

# Bridging the hospitality and tourism university–industry research gap in developing countries: The case of Egypt

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## Abstract

This paper explores university–industry collaboration in developing countries through a case study of university–industry research collaboration in support of the Egyptian hospitality and tourism industry. The perceptions of four key Egyptian stakeholder groups – industry, university, government and non-governmental organisations – were identified via in-depth semi-structured one-to-one interviews. The research gap between Egyptian universities and the hospitality and tourism industry is wider than suggested in the literature on university–industry collaboration. There was consensus of the absence of a research culture in faculties of tourism and hotels where social science research was perceived as having little/no value except as a part of academic degrees or for promotional purposes, rather than for knowledge creation or to inform industry’s practices. Egyptian faculties of tourism and hotels had not undergone the first academic revolution experienced in the US and Europe in the late 19th century. There was no evidence of government interventions to drive university–industry research collaboration for the tourism and hospitality industry, despite its undoubted importance to the Egyptian economy. The study sends a message to policy-makers, particularly government, that unless serious attention is paid to hospitality and tourism education and research, the impact on economic and social development will be negative.

## Keywords

University–industry gap, research gap, research collaboration, tourism research, university revolutions, knowledge transfer

## Introduction

In both developed and developing countries, a university–industry research gap exists (Anderson, 2012; Zaky and El-Faham, 1998). In developed countries, universities are increasingly shifting from an ivory tower to a more entrepreneurial mind-set to forge increasingly strong links with industry based on an innovative Triple Helix model of university–industry–government relations (Etzkowitz and Leydesdorff, 2000). However, in developing countries, e.g. Egypt, the gap remains very wide. This may be due to Egypt’s highly bureaucratic socio-political system complemented by a poor education system that does not support university–industry collaboration (Belal and Springuel, 2006; Bond et al., 2012).

Collaboration between university and industry is critical in developing a knowledge-based economy and creating sustainable competitive advantage (Abbasnejad et al., 2011; Herrera et al., 2010). Several studies (e.g. Abbasnejad et al., 2011; Etzkowitz and Leydesdorff, 2000; Tödtling et al., 2009) have confirmed that advanced and radical innovation associated with disciplines, such as computer science and engineering, has drawn on new scientific knowledge generated in universities and research organisations. Thus, universities and public research centres are key stakeholders in knowledge creation for organisational innovation. However, hospitality and tourism are not widely recognised as knowledge-based industries and thus the extent to which university–industry collaboration can benefit the hospitality and tourism industry is more debatable. Studies on university–industry research collaboration in hospitality and tourism context evidence, unsurprisingly, a focus on developed countries (e.g. King et al., 2011; Morrison and O’Gorman, 2008). However, hospitality and tourism university–industry collaboration in developing countries is very important and a topic to which more attention should be paid by researchers, so that economic and social benefit may flow in the

form of knowledge dissemination, better education, funding opportunities and more innovative society. Afifi (2009) stressed the urgent need of research on the research collaboration between university and industry in Egypt with regard to the tourism and hospitality industry which has not been investigated. To address this gap, this research study investigates the current status of research collaboration between university and industry in relation to the tourism and hospitality industry in Egypt; identifies the factors contributing to the university–industry research gap and highlights the barriers that researchers face in the hospitality and tourism discipline and impact on research quality; and provides practical recommendations for university, industry and government policy-makers. It is among the first attempts to focus on university–industry research collaboration on hospitality and tourism in developing countries, e.g. Egypt.

## **Review of literature**

### *Paradigm shift in university/industry missions and university–industry collaboration*

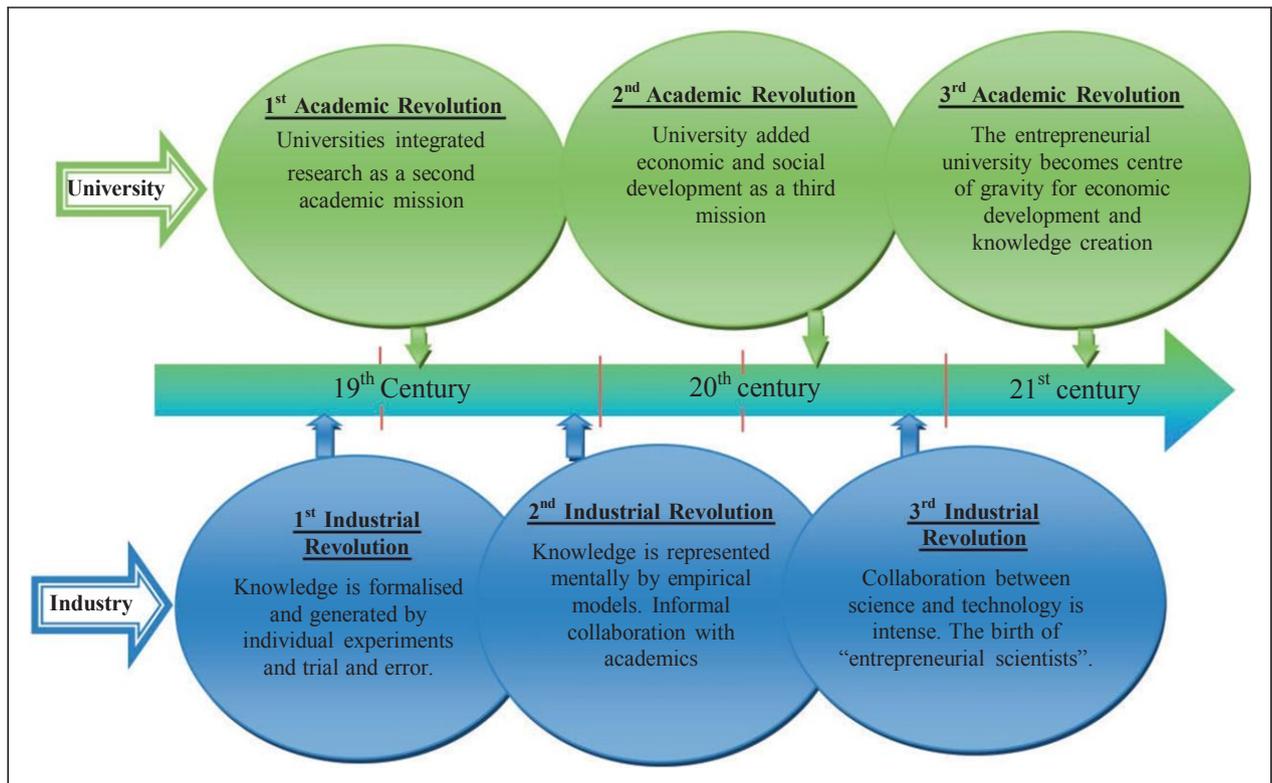
In the last two centuries, there has been several revolutions in university missions globally. The first academic revolution in the 19th century in the US made research an explicit academic mission alongside the traditional (first) mission – learning and teaching (Jencks and Riesman, 1968) and is by no means finished in many universities worldwide (Etzkowitz, 1998). Despite continuing industrial growth, universities in some developing countries, e.g. Egypt, have remained resolutely focused on the first university mission and have not embraced the second mission (research) in the same way as universities in developed countries, e.g. US (Etzkowitz and Leydesdorff, 2000). In the late 20th century, a second revolution took place, notably in the US and some parts of Europe and Asia, to include issues relating to economic and social development as a part of a so-called university ‘third mission’ (Etzkowitz, 1998). In the early 21st century, a third academic revolution took place – again in the US and Europe – based upon the entrepreneurial university concept embedded in the Triple Helix model of university–industry–government reciprocal relations (Etzkowitz and Viale, 2010). Schofield (2012) explained that entrepreneurial universities have become the centres of gravity for economic and social development and knowledge creation. Each academic revolution was mirrored by an industrial revolution (see Figure 1). While some policy developers and scholars (e.g. Etzkowitz, 1999; Etzkowitz and Leydesdorff, 2000) have argued that universities should form direct links with the industrial world, others (e.g. Dasgupta and David 1994, Business Higher Education Forum (BHEF), 2001) have expressed concern about the integration between university and industry, reiterating: ‘let the university be the university; let the industry be the industry’ (Etzkowitz and Viale 2010, p.2) and emphasising distinctions between the two parties. Dasgupta and David (1994) argued that universities and industries are distinctively organised and functionally differentiated spheres, and that a proper division of labour between the two should be maintained to maximise social benefits. Research collaboration takes formal (personnel or researcher exchange; joint research; contract research; consulting; patent and publications or industry-funded laboratories) or informal (meetings/conferences) mechanisms (Abbasnejad et al., 2011; D’Este and Patel, 2007; Segarra-Blasco and Arauz-Carod, 2008). The Council on Governmental Relations (1995) in the US has listed six mechanisms for university–industry research collaboration: sponsored research, collaborative research, consortia, technology licensing, start-up companies and exchange of research materials.

