

Research Article

## Media Innovation and its Influence on Policy-making in the Social Media Sector

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### Abstract:

**Purpose:** The social media industry has brought about numerous innovations in content development and publishing. Yet these innovations are the source of challenges in policy-making and regulation. The newly emerged Iranian social media companies are also facing regulation issues. This study analyzed media innovation's effects on content management, copyright, privacy, and data protection policies as viewed by the media industry's players in the emerging Iranian social media market.

**Methodology:** In this study, we surveyed the participants through a self-administered questionnaire. The statistical population included two groups of social media actors (the first of which consisted of policy-makers, media managers, and employees of social media companies, while the second group included social media users). Sampling was performed twice separately to select 128 and 580 individuals from the first and second groups. The research sample included 708 participants.

**Findings/Contribution:** Findings reflect that media innovation does have significant effects on copyright, privacy, and data protection policies, but does not significantly affect content management policies in emerging social media markets.

**Keywords:** Media innovation; Social media; Media policy; Content Management; Data protection; Privacy; Copyright.

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### 1. Introduction

Innovation is viewed as a fundamental element in the success of a media firm (Küng, 2013; Gershon, 2018). With the advent of the multi-platform approach to content production and dissemination (Doyle, 2010; Bennett, 2011), innovation gained even more attention in the media industry. It has become a way for media firms to acquire a competitive advantage in the market

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(Dogruel, 2014). Policies, business models, stakeholder experiences, and operating processes in the media industry were changed by innovations favourably (Horst & Murschetz, 2019). In the meantime, technological innovations in the media industry have led to content production challenges.

Media innovation also gives rise to regulation challenges (Labafi & Williams, 2017), for example in the relationship between users and media firms; thus, it is necessary to formulate the new media policies (Parker, Van Alstyne, & Choudary, 2016; Khajeheian, 2016). One of these challenges is the necessity of keeping media policies such as content management, privacy, and copyright. The policy-makers that are responsible for adapting traditional policy-making to the multi-platform environment have to arrange new policies towards the development of innovation in the media industry (Lund, 2016).

This study aimed to address the following questions:

**RQ1:** Do the innovative processes of producing and distributing media products affect media policy-makers?

**RQ2:** Which media policies will change most under the influence of media innovations?

This study analyzed the effects of media innovations on media policies such as content management, privacy, copyright, and user data protection. The reason for studying a developing country context is because the social media industry in these countries still lacks organized and inclusive media policies (Roshandel Arbatani et al., 2016; Labafi, 2020). Currently, there are nine national social media firms in Iran - Soroush, Bale, Eitaa, Gap, iGap, BisPhone, Wispi, Syna, and Navaa. The largest one, Soroush, has 10 million users. The government-supported development of some local social media, and a few of them declared they are working with no financial support. A challenge to the social media industry in Iran is the need to change media policies in response to media innovations. So far, media policies have been formulated under the influence of traditional media policies (such as the press law) on content management, privacy, and copyright. However, many of these policies are insufficient and need to be revised due to the specificity of content production and dissemination on social media.

The social media sector in Iran was selected as a case study since previous few studies have analyzed innovation and policy-making in the social media sector in this context. This study seeks to identify the views of social media actors at two levels: i) state policy-makers, managers, and employees of social media firms and ii) active social media users. We introduce our conceptual framework and hypotheses firstly. Then, we provide in-depth coverage of previous academic research on media innovation, media policy, content management, copyright protection, privacy, and data protection. Then we move on to explain the method and measurement of study on Iranian policy-making in the social media sector. After that, we present our analysis and discussion. Finally, we lay out our conclusion and further research ideas.

