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ARAŞTIRMA MAKALESİ **RESEARCH ARTICLE**

The Effects of Information Pollution on Poultry Companies: The Case of Turkey

Bilgi Kirliliğinin Tavukçuluk Firmaları Üzerindeki Etkileri: Türkiye Örneği

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Abstract

The poultry sector provides people and countries with many benefits in the social, economic and health domains. However, the poultry sector faces a number of important problems. One of these problems is information pollution. The rapid advances in information and communication technologies, in particular, made information pollution one of the most important problems of our contemporary age. Information pollution can have significant negative effects on companies and sectors, as well as threaten the reputation of the brand, the products and services offered by the businesses. The poultry industry is among the most affected by information pollution and Turkey represents an ideal case for studying the effects of information pollution on the poultry industry. The poultry sector has achieved significant growth in Turkey in recent years, but the problem of information pollution is an important factor that limits this growth. There are ongoing efforts by various organizations and agencies in Turkey to solve the problem. This study aims to examine the effects of information pollution on poultry producing companies in Turkey and identify the activities undertaken by producers to fight information pollution. Data were collected from companies that are members of BESD-BİR (Turkish Poultry Meat Producers and Breeders Association), which brings together the largest chicken producing companies in Turkey and account for 91% of all poultry production in Turkey. Basic statistical techniques and procedures such as frequency distributions, percentages, and arithmetic means were used to conduct descriptive statistical analysis. Likert-type questions were also included in the study for various purposes. Descriptive analysis method was used to analyze the suggestions made by the poultry producers to reduce information pollution in the sector. The results show that information pollution problem is an important problem for poultry producing companies in Turkey. Since a significant part of the companies are affected by the problem of information pollution, they have various activities aimed at solving this problem and informing consumers. The problem has slight to moderate effects on the sales, production decisions, marketing decisions, and investment decisions. It has been found that sales and production decisions are affected to a slightly larger extent compared to marketing and investment decisions. Poultry producing companies consider it important to carry out successful information campaigns and increase cooperation in the sector in order to solve information pollution problems.

Keywords: Chicken, Poultry, Information pollution, Producer, Turkey.

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Öz

Tavukçuluk sektörü, insanlara ve ülkelere sosyal, ekonomik ve sağlık alanlarında birçok fayda sağlamaktadır. Ancak tavukçuluk sektörü bir takım önemli sorunlarla karşı karşıyadır. Bu sorunlardan birisi de bilgi kirliliğidir. Özellikle bilgi ve iletişim teknolojilerindeki hızlı gelişmeler, bilgi kirliliğini çağımızın en önemli sorunlarından biri haline getirmiştir. Bilgi kirliliği, firmalar ve sektörler üzerinde önemli olumsuz etkiler yaratabileceği gibi, markanın itibarını, işletmelerin sunduğu ürün ve hizmetleri de tehdit edebilmektedir. Tavukçuluk sektörü, bilgi kirliliğinden en çok etkilenen sektörler arasındadır ve Türkiye bilgi kirliliğinin kanatlı sektörü üzerindeki etkilerini incelemek için ideal bir örnek teşkil etmektedir. Tavukçuluk sektörü son yıllarda Türkiye'de önemli bir büyüme kaydetmesine rağmen bilgi kirliliği sorunu bu büyümeyi sınırlayan önemli bir faktördür. Türkiye'de çeşitli kurum ve kuruluşların sorunu çözmeye yönelik çalışmaları devam etmektedir. Bu çalışma, bilgi kirliliğinin Türkiye'deki tavuk üreten firmalar üzerindeki etkilerini incelemeyi ve üreticilerin bilgi kirliliği ile mücadele için üstlendikleri faaliyetleri belirlemeyi amaçlamaktadır. Çalışmanın verileri Türkiye'nin en büyük tavuk üreticisi olan firmalarını bir araya getiren ve Türkiye'deki tüm kanatlı üretiminin %91'ini oluşturan BESD-BİR'e (Beyaz Et Sanayicileri ve Damızlıkçıları Birliği Derneği) üye olan firmalardan elde edilmiştir. Çalışmada tanımlayıcı istatistiksel analizler için frekans dağılımı, aritmetik ortalama, yüzde hesapları gibi temel istatistiksel işlem ve yöntemlerden yararlanılmıştır. Çeşitli amaçlarla Likert tipi sorular da çalışma içerisinde yer almıştır. Üretici firmaların sektördeki bilgi kirliliğinin azaltılması için yaptığı önerileri analiz edebilmek için ise betimsel analiz yöntemi kullanılmıştır. Sonuçlar, bilgi kirliliği sorununun Türkiye'deki tavuk üreticisi firmalar için önemli bir sorun olduğunu göstermektedir. Firmaların önemli bir bölümünün bilgi kirliliği probleminden etkilendikleri için bu sorunu çözmeye ve tüketicileri bilgilendirmeye yönelik çeşitli çalışmaları bulunmaktadır. Bilgi kirliliği sorununun satış, üretim kararları, pazarlama kararları ve yatırım kararları üzerinde hafif ila orta düzeyde etkileri vardır. Satış ve üretim kararlarının pazarlama ve yatırım kararlarına göre biraz daha fazla etkilendiği tespit edilmiştir. Tavuk üreticisi firmalar, bilgi kirliliği sorunlarının çözümü için başarılı bilgilendirme kampanyaları yürütmeyi ve sektördeki iş birliğini artırmayı önemli görmektedir.