A critical review of literature on university–industry research collaboration shows it to be a phenomenon mainly associated with developed countries, although it is expected that developing countries suffer the same issues potentially with even more barriers (e.g. Abbasnejad et al., 2011; BHEF, 2001; D’Este and Patel, 2007; Perkmann and Walsh, 2007). Eight key issues contributing to the gap between university and industry.

First, a lack of interest in, and commitment to, collaboration between universities and industry – universities are non-profit institutions with a mission to create knowledge, educate future generations and conduct basic research. It is not their job to research for industry. In contrast, the main aim of industry is to profit through developing marketable products/services for customers. Second, confidentiality – universities are not good places to keep secrets as academic staff are valued and promoted by publishing and industry does not generally want to share operational detail with university researchers. Third, intellectual property rights (IPR) – universities often require ownership of IPR to allow their staff and students to continue work in the area, meet joint sponsorship obligations, ensure commercialisation and licence new technologies on a non-exclusive basis. However, industry wants ownership so they might manufacture, use and sell products based on the research. Fourth, lack of mutual trust – universities believe that industry does not value academic research; industry argues that university researchers lack professional experience and do not understand the needs and nature of industry. Fifth, the research aim – universities see that research mainly develops/extends new knowledge in an absolute way – acquisition of knowledge is of value for its own sake, whereas for industry, knowledge is only of value if it can be commercialised. Sixth, the research type – research in universities is an open activity where every- one can access the information; in industry it is a closed activity and new developments require protection (patents, etc.). Seventh, the research activity – university research is a part-time activity, whereas industrial research is a full-time activity. Eighth, research nature – university research is predominantly pure, undirected and fundamental, whereas industrial research is strategic, directed, applied and ad hoc.

Despite evidence to suggest that industry and university with their different cultures and missions are not natural partners (BHEF, 2001), some studies (e.g. Abbasnejad et al., 2011; Schofield, 2012; Tödtling et al., 2009) have identified several motivational factors that encourage research collaboration and bridge the gap between the two partners. For universities, it is gaining access to external sources of funding and expertise. There is an urgent need for financial support, particularly in Egypt, where the government is the only source of funding. Collaboration could help universities make use of sophisticated and expensive industrial facilities and broaden the experience of their staff and students to support industrial links that could develop into sponsored research ventures and/or consulting opportunities which would help universities develop new knowledge and educate the next generation. For industry, research collaboration with universities could help access expertise not available in corporate laboratories, use universities to expand the network of external contacts for industrial laboratories, utilise university talent and facilities, maximising the benefit (cost ratio), aid in the renewal and expansion of a company’s technology and leverage internal research capabilities. Liaison with universities provides industry with a window into innovative scientific research. There are also benefits from university– industry collaboration for government, especially in developing countries. Research collaboration creates job opportunities through joint ventures. It also facilitates the shift to a knowledge-based economy, innovation in wider society and national growth (Schofield, 2012). The interaction between government, industry and university in collaboratively developing roadmaps and foresight strategies can lead to more sustainable economic growth and competitive advantage (Ranga et al., 2008).

Figure 1. Revolutions in university–industry mission and their reciprocal collaboration. Adapted from Etzkowitz and Leydesdorff (2000) and Etzkowitz and Viale (2010).



## The Egyptian context

Egyptian universities were at an international standard in education and research until the 1950s. There were three governmental public universities – two in Cairo (Cairo University and Al-Azhar University – the world's oldest university founded in 917CE) and one in Alexandria (Alexandria University). After the revolution in 1952 and up to the 1970s, systemic changes to Egyptian higher education (HE) resulted in the establishment of nine public universities through the country as well as some private universities, e.g. the American University in Cairo. Other changes in the Egyptian HE system at this time included: a sharp decline in the number of qualified teaching/ research staff; a dramatic increase in university student numbers; low expenditure on education and research in public-sector universities; a brain drain as research centres and universities in other Arab countries employed the best-qualified Egyptian academic staff (Belal and Springuel, 2006), and caused a decline in Egyptian education and research. Despite this, Egypt has had for some time, and still has, the largest public-sector HE system in the Middle East/North Africa region. Zaky and El-Faham (1998) identified a number of issues contributing to the university–industry research gap in the Egyptian engineering context. The most critical issue was the lack of governmental and industry funding for research. Research laboratories, support facilities and other equipment were virtually non-existent or had been allowed to deteriorate without renewal. Another issue was the socio-political system which made it impossible to establish any meaningful ties between universities and industry. Researchers often carried out research only for promotional purposes, not to inform knowledge or practice and thus academics often lacked industry experience and undertook superficial and basic research. This may be due to poor or no training provision of academic staff on research methods.

