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University and industry cooperation from the perspective of hotel managers: The case of Türkiye

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ABSTRACT

The aim of the study is to examine the attitudes of hotel managers towards cooperation with tourism academy and to determine the status of cooperation between hotel businesses and tourism academy. Data were obtained from the general managers of eighteen five-star hotels from seven regions of Türkiye by qualitative analysis method. The study found that R&D collaboration is insufficient. However, it was stated that universities assist with digital marketing and promotion. Furthermore, it has been determined that the majority of collaboration between the university and the industry is in the fields of internship and practical training.

1. Introduction

The University-Industry Cooperation (UIC) is increasingly attracting the attention of leaders and policy makers around the world. In developing countries, UIC is recognized as a pathway to technological development and thus to increase economic recovery (Fischer et al., 2019). UIC emerges more in the negative conditions of the country's economies and gains importance in environments where social needs, high unemployment and poverty rates exist (Aguinis et al., 2020; Fischer et al., 2020). Having become a major attraction for people interested in the role of universities in the national economy (Eun et al., 2006), UIC strives to benefit society through innovative models and social entrepreneurship (Rinaldi et al., 2018).

UIC has been discussed in many studies as an interdisciplinary subject (Guerrero et al., 2019; Meng et al., 2019; Rajalo & Vadi, 2017). Research on the form, scope, formation (Perkmann & Walsh, 2007) and motivation for cooperation and the consequences of cooperation (Ankrah & AL-Tabbaa, 2015) of the UIC are pioneering studies on this subject. Among the recent studies, there are also empirical studies examining UIC applications (Filippetti & Savona, 2017; Kruss et al., 2015; Zavale & Macamo, 2016). Salter and Martin (2001) classified UIC as "research partnerships", "research services", "academic entrepreneurship", "human resource transfer", "informal interaction", "commercialization of property rights", "scientific publications".

When the literature on UIC is examined, it is seen that the studies focus on UIC practices and the problems experienced in selected countries (Faisal et al., 2017; Vick & Robertson, 2017; Zavale & Langa, 2018). Although these studies have addressed the problems related to UIC, they reveal a partial result regarding UIC applications in terms of geo-restriction and content. In studies on UIC, collaborations have been handled from a one-sided perspective. Studies on the antecedents and consequences of academic participation (Perkmann et al., 2013), the conceptualization of the UIC process (Ankrah & AL-Tabbaa, 2015) have not focused adequately on UIC relations because they have examined UIC in terms of research collaborations.

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Despite the increase in the number of empirical studies on UIC, no systematic study has been found in the tourism sector in terms of UIC's "R&D relations, research services, academic entrepreneurship, human resources transfer, informal interaction, commercialization of property rights and scientific publications". This research aims to close this gap by systematically reviewing the seven different dimensions of UIC in the tourism sector. The aim of the study is to examine the attitudes of hotel managers towards cooperation with tourism academy and to determine the status of cooperation between hotel businesses and tourism academy.

This article contributes to the literature based on the opinions of the managers of the hotel businesses operating in the tourism sector regarding the UIC implementation processes. It is thought that this approach will provide a better understanding of various aspects of UIC relationships (Brunell et al., 2010). Contrary to studies that have addressed the challenges and barriers encountered in UIC processes (Garousi et al., 2016; Vick & Robertson, 2017), this article allows to obtain detailed information about "R&D relations, research services, academic entrepreneurship, human resource transfer, informal interaction, commercialization of property rights and scientific publications".

Theoretical background in the second part of the article, the methodology in the third part, in the fourth part the findings obtained are discussed, and in the last part, the conclusion and suggestions for future studies are presented.

2. Literature

2.1. SEUniversity-industry cooperation (UIC)

UIC refers to a process that covers all relations between universities and industry. The main reason for university and industry cooperation is to provide a financial contribution by mutually transferring knowledge, technology and practice (Link et al., 2015). While universities deal with collaborations in the form of recognition, verification of research results and information transfer (Centobelli et al., 2019), industry evaluates collaborations in terms of economic returns, patents, licensing and joint laboratories (Soetanto & van Geenhuizen, 2019). In general, it can be said that university and industry collaborations are supported as much as they give credit to academics and bring economic return to the industry (Perkmann et al., 2021; Wright, 2018). UICs show positive effects for the benefit of society in developed countries (Perkmann et al., 2021). However, cooperation is weak in developing countries due to low investment in R&D, lack of incentives for technology transfer, quality of production and patents, and other barriers (Fischer et al., 2020; Sanchez-Barrioluengo and Benneworth, 2019). For such reasons, the effectiveness of UIC in developing economies is not sufficient (Teixeria, 2014).

