They say, "We can't meet the application on the

> 25th of May." 'Why?', 'Because we can't fill out their papers on the 25th of May, because we're going to be in class, we're going to evaluate homework, we don't have time. We need something to fill in on papers in summer and apply in the fall. Or we need to fill in the papers between February and apply in March, so we can apply twice a year. " There is no such thing in a company, the company works 12 months of the year. … The company provides if it can adapt to the two-time calendar of the university in that year, if it cannot, it cannot. … But this is the actual truth. The same problems are experienced around the world. Do you wonder how they manage though? For example, Oxford is an example from Europe, from the immediate environment. Almost no doctorate lectures in undergraduate courses in Oxford. They make do with lecturers. Same goes for Harvard as well. (TDM2).

An academic who works as a project manager in a defence company in Ateş Teknokent explains that their colleagues are not preferred by companies because they are far from the industry:

> Now when the industrialists have a problem, they are afraid to come to university, why? First, when they come, very high wages are demanded by lecturers. For example, I witnessed that five or six thousand liras were requested even for a very simple test, so the industrialist is afraid. Second, when the industrialists come here, they cannot find the expert lecturer of the subject. No, they remain closed to industry; only theoretical. They cannot take what they expect from the teacher, how can I say, because the teacher is not an expert but rather inadequate. Especially in the field of industry. So I saw all this. Industry-university cooperation is like a story concept for me. It is a very, very fictional concept. Here we see academician friends. Unfortunately, there are engineers ... and academics who have never been to Ostim, who have not seen the industry environment in their lives. They came in to do their things in the morning, they gave their classes, they went home in the evening. Ninety per cent are working off the industry, I say ninety per cent. (AAM6)

It was understood that the companies that received support from academics as consultants may need project-based consultant support, and at this point, they

prefer academics under the qualifications required by the project. In the selection of this kind of academic, especially the studies done by the academic and whether it is close to the company's way of working; Also, it was observed that especially being young and open to learning were given as the reason for preference. In addition to the qualifications required by the project, the qualifications expressed by expressions such as being appropriate for the company's working style, being compatible with cooperation, being compatible, and being good in human relations were also expressed as a reason for preference in working with academicians. The qualifications of the academician being “young” and “open to learning” are explained as follows:

> So working with young academics… I think it's easier. I say this every time I speak; if we are going to do something, people at the doctorate level are the most precious people for us at the moment. Because they are flexible, it is easy to put them in a more fleshed out structure. But it is almost impossible to put a 25-year academic in a structure. They have past experiences, they have a perspective, they have an approach. In other words, it is really difficult to find a consensus. That's why we usually work with academics that I can call young. I wouldn't say too young, but with academics around the age of 35-40 (ADM1).

On the other hand, some prefer to work with people they have been in contact with before. A company owner with this view explains that academics cannot evaluate their ideas due to the peculiarity of the field, but they can direct the academics to adapt to their fields with the following sentences:

> So let's say we have meetings. In our meetings, we say that 'this field is beautiful', the academicians who are integrated with us, are trying to build teams… to do something in that field. Or they are trying to construct those works accordingly. After that, we can include someone on that channel. Someone might say "I have research in the following areas". But I might not have the market power in that area, or I know that I

> might not have the possibility to commercialize it in my area, as it's the case with many fields in Turkey (ADM1).

It has been observed that large companies, which mostly benefit from academics as consultants or project executives, and mostly majority of defence companies, can cooperate with the university within the framework of the Revolving Funds Law (Döner Sermayeler Kanunu). In collaboration studies within the framework of the Revolving Funds Law, the company directly contracts with the university and academic support is carried out with the assignments that the university will make in line with this Law. The academic is assigned by the university to work for the company in question. Academic labour turns into substitute labour with a new assignment when necessary. While the academician is responsible to the employer university for the implementation of the project; The university is also liable to the company under its agreement with the company.