Anahtar Kelimeler: Tavuk, Tavukçuluk, Bilgi kirliliği, Üretici, Türkiye.

1. Introduction

Chicken is highly nutritious and easy to prepare in a short period of time, and its taste is highly rated by many consumers, which makes it special among all types of meat (Vukasovič, 2010). With low prices compared to most other types of meat, short production cycles, and a high feed conversion ratio, chicken and the poultry industry are very valuable in economic terms as well (Szőllősi et al., 2014). All of this means that they the poultry industry has a great potential to contribute to animal husbandry and the national economy overall for many countries.

However, the poultry industry has number of important problems. One of these problems is information pollution. The poultry industry is among the most affected by information pollution in the world (Bearth et al., 2014; Chen et al., 2018; Pitigraisorn, 2021; Roy et al., 2021). However, there have been very limited studies about information pollution in poultry sector.

The rapid advances in information and communication technologies were accompanied by a parallel increase in the number and severity of information problems, and information pollution became one of the most important problems of the age of industry 4.0 (Iqbal et al., 2020). Different terms are used in the literature to refer to information pollution, but they all have similar definitions. There seems to be an overall consensus on the definition of the concept. In general terms, information pollution is defined as "the presence of useless, harmful, malicious, or unwanted messages and the spread of these messages to the extent that they have significant negative effects on society" (Cai and Zhang, 1996). Varying terminology is used in the literature to examine the issue of information pollution and the problems it causes. In addition to "information pollution," the terms "information overload" (Nelson, 2007; Dubosson and Fragniere, 2009) and "infollution" (Cho, 2002; Ölcer et al., 2020) are also used to refer to these problems. Additional terms used in the literature include "misconception" (Bearth et al., 2014; Chen et al., 2018) "misperception" (Flynn et al., 2017), "misinformation" (Ayoob et al., 2002), "disinformation" (Demestichas et al., 2020) and "fake news" (Pitigraisorn, 2021) among others. These use concepts have very similar or overlapping meanings, and are frequently used interchangeably. Hence the proposal that the term "problematic information" be used as an umbrella concept that covers them all (Marwick, 2018).

Information pollution has significant negative effects not only on individuals but also on individual businesses and entire industries (Das, 2017). Information pollution can have negative economic effects on firms, threatening brand reputation and the products and services offered by businesses (Petratos, 2021). Given the effects of information pollution on organizations, solving the problem requires these organizations to develop and implement effective strategies to fight information pollution (Iqbal et al., 2018). Fake news, which can spread rapidly, remains an acute problem, indicating that researchers need to pay more attention to this issue and a lot more studies should be conducted on this topic (Palade and Balaban, 2020). Given these considerations, information pollution is very much a current problem, one that should be studied in detail, paying attention to its different aspects.