Belal and Springuel (2006) added other reasons for the decline of university research quality in Egypt which impacted on university–industry relationships: first, the lack of a strategic plan for research – neither the government nor universities have strategies for developing research in Egyptian universities; second, there are no mechanisms to ensure ethical appropriateness and the lack of procedures for monitoring research leads to widespread plagiarism; and third, academic staff are poorly paid and not motivated to undertake quality research. In terms of government involvement in driving university–industry research in Egypt, a *laissez-faire* model probably best describes the situation since it is difficult to argue that there is evidence to support an statistic model or anything as structured as a Triple Helix model (Etzkowitz and Leydesdorff, 2000).

One of the main issues that cannot be underestimated is the prevailing political situation in Egypt, particularly after the 2011 and 2013 revolutions that led to the overthrow of two presidents and their regimes – Hosni Mubarak and Mohamed Morsi, respectively. Since the 2011 revolution, i.e. in just three years, six prime ministers and their various governments have been in power reflecting the ongoing instability of the country in all aspects. This instability in government has had significant impacts on education and research. Unsurprisingly, nine ministers of HE and scientific research have been appointed since the 2011 revolution. At times there has been just one Ministry for Higher Education and Scientific Research and at times there have been two distinct ministries (one for HE and one for scientific research). Chaos rocked national universities and research centres after the 2011 revolution as faculty members, researchers and students mounted demonstrations and strikes demanding the removal of Deans and University Presidents. Such uncertainty impacted on university– industry collaboration. However, some US-based Egyptian scholars, e.g. Professors Farouk E-Baz and Ahmed Zewail, argued that, while science and technology had been totally forgotten in Egypt for decades, the revolution was the time for real change to make things better for Egypt. Thus, for a plethora of political and economical reasons, Egyptian universities have not been places of invention and innovation, but, in keeping with the spirit of Tahrir Square in January 2011, anything would now seem possible.

## **The hospitality and tourism research context**

Six key issues relate to university–industry collaboration around hospitality and tourism. First, hospitality and tourism are not perceived as knowledge-based industries and thus there are few knowledge-related problems likely to drive hospitality and tourism organisations to seek university collaboration. In Egypt, tourism and hospitality research does not feature amongst the research priorities of the Egyptian government (Ministry of Scientific Research) (Zakhary, 2013) despite its critical contribution to the Egyptian economy. Second, the relative infancy of tourism and, particularly, hospitality research globally compared to more generic social science research where the first PhD in tourism in the US appeared in 1951 (Jafari and Aaser, 1988). Tourism and hospitality research is a relatively new discipline in Egypt – the first Egyptian Tourism and Hospitality PhD was awarded only 20 years ago (1993) (Afifi, 2009). Third, the international, predominantly US, ownership of the hospitality and tourism industry through major international hotel, restaurant and leisure chains, such as Hilton, Marriott, McDonald's, KFC and Pizza Hut, with their US-based head offices, means that universities in developing countries, such as Egypt, are very unlikely to be considered as potential partners for university–industry collaboration. Fourth, the dominance of small- and medium-sized enterprises (SMEs) in the tourism and hospitality industry – most tourism and hospitality firms worldwide are small- or medium- sized enterprises (Thomas, 2000) and their numbers are growing due to governmental emphasis globally on SMEs as a result of their potential contribution to economic growth and job creation which is critical to developing countries. However, SMEs are less likely to invest in Research and Development (R&D) due to their lack of infrastructure and financial resources and so they are less likely to seek research collaboration with university than larger firms (Abbasnejad et al., 2011). However, there are few studies that argue that small firms are more eager for external cooperation than large firms, as they lack of internal resources, especially financial, R&D capacity or facility (e.g. Eom and Lee, 2010). Fifth, unlike other industries, there is no barrier to entry as hospitality and tourism business can happen anywhere and everywhere without the need for particular qualifications. Most of the current industry leaders have no tourism qualification and have no idea about or interest in tourism degrees or what happens inside universities. Lots of them have come up through ranks but do they really understand the academic contents and value the research collaboration with universities.

Thus, there is general assumption that hospitality and tourism business can be run without the need of expertise or collaboration with universities. Sixth, tourism and hospitality is a 24/7 industry which implies that industry has little/no time for research. When industry leaders seek collaboration with universities, they demand things instantly and they expect education to change and respond very quickly which often does not happen due to the procedures and routines in universities.

Tourism and hospitality education first started in Egypt in 1962 when two institutes (one for tourism studies and the other for hotel studies) were established. These two institutes were turned into higher institutes (providing four-year programmes of study) in 1968. In 1975, these two institutes were merged in one entity – the Faculty of Tourism and Hotel Management, Helwan University, which is regarded as the first faculty of tourism and hotel studies not only in Egypt but also in Middle East/North Africa. In 1983, a second faculty of tourism and hotels opened in Alexandria. Today, there are eight public faculties of tourism and hotels (FTHs), over 20 tourism HE institutes and four two-year institutes. Only the eight public facilities are classified as research and teaching institutions, whereas all the other institutions are classified as teaching-only institutions.

## **Methods and data**

This research used a qualitative approach to investigate the perceptions, views and experiences of key groups of Egyptian stakeholders in relation to hospitality and tourism university–industry research collaboration. The article draws on data from 36 in-depth semi-structured one-to-one interviews, with four key groups of Egyptian stakeholders (members of FTHs; representatives of the hospitality and tourism industry, the government and non-

governmental organisations) selected using purposive sampling (see Table 1). Semi- structured interviews provide the opportunity to probe answers and allow interviewees to explain their responses (Saunders et al., 2012). Interviewees included: academics from university FTHs, a sample of top R&D managers (or managers acting the role of R&D) from the four main sectors of the hospitality and tourism industry in Egypt (hotels, restaurants, travel agencies and airlines), representatives of government (Ministries of Tourism and HE) and non-governmental organisations (Egyptian Tourism Federation).

An appointment was made with interviewees to ensure they were free at a specific time and that they were happy to participate in the study. Interviewees were given a clear outline of the purpose of the research. A digital voice recorder was used to record the interviews to reduce the risk of misinterpreting the answers to the questions. Four main interview themes were discussed with the interviewees: first, the current state of research collaboration between university and industry on tourism in Egypt; second, the principal factors contributing to the university–industry research gap; third, perceptions of benefits of bridging the hospitality and tourism industry–university research gap in Egypt; and fourth, the barriers facing researchers in the hospitality and tourism and impact on research quality. Also a set of practical recommendations for university-industry and policy-makers will be developed. The technique used for the data analysis in this study was qualitative content analysis, which can be defined as a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns to understand the research issues (Hsieh and Shannon, 2005).

Table 1. One-to-one interview participants.