The channels through which university and industry cooperation are carried out have been the subject of many studies (Dutrénit et al., 2010; Lemos & Cario, 2017; Arza et al., 2015; Arza & Vazquez, 2010; Dutrénit & Arza, 2015; Bekkers & Bodas Freitas, 2008). These channels were evaluated in four categories: traditional, two-way, commercial and service. While traditional channels covering topics such as broadcast, conference and graduate employment etc., two-way channels are networking with companies, joint R&D projects and research contracts (Zaharia, 2017). Commercial channels include patents, licensing and proprietary rights. The service channel includes consultancy and similar services (Arza et al., 2015). In another study, collaboration channels were categorized as "relational" and "transactional" (Alexander & Martin, 2013). In the classification made in terms of the nature of interactions, they are categorized as (1) Information and education, (2) Intellectual property rights and commercialization, (3) R&D projects and consultancy, (4) Human resources, staff and student internship mobility, (5) Networking (Ramos-Vielba & Fernández-Esquinas, 2011; Zaharia, 2017; De Fuentes & Dutrénit, 2012).

UIC studies provide an environment that will facilitate the transfer of technological developments to society (Ankrah & AL-Tabbaa, 2015; Fuster et al., 2019). In addition, it has been considered important in terms of encouraging academicians and the industry in this regard, establishing communication networks, emergence of joint ventures, training and internship agreements and R&D projects (Jones & Coates, 2020; Yiğitcanlar et al., 2019). With effective collaborations, both academics and industry members can coexist in a developmental and utilitarian ecosystem (Suh et al., 2019).

When the literature on UIC is examined, it is seen that determining the level of university and industry cooperation (Bayrak & Halis, 2003), success and failure factors of cooperation (Carayannis et al., 2017), positive and negative aspects of cooperation for the university (Aslan, 2010; Yalçıntaş et al., 2015), factors that hinder and facilitate cooperation (Kaymaz & Eryiğit, 2011; Zhao et al., 2018), motivations of both academia and industry to participate in activities (Brunell et al., 2010; Kaya & Yalçıntaş, 2016; Perkmann et al., 2021; Yücel & Atlı, 2014) and the struggle of universities to gain recognition and reputation (Breznitz et al., 2008; Cunningham & Menter, 2020).

3. Methodology

3.1. Research design

This study examined the attitudes of hotel managers towards cooperation with tourism academy and determined the status of cooperation between hotel businesses and tourism academy with a qualitative approach. In this study, qualitative data were collected by conducting individual online interviews with the following open-ended questions.

1. What are the national and international tourism magazines you follow in the field of tourism? How often do you follow these magazines? How do you use the information you get from the articles in practice, can you give us some information?
2. Which websites, magazines and newspapers related to the tourism sector do you follow?

3. Could you give information about R&D projects, patent, trademark registration etc. You have done with universities?
4. Could you give information about the support you have given to the projects of tourism academicians?
5. Have you implemented a product or model developed by tourism academics in your business? If you have applied it, can you give information about it?
6. Could you tell us about your collaborations with tourism academics on the subject of training of your staff, internship applications of students, employment of graduate students etc. In your business?
7. Do you participate in activities such as conferences and seminars organized by universities in the field of tourism? If you participate, how does the business provide benefits in the management process?
8. Could you tell us about the consultancy services you have received from tourism academicians?