Turkey represents an ideal case to study the effects of information pollution on the poultry industry and the poultry producing companies in this industry. In 1970s, poultry businesses in Turkey were family run business with high costs and limited production capacities, but this changed with the large investments in the industry in 1990s and 2000s, resulting in high standards of quality (Çakı, 2007). With state subsidies and planning, the poultry industry in Turkey has become one of the strongest and most rapidly developing industries in the country (Keskin and Demirbaş, 2012; Avcıoğlu et al., 2013; Karadavut and Taşkın, 2014; Çınar and Keskin, 2018). Turkey, in turn, has become one of the top ten countries that produce and export chicken (FAO, 2021). The poultry industry in Turkey makes an important contribution to Turkey's GDP by exporting chicken to many countries (Bayraktar et al., 2019), plays an important role in reducing poverty by providing employment and a source of income to millions of small farmers and poor people (Bayraktar et al., 2019), and creates millions of jobs through related industries such as feed production and pharmaceutics, and related activities such as transportation and marketing (Çakı, 2007). However, information pollution has become and remains one of the biggest problems facing the poultry industry in Turkey, with significant negative effects on the industry (Ataman, 2012; Yıldız, 2012; Keskinoğlu, 2014; Okur et al., 2016). Information pollution regarding the poultry industry is very widespread in Turkey (Okur et al., 2016; Ayvazoğlu Demir and Aydın, 2018, Eleroğlu et al., 2018; Yıldız and Duru, 2019). Print and visual media in Turkey, in particular, frequently run negative stories

about chicken and poultry production. These stories contain various claims including that "chicken consumption is bad for health," "chicken consumption leads to cancer," "there is excessive use of hormones and antibiotics in poultry production," "chicken are fed special drugs to make them grow faster," and "chicken consumption leads to early-onset puberty in children" (BESD-BİR, 2016). The Ministry of Agriculture and Forestry, on the other hand, as well as poultry producers, state that these stories are not based on facts and are simply not true (Ministry of Agriculture and Forestry, 2014; BESD-BİR, 2016). Fighting the current problem of information pollution regarding the poultry sector in Turkey is a priority issue for the Ministry of Agriculture and Forestry. Various strategic plans by the Ministry of Agriculture and Forestry identify the issue of information pollution regarding the food industry as an important problem that needs to be solved (Ministry of Agriculture and Forestry, 2013, 2019).

Some of the poultry producers in Turkey experienced significant declines in their sales due to negative stories about chicken (Keskinoğlu, 2013a). In an effort to combat information pollution, these companies came together to establish a platform called "Healthy Chicken Information Platform" in order to correct pubic misperceptions and prevent information pollution (Healthy Chicken Information Platform, 2021). Moreover, to combat information pollution, producers took steps such as live-streaming from their production facilities (Keskinoğlu, 2013b), allowing the public to visit production facilities (BESD-BİR, 2015), and producing public service announcements (Banvit, 2021). These observations show that poultry producers in Turkey are highly affected by information pollution. Decision makers and policy makers in Turkey, along with companies operating in the industry, undertake efforts to solve the problem of information pollution.

This study aims to examine the effects of information pollution on poultry producing companies in Turkey, identify the activities undertaken by producers to fight information pollution, and discuss what needs to be done to deal with the problems created by information pollution.

2. Materials and Methods

Surveys were conducted with the authorized personnel of poultry producers in Turkey who were members of BESD-BİR (Turkish Poultry Meat Producers and Breeders Association). BESD-BİR brings together the largest poultry producing companies in Turkey, which together account for 91% of all poultry production in the country (BESD-BİR, 2015). As a result, BESD-BİR members are highly representative of poultry producers in Turkey overall. At the time the study was conducted, BESD-BİR had 18 members engaged in chicken production (BESD-BİR, 2017).

The initial goal was to conduct surveys with all poultry producers who were members of BESD-BİR, but some of the producers declined to participate in the study, citing their company policies. Eventually, surveys were conducted with representatives from 9 companies who agreed to participate in the study. Participants were authorized and knowledgeable employees of the companies in question.