The evaluations of academics, who provide consultancy services to industry or who work as project managers, about the types of academicians, cooperated in the industry, vary according to the comments of academicians who own the company. A thorough evaluation made in the eyes of academicians in this regard is that the expectations of the companies are academics that produce solutions that will work in practice and can keep themselves behind the company in this cooperation. This interpretation makes the thinking that the commodification of academic labour is seen as legitimate by academics:

> Now you have to offer them the solution once, to the companies. With theory or good science or anything ... they have nothing to do with them. In other words, when you say "this is the solution" and if it is already a solution, you are valuable for them ... It is the opposite of research at the university. As long as you solve their problems and do not go into polemics, as long as there are no personal things, you continue to be

> valuable to them. ... It is never important to be optimal. Because it is the point that contradicts the university; so you are never expected to do something like super art. As long as it works without problems. As long as you work that way, there is no problem… There is also one thing… after all, the academician must understand this from the beginning; the project is their project, that is, you can not embrace it and know how to make it work according to yourself. In the end, they will sell that project, you have to set up your own time accordingly. In the end, they will make money from it, you should not own it, you will only offer solutions, and you will be drawn. It works well this way.… (AAM3)

Some academics, either through the Revolving Fund or through various project supports, advised companies or worked as project executives, also emphasized the importance of producing solutions for the results for companies.

Working Conditions of Academicians in Industry within the Scope of University-Industry Cooperation

It has been understood that academics who have established a company in technocities or cooperated with the industry through consultancy, mostly do not do this during their normal working hours, but in their own time, as overtime. On the other hand, it is understood that the academics receive certain amounts of payment or monthly salary depending on the way they work with the company. It is also understood that academics can receive a payment called a "royalty" per product in exchange for the commercialization of their ideas. However, no academic stated that they received such a payment among the academics interviewed. They emphasize that academics generally focus on carrying out their concrete tasks effectively, such as teaching, administrative affairs or thesis consultancy in their studies at the university, and they are sensitive to their working hours; however, it is possible to say that they are in a flexible working system that is integrated with the industry from time to time for research.

An academic explaining the impact of industrial activities on the university on the legal obligations that determine them regarding their duties at the university, says:

> My work at the university was not affected in any way. I am already fulfilling my teaching, research and service obligations at the university. Already my permission to work there is given in this way, provided that you can do business in the technocity provided that you fulfil your duties (AAM4).

On the other hand, most of the academics stated that their work intensity and working hours increased. In this regard, only one academician made it clear that activities in the industry do not limit their time in private life:

> I did not increase my working hours because I have children. I can't steal time from them, it would be unfair. So I work at the same time. As I said, I give 30% to [technocity company] there, 70% to [university] here. […] Now the university is a bit more comfortable, so there is no problem, I manage. I said that with the university, first of all, applications… I said, "I will spend 30% - 40% of my time" at that time, the university allows it. There is no such limit, by law, it is just a kind of gentlemen's agreement. I follow that as much as possible. In the winter, I mean… I go to school for three and a half-day. Maybe this might increase a little bit more in the summer. There is such a situation. (TAM2)

In response to this comment that academics do not have any restrictions on their work in the industry, another academic explains that they may experience tension with the university department management regarding working hours in industry and that she sees this as the most important problem:

> Well, there are problems, you have to take leave every year, and I can think of a lot of trouble during the process of taking those leaves. The university allows half a day a week. However, I go there for more than half a day, plus I go every day as it has already become my laboratory. I go there for forty hours a month, but normally the

> opportunity that the government gives you is half a day. Most academics go there for more than half a day, as I know. While they are taking their leave, they can encounter stuff like, "What will you do with your academic activities here?" from their department. In other words, you need to talk to the department chair or something while you are taking leave. The head of the department tells you, "Provided that you do not disrupt the work here ..." or something like that. It is difficult to take that leave. (AAM2)

Some academics stated that doing business in the industry created an increase in working hours in the beginning, but they claimed to be unaffected as they learned to use their time effectively:

> It is up to you, that is, teachers at the university, that is, a little bit like self-employed entrepreneurs. So for example, I was doing three projects during a term, then it was very limited; I mean, things are running out, nothing ... But we learned that, how do we plan our capacity to use our time efficiently? Currently, I am working on a project, maybe the second project, but I would not go for the third one. It is possible to carry out the courses, students and the project together, at the same time. In other words, I think it would not take all of their time for a lecturer not to do research or practice, but only to deal with lessons and theses. They need to do an application, they must improve themselves. (TAM3)

The academics who state that they do not work with a certain time and their time in their private life is restricted due to the high density of work, in various ways, are the majority. Seven academics, who stated that their special time was restricted because of their high work intensity, generally perceived this situation as an immanent situation for academics and did not complain:

> I mean, when you use your 24 hours effectively, you know that you work a little hard, so of course, I don't have anything to say like "I'll be at nine o'clock, let me out at five quarters". I was here at eight in the morning, seven - eight, it was eleven yesterday

> when I went home, so of course, it increases as it goes but the hours I teach are certain, as long as I teach at those hours, it's okay. (AAM1)

As an investigator, an academic who admits in advance that they do not have a private life expresses that they are stealing from the time required for direct research, not from their private life, and states that they have complained about it:

> I have no working hours. I am already in the lab seven days a week, almost 18 hours a day. I am a dedicated researcher. Therefore, since the technocity did not have working hours, it stole from my research time. And of course, it was a situation that did not make me happy, I do not want it to continue as it is because it is very unnecessary and very detailed. (TAM5)

This interpretation given above can be considered as the reaction of an academic who owns an R&D company, who stated that their researches in basic sciences do not find a response in industry and that the special conditions required to own a company compromise their research.

On the other hand, problems related to the working conditions of academics who have companies in technocities can be partnered with other company owners in terms of the academics who own a company. Within this framework, the fact that technocity rents have been set at a very high level are among the problems that two company owner academics have stated, primarily in Ateş University Technocity.The metaphors such as “real estate agent” about technocities, “tenant” and “innkeeper” about technocity companies have been frequently used by both academicians (3 people) and company owners (4 people). Complaining the high level of technocity rents and the being degraded to the “real estate” dimension, the expectations of academics to produce R&D in return for these costs; On the other hand, it has been observed that company managers mostly focus on the expectation of an “ecosystem approach” to

mediate collaborations that bring together companies, academics, students and other companies. A specific comment on this issue is remarkable:

> […] So I think the ecosystem approach of our technocities is nonexistent. So only our approach perceives it as advanced real estate. They do not even see it as real estate, not even advanced, and I can say that for all technocities. […] We take place in such a technocity… I looked [global brands] and they are building shopping malls. I said, "You have exaggerated these companies, what do [global brands] do in technocity?". They said, "No, no, we agreed, they will be here, we are making a shopping mall, we will be the Istinye Park[v] of Ankara." I am still talking about a technocity. So here they try to go to the concept of the best technocity, the most luxurious technocity. Because that is what they can measure, know, they go for it. Lack of vision, that is how I evaluate it. However, nobody says, "How many companies have collaborated in your technocity?" I think you need to measure this, is there anyone doing that? Is there any such information? How many of them came up with this collaboration? In collaboration, if there is no company already, the company does not change with the arrival of the academician, it does not change. So if there is a company, it gets service from the academician. An academician cannot add vision to a company. (ADM1)

An academic who stated that the use of the central laboratory of the university was restricted after accreditation, stated that the university should support this cooperation without any commercial concern in university-industry collaborations; He explained that the support of the university is important in costly investments that cannot be undertaken by the company with the following sentences:

> […] I think we have shortcomings about how central labs should be operated. Therefore, university-industry cooperation is the most important part of this. The industry is always a sector that has limited resources to make such investments and, frankly, thinks without spending too much money. The beauty of the university is; money is never a priority, earnings are never a priority; research, knowledge, science production is a priority. That's why success comes. Because if I am going to research

> by thinking about the money and thinking about the product, sorry, this job is not doing well (TAM5).