Before starting the interviews, a brief information about the study was given to all participants and the concepts of industry and academia relations were explained. It was stated that the participants could leave the interview at any time in order to reduce the response bias. In addition, it has been stated that personal data will not be used in the study and will be handled within the principle of anonymity. The interviews were conducted by two experienced researchers on the online platform in a comfortable environment where the participants were convenient. The duration of each interview is approximately 30 minutes. First of all, the participants were asked to give information about their demographic characteristics such as age, gender, education level, experience in the tourism sector and experience as a manager. In each interview, audio and video recordings were taken with the permission of the participants. Then, qualitative data were obtained by transcribing the records for data analysis. This study was carried out in accordance with the permission of the Social Humanities Research and Publication Ethics Committee of Uşak University, dated May 26, 2022 and numbered 2022–93.

3.2. Participants

Participants working as general managers in five-star hotels in Türkiye were invited by the authors using a purposive sample. These participants were chosen because they work in a decision-making position in hotel businesses and are usually in direct contact with the tourism academy. General managers of 18 five-star hotels from all regions of Türkiye participated in this study. The demographic information of the participants is summarized in Table 1. It has been determined that 72.22% of the participants have a bachelor's degree, 50% have worked in the hotel industry for more than 26 years and have 11–20 years of experience as a manager.

3.3. Reliability and validity

Each of the researchers independently reviewed hotel managers' comments on their relationship with academia, and the researchers' results were compared. Common and divergent points were analyzed and data were reviewed together until consensus was reached. Inter-research reliability was analyzed to verify the reliability and validity of the content analysis. The coding consistency level is 95%.

4. Findings and discussion

In order to analyze the relations of hotel managers with the tourism academy, interviews were conducted with the senior managers of 5-star accommodation businesses operating in different regions of Türkiye. According to the literature, there are seven main dimensions for university and industry cooperation. These are R&D relations, research services, academic entrepreneurship, human resources transfer, informal interaction (conference, seminar etc.), commercialization of property rights and scientific publications. Questions regarding these seven main dimensions were formed and hotel managers were asked to answer. The obtained data was used

Table 1
Demographics of participants (n = 18).

Variables	Definition	Number of participants	Percent (%)
Age group	31–40	2	11,12
	41–50	10	55,55
	More than 50	6	33,33
Gender	Female	1	5,56
	Male	17	94,44
Education level	High school degree	1	5,56
	Associate degree	1	5,56
	Bachelor's degree	13	72,22
	Master degree	3	16,66
Experience in the hospitality industry (years)	5–15	2	11,11
	16–25	7	38,89
	26 and more	9	50
Experience as a manager (years)	5–10	4	22,22
	11–20	10	55,56
	More than 21	4	22,22

as a coding and analytical framework. Content analysis results are summarized in Table 2.

4.1. R&D relations

When the data obtained are analyzed, it has been determined that hotel managers have project relations in two areas: “projects on digitalization” and “development agency projects” for R&D relations related to academy. It was stated that in the R&D projects carried out, issues related to developing a game simulation for digital marketing and promotion were discussed. Some of the answers given by the participants are presented below:

“P9: We applied to development agency projects with universities. P12: We are working on digitalization in tourism. P18: We are developing a project related to the computer engineering department at the 2022 techno-fest event. We are developing software that will allow hotels to be visited as if they are playing a game.”

When the frequencies are examined, it is seen that there is a small number of cooperation in this regard. Hotel managers stated that there is no demand from academicians regarding such projects. Therefore, most of the participants said that such a project has not been realized. Here are some comments from the participants:

“P1: We held workshops on the R&D project, but we could not put it into practice at the moment. Universities stay away from hoteliers. We are in constant contact, but we do not yet receive sufficient support from the University. P2: We do not have this kind of cooperation. P3: There was no such project. We did not have such an integration with the university. P4: We do not have any R&D studies or projects with universities. P6: We do not have a project as R&D. P7: Unfortunately, we have not had such a cooperation until today. P10: Unfortunately, we did not have such a project. P17: Unfortunately, we do not have such a project partnership.”

4.2. Research services

The research services that hotel managers have received from the tourism academy are classified as “supports for surveys, interviews, etc.” “supports for educational seminars”, “cocktail and organization sponsorship supports” and “consulting service supports”. The participants stated that tourism academicians generally ask for support in order to fill out questionnaires or conduct interviews. They emphasized that due to the intensification of these requests in various periods, they sometimes could not meet, but most of the time they tried to help. In addition, they stated that they supported the publications of the academicians, but they could not receive feedback on the results obtained. Here are some comments from the participants:

“P2: We provided financial support to the classrooms of the vocational school. We provide support when there is no company secret in studies such as surveys and projects. P4: They came from the Faculty of Tourism, we interviewed for a few articles. We supported the work of a few friends from the university. P5: There are sometimes requests for help with their publications from academicians. We

Table 2
Dimensions and coding for sector-academy relationships.