Participants participants	Details of	No. of participants	Codes
Academia	FTH young researcher undertaking MSc and PhD degrees	4	YR1-4
	FTH postdoc and other mature researchers	10	MR1-
4 Industry 3	10 FTH professors holding administrative jobs	4	DM1-
	Hotels	3	HM1-
	Restaurants	4	RM1-4
	Travel agencies	2	TA1-2
	Airlines and airports	3	AA1-3
Government	Ministry of tourism	2	MoT1-
	2 Ministry of higher education	2	MHE1-
Non-governmental organisations	Egyptian tourism federations	2	ETF1-2
Total		36	

FTH: faculties of tourism and hotels

## Key findings

### Theme one: The current state of hospitality and tourism university–industry research collaboration in Egypt

The stakeholder interviews evidenced consensus on the wide university–industry gap and that the research undertaken by FTHs had little or no practical relevance to industry supporting the work of Afifi (2009) that Egyptian hospitality and tourism researchers do not pay sufficient attention to industry’s issues. Only informal relationships between some staff in FTHs and the hospitality and tourism industry were noted with no formal collaboration at an institutional level. Among their comments:

The research relationship between our faculty and the industry – each one of them is in his own valley, but if one of the academics has a relationship with someone in the industry; this begins some kind of individual cooperation but not an institutional one.

(DM-1)

It is a very negative relationship because we are working in our valley and industry works in a completely different one. Every day the gap is getting wider and wider.

(MR-1)

University research from our point of view is put on the shelf not put into practice. It is undertaken from your side for academic degrees and promotion purposes, not for industry purposes.

Like other faculties, FTHs had collaborated with industry in relation to students and graduates, e.g. student training and graduate employment, and through involvement with faculty councils. Research interactions involved industry practitioners supervising and examining research students (both MSc and PhD degrees). Both academics and practitioners argued that informal relationships (meetings with peers) were more widespread than formal cooperation. However, such informal relationships are less likely to promote innovation and knowledge transfer between university and industry (Abbasnejad et al., 2011).

It was interesting that the FTH in Helwan University located in Egypt’s capital – Cairo – had more industry collaboration than other FTHs. Helwan University’s FTH had collaborative undergraduate ventures with the international restaurant sector – Interactive or Reciprocal Learning Programmes with the Americana Group and McDonald’s Egypt and Open Learning programmes for students from industry. In addition, a postgraduate venture had been developed through collaboration with the Arab Air Carriers Organisation, i.e. Master of Business Administration (MBA) in Aviation:

We have two undergraduate programmes in cooperation with Americana Group and McDonald’s Egypt. We also do open learning; most of our students are industry members. There was also an MBA with the Arab Air Carriers Organization but it is now stopped.

(RM-5)

Despite agreement by academics and industry members that there was limited collaboration in relation to education and training initiatives in support of the recruitment of trained staff for inter- national chain operations, there was very little liaison in relation to university–industry research collaboration:

In our field, research cooperation is lower than educational cooperation because we are not research institutions. Also, we don’t produce new knowledge (DM-2)

Most hospitality firms in Egypt are international companies. They depend upon the policies of head office. They will never come to us for research cooperation because they are not in need of our help.

(DM-4)

These comments show that the main reason for the lack of research collaboration compared to educational cooperation in the Egyptian hospitality and tourism context was that to be of value to industry, university research needed to contribute either to enhanced knowledge or practice but, unfortunately, it contributed to neither. The other issue was that the Egyptian hospitality sector was dominated by international, mainly American, management chains that may seek university collaboration, but through a university located geographically close to the head office, i.e. out- side Egypt, rather than through collaboration with Egyptian universities. The full set of factors will be discussed under theme two.

There was an agreement among the academics and industry representatives that Egyptian government's role in both education and research should be strategic, especially in public universities; however, this strategic role was absent in Egypt:

Certainly, the role of the government should be strategic but it is absent I am afraid. It is not active and you can see this in the poor expenditure on scientific research. Investing in research is missing.

(MR-1)

Surprisingly, this comment was supported by the findings of Belal and Springuel (2006) on the absence of a research strategy by the Egyptian government and the former Minister of Scientific Research in Egypt, Prof. Nadia Zakhary, who confirmed that despite the government doing its best the role is still far from what it should be (Zakhary, 2013). She added that public universities and research centres lack funding from both the government and the private sector, which again does not promote innovation or knowledge transfer. The government officials explained that the government was making the best possible endeavours to improve the Egyptian HE system and to promote research in the public universities. One of the examples cited by the government officials was the efforts of the National Authority for Quality Assurance and Accreditation of Education in Egypt (NAQAAE). NAQAAE is the accrediting body for all Egyptian educational institutions, including HE. NAQAAE was established in 2007 by Presidential Decree. Its main goal is to support Egyptian educational institutes by fostering their quality assurance practices. However, the focus of this authority is upon evaluating the quality of the systems and processes underpinning education and pays little or no attention to R&D. Academics criticised the quality system applied in HE: This quality and accreditation system is, indeed, ineffective. The system evaluates the practices. We don't want evaluation; we need a strategy to improve our poor practices. How can they ask about staff satisfaction when they know that most of the academic staff have no desks to do their job?

(DM-3)

The comments reflected the poor system and procedures used to accredit the universities in Egypt. The government is trying to apply a western model of quality management (i.e. the British model of quality assurance) in Egyptian public universities with the aim of promoting innovation, but did not consider the current state of Egyptian universities. As it can be seen from the above comment, the accreditors asked academic staff about their job satisfaction despite fully understanding that there was not even the basic resources (e.g. a desk) to meet their needs.

### **Theme two: The principal factors contributing to the hospitality and tourism university–industry research gap in Egypt**

More barriers to hospitality and tourism university–industry research collaboration emerged from the interviews than were identified in the literature (see Table 2) making the situation even more desperate than initially anticipated. Agreeing with Bond et al., (2012) on the poor research culture in Egypt, where academic research has not been seen to be of value by industry, the interviewees pointed to the lack of a research culture among hospitality and tourism academics and industry practitioners. FTH academics added that industry practitioners were not convinced by academic views or by their research results:

The problem is that they are not fully convinced by the views of academics and their research. It is a general culture. How many of them will pay for consultancy? I would say very close to zero. A research culture is not available in our society. They only pay for tangible things.

(DM-3)

Surprisingly, the absence of a research culture was commented upon by the FTH academics themselves, stating that hospitality and tourism research was not important to industry or society. They assumed that their research would not bring something new to serve industry or wider society. As one academic commented:

I think we make research in tourism and hospitality for promotion only. We believe that no inventions will come out from our research to change the universe.

(MR-8)

Industry practitioners confirmed the absence of a research culture, mentioning that they did not value university research and their businesses were running fine without it. They stated that:

Academic research is not valuable for us. Its place is to be on the shelf and we are fine without it.