Basic statistical techniques and procedures such as frequency distributions, percentages, and arithmetic means were used to conduct descriptive statistical analysis. Items with Likert-type scales were used in the surveys for various purposes. Descriptive analysis was used to present and discuss proposals made by representatives of poultry producers to reduce information pollution in the industry.

3. Results and Discussion

3.1. General information about companies

Companies included in the study have their headquarters in six different provinces of Turkey. All of these companies have been operating in the industry for a minimum of ten years. Four of the nine companies, on the other hand, have been operating in the industry for more than 40 years. All companies have more than 250 employees, and are classified as large enterprises. Three of the companies exclusively use conventional production methods, another three exclusively use good farming practices, and the last three combine conventional methods and good farming practices. All of these companies are poultry exporters (*Table 1*).

Table 1. General information about companies

Variables		Frequency
Headquarters in	Bolu	3
	Bursa	2
	İzmir	1
	Manisa	1
	Samsun	1
	Uşak	1
Years operating	1-10	-
	11-20	1
	21-30	2
	31-40	2
	40+	4
Number of employees	1-9	-
	10-49	-
	50-249	-
	250+	9
Method of production	Exclusively Conventional	3
	Exclusively Good Farming Practices	3
	Both Conventional and Good Farming Practices	3
Exporter status	Exporter	9
	Non-exporter	-

3.2. Effects of information pollution on companies

Participants were asked whether their sales were affected by the information pollution regarding the poultry industry. Six of the participants reported that they saw a decline in their sales due to ongoing information pollution, whereas three reported that they have not observed a decline in their sales due to information pollution (*Table 2*).

Table 2. Effects of information pollution on sales

Effects	Frequency	Percentage (%)
Sales have declined	6	66.6
Sales remained the same	3	33.3
Total	9	100.0

Participants were asked whether they took any action to prevent information pollution. Six of the participants reported taking action to prevent information pollution (*Table 3).*

Table 3. Taking action to prevent information pollution

Took action to prevent information pollution	Frequency	Percentage (%)
Yes	6	66.6
No	3	33.3
Total	9	100.0

Participants who reported taking action to prevent information pollution were asked to describe their actions, using open-ended questions. Actions taken by these companies are reported in *Table 4*. Participants reported finding out that the problem of information pollution mostly affected women, those with children, in particular, and as a result, they took action targeting women and children. For example, to increase consumption of chicken

and chicken products among children, one of the companies bought the licensing rights to well-known cartoon characters, using the names and images of these characters on product packaging, and offered new products specifically for children. Moreover, participants said their companies took various measures including live streaming from their production facilities, allowing visits by the public to production facilities, conducting consumer research, and creating FAQ pages on their websites to provide answers to consumer questions and clarification regarding misperceptions.

Table 4. Actions taken by compaines to fight information pollution

Actions taken
- Offering new products specifically for children in order to increase children's consumption of chicken and chicken products. (Buying the licensing rights to well-known cartoon characters and using the names and images of these characters on product packaging).
- Adding FAQ pages to company websites to address information pollution, and providing answers to consumers' questions and clarification regarding misperceptions.
- Producing ads and announcements for TV, newspapers and social media regarding public misperceptions.
- Conducting consumer research.
- Live-streaming from production facilities, allowing all interested parties to watch production activities.
- Allowing visits by the public to production facilities.

In terms of responses to information pollution, most companies were found to undertake activities such as creating a customer services unit or consumer hotline, conducting research on consumer perceptions and behaviors, allowing interested consumers access to their production facilities, and placing emphasis and increasing spending on advertising, promotion, and publicity. However, it was notable that only four of the companies had sections on their websites that were meant to combat information pollution. This finding indicates that the companies are affected by and take measures to fight information pollution, but fail to make effective use of their own websites. Given that the internet is an important venue to reach consumers, this leads to the conclusion that the official websites of the companies could be used more effectively to fight information pollution. On the other hand, seven of the companies included in the study had a customer services unit or consumer hotline, which makes it easier for consumers to contact the companies in question and helps to inform consumers and fight information pollution (*Table 5*).