	Dimensions	Codes	f
Sector-Academy Relations	1. R&D Relations	1.1. Projects on digitalization	2
		1.2. Development agency projects	1
	2. Research Services	2.1. Supports issues on survey, interview etc.	12
		2.2. Supports for training seminars	1
		2.3. Cocktail and event sponsorship support	5
		2.4. Consulting service supports	0
	3. Academic Entrepreneurship	3.1. Applications related to health tourism	1
		3.2. Applications related to sales, marketing and promotion activities	1
		3.3. Applications related to automation and chemicals	1
	4. Human Resources Transfer	4.1. Internship applications	15
		4.2. Applied training studies	3
		4.3. Providing employment	9
	5. Informal Interaction	5.1. Career interviews	4
		5.2. Participation in conferences and seminars	9
	6. Commercialization of Property Rights	6.1. Patent and trademark studies	1
	7. Scientific Publications	7.1. Following national and international articles (gastronomy)	1
		7.2. Journals of professional associations	18
		7.3. Industry websites	18
		7.4. Social media accounts (LinkedIn etc.)	18

support these studies. Because, as both a sectoral and an educated person, I think educated people should do these jobs. P6: We supported the surveys and similar studies of many universities. For example, we exchanged information on sustainability. P8: We assist academic studies carried out by academics in filling out survey forms and conducting interviews. P10: We provide support in filling out survey forms and conducting interviews. P13: We support survey studies. P14: We support survey studies, but when there are many requests, we sometimes have difficulties.”

Hotel managers stated that they sometimes attend training seminars at universities and sometimes even give lectures. Some of the comments of the participants are presented below:

“P7: We can provide support in training seminars requested by universities. We have supported seminars several times. P12: Gastronomy, human resources, front office etc. We support their work on these issues. P16: In the past, there are interviews and projects that we have hosted on different topics. There were studies on field trips. We conducted some lessons.”

In addition, hotel managers stated that they provide sponsorship support to organizations organized by universities, and that they allow some organizations to be held at the hotel. Some of the participants’ comments are as follows:

“P3: Not financially, but we offer free accommodation to academics who are invited by the Governor’s Office and the Municipality at various events. P9: When tourism academics want data about hotels, we help them by filling out surveys and conducting interviews. If a meeting will be held at the hotel, we provide a meeting place to the University. P18: Financially, we sponsor cocktail organizations to promote their projects.”

The majority of hotel managers stated that they did not receive consultancy services from tourism academicians. Comments from the participants are presented:

“P1: Currently, we do not receive consultancy services from universities. But we expect them to provide support in many subjects, especially in terms of theoretical knowledge. P3: We have not received any consultancy service yet. Since we are a chain hotel, maybe it hasn’t been needed until now. If we were a local company, maybe we could get support. P5: We did not receive any consultancy services. But we would definitely like to get it. P6: We do not receive consultancy services. We carry out our work in the form of cooperation. P13: We did not receive a consultancy service. P14: We did not receive such a consultancy service.”

Some hotel managers stated that they received some support for certification, Social Security Institution (In Turkish is SGK) transactions and establishment procedures. Participants comments include:

“P2: We received consultancy services from academicians while obtaining ISO 9001 certificate. P4: We received consultancy support from universities regarding personnel transactions and Social Security Institution. P11: We received consultancy services from companies established by academicians during the opening phase of businesses.”