## **2. Conceptual Framework and Hypotheses**

### *2.1. Media Innovation*

Innovation plays a significant role in the development of media industries (Mierzejewska, 2011: 19; Lindmark et al. 2013; Sylvie & Weiss 2012). Media innovation not only refers to the creation of new technologies and technological adaptation in media firms but also includes the actions performed by both media actors and media users (Westland & Lewis, 2014; Goffin & Mitchel, 2016). Therefore, media innovation, according to Dogruel (2013), includes both the contents of new media or technological products as well as organisational changes, new services, and new media business

models (Küng 2008, 2013; Albarran, 2010: 62; Tajeddin, 2018). There is an academic consensus that in the online spaces media innovation includes not only traditional media activities performed in the digital contexts but also pure-digital media activities such as social media (Lomborg & Helles, 2013). Moreover, the new media products themselves are described as media innovation (Lobigs & Siebert, 2008).

Innovation management created specific procedures by integrating user knowledge with that of the opponents to make organizations more flexible (Küng, 2013; Omidi, 2020). The social media sector, which is closely related to its user data, is arguably the most prepared industry for the development of innovations. Characterized by access to user data, the social media sector has managed to make innovative products to meet user needs. However, there are contextual factors such as media policies that can be either beneficial or detrimental to the development of these innovations. For example, Storsul and Krumsvik (2013) identified ten factors affecting innovation in the media industry. Policy-making and regulation are among the factors that are closely related to innovation. Therefore, context-specific studies of national frameworks are useful. As discussed earlier, innovation is an essential factor affecting the modification of policies in the media industry.

However, innovation is not a unique concept when it comes to the national ecosystems or context of countries. Radical innovation, incremental innovation, and imitative innovations are three major types that can be considered in the study of media innovation. Schumpeter introduces radical innovation as the cornerstone of creative destruction (Martinsuo, 2019), however, these types of innovation need capital, education, investment, infrastructure, and other requirements (Govindarajan, 2011; Liu et al. 2020) that are rarely available in the small or developing countries, unless a huge investment by the government or major corporates is made, and normally such projects fail. Due to this fact, we consider radical media innovation as a type that is mostly peculiar to the most advanced economies rather than developing countries. Incremental innovations are gradual improvement and slight upgrades in the existing products, processes, and methods (Klarin, 2019). These improvements are usually technical and are implemented by technological companies. Imitative innovation has been recognized as the most common type of innovation in developing countries that can be carried out by small firms and enterprises (Khajeheian, 2017). These innovations benefit from the second-mover advantage and conduct a previously successful innovation in a new geographical market or new applicability or to the new users. In fact, most media entrepreneurs involve imitative media innovations (Khajeheian, 2017).

This study aimed to analyze the effect of imitative media innovation from the perspective of policy-makers on the Iranian social media industry, given the fact that this type of innovation suits the context of developing countries and dominates the media market of Iran..

## *2.2. Media Policy*

Media policy determines and affects how media industries develop (Doyle, 2013). It includes formulating policies towards copyright, privacy protection, allocation of subsidies, ownership constraints, permit issuance, the direct intervention of the state in the media ownership, etc. Media policies vary depending on national context (Jensen & Sund 2018; Layton, 2018; Robecas, 2018). National legal frameworks result in opportunities or limitations for innovation in the media industry (Khajeheian, 2014), and affect, for example, how entrepreneurial (Ibrus 2015; Khajeheian 2016; Tokbaeva, 2019) and innovative (Van Kranenburg, 2017) certain media actors can be. Most of the previous studies on media policy framed it as the decisions of a state towards the media. The previous studies analysed the efficiency of media policies (Van Cuilenburg & McQuail 2003). However, the Iranian media policies concerning the rapidly developing social media sector have not come under academic scrutiny yet.

