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Original Article

Ethical and Legal Challenges Facing Academic Start-Ups in Using Social Media

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Abstract

Introduction: In Iran, during the past few years, start-up activities have been seriously pursued in the academic sector and recently it has been mixed with media technologies. Due to the nascent nature of this field, there are many challenges in the path of their growth and development, which require more research and more practical solutions to solve them. In this research, considering the importance of ethical issues in any profession, the main goal is to identify the ethical and legal challenges faced by academic entrepreneurs' start-ups in using social media.
Material & Methods: The qualitative research method is based on classical data theory. The statistical population of the research is made up of university entrepreneurs who were selected using the purposeful sampling method and until reaching theoretical saturation, a sample of 12 people. The data collection tool was semi-structured interviews with 7 general questions. Data analysis was done in three stages of open, axial and theoretical coding.
Results: Data analysis and coding led to the extraction of 34 concepts, 7 subcategories and finally 2 main categories from the integration and classification of concepts.
Conclusion: Based on the proposed model, internal challenge (management issues, ethical relationship with customers, branding, professional ethics) and external challenge (unethical competition, technology infrastructure, policies, laws and regulations) were identified as the dimensions of ethical and legal challenges faced by university start-ups in using social media.
Keywords: *Ethical challenges, Academic entrepreneurship, Start-up, Social media.*

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INTRODUCTION

An academic entrepreneur is a university professor, a doctoral student, or a postdoctoral researcher who starts a new company to commercialize the results of his research. From this point of view, this description can be considered a direct and classic definition of the concept of entrepreneurship in today's business environment, which will also be pleasing to policy makers; Because it refers to a special category of entrepreneurs who benefit the society through innovation and job creation. On this basis, although the university management supports the birth companies through equity participation, but the successful university entrepreneur also deserves praise for his efforts in commercializing the technology and setting up a healthy financial system. Therefore, academic entrepreneurs are usually people with brilliant scientific records who have achieved high skill in their field of work by being systematic, creative, and creating research and laboratory teams. These people, in order to achieve their desired goals (generally scientific goals and technology development),

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have a great desire to use different resources. One of the most important resources that academic entrepreneurs can use to develop their activities and gain more competitive power at the national and international level is the use of social media and digital technologies.

Digital technologies have been very effective in the transformation of businesses and society at the global level, and have received wide attention from researchers in the field of academic institutions. The business that is derived from the university is the factor of resolving the tensions of commercialization, which provides a mechanism for the movement of the economic benefits of knowledge and technology at the national and regional levels [1]. Digital technologies have provided attractive innovation opportunities for academic entrepreneurs. By using digital technologies, entrepreneurs can develop new forms of entrepreneurial actions that go beyond the boundaries of traditional industry and include networks and accelerate the evolution of new investments [2]. These digital technologies provide a platform for entrepreneurs and their companies to widely share their products and services with existing and potential customers [3]. Accordingly, entrepreneurs face a new competitive dynamic, because digital technology must be an integral part of their business strategies [4]. One of the basic aspects of digital technology systems is the contribution of social media to innovations [5]. Social media have often brought about major changes in the organization of business operations and have influenced the way products and services are produced and delivered, as well as organizational and organizational processes [6].

Social media, as an intermediary, provides the possibility of communicating with a large number of consumers. Reaching and getting closer between the companies and the target audience continuously causes their transformation and is quickly considered as a part of the company's communication strategy. Today, various businesses use social media to compete with competitors, advertise products and offers, and maintain reputation among competitors [7]. The use of social media in the start-ups of academic entrepreneurs has significantly contributed to the progress of business sectors. Because social media such as Facebook, Instagram and Twitter have been a part of everyday life in the last decade. The statistics for 2021 show that 2.8 billion people access Facebook monthly and 10% is added to this figure every year. In addition, 100 million active Twitter users send 65 million tweets and 2 billion videos are viewed on YouTube. WhatsApp and Instagram, as an independent platform, have 500 million daily active users [8]. Digital technology has promoted a relatively new concept called Digital Academic Entrepreneurship (DAE). Digital academic entrepreneurship is a socio-economic and technological phenomenon that links traditional academic entrepreneurship to new digital technologies with unique methods and transforms the common forms of academic entrepreneurship [9]. Digital academic entrepreneurship emphasizes that academic start-ups can sustain their business with digital technologies such as social media, because these systems provide diverse opportunities for business management. Social media provides opportunities such as competitive knowledge and improves product, packaging and productive relationships with customers. Social media gives entrepreneurs the opportunity to promote their products and services on mass communication platforms to bring product recognition to customers. And it also provides the possibility of development according to the needs of customers. Also, the ease and accessibility of social media also play a fundamental role in how entrepreneurs search and access information to the extent that social media has changed the way