4.3. Academic entrepreneurship

Most of the hotel managers stated that they do not cooperate with the products and models developed by the academicians. Below are the comments from the participants:

“P1: We did not implement such a model. P3: We did not have such a project. P4: There was no such request. Young people who graduated from the university received an offer saying “we can market the hotel as follows”, but no information came from the academicians. P5: Currently, we do not have an application in our facility. So far, there has been no demand for such a product or model. Since there was no demand, we did not have such a study. P6: To date, no such request has been received from academics. But we have such works within our own body. P7: Unfortunately, we did not have such a cooperation. P8: Such activities are carried out by the central management. Therefore, we did not have such an activity. P9: We did not carry out any application such as product or model development. P10: I have not implemented such a model until now. P11: We did not apply such a model. Theoretical and practical can sometimes be inconsistent. But some of the models they built showed us the way.”

Some of the hotel managers stated that they have collaborations related to health tourism, sales, marketing and promotion, automation and chemicals. It has been seen that hotel managers benefit from the treatments developed by academicians related to physical therapy applications, applications such as destination promotion and brochure design are beneficial, and they receive support in terms of developing automation programs used in the hotel. Comments from the participants are given below:

“P2: There were projects on health, such as physical therapy applications. The university will produce it, we will implement it. I am of this opinion. “P2: There were projects on health, such as physical therapy applications. The university will produce it, we will implement it. I am of this opinion. P12: They support sales and marketing. There was also cooperation on waste. They contribute a lot in this regard. They provided a lot of support in promotion, especially by preparing brochures and books for the promotion of the destination. They worked in the style of city guides. As a hotel, we offered these products to our guests, enabling them to have information about the city very quickly. P16: We implemented a product related to automation and chemicals in the business.”

4.4. Human resources transfer

It has been determined that the most important subjects of cooperation between hotel managers and tourism academics are internship, applied training and employment. Hotel managers stated that they get students for internship from vocational high schools, vocational schools, colleges and faculties. They also stated that the applied knowledge of the students was insufficient and they were unwilling to develop it. It has been stated that the collaborations are beneficial for both the academy and the sector. Some comments from the participants are presented:

“P1: Our cooperation continues. I wanted students to do their lessons practically at our hotel. We asked them not to stay away from operational activities. There have been several such collaborations. Internship cooperation continues. There is currently no cooperation regarding the training of personnel. Theoretical information is given, but applied education is unfortunately not given in universities. Students who have graduated from university do not want to work in hotels. P3: We generally get support from tourism high schools about internship and employment issues. We benefit from the personnel training system offered by the chain we are connected to. P5: I attach importance to the training of tourism employees. We work especially with people who have tourism education. We have collaborations with universities for internships. We are trying to bring these students into the sector. Generally, we train tourism high school students by recruiting them. P7: We recruit intern students from both universities and high schools to the required departments. P9: We support universities and high schools regarding internships. We are working with the Gastronomy department. We currently have 18 interns. P13: We receive intern support from universities. We also receive support in terms of employment. P16: We attend career days. We recruit interns from high schools and universities. However, since students' education is problematic in terms of practice, their employment can cause problems.”

It is seen that another cooperation of hotel managers takes place within the scope of applied training. It was emphasized that practical training should be increased. Some comments from the participants are presented:

“P6: There are many projects we carry out with universities. We did the winter academy project. We have implemented the Winter academy project 3 or 4 times in the past. University students came to the facility as if they were going to school between midterm and final exams, and had the opportunity to both receive training and practice. Before the internship, they get information about the hotel. In particular, they receive training such as sommelier training and first aid. At the end of the application, an exam is held and as a result of the exam, they are accepted to the institution as interns. We receive support from university academics regarding personnel training. P11: We have made a very important cooperation in this regard. Thanks to the advisory board, we ensured that the final year students receive practical training. 3 or 4 days in a week business practice was provided. It was very successful. The students and we were also pleased. As a hotel, we have difficulty in employing students because they come from out of town and businesses do not offer accommodation. We received support from the Ministry of Tourism for education. Sometimes we also benefit from academics. P14: We see that students do not receive adequate education. They are very poor in language. That's why practical training is required. We also support the employment of graduate students. The human resources problem was caused by the pandemic. That's why we employ graduates.”

Hotel managers also stated that they have cooperation in the employment of university students. Some comments from the participants are presented:

“P8: Interns are very important for our hotel. We employ 2 out of 5 interns. P10: We allow students from high schools and universities to do their internships at our facility. We also provide employment for students who can join the sector. P12: We support internships and work on the employment of students. P18: We get interns from universities. University graduates make up about 10% of our total employment.”