Media policy is a product of national political, cultural, and social ideologies (Ots & Krumsvik, 2016; Freedman, 2008, 2018; Labafi, Kia, & Maleki 2020). It helps to achieve specific goals of the governing system (Hutchison, 1999), retain and attract stakeholders, and control power in the industry (Labafi, Salamzadeh, & JalalPoor, 2019). As a result, new media have the potential of being redeeming tools and, also, tools for monitoring and control (Smith & Tambini, 2010; Jayakar & Park, 2018; Valtysson, 2011). Some scholars accept the state intervention at a minimum level (Evans, 2016) and suppose that various players such as states, civil institutions, and users should take part in policy-making (Puppis, 2010), which is a context-dependent process and is prone to technological changes and innovations; however, such players fail to benefit social welfare unless they come under pressure from the public opinions or monitoring requirements. Drawing on national or international legislation systems, previous studies (Van Cuilenburg & McQuail, 2003; Lund, 2004; Freedman, 2011) indicate that media policy requires a series of socially accepted principles.

The specific features of social media have caused policy-making problems (Iosifidis & Wheeler, 2016). For instance, unlike the press and radio-television broadcast industries, it is impossible to make detailed policies regarding the social media sector (Lund 2016; Evens & Donders 2018). Developments of policies and legislations in this area indicate how technologies revise media policy-making (Freedman, 2011; Evens, 2016). A challenge to the social media sector is the problem of innovation and its impact on the media policy. An essential challenge to new media policies is the modification of policy principles such as copyright, privacy, and content management.

### *2.3. Content Management*

Content management has been challenged with the advent of technological innovations in the media industry (Klimkiewicz, 2010), and, in particular, the rise of social media platforms (Chen et al. 2016). Stakeholders can use the content management policies, for instance, to promote contents they regard as appropriate and limit other types of materials that are considered detrimental to the economic, cultural, or social contexts (Jayakar, 2018). Therefore, it depends on stakeholders acting as decision-makers. There are certain constraints on content management based on the type of content and even the communication environment. There have been legal constraints on content management on the media in different areas such as causing insecurity, promoting collective conflicts and violence, and opposing the established political system (Chen et al. 2016). The media firms, including social media platforms, have to comply with these rules; otherwise, they face legal complications. In addition to these legal constraints, there are other limitations on content through the autonomous actions of officials. These limitations are usually justified for the protection of social order or control of the detrimentally cultural effects of the media (Puddington et al., 2015). The media firms are exposed to the risk of the sudden rebellion of political preferences and autonomous rage of governmental players.

This study is focused only on the media policies within the specific Iranian context. In Iran, users select social media to express their views because of more extensive liberties. In this regard, there are different types of content management (Bertot et al., 2012; Mergel & Greeves, 2012). Moreover, media policy-makers face various problems such as the inability to monitor the implementation of content management in social media. Now policy-makers agree unanimously that traditional content management policies cannot be applied to the social media industry (Sharifi, Marzban, & Labafi, 2018). Therefore, these policies need to change. All the topics mentioned above lead to the following hypothesis:

***Hypothesis 1:*** *Media innovation has a positive effect on content management policies in the social media sector.*

#### 2.4. Copyright

Media firms usually innovate by developing a multi-platform approach to content production and dissemination (Doyle, 2010; Bennett, 2011; Achtenhagen, 2020). The advent of social networks has complicated the legal and political dimensions of copyright (Curtis, 2015). The social media sector has created an environment in which users may deliberately or inadvertently violate the copyrights of media firms or those of other individuals. However, the assertive use of warning-and-confiscation monitoring policy can limit the fair opportunities for the use of creative content for artistic expression, critical interpretation, or research (Collins, 2010). Copyright laws have become obsolete as a result of digitalization (Lessig, 2009) and need to be revised in a way that they generate more creativity of recombination of works rather than simply aim at spotting plagiarism (Withers, 2006; Seng, 2010; Elkin-Corn, 2014). At the same time, it is challenging and costly to control and monitor social media compared to other types of media. As a result, the following hypothesis has been developed:

*Hypothesis 2: Media innovation has a positive effect on copyright policies in the social media sector.*

#### 2.5. Privacy

Privacy is the most critical concern in social media usage, which has caused both legal and ethical challenges (Wening, 2013). Digital media changed the way data is extracted, stored, and analyzed. It leads to new types of user communication patterns (Lomborg & Helles, 2013). Users are entitled to know how companies treat their personal data. However, it is still a significant regulation and implementation challenge (Parker, Van Alstyne, & Choudary, 2016).