Another academic also thinks that companies with similar commercial concerns experience ethical problems arising from their expectations, which has negative consequences for researchers:

> […] For example… some departments use some materials and equipment. They get more support when they use them; The more that stuff is used, the more they can gain special support because they will earn a lot. But some do not earn at all… In the end… even if it is not said publicly, it may not be correct to say and generalize some of the support of the companies for everyone, but it is like "you scratch my back and I'll scratch yours". So the logic of "the more you earn me, the more I support you" lies in some company relationships. […] So there shouldn't be such unethical relationships in between. (AAM5)

On the other hand, one of the academics who stated that there were problems due to the lack of university-industry cooperation yet, complained that his qualifications were ignored due to his being regarded as an industrialist in the academic environment; Another one complains that the field of biotechnology, where he works, has great difficulties in terms of both legislation and method.

It has been observed that academicians who take responsibility both at the universities and at the technocity companies they cooperate have a very busy working pace, mostly spend their time in their R&D studies and the projects they carry out in the industry, and some academics consider this as an immanent situation for the academic profession.

Reflections of University-Industry Cooperation Practices on Academic Employment and Academic Identity

It has been observed that academics' cooperation opportunities with the industry can be realized basically in several ways. Some of them are directly intertwined with technocities, or in other words with the industry, as the owner or partner of a technocity company. In this context, seven academics were reached. Another group, in addition to its academic position at the university, cooperates with the industry either by consulting outside technocity companies or other companies or by directly working as a company employee. A total of five academics who have been an example of this cooperation have been reached. An academic in this community who draws attention with his unique status as a lecturer at the university. Also within the scope of a project created to develop products for the defence industry, it has been understood that he has been employed as a full-time employee for 24 years. During the War of Cyprus started to produce a material that provides NATO and Turkey for 24 years directly ongoing projects to develop products to the Turkish Armed Forces; For the last two years, it has been operating through a university-owned technocity company. Within this framework, there has been no change in the employment method or production of the academic, however, production through the revolving fund channel has also started to be realized through the company channel. Similarly, it is understood that an academic,who is a professor of mechanical engineering and currently does not own a company, has been the project manager of a company serving the defence industry for more than 30 years. These examples show that universities have provided services directly to the defence industry in the projects that served the defence industry, even though technocities did not have the name, yet through the circulating capital channel. In this context, industrial cooperation with the universities in Turkey is considered to be effective at the beginning of the requirements of the defence industry.

Apart from these unique examples, it is not possible to say that some of the academicians who are not the owner or partner of the company are in communication with the company only at the consultant level. It can be said that this creates a peculiar situation differently: An academician who explains that they set off with the company owner, who is a classmate at the university, has been directly involved as an employee of the company in all processes from the establishment to the present day; He undertook administrative duties for the company and carried out his academic studies directly through the company channel. In this sense, it is a specific example of the role that academic labour can have in the industry as an example of "university-industry integration" as expressed by the owner of the company that this academic works for. He states that the company was designed as a university-industry integration as of its establishment, and if the university did not exist, the company would be in a position to lose its reason for existence within a few years. For example, the knowledge gathered from the university was used in the establishment of the company, and one of the academics who could be considered as the backbone of the company left the university and came to the management of the company; another says that since the establishment of the company, it has been producing services for the company with both its efforts and academic studies, but on the other hand, it has also carried out its duties at the university. In this sense, for example, if the academic interviewed is organizing training, it states that the indistinguishable roles are intertwined with which identity, university teacher or company employee identity. In addition to this, the academic, who does not have a laboratory at the university, is using the laboratory established in technocity for both his/her academic studies and the R&D studies necessary for the company; graduate students are also writing a thesis with these laboratory facilities; being involved in projects belonging to the company and/or teacher by designing these theses, sometimes by transforming the projects of the company - or belonging to the teacher - to postgraduate theses, the cost of these

laboratories used for university research is covered by the company. Factors such as the fact that the department chair can be flexible in favour of the company for the work of the academic staff is not only academic labour; laboratories show that graduate students and/or employees are also intertwined to leave behind the concept of "collaboration" and in this sense, there is indeed a "university-industry integration". As it can be seen in this example, the companies whose foundation is old and interested in R&D have prioritized the Technocity Law; It is understood that they play a guiding role in the development of technocities by carrying the needs of the industry to the university or by integrating the research carried out at the university.