4.5. Informal interaction

Most of the hotel managers stated that they participated in career talks organized by tourism faculties. It has been stated that it is beneficial to arrange such organizations in order to share applied knowledge for students. Some comments from the participants are presented below:

“P1: We attend career days organized by universities. P7: We are going to some conversations for the students of universities. We participate in professional conversations. We pass on our experiences. This is how we usually do it. We share what we learned from the conversations we had with academics at the university with our friends at the hotel. P8: Generally, universities invite career talks to share experiences. We share our professional experiences. P9: They invite industry professionals to get their opinions. We exchange views on how the lessons can be more beneficial. P11: Universities invite us, that's how we attend conferences. We attend conferences organized by universities in the form of career interviews. P12: They invite us to conferences held in the field of tourism. We also attend these meetings. We incorporate the knowledge we have gained from here into our training program and ensure that the trainings are carried out. We also attend these meetings as speakers and share our experiences.”

Hotel managers stated that they also participated in conferences and seminars organized by universities and that mutual knowledge transfer took place at these conferences. However, it has been stated that the processes in which hotel managers convey information about the application come to the fore. Some comments from the participants are presented below:

“P2: Of course, we attend such seminars. In this way, we learned in a seminar that it is wrong to drink soda after thermal baths. We gave up this practice at the hotel. P3: We agree, we try not to miss it. If there is a new idea, we try to implement it. P6: I attend many seminars. We attend seminars within the scope of industry-university relations. P10: There are meetings that I personally attend. These conferences are very important for the formation of new ideas. We are trying to apply the knowledge gained from these conferences in our facility. Online sales and marketing work interest me. P14: I attend conferences held by universities and to which I am invited. We usually explain the practice to universities. Unfortunately, we did not use the information we obtained from there in the management. P15: We attend conferences. I think it is useful for the emergence of new ideas. P16: We attend such conferences. But I can't say that it contributed much. P17: Of course, we attend conferences and meetings. Of course, I apply and try to apply the knowledge we get from here. P18: We attend conferences. In a seminar we attended, an idea arose about sending students to foreign countries. We applied this idea in our business and sent the successful students abroad.”

4.6. Commercialization of property rights

Hotel managers stated that there are few collaborations for patents and brands. It has been stated that such activities are carried out by consulting companies or carried out by head offices. Some comments from the participants are presented below:

“P2: We do not have this type of activity. P3: There was no such project. We did not have such an integration with the university. P5: We have a new hotel establishment. After opening our facility, we will contact universities. We make our trademark and patent applications through consultancy companies. P7: Unfortunately, we have not had such an activity until today. P8: Since we are a chain hotel, such activities are carried out by the center. That's why we didn't have such a cooperation. P10: Unfortunately, we did not have such an activity. P14: Since we are a chain hotel, this kind of work is done from the headquarters. P15: We have no cooperation in R&D, brand and patent issues. P17: Unfortunately, we do not have such an activity.”

4.7. Scientific publications

Hotel managers stated that they do not follow any of the national and international journals published in the field of tourism. It can be said that the relationship between the sector and the academy is not fully established in scientific publications. Some comments from the participants are presented:

“P1: We do not follow national and international tourism journals. In general, we follow the magazines published by the sector. P5: To be honest, I don't follow such journals all the time. As you know, the tourism industry is a labor-intensive industry, so there is no time. P6: To tell the truth, I don't have many journals that I follow. P7: If there is a subject that draws our attention, we look at it, but there are no journals that we follow all the time. P8: We do not follow national and international academic tourism journals. P9: We do not follow academic journals published by universities. P10: I do not follow academic journals. P11: We cooperate with universities. But if you're asking for a specific name, I can't tell you right now. P12: Due to the pandemic, I can't follow much. P13: We do not follow academic articles. P14: We do not follow scientific journals. P15: Frankly, we do not know about scientific journals. That's why we don't follow. P16: We cannot follow scientific academic articles much. P17: We cannot follow scientific academic articles.”