The issue of potential confidentiality breach on social media is caused by archiving personal information and electronic backups taken from information that is impossible to erase (Brown, 2013). As time goes by, the cyberspace offenses (such as identity theft and fraud) will increase (Safae & Jafari, 2013) if people continue to share more and more confidential information online. Therefore, the privacy policies of new media, such as social media, need to be revised. All the topics mentioned above lead to the following hypothesis:

*Hypothesis 3: Media innovation affects the privacy policies of the social media sector.*

#### 2.6. Data Protection

Even though social media firms and national governments can collect, archive, and process personal data, there is no consensus on the conventional standards of personal data protection (Eslami & Feizi, 2016). Information-based businesses such as Google, Apple, Facebook, and Amazon are global firms with millions of users operating in many countries. Hence, it is necessary to create national data protection laws through international frameworks. Different international organizations, such as the European Union have embarked on developing supra-national data protection frameworks (Safae & Jafari, 2013), and these efforts are to be further explored academically through longitudinal studies.

Another problem related to data protection is data localization (Bauer et al., 2014). The outcomes of data localization for businesses are significant. The data obtained from users can be easily moved beyond the national boundaries. To ensure that the data of citizens are guaranteed under the rights and protections of the national laws, some countries banned international data transfer. The initiatives such as the European Union's Privacy Protection Shield seek to protect the privacy of the EU institutions in the United States (Tacol, 2016). All the debates mentioned above lead to the following hypothesis:

**Hypothesis 4:** *Media innovation has a positive effect on user data protection policies related to the social media sector.*

### 3. Methodology

This study focuses on the effects of media innovations on media policies in the social media sector in Iran. To define the statistical population, three groups of social media actors were selected (policy-makers, managers and employees of social media firms, and users). This classification was chosen due to the effects that these groups have on policies and also on innovations within this sector in Iran. Therefore, hypotheses can be analyzed well by these groups. In Iran, the social media policy-makers include governmental legislators (Supreme Council of Cyberspace, Supreme Council of Cultural Revolution, and Islamic Consultative Assembly helped by universities) and the managers of social media firms (including the active heads and experts working at social media firms). There were 193 individuals in total. These are hard-to-reach individuals that took part in this study, raising the value of this study in terms of academic and policy-making concerns.

We argue that in countries such as Iran where informal networks play a significant role in policy-making (Emami & Klein, 2020), it is more appropriate to survey policy-makers and other actors rather than merely considering the policies themselves. Such an approach helps assess the dynamics of the actual policy design and its implications. The third group of users, affecting social media policy-making, consisted of the active users of Iranian social networks. This study included 3222 individuals who are active users of social networks or users who spend five hours a day on an Iranian social network (Madani and Abedini 2016). A self-administered questionnaire was employed, and data were collected from September 2018 to March 2019.

**Table 1.** Sample size and population and different sampling groups

	Population	Sample	Sampling error	Response rate
Policy Makers, Managers, and Employees of Social Media Firms	193	128	5%	66.32%
Users	3222	580	3,69%	18%

According to Table 1, during data collection, the policy-makers, managers, and experts of social media were contacted six times (twice by email, twice by letters, and twice on the phone) to fill out the questionnaire. The data collection process was finalized by accepting 134 questionnaires, out of which 128 were usable. The questionnaire was also sent to the owners of social media and users through Iranian social media, by email, post, and also distributing questionnaires at the formal meetings. The data collection process was finalized with 596 questionnaires. After excluding incomplete and damaged questionnaires, there were nearly 580 completed questionnaires.