of searching and collecting information [10]. Given that digital technologies such as social media have been recognized in the modern concept of academic entrepreneurship [11]. The researchers emphasized the impact of possible challenges in this field. They believe that more research should be done on the different perspectives of digital technologies in relation to academic entrepreneurship [9]. Legal challenges, such as restricting access to some social media, reducing the social presence of people in some media, cultural challenges such as the existence of a traditional view of the media and emphasis on daily and non-commercial functions, management challenges and infrastructures are considered among the media challenges facing startups, which have received more attention. But in the meantime, one of the basic challenges is the ethical challenges, which have received less attention in research.

The goal of a startup is to make profit, but while making profit, the ethics of profit should not be ignored. Startups must follow the rules and regulations and at the same time do not forget their duty to society, people, customers and the company. Startups should not engage in any activity that may harm customers. Startups should be careful not to harm people's feelings in any way and by maintaining the provisions of investment in social fields such as education, food, environment, etc., they should take the right path to improve society. Startups should be careful about people's religious feelings, especially in advertising [12].

Based on this, it is felt necessary to conduct a comprehensive study on the ethical and legal challenges of university entrepreneurs' startups in using social media technologies to start a business. Challenges that, if not recognized and ignored, can stop startups in the very early stages. Meanwhile, startups, as a new growing business, welcome the latest technologies as an advertising platform to compete with domestic and international competitors. The presence of a large number of users in social networks and spending a lot of time according to the announced statistics are all reasons that show why social media is considered a good platform for the growth of startups. Therefore, the main question of the current research is, what are the ethical and legal challenges facing startups of university entrepreneurs in relation to social media technologies?

MATERIAL AND METHODS

The present research method is qualitative. Since in the previous researches, a coherent classification of the ethical and legal challenges faced by the start-ups of academic entrepreneurs in the use of social media was not presented and there is no reliable framework in this field, grounded theory was used to identify and formulate these challenges and fill the gap in the research literature.

The statistical population of the research is made up of academic entrepreneurs. The selection of participants with the aim of obtaining maximum information, taking into account the two criteria of at least 3 years of work experience in executive activities in the field of management, entrepreneurship and information technology, and having a master's degree or higher (management majors, entrepreneurship and information and communication technology). A sample of 12 people was selected among them using the purposeful sampling method until reaching theoretical saturation. In Table 1, the characteristics of the interviewees are presented.

Table 1: Description of the participants in the interviews

Code	Position	Educational degree	Domain	Time (min)
1	Professor Amirkabir University	Information Technology Management	Developer of therapeutic games for children	50
2	Associate prof. Tehran University	Industrial Engineering	Decoration design with augmented reality capability	60
3	Associate prof. Tehran University	Agricultural Training	Software for growing and propagating medicinal plants	45
4	Assistant prof. Iran University of Science and Technology	Technology Management	Health assistant software	50
5	Manager	Business Management	Mobile game developer	55
6	Assistant prof. Tarbiat Modarres University	Policymaking of Science and Technology	Door control system with mobile phone	45
7	Associate prof. Shahid Beheshti University	Business Management	Clothing retail software	40
8	Assistant prof. Amirkanir University	Business Management	Language training based on movies and series	60
9	Executive Manager	Technology Management	Manufacturer of smart home products	60
10	Assistant prof. Iran University of Science and Technology	Information Technology	Buying and selling new and used books	50
11	Assistant prof. Tarbiat Modarres University	Industrial Engineering	Virtual training of skills for employment	45
12	Manager of Company	Technology Management	Waste Management	55

A semi-structured interview was used to collect data, and the interview form was designed based on the objectives of the research and by studying the literature several times and taking notes on how to write interview protocols in previous researches. The final interview form consists of two parts. The first part consists of the demographic characteristics of the participants, such as their first and last name, their education and executive/educational background, as well as the start and end time of each interview. In this form, in order to facilitate the tracking of each interview in analysis and coding, each of the interviewees was assigned a unique code from 1E to En, which is considered the ID of the interviewee. Since the interviews are semi-structured, seven general questions were asked under the following headings: "Did you feel threatened by your competitors when you decided to use social media?" If yes, how? "; "In terms of start-up management, what ethical challenges did you face while using social media?" What concerns have you experienced in connection with the privacy and security issue? "; "To what extent has the technology infrastructure affected the use of social media in your startup?" "; What legal challenges did you face while using social media? "; "In terms of interacting with customers through social media, what issues did you experience? "; And "did cultural issues also challenge you?" If yes, how? "