Hotel managers stated that they obtained sectoral information from professional organizations magazines, sectoral websites and social media accounts. Some comments from the participants are presented below:

“P1: We follow the websites of the Ministry of Tourism, Tourism Development Agency, Erzurum Go website, and the Provincial Directorate. P2: We follow LinkedIn. P3: We look at these actively every day. It also comes to our emails. We also have memberships. We follow magazines such as Turizm Aktüel, Tempo Travel, Turizm Proje, Turizm. We follow the sites related to tourism development, Ministry of Culture and Tourism and Provincial Directorate of Culture and Tourism. P4: We follow the websites and publications of AKTOB, TÜROFED (Hotel Federation of Türkiye) and tourism agencies. P5: I follow all the websites related to the tourism field that I can reach. I am also a member of the professional hotel managers association. There is GM Touristic, which is the publication organ of the association, we mostly follow it, as well as the tourism newspaper, tourism today, etc. We follow the sites frequently. P6: I follow GM and Professional hotel managers magazines. I'm an active follower on LinkedIn. I'm following the postings there. P7: I follow sites such as Turizmdebusabah and Turkish Tourism Magazine. P8: We follow the websites of organizations such as Harvard Business, Ministry of Tourism, TÜROB (Türkiye Hoteliers Association) and TÜRSAB (Association of Türkiye Travel Agencies). It is very important for us to follow the trends. We need to constantly follow sectoral information. P9: We follow TÜROB's website. We follow TÜRSAB's website. We follow the website of the Ministry of Tourism. We also follow the daily tourism news on the internet. P10: I follow web-based magazines such as Turizmgüncel and Turizm Aktüel. There are websites that I check related to the Russian and UK market. P11: We follow the website of the Ministry of Tourism. P12: We follow the areas such as Turizmdebusabah, Turizmgüncel, provincial tourism directorate web sites, municipality web sites. P13: We follow Turizm Aktüel and tourism-related websites. There are info meetings given by the online travel agency, they give us direction. P14: We follow the statistics of the Ministry of Tourism and the Tourism Newspaper. I follow information on topics that interest me. P15: We follow GM magazine, Hotel Linkage events. P16: Since we do not find the articles up-to-date, we should follow the trends. That's why we follow more up-to-date websites. Publications published by professional organizations are more beneficial. P17: There are international journals. I also follow the magazines sent by the agencies. P18: I follow websites such as Turizm Newspaper, Turizm Aktüel, Turizmgüncel. I don't physically follow a newspaper. We follow GM and Hotelier magazines digitally.”

In the study, it has been determined that the cooperation between the University and the industry on R&D, patent, licensing and property rights is not sufficient. These findings are in line with studies made by Fischer et al. (2020), Sanchez-Barrioluenggo and Benneworth (2019) and Teixeira (2014) which state that investments are insufficient, incentives are low, and the quality of patents is weak in developing countries.

It has been concluded that there is a small number of collaborations between universities and industry related to health tourism, sales, marketing and promotion, automation and chemicals. It has been stated that these collaborations provide both a reputation and an economic return for the hotels. These findings are similar to the results of studies of Perkmann et al. (2021) and Wright (2018).

According to the findings of study, UIC collaborations generally take place in the form of “survey interview”, “educational seminars”, “cocktail and organization sponsorships” and “consulting services”. In this way, the verification of the application results of the theoretical studies carried out by the universities and the realization of mutual knowledge transfer are ensured. It was stated that the hotels helped the universities with their studies, but there were problems in terms of feedback. While these results are similar to the Centobelli et al. (2019) study in terms of recognizing universities and verifying information, they differ in terms of mutual information transfer.

According to the findings obtained in the study, it has been determined that the most important UIC collaborations are internship, applied training, publication, conference and employment of graduates. These cooperation channels support the study of Zaharia (2017). However, some problems have been identified in the transfer of publications to industry. In addition, it was emphasized that applied education is very important for universities and industry and that agreements on this subject should be increased. This finding is in line with the findings of studies made by Yiğitcanlar et al. (2019), and Jones and Coates (2020).

In the study, the themes of research and development relations, research services, academic entrepreneurship, human resources transfer, informal interaction, commercialization of property rights and scientific publications were determined. These are similar to the themes identified in the studies of Zaharia (2017), De Fuentes & Dutrénit (2012), Ramos-Vielba & Fernández-Esquinas, 2011.