According to the demographic variables, most of the participants identified as policy-makers had an academic background and more than ten years of relevant professional work experience. The active users had an academic background too and used at least three local social media networks. They spent at least 5 hours a day on social media. Table 1 shows the sample size and statistical population of policy-makers and active users. The Kolmogorov-Smirnov test was carried out to compare the normality of the statistical population to that of the sample in all the research indices. The results show no significant differences, indicating that the sample well-represented the statistical population.



### 3.1. Measurement

A survey was conducted with a questionnaire on a seven-point Likert scale to measure the variables. The respondents announced agreement or disagreement by selecting one of the seven ordinal items (ranging from 1 showing very great disagreement to 7 showing very great agreement). A respondent's total score of all the items indicated his or her tendency. Table 2 shows the indices composing the research variables (media policy and media innovation). Accordingly, the indices of all five research variables (content management, copyright, data protection, privacy, and media innovation) were pointed out. Data protection was adopted from Russel (2017); Ansari and Ansari (2013); Tracol (2016); Jayakar (2018), Eslami and Feizi (2016). Indices like user data storage policies, user data processing policies, and user data elimination policies are extracted from this research.

Concerning privacy, studies by McKinsey (2011); Maghami and Ataran (2019); Lomborg and Helles (2013); Parker, Van Alstyne, & Choudary (2016); Bruns (2014); Safaee and Jafari (2013) were used. Issues like prosecution policies on identity users, policies on the use of user data, and users' awareness of how to use data are among topics raised in these studies.. Studies by Withers (2006), Boldrin and Levine (2008), Jayakar (2018), Elkin-Koren (2014), Curtis (2015), Collins (2010), Reed (2014), and Ebrahimi and Kasnavi (2018) were used for copyright. An indicator like producers' right protection policies, criminalization policies on imitating artistic activities, and fair opportunities for work of arts are some of the issues raised in these studies. Regarding content management, studies by Klimoise (2010); Klimkiewicz (2010); Puddington et al. (2015); Jayakar (2018); Safaee & Jafari (2013), were selected. Indicators like violence spread prevention policies, and the collective conflict spread prevention and policies on the prevention of propaganda against the governing system were selected.

Besides, the authors used studies by Mierzejewska (2011); Sylvie & Weiss (2012); Dogruel (2013); Bruns (2014); Goffin & Mitchell (2016); Küng (2013); Doyle (2013); Storsul & Krumsvik (2013); Westlund and Lewis (2014) to determine the dimensions of media innovation regarded as the independent variable, including media content, production, media technology, dissemination platform, and the audience-media interaction.

## 4. Analysis and Discussion

The Likert scale was employed to evaluate the policy-making indices. The exploratory factor analysis (EFA) was conducted one step before the confirmatory factor analysis (CFA). After conducting the EFA, the CFA was used in the measurement model to test the fitness of each scale. According to the EFA data, the dimension of each variable looked precisely like the dimensions obtained from the research literature. The CFA was performed to confirm the causal relationships between media innovation and media policies.

According to the EFA and CFA results (Table 2), the scales indicate appropriate levels of fitness and psychometric characteristics. The composite reliability and extracted variance were employed to evaluate the reliability of each scale based on Cronbach's alpha, which was above 0.88 for all the data. The composite reliability was above 0.91 in all the data. The AVE (average variance extracted) was above 0.68 in the research data, and the thresholds above 0.50 were accepted. Likewise, the convergence reliabilities of scales were compared to the fact that all the estimates were standardized and that the weights of the latent regression were statistically significant, positive, and above 0.77 in all the indices.