All of the academics interviewed stated that their collaboration with the industry resulted from a requirement related to their field of study. Academics are academics from the fields of Machinery, Electrical-Electronics, Chemical Engineering, Biotechnology and Medicine, and those other than Biotechnology are working in the field of applied sciences; They stated that collaboration with industry is a must for applied sciences. Defining himself as a protein biochemist; an academic , who established a company to develop a product in biotechnology without approaching the product, stated that he was about to close his company because he could not run it, could find less place in the industry compared to other applied science fields; He said that his competitiveness with companies was more limited.

Communication channels with the industry vary according to the field of consulting academics. An academic working in the field of medicine and providing consultancy service by carrying out animal experiments that some companies need during product development, was faced with several clinical problems; He states that communication and collaboration with companies have

become a necessity both in financing researches and meeting the clinicians with the product that will emerge:

> […] our contact with companies that are effective in healthcare appears in every process that we face with these problems and seek solutions. Because their existence, financial support and their transformation into products become a basic handicap for us and sometimes become targets. Only then do we come face to face with companies, and once we start using some of the companies' products in the treatment of human diseases or problems, we see that they are needed. That's when we come face to face with companies again. … Of course, we are not in the commercial dimension of the business, but the main reason behind the support of the companies that support us is commercial expectation and anxiety. We, on the other hand, try to solve existing problems in the clinic in the field of products or materials or technical equipment. This inevitably enables us to face, support or not support companies. (AAM5)

It is understood that there is no clear challenge for academics to cooperate with the industry, but it is a natural requirement to cooperate with the industry due to the structural nature of financial support policies. This requirement arises from the fact that academics want to reach the R&D opportunities they do not have in the university or to find support for their product-oriented research. An academic who stated that the cooperation with the industry has become necessary as a result of the insufficient university facilities and the need for professional satisfaction, says:

> […] you cannot stay abstract because my field is automotive. In automotive, after a point, it starts to say things like "did you experiment with this" or something in high-perfector journals, which is not easy at the university level. Therefore, you have to come up with these companies at your discretion - and that is what happened to me. You have to do this for professional satisfaction. Otherwise, you will write an article that no one will read and what will happen, but you will use it to rise. (AAM3)

During his attempts to establish a company to carry out R&D studies more comfortably due to the insufficient laboratory facilities at the university, an academic stated that the process that was not in favour of an academic, instead it was working in university-industry cooperation and that they experienced difficulties rather than convenience:

> […] I see that this is a mistake. This is what has already been said… the company must be established for the product, that is, when there is something that has come close to the product, the company should be established. Because the whole wheel turns over the product. The state imposes taxes on you as if you were selling products, let me tell my master that the establishment of a company on the product, that is, for R&D, is probably the end of an academician; because it wore me through a year too. As I said, taxes, transactions, processes at work, the cumbersomeness of everything ... I think this is an environment where you can live if you sell your product. If you are doing R&D, it is a business with a lot of obstacles instead of support. (TAM5)

Five academicians have started to establish a company in time to commercialize the ideas and/or product they have developed to avoid loss of rights during the consultancy of the projects they carry out or in the continuation of their academic studies. On the other hand, the use of postgraduate research conducted in universities in projects is usual in industry cooperation; In this sense, it was observed that the idea of benefiting from student/trainee labour is an important source of motivation.

There are different approaches in different departments at universities about academics establishing company or collaborating with companies. In some departments, these studies are fully supported; in some departments it is partially supported - in certain ways; in some departments, it is regarded as odd.. In this regard, it has been stated that academics' consultancy and similar collaborations with companies especially in applied science are generally

welcomed or supported by 3 academics from Ateş U. and 2 academicians from Toprak U. However, there are some academics who reported negative opinions about the establishment of a company. Some of them said that they are positive, but there was a negative approach in the university department.The main concern behind the disapproval of academic- industry co-operation is the decrease in the academic's working hours for the university as a result of this collaboration.:

> […] Of course, people before us might find it odd. It is important, if I do not do my duties here and give my priority there, of course, the size of the problem will be larger. But as you can see I'm here, I'm not going anywhere. I do my work here, and when necessary I go to the company. For example, I would be here during normal working hours, I can work there outside working hours, once in a while, escaping, I do not have such a thing. So my mobile phones are open 24 hours. Also, especially if you are doing business abroad, namely England, America, Kazakhstan, Azerbaijan, for those kinds of things, they mostly start early, finish late, not like anything; you cannot work nine in the morning and five in the evening. (TAM4)

The fact that it was stated in the above comment that the misrepresentation of these studies may have been in the previous generation, is a kind of generational issue and reveals that there is a tendency to support these studies considering today's higher education policies. One comment made in this direction is as follows:

> Actually, the new trend is to support this. So, as far as I know, our former vice-rector established the Technology Transfer Office. That's why there is a big thing at our school. So… there is great support for university-industry cooperation, at least on paper. Innovation is always everywhere, so what should I know? After that, our rector also, that is, in areas other than medicine, especially renewable energy sources and electric vehicles, supports companies established in such subjects. He wants us to be there. That's why there is support for this at Ateş University. So, it's nothing; I think that nobody will deceive you because you have done a lot of work here in the

> industry. Some cannot, because of their characteristics. Because… he cannot adopt his working style in the industry, but many also do (AAM3).

Discussion, Conclusion and Suggestions

Within the framework of university-industry cooperation, companies operating in the technology development regions of universities can cooperate with academics either through the Technology Transfer Offices (TTO) affiliated with technocities or through the support provided by publicly financed institutions like STRCT / TIGPD, SMIDOF or IND-THE projects. It can be seen that these companies are globally partnered / globally and nationally large, as well as academic companies called "spin-off companies" and newly established R&D companies called "start-up companies". While a full-time and salary working system is generally applied in these tiny companies; It has been observed that academic labour, which can be listed as part-time students, students working free of charge to complete their 60-day compulsory internship, students working for the company to complete their postgraduate thesis, and academicians who are in cooperation with the company in different forms, are subjected to a flexible employment system. Academics, who also are university staff, have worked as a consultant or project manager in a technocity company or abroad, and collaborated with the industry. Similarly, it is seen that university students provide services like company employees by working as internships in companies from inside or outside of the technocity. It is understood that the salaries are flexible parallel to the working system of academic labour.

If the academics' level of contribution to the companies is categorized; It can be said that the first group is only academics providing services to the companies in the laboratory tests of the R&D product they have developed. Although academics in this group are mostly observed in the health sector, they do not contribute to product development, but only as experts in performing their

laboratory tests. It can be said that these academics who receive a fee based on their test are the most restricted and outsourced academic group with the companies. The second group of academics are academics who are project consultants or project managers to companies. The projects carried out by the companies by making use of the funds provided by both the own funds and the institutions such as the UN, STRCT and the Ministry of Industry; It is mainly created based on the needs of the companies in the market and is rarely developed with the ideas of academicians that are also suitable for the needs of the companies. In this way, academics undertaking project consultancy are assigned by the university to work in the company if the project resource is provided through a revolving fund. If other funds are used, they work for the company at a certain consultancy fee.

Since it will be easier for the projects that writed a name of academic to get support, there are also projects carried out with little use of the consultants mentioned in the project. Some companies do not prefer to benefit from the support of academics, because adaptation with the working systems of academics creates a slowing effect in the execution of projects in companies or because the accumulation of academics is considered to be too "theoretical" by the companies.

There are differences between universities in terms of developing policies that will enable Teknokent companies to connect with academics, and imposing sanctions on companies to get support from academics. Here, the way the company reaches the academic also means that the company's workspace is shaped by the company, guided by the company's knowledge of what kind of information is commercializable for them. The conditions required by academicians to collaborate with the industry also restrict the possibilities of

producing information that does not bring any benefits in the short term and that will provide public benefit through technocities.