In order to determine the validity of the results, the continuous review of the data, data analysis and the review of the codes extracted by the

interviewees were used. In order to increase credibility by adopting the approach of pluralism and adequacy of references, different stakeholders with different views and interests were used for interviews. Also, the researcher confirmed the validity of the concepts and categories by expressing the extracted concepts to other researchers and asking to review the text of the interviews. The concepts were also discussed with the interviewees and the correctness of the perceptions was checked and the categories were confirmed through the participation of the interviewees. Also, in order to achieve the necessary trust in data analysis and coding, the agreement method of two coders was used.

Data analysis was done in three stages of open, axial and selective coding.

RESULTS

At the beginning of each interview, an effort was made to create a suitable mentality in the interviewee by explaining the goals of the research and to reveal the different angles of the research work. In addition, with the permission of the interviewees, the entire interview process was recorded and notes were taken by the interviewer. With the beginning of the process of interviews, after the completion of the first interview, the recorded answers were entered into the writing field with care, patience and review several times to start the process of coding.

The interviews were completely conducted face-to-face, and finally the interviews ended with 12 people. The basis for determining the number of interviews is to reach theoretical saturation. Initial interviews sometimes led to the addition of several categories and multiple codes. But as the number of interviews increased, this trend went down. From the 9th interview onwards, no new material regarding the factors constituting the ethical and legal challenges facing the start-ups of academic entrepreneurs in the use of social media was raised. The research progressed in such a way that in the last two interviews, not only a new category was not created, but also a new code was not calculated. Therefore, this level of evolution seemed to be sufficient for designing and drawing the model, and theoretical adequacy and saturation were declared and sampling was stopped.

In total, more than 615 minutes (more than 10 hours) of interviews were conducted in about 3 months through coordination with experts. The average interview with each person is more than 50 minutes.

In this section, the stages of coding (open, axial and theoretical coding) are explained and then the final model is drawn.

First step: open coding

The researcher started the open coding by reading the interviews several times in order to get a general understanding of the interviews. Then, different parts of each interview were read and compared with the general idea obtained from the study of that interview. Next, the researcher followed the work by analyzing individual words, phrases, sentences and paragraphs. Finally, important concepts were identified in the selected text and separate primary codes.

In total, 188 non-unique primary codes were extracted through repetition in the interviews. The open codes obtained in the first stage of coding, with several rounds of revision, rewriting and modification of the labels assigned to each conceptual phrase, finally reached 34 unique codes. By reviewing the codes several times, the researcher tried to avoid duplicate codes. The list of extracted concepts and codes is presented in Table 2.

Second step: Axial coding

In axial coding, concepts were grouped together based on commonality or synonymy. In other words, the primary codes and categories that were created in open coding were compared with each other. While merging the codes that were

conceptually similar to each other, the categories that were related to each other were placed around a common axis (subcategories). For this purpose, the primary codes were merged and finally 7 selected codes were created. The findings of this step made the initial appearance of the ethical and legal challenges that university entrepreneurs face in using social media more obvious and provided the basis for creating bigger challenges in the last step of coding. (Table 2)

Third step: Theoretical coding

In the theoretical coding stage, the researcher thinks about the categories that may lead to a wide range of mental possibilities and analytically looks for the possible connection between the categories. Theoretical codes include abstract models that combine the obtained categories in the direction of a theory, and like real codes (which are obtained from the process of open and selective coding), they emerge and arise spontaneously. and they re-weave and connect the fragmented stories. In this stage, the subcategories extracted from the selective coding stage are combined with each other in terms of similarity, and the final classes form the challenges facing academic startups in using social media. As Table 2 shows, finally these challenges are divided into two main categories of internal and external challenges.