**Table 2.** CFA and EFA

<b>Content Management:</b> Cronbach's alpha :0.918; Composite reliability :0.928; AVE:0.684		
Std. lx	Factor loading	
0.897	.828	Effect of media innovation on violence spread prevention policies
0.792	.808	Effect of media innovation on collective conflict spread prevention policies
0.706	.785	Effect of media innovation on policies on the prevention of propaganda against the governing system
0.842	.861	Effect of media innovation on pornography spread prevention policies
0.827	.824	Effect of media innovation on offense prevention policies
0.883	.854	Effect of media innovation on religious promotion prevention policies
<b>Copyright:</b> Cronbach's alpha :0.942; Composite reliability :0.951; AVE:0.710		
0.817	.794	Effect of media innovation on copyright policies
0.797	.757	Effect of media innovation on producer right protection policies
0.882	.803	Effect of media innovation on criminalization policies on imitating artistic activities
0.873	.804	Effect of media innovation on policies on fair opportunities for work of arts
0.855	.762	Effect of media innovation on policies requiring firms to discover copyright cases
0.851	.761	Effect of media innovation on policies requiring firms to control copyright cases
0.849	.769	Effect of media innovation on policies on the exploitation of artworks
0.811	.765	Effect of media innovation on publication right policies
<b>Privacy:</b> Cronbach's alpha :0.924; Composite reliability :0.941; AVE:0.727		
0.694	.729	Effect of media innovation on the prosecution policies on identity theft
0.867	.731	Effect of media innovation on policies on the use of user data
0.880	.824	Effect of media innovation on policies making users aware of how to use data
0.854	.754	Effect of media innovation on user data storage policies
0.912	.718	Effect of media innovation on data disclosure control policies
0.891	.778	Effect of media innovation on anonymity policies in the use of data
<b>Data Protection:</b> Cronbach's alpha :0.952; Composite reliability :0.965; AVE:0.875		
0.947	.839	Effect of media innovation on user data storage policies
0.952	.828	Effect of media innovation on user data processing policies
0.920	.800	Effect of media innovation on user data elimination policies
0.922	.821	Effect of media innovation on user data transfer policies
<b>Media Innovation:</b> Cronbach's alpha :0.887; Composite reliability :0.917; AVE:0.689		
0.816	.670	Innovation in the media content
0.840	.616	Innovation in the media product
0.849	.752	Innovation in media technology
0.827	.746	Innovation in media content dissemination platform
0.818	.580	Innovation in the audience-media interaction

The elements on the diagonal (values between parentheses) correspond to the square root of the AVE of the construct to the discriminant validity checked if the AVE of each structure was more significant than their squared correlation. For the simplification of methodology, the squared root and AVE of each variable were selected (See *Table 3*). Accordingly, all the constructs had the property of discriminant validity.

**Table 3.** Measurement information: mean, standard deviation, correlations (n =708)

	Mean	Std deviation	(1)	(2)	(3)	(4)	(5)
T. Content Management	28.6568	5.42345	(0.684)				
T. Copy right	38.2938	9.23915	.351**	(0,710)			
T. Privacy	30.8390	5.69022	.145**	.534**	(0,727)		
T. Data protection	21.0946	4.70316	-.077*	.407**	.617**	(0,875)	
T. Innovation	29.7754	3.82379	.028	.592**	.614**	.687**	(0,689)

\*\*The correlation is significant at .01 level (bilateral).

\*The correlation is significant at .05 level (bilateral).



According to Table 3, there was a negative and weak correlation between media innovation and content management policies ( $r=0.28$ ;  $p>0.05$ ). In other words, increasing media innovations of social networks resulted in no considerable changes in the content management policies in social media; thus, the first hypothesis was rejected. There was a positive and strong correlation between media innovations and changes in copyright policies ( $r=0.592$ ;  $p<0.01$ ). In other words, increasing media innovations led to specific changes in copyright policies concerning the features of social media. Therefore, the second hypothesis was confirmed. According to the results, there was a positive and strong correlation between media innovations and privacy policies concerning the social media sector ( $r=0.614$ ;  $p<0.01$ ). In other words, increasing media innovations can change privacy policies concerning the features of this sector. Hence, the third hypothesis was confirmed. Finally, there was a positive and strong correlation between media innovation and data protection policies ( $r=0.687$ ;  $p<0.01$ ). Increasing media innovations can change the data protection policies of this sector. Accordingly, the fourth hypothesis was confirmed, too.