(Hotel-1)

Interviewees in the restaurant sector also verified this by arguing that industry staff can resolve their problems better than academics who have no professional or industrial experience. It is surprising that the academics did not contradict this argument but stated that most researchers in FTHs lacked industrial experience. The Egyptian university system allows anyone, once appointed as a demonstrator, to progress through to professorial rank without filtering at any stage – and this contributes to poor academic standards and culture. The Egyptian university system also does not allow academics to have an industrial job alongside their academic one. As one of them commented:

It is illegal for us to have two jobs and hence we have no industry experience and in turn we become pure academics. Yah, we know this is a weak point.

(MR-3)

Another barrier to research collaboration was the type of research produced by the FTHs. Academics argued that they undertook pure and fundamental research for academic degrees and promotional purposes. Promotion was close to automatic after a specific period of time (Belal and Springuel, 2006). It is surprising that academics also stated that there was a problem with duplication of research topics resulting in redundancy of results. Low-quality research out-puts informed neither theory nor practice and did not help the reputation of FTHs research. Interviewees from industry also confirmed this by saying that:

University research has a very poor image because it is always made by academics. They carry it out for their own sake.

(TA-2)

Two other interrelated issues were identified: transparency and confidentiality of both parties – university and industry – which supports the findings of BHEF (2001). FTH academics asserted that the industry was not transparent and did not provide full information to academics to complete their research. One of FTH academics commented:

The major problem in Egypt is the transparency of industry. We are part of this. They don't support us because they don't trust academics and their knowledge.

(MR-1)

Industry practitioners argued that each business had commercially sensitive information not for publication. In addition, one interviewee in the restaurant sector explained that they had stopped collaboration with academics following a bad experience with an academic:

We had a bad experience. One academic had trained with us and saw all the weak points that we practice. He made 'propaganda'. He took the problems and published it as our policy and did not even mention our strengths. This is not honest.

(AA-1)

Table 2. Factors contributing to hospitality and tourism university–industry research gap in Egypt.

Factors	University's view	Industry's view
Research culture	FTH missions are to educate and develop generations. The hospitality and tourism industry does not pay for consultancy or research. No research culture in FTH.	University research is on shelf. It is not valuable. Industry works fine without academic research.
Research aim	Research in FTH is always undertaken for degrees and promotion purposes and degrees often granted after a period of time.	FTH research is for academic degrees and promotion purposes.
Nature of the research measured by	Research in FTH is pure and its academic value. No problem with research topics and results redundancy.	Research in industry is applied and serve the industry needs without redundancy in topics and results.
Research activity	Research in FTH is part-time activity starting after teaching job is completed. Universities are not research institutions.	Research has very poor reputation because it is made by academics who carry it out for their own sake.
Trustworthiness	Industry do not trust FTH academic and value their research	FTH staff lack professional experience. Industry generates better research results.
Transparency	No transparency from the industry staff and thus they do not give information to FTH academic staff.	FTH do not consider research ethics and fabricate their research results in their office.
Confidentiality	FTH academic want to disseminate their research findings as they valued by publication.	Each business has secrets not for publishing. Publication is very restricted.
Research environment facilities,	Weak research infrastructure, financial resources, and non-financial, i.e. research database. Poor administration procedures and routine prevent collaboration.	Industry has better research environment than FTH research environment that lead to high quality of research. No routine and administration procedures.
Research strategy lack of	Low expenditure on research and strategic plan for research development in public universities by government.	Industry has a plan of dealing with current and new emerged matters. Flexible strategy and plan for action is always available.
System design	FTH as a part of public universities were not fully teaching-oriented or research-oriented institutions.	Research can start any time with the support of the top management.
Qualifications, skills and seriousness	FTH staff feel less motivated, enthusiastic and lack academic research skills and seriousness for	doing quality research.

Industry staff have the	required professional qualification and skills. They can sort their	problem independently better than academic.
Organisational structure support research collaborations with industry.	University current structure dose not	There is/is not structure and system to facilitate interaction with university.
Marketing	There is no marketing for good quality research generated by FTH. No third party to facilitate collaboration between FTH and the hospitality and tourism industry.	There is no experience about quality research by FTH. Industry does not hear about quality FTH research.

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FTH: faculties of tourism and hotels.

Another issue related to the industry's transparency and confidentiality was their fear that their innovative practices might be known by academics and turned into publications since academics were evaluated through their publications. Industry practitioners were also worried that their competitors would learn from the publications of their best practices by academics. Among their comments:

Every company has many competitors. We do not want to give our secrets to anybody. The confidentiality in our information and not to let anybody knows about us is the key to our success

(HM – 1)

There were also barriers relating to research strategy, research environment, research systems, research staff, from both sides supporting the work of other scholars on the university–industry gap per se (Bond et al., 2012). FTH academics commented that the lack of a university research strategy and the poor research environment were major barriers that hindered them from research collaboration with industry. Industry agreed with this and argued that they had flexible plans for managing research and innovation that avoided the bureaucracy in the public-sector Egyptian university system. There was also an issue about the design of the Egyptian public university system and its classification of universities into research-oriented/teaching-oriented (or both). It was felt that for universities that were both research- and teaching-oriented, the government should plan to support research and research-active academics. As one of the academics commented: There is a design problem. We do not know whether our institutions are classified as research or teaching institutions or in between. If so [*in between*], ok, that's fine, but we need to find a system to work for both.

(MR-2)

In such a poor research environment with no strategy for research and poor system design that are common in Egypt and some other developing countries, unsurprisingly, FTH academics felt less motivated and enthusiastic about doing quality research. Notwithstanding this the nature of tourism research as a social science was seen as a barrier to collaboration reflecting the absence of social science research's value:

We have the feeling that research in the tourism field is a social field so any results will satisfy the research purposes. In contrast to science, where there is seriousness in doing the research, most of our researchers feel less motivated and less enthusiastic.

(MR-4)

On the other hand, industry practitioners felt that their researchers had the proper research skills and qualifications to work independently in their research and resolve business problems without collaborating with universities:

Our company has many high-calibre staff. They perform our research studies and solve our operational problems and in turn we do not need university research.

(HM-2)

The last two barriers identified by interviewees were related to university structure which did not support research collaboration and research marketing. For example, despite there being three vice deans in each faculty – one for undergraduate student affairs, one for environmental and social affairs and one for post-graduate studies and research – the job titles did not match with the actual roles which were not in turn reflected in relationships with industry. In addition, there was no marketing of quality research developed by FTH academics due to the lack of professional bodies that can take care of this, i.e. enterprise and research centres that could make a link with the industry and spread the research culture (Santoro and Chakrabarti, 1999). This was confirmed by some of the industry interviewees who also stated that:

I don't know about the research done by university researchers. It would be good if you could have your results in here [*in industry*].