Companies prefer to work with academics whose qualifications are suitable for those required by their projects. Also, the company owners stated that they preferred to work with academics who are young, open to learning, compatible, and successful in human relations. In this table, the preference for working with young research workers is justified by the intergenerational adaptation and the more openness of young people to learning. This situation draws attention as an issue that Bernal (2011, 105) also emphasized and problematized.In this sense, Bernal talks about contracts with research workers that expire at the age of thirty or forty. While this can be rationalized by a benefit driven capitalist market, particularly by linking to the ability to follow very rapid developments in some technical fields, it is the concrete aspect of a research worker facing insecurity and futility.

It is understood that the academics, who are considered acceptable in the industry, have an academic profile who can master the field, meet the needs of the market with the knowledge of the field, can quickly respond to the practical needs of the industry, can see the idea or information they produce within the property of the company they cooperate, and in this context, can keep themselves behind the industry. It is possible to say that all these features have turned into “symbolic accumulation tools” for the academician, which Bourdieu (1997, 110-112) talked about, and that academics have cooperated with a rational attitude through this symbolic accumulation. Besides, all the qualifications of the academics, other than the qualifications suitable for the project needs and being prone to cooperation, were expressed by the academics who provided consultancy and were considered as an expression of their rational attitudes and behaviours. It is possible to say that the continuation of

this "rationality regime" is possible by making the information produced by academics suitable for the information demanded in the industry. Ultimately, company managers explained the kind of information they were interested in to academics who wanted to work with them and stated that they wanted them to work accordingly or find a suitable thesis student.

It is noteworthy that some of the academics interviewed interpreted the “criteria for choosing academicians" above their colleagues and in the position of practitioners. In this context, it is understood that academics who emphasize the role of company manager instead of their academic identity are either academics who own or are a partner with a technocity company or academics who construct their entire academic history in parallel with the product developed for the company.

This gives clues that university-industry cooperation has an alienating effect on academics. Today, unlike academic labour, which has become alienated, flexible, and precarious to its labour, subject to precarization and Taylorization processes, here comes another form of alienation of academic labour. Rather, it is possible to resemble the alienation observed in the shifting of the university members with the evolution of privileged classes and the transformation into a kind of aristocracy, with the evolution of feudal rent and the king's central authority becoming evident in the fourteenth and fifteenth centuries (Le Goff, 1994, 159-166). It is possible to say that academics who set up companies in technocities and even academics, who came to the agenda to obtain royalties thanks to the commercialization of the information they produced, have stepped out of the "intellectual labour" and turned towards the identity of the "capitalist academician".

The collaborations of academics has increased greatly with the cooperation of the company. The academics who gave their opinions on this matter stated that they were given permission to work with the companies and that they tried to act accordingly, provided that such company work did not interfere with their education and research duties at the university. However, in many cases, it is understood that the duties that academics undertake in the university and the task they undertake in the company are intertwined. Especially the graduate theses made by the graduate students in the project for the benefit of the company are concrete views of this intertwining. Also, the fact that the hardware, equipment, materials, laboratory facilities, which are stated to be unavailable at the university, can be accessed through projects carried out with companies or companies seems to be effective in the intertwining of the two task areas of academics. Academics who provide consultancy to companies consider these collaborations necessary for raising their living standards, accessing research opportunities (budget, equipment, laboratory, material, etc.) that they cannot find in the university, and having practical possibilities and practical knowledge for their research. As collaborations between companies and academics are mostly in favour of the company, academics who want to turn their productivity into their benefit and prevent loss of rights may prefer to establish their own companies as a result of their experience during their consultancy. Some academics who own the company see the graduate students they consult as a potential and they want to establish a company because they want to use this potential.