**Table 4.** Results of multivariate regression analyses: management innovation

	Value	F	Hypothesis df	Error df	Sig.	R Squared	Observed Power <sup>b</sup>	Noncent. Parameter
Wilks' lambda	.176	20.862	72.000	2699.888	.000	.353	1.000	1470.683

Each F tests the multivariate effect of T. Innovation. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. The statistic is an upper bound on F that yields a lower bound on the significance level.

b. Computed using alpha = .05

According to Table 4, the multi-variant regression was employed to test the research hypotheses. Given the fact that the research goal was to analyse the effects of media innovation on media policies when the correlation of the two dependent variables was considered, it was necessary to determine whether innovation, considered the independent variable, could affect dependent variables and explain their changes. As the next step, regression was employed to address the question of whether innovation was able to explain the variance of dependent variables sufficiently.

The magnitude of Wilks' lambda indicates how much of the variance of dependent variables (media policies) was not explained by media innovation. It would be better if this value were lower. In Table 5, Wilks' lambda is 0.176, and f is 20.862 (statistically significant). The value of partial eta squared in Wilks' lambda was 35.3%, demonstrating that the changes independent variables (media policies) were explained by media innovation. The test power is 1, indicating that the analysis used all the test power for rejection.

**Table 5.** Results of univariate regression analyses: dependent variables

Dependent Variable	Sum of Squares	df	Mean Square	F	Sig.	R Squared
T. Content Management	792.639	18	44.036	1.517	.077	.038
T. Copyright	26255.504	18	1458.639	29.476	.000	.435
T. Privacy	11429.665	18	634.981	38.170	.000	.499
T. Data protection	9646.259	18	535.903	61.618	.000	.617

The F tests the effect of T. innovation. This test is based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Computed using alpha = .05

According to the results of Table 5, media innovation had no significant effect on content management policies ( $df=18$ ,  $f=1.517$ ,  $sig=0.077$ ,  $R^2=0.038$ ). The resultant value of R SQUARED was 3.8%, showing that media innovation was unable to explain content management policies and had no effects on them. Regarding the effects of media innovations on copyright policies, the former explained 43.5% of the latter. Given the fact that SIG and F were 0 and 29.47, respectively ( $df=18$ ,

$f=29.47$ ,  $sig=0$ ,  $R^2=0.435$ ), media innovation had significant effects on copyright policies. Thus, the second hypothesis was confirmed.

Regarding the effect of media innovation on the changes of privacy policies, the resultant data of R SQUARED indicate that media innovation was able to explain 49.9% of changes in privacy policies ( $df=18$ ,  $f=38.17$ ,  $sig=0$ ,  $R^2=0.499$ ). Therefore, media innovation had significant effects on privacy policies, and the third hypothesis was confirmed. As for the effect of media innovation on the changes of data protection policies, the resultant data indicated that media innovation explained 61.4% of changes in data protection policies ( $R^2=0.617$ ,  $df=18$ ,  $f=61.61$ ,  $sig=0$ ). Hence, the fourth hypothesis was confirmed.

## 5. Conclusion

The purpose of this study was to test the effects of media innovation on social media policies in Iran. This context was chosen because the social media sector in this country faces privacy, copyright, data protection, and content management challenges. For this purpose, the study was designed to determine the effects of media innovation on the relevant policies on four areas: privacy, copyright, data protection, and content management. The findings suggest that media innovation in the Iranian social media industry had no effects on content management policies in the country. In other words, media innovation was not a predictor of changes in content management policies in social media. The prevention of violence spread, collective conflicts, propaganda against the governing system, pornography promotion, offenses against people, and religious promotion, media innovations of social networks had no effects on content management policies because of the high sensitivity of content management policies in this context. This study confirmed previous findings by Safaee and Jafari (2013).