(TA-3)

### **Theme three: The benefits of bridging the hospitality and tourism industry–university research gap in Egypt**

The interviewees (especially the FTH academics and the government representatives) agreed that research collaboration would positively impact on the three stakeholders (government, university and industry) in the same way as the benefits identified in the literature and noted

additional benefits which would be very important in Egypt and other developing country contexts. These were as follows:

First, hospitality and tourism research collaboration would impact positively on the Egyptian economy. This is because the tourism sector makes a major contribution to foreign exchange earnings for the Egyptian economy. The economic impact of tourism is very important, especially in Egypt, as a developing country:

We hope that both of them cooperate with each other. This will all pour benefit into our economy.

(MoT-2)

Second, another important benefit for hospitality and tourism research collaboration would be to improve the image of Egyptian education and research and, in turn, to attract international students, especially Arabic-speaking students, to the Egyptian FTHs:

Collaborating with industry would, definitely, improve the image of tourism education, make it international and help us in attracting Arab students.

(MHE-1)

Third, one of the most important benefits of research collaboration with industry from the perspective of academics and government was improving the financial conditions for academics, who were among the lowest-paid categories in Egypt. The poor economic condition of academics made them look for other sources of income to enhance their living standards at the expense of their duties as educators or researchers. A couple of young researchers (YR-1/3) agreed that:

If this [*collaboration*] happens, hopefully, our [*researchers' and educators'*] financial conditions would be better. We would not search for other sources of income. We would focus on research and meet industry expectations.

(YR-1/3)

Fourth, the improvement of the performance and productivity of FTH academics cited among the crucial benefits that they would be achieved by FTHs and industry collaboration. Academics in FTHs often did not have any interaction with industry and missed the industry experience. Such collaboration would develop their professional skills and impact on their performance that in turn would impact on the quality of graduates and the university's first mission.

Fifth, research collaboration would not only benefit the government and the universities. However, it also would help industry members fulfil their objectives. Agreeing with Zaky and El-Faham (1998), industry staff were major assets and developing their skills and qualifications could be achieved through partnerships with university. The research could also help industry develop their products and/or services to better meet customer needs.

#### **Theme four: The barriers that meet researchers in hospitality and tourism and affect research quality**

This theme focuses on the perceptions of FTH researchers, particularly young researchers, who were the key to the future and innovation. Researchers agreed that there were seven barriers facing them in relation to undertaking their research, which impacted upon its quality:

First, data accessibility—researchers in FTHs said that there were difficulties accessing data through fieldwork in the industry due to the lack of transparency and trust from industry. FTH researchers argued that they often treated very badly by industry during their fieldwork. Industry staff did not see academic researchers as a potential partner. In contrast, they often saw them as their enemies who worked against them. One young academic researcher commented:

When we go to collect field data, it is like you are getting military secrets. They consider their information as military secrets and consider us as spies.

(MR-9)

Second, as highlighted earlier, young researchers confirmed that there was very limited (or no) financial support from government, university and industry for conducting the research which was reflected in poor facilities and resources for research support, e.g. IT. The government was the major funding source for research activities in Egypt. The issue of finance included poor remuneration for university academics, which pressured academics into searching for other sources of income, e.g. teaching in private universities at the expense of their research (Belal and Springuel, 2006). Private universities paid better salaries than the public universities. However, the private universities in Egypt did not care about research.

Third, one of the important issues that affected the quality of academic research was the lack of research ethics. Agreeing with Belal and Springuel (2006) on the absence of research ethics in relation to research in Egypt per se, FTH researchers argued there were no procedures for monitoring research quality – in most cases, people who cheated were not penalised which led more researchers cheating by fabricating their research results which potentially undermined the whole image and credibility of university research and could destroy any links with industry. One young postgraduate researcher commented:

The researchers' attitude was to fabricate research results. Since they were students and they were doing their graduation projects, no one distributed the questionnaire forms... Cheating has become our habit. If it works in this way, why do we need to collect data and waste our time.

(YR-4)

Fourth, the lack of electronic resources, particularly library resources was one of the barriers suggested by the researchers to their research. They argued that although there had been improvements in the availability of electronic databases for the social sciences in Egypt, particularly in the previous five years, the resources still did not satisfy their needs. In the Tourism Guidance specialisation, data sources were paper-based not electronic due to the nature of the discipline. However, there was no Egyptian library for Archaeology, despite the great heritage and antiquities in Egypt. Thus, researchers depended upon the libraries of overseas institutions based in Egypt. However, the number of these libraries was limited and researchers had access to a limited number of books in these libraries:

We do not have an Egyptian library for archaeology. If you would like to research in this field, you would then have to go to the foreign institutions based in Egypt,

i.e. French, German, Swiss, American institutions for archaeology.

(MR-5)

Fifth, FTH young researchers said that there was no training/workshops to develop their research and writing skills. Postgraduate researchers doing Masters and PhDs stated that the courses that they had taken did not develop their research skills nor add to their knowledge and should be reviewed. They also added that educators/trainers who teach/train research methodology courses should have the appropriate qualifications and skills:

We need training to develop ourselves and our skills, especially how we can conduct and write a scientific research in social science. This could be at an undergraduate level as well. Such courses must be given by those who have experience and skills.

(YR-4)

Sixth, young researchers also commented about the supervisory system for Masters and PhDs. They argued that they did not understand how research supervisors were allocated. Young researchers explained that they did not have the right to choose their research supervisors. In addition, supervisors were distributed on the basis of seniority rather than specialisation, qualifications or skills. Research supervisors who were full professors and associate professors always had the right to be Directors of Studies whether they were specialised in the particular research area or not. Furthermore, there was no system to monitor the progress of research students, except a six-monthly report written by supervisors about research students. Research students had no right to comment on the supervisors' reports which reflected the poor supervisory system and impacted on the interaction between research students and their supervisors. Kattara et al. (2004) similarly commented that hospitality and tourism postgraduate students in Egypt did not have a good supervisory experience which impacted on the quality of their research. Among researchers' comments:

The way that research supervisors are distributed is not known. If you are lucky, you will get a

good supervisory team, but if not, you will be stuck for many years. No one will ask about you. There is a very poor system to follow up and check the progress of students.

(YR-3)

Seventh, FTH academics identified lack of time as a barrier to development of quality research. They wasted a lot of time, inside or outside their workplace, without benefit. One example of this related to the unbelievable traffic system in Egypt which not only wasted time for academics travelling to work but also wasted their power and motivation for doing research:

The traffic system does not help us. We waste most of our time jammed in traffic. Then, we arrive at work we are often tired and just do our teaching and have no time for research.