Table 2: The results of coding

Open codes	Axial codes	Theoritical codes
Internal challeges	Management issues	The difficulty of measuring the effectiveness of social media
		Difficulty maintaining ethical relationships with customers
		Lack of customers' awareness of business activities in social media
		Lack of experienced and skilled social media experts
		Lack of management approaches and strategies to deal with ethical problems in social media
		High cost of investment in social media operating system
		The traditional marketing mentality of senior managers
		Emphasis on the daily and non-commercial function of social media
	Ethical relationship with the customer	Lack of trust (Business - business and business - customers)
		Customer resistance in using social media platforms
		Reducing the social presence of people in some social media
		Lack of face-to-face interaction with customers
		Non-reciprocal interactions
		Inability to discover customer tastes and preferences
		Preparation of ethical content
	Branding	Negative customer comments and complaints on business social media pages
		Difficulty persuading customers
		Lack of coordination and direction between social media site agents and business units
		Customer power and control over social media platforms
	Professional ethics	Violation of customer privacy (leakage of private information and bank account information)
		Violation of business ethics (images and unreal content)
		Violation of codes of ethical conduct (Fake or fake customers, inappropriate images and content)
External challenges	Unethical competition	Easier product destruction by competitors
		Competitors' misuse of information shared on social media platforms (theft of intellectual property)
	Technology infrastructure	Restrictions caused by sanctions and political violence
		Difficult access to high-speed Internet
		Limitations of domestic online social media platforms

	Policies, laws and regulations	Limiting access to some foreign social media
		High rate of cybercrime and fraud (the existence of fake accounts and committing Internet crimes)
		Non-responsibility of the government in monitoring the security of users' information
		Changing the policies of cyber space with the change of governments
		Securing the specialized space
		The intervention of unrelated centers outside of legal authority
		Lack of familiarity of a large part of decision makers with issues related to social networks

With the investigations carried out about the relationship of the concepts with each other, it seems that at this stage of combining the selected codes, the internal challenge (management issues, ethical relationship with the customer, branding, professional ethics) and the external challenge (unethical competition, technological infrastructure, policies, laws and regulations), are the dimensions of ethical and legal challenges faced by university start-ups in using social media.

DISCUSSION

Although the challenges and problems in the space of academic startups are the same in most of the developing countries, the challenges and problems that arise for Iranian and local startups because of the culture, way of management and educational structure of universities, infrastructure and laws and regulations governing the country, take a different form. Therefore, eliminating these challenges requires a detailed and thorough understanding of them within the framework of the country's entrepreneurship ecosystem. The research findings, in examining the ethical and legal challenges faced by academic startups in using social media, internal challenges (management issues, ethical relationship with customers, branding, professional ethics) and external challenges (unethical competitions, technological infrastructure, policies, laws and regulations) as the main challenges. This result is consistent with the results of some researches in the field of entrepreneurship and the use of social media in business [13-18].

Based on the results obtained from this research, the following are suggested:

Promoting the activities of academic startups using social media technologies as market platforms requires the focus of plans or programs and policies on promoting cyber security, brand image and reputation, and value-added services. And it is necessary for government policy makers and decision makers to pay attention to the reduction of privacy and security issues, copying of business information, and the development of secure electronic payment infrastructures for the development of academic entrepreneurial start-ups.

For the development of academic entrepreneurial start-ups, the country's policies should consider the issue of start-ups as a serious issue that needs special attention. Also, the government should institutionalize the culture of entrepreneurial ethics among students, universities and higher education institutions and support university entrepreneurial projects.

Despite the theoretical and practical achievements, this research has faced its own limitations that require more attention in future researches. First of all, the introduced challenges are the result of qualitative analysis, which may make it difficult to generalize the findings at the level of the larger society. For this purpose, it is suggested to test the relationship between dimensions and indicators in the form of a quantitative research with the aim of increasing the generalizability of the findings. Secondly, the above challenges cannot be considered as the main challenges of startups in using social media and they should be seen as the challenges of a society and a special institution called a university. Considering this limitation, it is recommended to conduct more diverse research focusing on non-academic start-ups in order to develop findings and further discuss the challenges faced by entrepreneurs in using social media technologies.

CONCLUSION

Based on the proposed model, the internal challenge (management issues, ethical relationship with the customer, branding, professional ethics) and the external challenge (unethical competition, technology infrastructure, policies, laws and regulations), were identified as the dimensions of ethical and legal challenges faced by university start-ups in using social media.

This research has led to an increase in awareness of nascent university start-ups using social media and a better understanding of technological barriers for businesses and entrepreneurs. The findings of the research should inform the policy makers about the various limitations faced by the start-up companies of academic entrepreneurs. And it is expected that these policy makers will pay increasing attention to strategic plans to help the start-ups of academic entrepreneurs.

ETHICAL CONSIDERATIONS

Ethical issues (such as plagiarism, conscious satisfaction, misleading, making and or forging data, publishing or sending to two places, redundancy and etc.) have been fully considered by the writers.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interests.

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