However, media innovations had different effects on media policy. According to the results of analysing the effects of media innovations on copyright policies, the changes in copyright policies in the social media sector are predictable via media innovation. We have found that media innovation had a positive effect on the user right protection policies, producer right protection policies, imitative artistic activity, criminalization policies, fair opportunity policies for the creation of artworks, discovery of copyright cases, control of copyright cases, artwork exploitation rights, and multiplication right policies in social networks. Media innovations would change these policies. The results of testing the effects of media innovations on copyright policies indicated that paying attention to the impossibility of implementing copyright policies in social networks showed that these policies needed to be changed. According to the official approach towards the implementation of copyright policies in social networks in recent years, it is currently not possible to monitor the accurate implementation of previous copyright policies. According to Ebrahimi and Kasnavi (2018); Eslami and Feizi (2016), innovation affected copyright policies.

The results of analysing the effects of media innovations on privacy policies showed that media innovation predicted changes in privacy policies on social media. The effects of media innovations on identity theft, prosecution policies, exploitation of user data policies, the necessity of informing users of the type of user data exploitation, user data storage policies, data disclosure control policies, and anonymity policies on the use of data were positive. These policies change in proportion to the rise of media innovations. Given the sensitivity of people to their privacy, privacy policies were considered by policy-makers. However, privacy has become less sensitive in social networks concerning users' awareness of transparency and the possibility of personal information disclosure in social media. At the same time, it is impossible to monitor and entirely prevent privacy violations in social media platforms. Therefore, policy-makers agreed that it would be necessary to design and/or adapt privacy policies for the use of social media. The empirical studies by Safaee and Jafari (2013) and Maghami and Ataran (2019), confirmed this finding.

According to the results of analysing the effects of media innovation on data protection policies, media innovation predicted changes in these policies on social media. The effects of media innovation on user data storage policies, user data processing policies, user data deletion policies, and user data transfer policies were positive. With the advent of media innovation, these policies can change proportionately. The data processing and transfer challenges in Iranian social media are different from those of traditional media. Therefore, policy-makers reach an agreement on the need for changing data protection policies.

### 5.1. Further research

This study contributed to the new area of literature on media innovation, and it is the first study to analyse the role of media innovation in social media policy-making in Iran. The findings indicate the agreement between policy-makers and actors of social media in Iran on changing privacy, copyright, and data protection policies in social media. This agreement can be effective in the policy-making process of this new social media sector in Iran. By changing these policies, social media firms can keep operating in a more competitive environment. In addition, the findings indicate that transformation in social media policy-making requires the active involvement of all social media actors in Iran and the application of the international policy principles in this regard. Even though this study is only limited to the Iranian context, it confirmed previous findings by Jayakar (2018) that media policy-makers should formulate policies for all sectors of the media industry in an integrated manner. We argue that our study on the Iranian context is of value for other national settings with similar policy-making challenges in the media industry and substantial state influence on the media policy.

If the research hypotheses are tested in the context of other countries, a new empirical concept will emerge for policy-making in social media. Moreover, further qualitative studies can provide more detailed information on the role of media innovation regarding the changes in media policy, and particularly, social media policy. Analysing the feasibility of these changes in other principles of media policy is another crucial area of research for further studies to focus on.

With the continuous development and rapid spread of social media networks, there is an even greater need for academic and policy consensus on the conventional standards of personal data protection (Eslami & Feizi, 2016) internationally. Although the ability of social media firms and national governments to collect, archive, and individual process data has progressively increased, there are still no clear standards and implementation mechanisms of users' data protection in the vast majority of national contexts. Therefore, we emphasize that data protection in digital platforms should be the center of attention of further studies and funding bodies.

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