(DM-1)

## **Discussion and implications**

The results of this study show that the research gap between the hospitality and tourism industry and universities in Egypt is wider than suggested in the literature from other countries (e.g. King et al., 2011), and from other academic disciplines in Egypt, e.g. engineering (e.g. Zaky and El-Faham, 1998). Unlike other universities in developed and some developing countries, Egyptian FTHs have not undergone the first academic revolution experienced in the US and Europe in the late 19th century (Etzkowitz 1998) and have remained resolutely focused on the first university mission (learning and teaching). This might be because hospitality and tourism education and research are relatively new in Egypt (Afifi, 2009), but the gap is certainly related to the cultures of both academics and industry members in this field who assume that research is not valued by, or valuable to, industry, which seems to be the overall research culture in Egypt, particularly in social science (Bond et al., 2012). Because social science is not featured among the priorities of research by government in Egypt (Zakhary, 2013), it is not surprising that FTH academics under-valued social science research and believed that such research is always conducted for academic degree and promotional purposes and there is no other rationale for doing it. Such erroneous assumptions affect the quality of hospitality and tourism research which often has a poor image in developing countries, e.g. Egypt.

Unsurprisingly, together, the lack of a strategic plan for research, little or no research training for academics, the poor standard of living of academics, the lack of resources – financial and/or non-financial (e.g., library databases) – all contributed to a lack of motivation by FTH academics, particularly young researchers, for undertaking research and in turn to poor quality research outputs. This is a critical issue because if the young researchers feel unmotivated and frustrated, they will not contribute either to research or to wider society and Egypt will lose its bright researchers. Despite this, there was some excellent academic research work being undertaken in tourism and hospitality in Egypt. However, the problem was that either the research did not meet industry's needs or industry was unaware of its existence. This is because FTHs were not good at marketing their products since not all of them have professional bodies, e.g. enterprise or research centres, to do this work and promote innovation with industry collaboration (Santoro and Chakrabarti, 1999) and researchers often do not seek international publications and instead use local journals to disseminate their results.

Although there were informal contacts between some FTH academics and hospitality and tourism industry members, universities did not derive any institutional benefit from these contacts. However, universities should encourage formal and informal relationships and consider giving appropriate credit to university researchers who collaborate with industry because this will boost innovation and knowledge transfer (Abbasnejad et al., 2011). The informal contacts could be turned into formal communication channels if they were sponsored by universities.

There can be no doubt that university research without industry involvement will not lead to useful contributions to industry or society. Similarly, industry practices cannot be enhanced without continuous research and development. All four stakeholders – government, non-governmental organisations, university and industry – need convincing that a close relationship

between them would be of benefit in today's increasingly competitive world. Hence, there is an urgent need for the strategy development (see Figure 2) to promote university–industry collaboration in the hospitality and tourism context.

The key stakeholders agreed that the government should establish a clear strategy for university–industry research collaboration to turn public universities into entrepreneurial universities, provide appropriate research funding for universities and research centres, promote research culture, sponsor research and research projects, offer support for industry capacity- building, facilitate access to international research funding, develop the research skills of academic staff, set regulations and legislation to support collaboration between university and industry and apply decentralised decision-making processes to give flexibility in developing programmes that meet industry needs. The government should also give funding and power to non-governmental organisations to support research collaboration between university and industry since non-governmental organisations argued their role is very limited in this issue.

The success of university–industry research collaboration depends upon the practices of academics in education and research. Both university and industry interviewees agreed that FTHs should undertake the following steps to bridge the gap:

1. Revision of the national tourism and hotels academic standards by university and industry participants. The current academic standards are developed by academics and have limited industry inputs;
2. Reviewing course curricula and degree plans to meet the industry expectations. Most of the curricula are set by academics with no/limited consideration to the needs of the industry. Industry must be invited into the planning and review processes for undergraduate and graduate curricula;
3. Both teaching and supervision of research must be based upon the areas of specialisation and qualifications of academics rather than their seniority;
4. Applying internships for academic staff to enhance their professional and industry experience which will support them in their teaching and research;
5. Academics should also take care of student satisfaction and facilitate their summer training through the training unit in each faculty. They also should make sure that practical courses meet industry requirements.

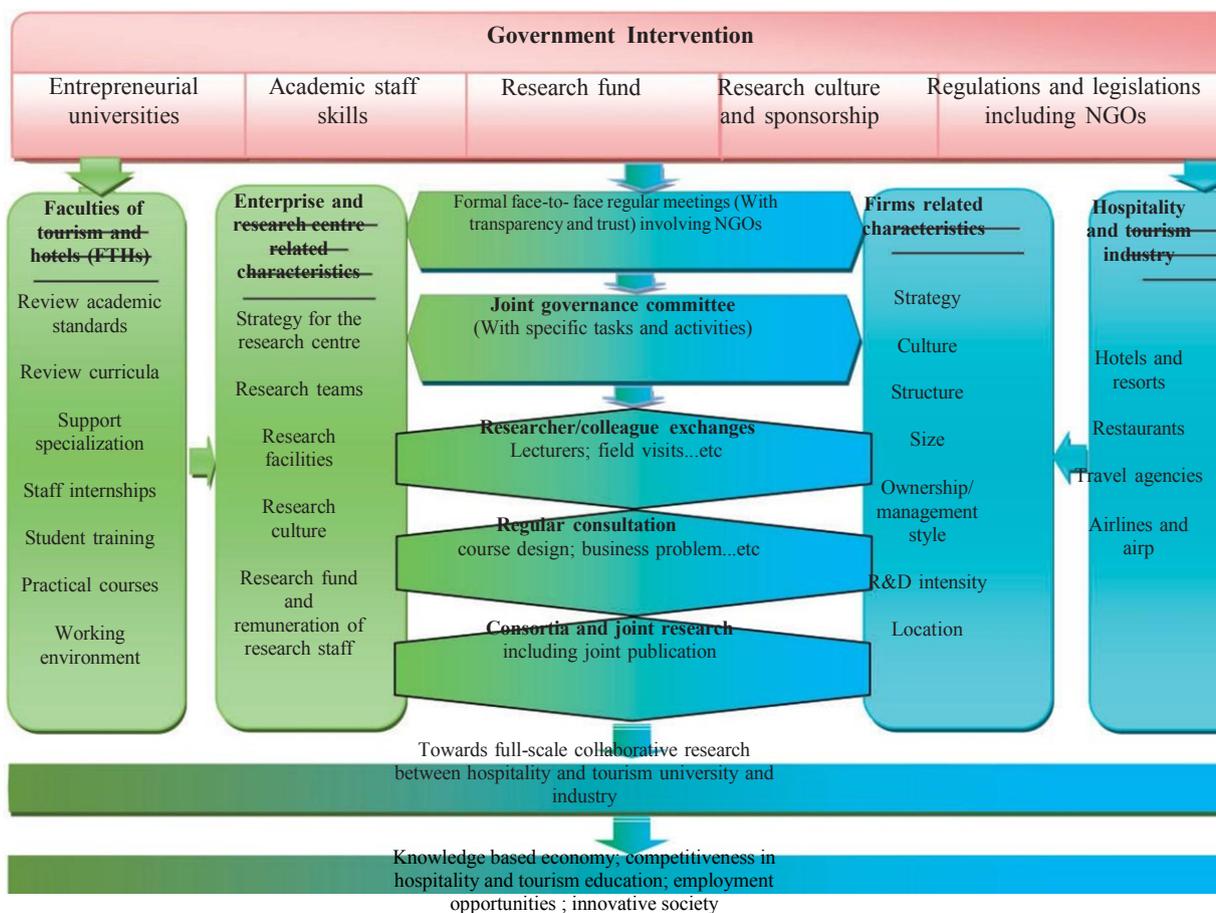


Figure 2. A proposed strategy for hospitality and tourism university-industry research collaboration in Egypt