5. Conclusion and implications

This study aims to determine the status of university and industry collaborations from the point of view of hotel managers in Türkiye. Participants working as general managers in five-star hotels in Türkiye were invited by the authors using a purposive sample. A total of 18 five-star hotel general managers from all regions of Türkiye were interviewed.

When the results are evaluated in terms of R&D relations, it can be said that there is little cooperation between hotel managers and tourism academicians. In other collaborations made in small numbers, digitalization projects and development agency projects come to the fore. Hotel managers also stated that there is no demand from the academy regarding such projects.

When the results were evaluated in terms of research services, hotel managers stated that they supported the requests of academicians in the form of filling out questionnaires, conducting interviews and sponsorship. However, after the support given for the publications, it was emphasized that the feedback was not sufficient. It was also stated that the consultancy service was covered by the consultancy firms.

When the results were evaluated in terms of academic entrepreneurship, hotel managers stated that a product or model developed by academicians was neither recommended nor implemented. It has been concluded that there is little cooperation related to health tourism, sales, marketing and promotion, automation and chemicals.

When the results are examined in terms of human resources transfer, it is seen that the most cooperation between hotel managers and tourism academicians is in this field. It has been concluded that collaborations for internship, applied training and employment are made intensively and these practices are beneficial for both the academy and the sector.

When the results are evaluated in terms of informal interaction, it is seen that hotel managers have cooperation with organizations such as conferences, seminars and career talks organized by tourism faculties. In these organizations, it has been determined that hotel managers mostly convey their practical experiences. It is also seen that the studies on transferring the information produced by the universities to the administrators are insufficient.

When the results are evaluated in terms of commercialization of property rights, it is seen that there is no cooperation between hotels and academicians on patent and trademark. It has been stated that such studies are carried out by consulting firms or head offices.

When the results are evaluated in terms of scientific publications, it is seen that hotel managers do not follow any of the national and international journals published in the field of tourism. It can be said that the cooperation between university and industry is insufficient in terms of scientific publications. It has been determined that hotel managers obtain information about the sector from professional organizations magazines, sectoral websites and social media accounts.

This study contributes both theoretically and practically. Given the scarcity of studies on this subject in the literature, it adds to field knowledge by describing the dimensions of university-industry collaboration and what needs to be done to develop these dimensions. The following are the study's practical contributions. By enabling hotel managers to communicate with university technoparks, joint projects should be created, especially on software and digitalization. A mutual exchange of information between the industry and the academy should be realized by creating an online platform that will improve the cooperation between hotel managers and universities. Academicians should be informed about entrepreneurship and studies on this subject should be encouraged by university administrations. Organizations such as congresses, conferences and seminars should be increased. As well as the transfer of experience from hotel managers, organizations where the results of the studies are shared should also be held. It should be ensured that sector representatives participate in congress programs organized by universities with their work. Collaborations should be made with hotel managers on patenting and certification issues. Measures should be taken to facilitate the subscription of hotel managers to academic

journals and informative activities should be carried out regarding the published articles. In addition, a content that will meet the expectations of the tourism sector should be created by making joint publications with the representatives of the sector. The important contributions of the study to education are as follows. This study contributes to reveal the missing points by determining the dimensions of the relations that are ignored by the decision makers and stakeholders in the field of tourism education in the communication between universities and industry in Türkiye. It is emphasized that the curricula of higher education institutions providing tourism education should be planned for applied education. It is necessary to plan 3 + 1 and 7 + 1 vocational education programs related to applied education in universities and to increase the on job vocational experience of students. In addition to the theoretical courses in the curricula, the implementation of practical courses in enterprises should be supported. Moreover, on job training programs should be carried out occasionally where academics can update their sectoral knowledge.

This study has several limitations that provide opportunities for future research. First, the study was carried out with hotel managers. However, due to the lack of availability of the managers, the interviews had to be limited. Therefore, more hotel managers need to be interviewed to improve the findings. Second, the study was limited to hotel managers only. For this reason, it is necessary to have information about the tourism sector in general, with the managers of organizations operating in the tourism sector, such as restaurants, recreational organizations, travel agencies.

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