Academics are trying to find a balance between the legal procedure, common practices and their requirements about how much of their work should be allocated to the university and how much to the industry. However, the academics interviewed stated that they were largely restricted from their private time to create time. Some academics stated that they had to be restricted from

the time they researched to complete the necessary studies in the industry. It has been determined that academics do not have a special time of their own, and this is perceived as an immanent situation for academics. Here, the common behavioural pattern of the academics' profession, which can be expressed by "commitment", has turned into a kind of capital for industry; It is understood that the expression of purpose, which has been going on for centuries in the form of dedication to “humanity”, has become blurred and intertwined with preferences based on commercial benefit. It is worth remembering that Gorz sees the “non-profit value” that dominates the standard exchange value, and that the academician reproduces under the name of “professional service” as a new type of “fixed capital” that cannot be identified legitimately with fixed capital. According to Gorz, this “commitment to self” that emerged in the labour of academics gradually moves away from his social meaning and is under the threat of futility due to the wide difference between the “hoped” and the “achieved” and the precariousness that has become common.

It is understood that collaboration with industry is generally welcomed and even supported due to the perception that production-oriented industrial studies are important in both universities, especially in applied sciences. It is possible to say that this support is conditional based on sensitivity in terms of working hours. The establishment of academics in some cases is a suspicious situation, especially in the sense of social pressure on young academics. It is possible to say that this is based on anxiety caused by the contrast and contradiction between the requirements of owning a company and the academic identity. The transformation of the information produced by the academic from the use-value to the market value, by measuring the value of the academician over the commercializability of the information it produces, brings it to establish inevitable connections with the market. The criticisms directed to this area based on the anxiety of the academic pursuing profit, and in doing so, moving

away from the conditions that will fulfil the notion of producing science and losing the scientist's “non-interest” feature.

According to Bourdieu (1997), this “non-interest” is one of the tools of the symbolic power that the scientist has and represents a feature that must be protected for rational reasons. Therefore, the criticism directed to the academician who founded the company does not contain any market query in any way, the power of the market requirements on the scientist is not subjected to academic autonomy and freedom assessment, and it can be interpreted as the loss of their symbolic power for these academics arising from their scientific identity. On the other hand, as well as a profit-oriented university, an academic focused on profit will undermine public trust and a loss of reputation; a paradoxical relationship can also be established that this will create results that will prevent profitability.

The research findings confirm the precarious flexible forms of work called precarization or Taylorization specifically for technocities. In addition to full-time work at the university, academics who work flexibly in technocity and students who complete their graduate theses with flexible work in a company project can be given as examples. The working conditions of students who are employed as free or cheap labour by companies due to their postgraduate studies should be improved. On the other hand, the financing of information production in neoliberal fiction depends on certain project supports and companies' profit-making conditions.

It was revealed that the conditions of producing information of a kind with the high public interest in universities but without exchange value in the market were limited. The conditions of producing information in basic science fields such as biology and physics, which are the sources of applied sciences such as

medicine, engineering, are also restricted due to the same neoliberal policies. However, to produce product/commercialization information in applied sciences, first of all, original and free ideas of scientists working in basic science fields should be supported. This reveals the paradox of neoliberal information generation processes. All these conditions will affect fields such as social sciences and philosophy in a similar way. Within this framework, it should be ensured that the production of information in universities, especially in basic science, is financed by the state and the necessary laboratories and equipment are met. The production of information that has a high public interest but has no exchange value in the market should be carried out in universities with state facilities under the conditions of academic autonomy and freedom. Due to the structure of science that can progress by transferring, it is important to provide free access to information, especially for scientists. Quantitative assessments in the production of university information and academician performance should immediately be replaced by qualitative assessments.

Notes

[i]This study was conducted at the Institute of Educational Sciences of Ankara University. It was produced from the doctoral dissertation titled "The University-Industry Collaboration and Technocities (Technoparks) In The Context of Marketization", which was carried out in 2016 under the supervision of Prof. Hasan Hüseyin Aksoy.

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[iii]It is worth remembering the following quote by Immanuel Kant, which has become the motto of enlightenment thought: "Have the courage to use your own reason" Immanuel Kant (*Foundations of the Metaphysics of Moral* ,1785)

[iv] Unlike "administration", which emphasizes public service, "management" refers to a dimension of administration that emphasizes financial management. With the spread of neoliberal policies, it can be mentioned that organizational management, including educational institutions and public institutions, has changed from the meaning of "administration" to "management", that is, it has evolved into a more managerial understanding day by day.

[v] The giant mall in İstanbul (Turkey)

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