Following these steps, hopefully, would lead to improvements in academic and graduate quality and should include establishing research and enterprise centres with appropriate strategies to communicate with industry. Research staff must have the right qualifications and skills and receive appropriate remuneration for their activities. The centres should get support from the university management. These research centres should take the initiative to communicate with industry and discuss industry's needs because failing to understand and meet industry needs contributed to the academic-industry gap (Zakhary, 2013).

The transparency and trustworthiness of tourism and hospitality industry members in university academics and their research could help both parties to discuss business needs and meet both business and university objectives. Industries have to change their perceptions about university research and its benefits to their businesses. They should have a strategy for discussing their needs with the university, considering the size, ownership, structure and R&D intensity in their firms. This would be to the mutual benefit of both university and industry partners.

Stakeholders suggested that university and industry should create a joint research governance committee with regular formal face-to-face meetings to discuss the interests of the two parties. The committee's agenda should include regular consultation, researcher exchanges, consortia and joint research. As a result of such research collaboration, the economical and social impact on society could be very positive (see Figure 2). An interesting finding that might benefit from further investigation is how key characteristics of hospitality and tourism firms affects the nature of their collaboration with universities, especially in relation to research collaboration. Agreeing with Abbasnejad et al.'s (2011) discussion on university and industry collaboration, the results of the stakeholder interviews identified key characteristics, such as the availability of a research strategy, research culture, the size of the firm, ownership or management style, firm structure, R&D intensity and firm location.

This study bridges a gap in knowledge with regard to research collaboration between hospitality and tourism universities and industry in developing countries, e.g. Egypt. It provides a set of practical recommendations for how universities and the hospitality industry could benefit from research collaboration. It also highlights the role of government intervention in university-industry collaboration and suggests for Egyptian decision-makers that unless serious attention is paid to tourism and hospitality education and research, the impact on industry and education, both of which are vital to the Egyptian economy, will be negative.

## **Conclusion and opportunities for further research**

The hospitality and tourism research gap between university and industry in Egypt is, indeed, very wide. Egyptian FTHs have not undergone the first academic revolution experienced in the US and Europe in the late 19th century and have remained resolutely focused on learning and teaching. Although there was limited collaboration between FTHs and the hospitality and tourism industry around undergraduate education, very limited collaboration was found between them in relation to R&D. The main reason for this from an industry perspective was industry's perceptions of the poor quality of university hospitality and tourism research and its lack of significance for industry. Surprisingly, many academics supported this argument and confirmed that much of the hospitality and tourism research was conducted for academic degrees and promotional purposes and did not inform knowledge or industrial practices. Another issue was the absence of a research culture among the four key stakeholders who do not value research in social sciences or think that it has any value apart from in the context of academic degrees.

Researchers in FTHs identified many barriers that prevented them for undertaking quality tourism research that met international standards and also met industry needs in

Egypt. These barriers included:

(1) difficulties accessing data during field studies due to a lack of transparency and trust from industry members; (2) lack of funding for research from government or industry; (3) poor economic circumstances of academics makes them search for second jobs and ignore their research, as there were no financial or other benefits/rewards for doing research; (4) absence of a mechanism for ensuring the application of research ethics which opened the door to the falsification of research results; (5) lack of training for researchers as part of an enhanced research and education system, especially to enable young researchers to develop their research skills; (6) poor data resources that do not always meet the needs of researchers, despite the improvements adapted; (7) lack of time for research due to the academic bureaucracy in Egypt.

Despite that tourism and hospitality universities and industry have different cultures and missions; research collaboration could bring mutual benefit and help each party fulfil its mission better. For universities, hospitality and tourism research collaboration would help academics develop their professional skills and new knowledge on day-to-day business activities and enhance teaching, and the quality of graduates. It certainly would improve the economic circumstances of academics who suffered from low remuneration. Research collaboration would also help industry access university facilities and industry staff would have updated training and continuous education. It would also help industry to develop their products and services to better meet customer needs and fulfil business objectives. Collaboration would also help government by creating employment opportunities, supporting the economy, achieving competitive advantage in tourism and hospitality education and contributing to a more innovative society. There was no evidence of government intervention to drive university–industry research collaboration for the tourism and hospitality industry, despite its undoubted importance to the Egyptian economy. The government should adopt strategies to overcome barriers for providing quality research to support the hospitality and tourism industry. Such a strategy, as suggested in Figure 2, would promote research collaboration between industry and the Egyptian FTHs.

The missing role of government (and non-governmental) organisations is, indeed, crucial for developing the HE system in Egypt (Zakhary, 2013) and in turn promoting high-quality scientific research. The government should pay sufficient attention to young researchers who will be the key tool of innovation and invest in their skills. The government must have a strategy for HE and research by turning its universities into entrepreneurial universities. The strategy must eradicate the erroneous assumption that any expenditure on research, especially in social science, is a luxury. The government should develop the research environment in public universities, i.e. improve the physical infrastructure for university research. The government could encourage valuable links between universities and industry through establishing national research centres in more discipline areas, particularly for social sciences. The government should also realise that investing in university research would provide an excellent return on investment if effectively oriented and efficiently administered. More attention should be paid to young researchers who are the key for innovation and invest in them. The government must have a strategy for promoting an organic research culture where social scientific research is seen as of equal value to natural scientific research. The government should encourage and sponsor valuable links between universities and industry and encourage the private sector to benefit from R&D.

Further research is needed to examine the validity of the proposed strategy for promoting research collaboration between FTHs and the Egyptian hospitality and tourism industry. This could be done using a Delphi technique (Sobaih et al., 2011) with an expert panel reflecting membership by university, industry, government and non-governmental organisations. One further research opportunity, identified in this study, would be mapping the characteristics of tourism and hospitality firms –research culture, size, ownership or management style, firm structure, R&D intensity and firm

location – and how these characteristics affect the nature of their collaboration with universities.

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