Table 5. Companies' responses to and measures against information pollution

Company Responses	**Yes**	**No**	**Total**
Having a customer services unit, consumer hotline, or similar structure	7	2	9
Conducting research on consumer perceptions and behaviors	7	2	9
Allowing interested consumers to visit production facilities	6	3	9
Pays special attention to advertising and promotion activities	6	3	9
Increasing spending on advertising and promotion activities	6	3	9
Preparing action plans to fight information pollution	6	3	9
Taking steps to increase the range of products offered	5	4	9
Having a section on official website dedicated to fighting information pollution (e.g. FAQ)	4	5	9
Lowering production	4	5	9
Searching for alternative markets	4	5	9
Deciding against making further investments	2	7	9
Buying less from suppliers	2	7	9

Participants reported that their sales, production decisions, marketing decisions, and investment decisions were slightly to moderately affected by information pollution. Sales and production decisions were affected to a larger extent compared to marketing and investment decisions (*Table 6*).

Table 6. Effects of information pollution on companies and company decisions

Fields	1	2	3	4	5	Mean
Sales	2	2	2	2	1	**2.77**
Production decisions	1	3	2	3	0	**2.77**
Marketing decisions	2	4	0	3	0	**2.44**
Investment decisions	2	4	0	3	0	**2.44**

1=Not affected, 2=Slightly affected, 3=Moderately affected, 4=Affected, 5=Strongly affected

Asked to rate the importance of problems caused by the information pollution in the industry, compared to other problems they face, one participant reported they were slightly important, two reported that they were moderately important, five reported that they were important, and one reported that they were very important. Overall, it was found that information pollution problems were moderately important (3.66) compared to other problems the companies faced (*Table 7*).

Table 7. Importance of information pollution compared to other problems

Factors	1	2	3	4	5	Mean
How important are the problems caused by information pollution compared to other problems faced by your company	**0**	**1**	**2**	**5**	**1**	**3.66**

1=Not important at all, 2=Slightly important, 3=Moderately important, 4=Important, 5=Very important

Asked to rate how successful their companies were in terms of eliminating information pollution and informing consumers, participants on average rated their companies to be moderately successful to successful (3.44) (*Table 8*).

Table 8. Success in fighting information pollution

Factors	1	2	3	4	5	Mean
How successful do you think you are in fighting information pollution?	**0**	**3**	**1**	**3**	**2**	**3.44**

1=Not successful at all, 2=Slightly successful, 3=Moderately successful, 4=Successful, 5=Very successful

3.3. Effectiveness of methods to fight information pollution

The Ministry of Agriculture and Forestry and other official agencies have ongoing efforts to fight information pollution, and new recommendations are made from time to time regarding this issue. It is very important to learn about companies' opinions regarding the effectiveness of these methods. Therefore, participants were asked to evaluate the effectiveness of some of the practices recommended to fight information pollution.

Participants thought that methods such as running public service announcements on television, conducting social media campaigns, and having medical doctors and industry representatives appear as guests on TV shows to inform the public would be effective in fighting information pollution. Distributing flyers, advertising in newspapers, and having medical doctors and industry representatives appear as guests on radio shows, on the other hand, were considered to be less effective in informing consumers, compared to other methods *(Table 9).*

Table 9. Effectiveness of methods to fight information pollution

Factors	1	2	3	4	5	Mean
Running public service announcements on TV	0	0	0	4	5	**4.55**
Conducting social media campaigns (e.g. on Facebook or Twitter)	0	0	0	4	5	**4.55**
Having medical doctors appear as guests on TV shows	0	0	1	4	4	**4.33**
Having industry representatives appear as guests on TV shows	0	1	0	4	4	**4.22**
Organizing promotional tours of company offices and plants for consumers	0	0	3	4	2	**3.88**
Organizing conferences, lectures, and symposia regarding the issue	0	1	1	5	2	**3.88**
Preparing billboards	0	1	1	6	1	**3.77**
Having all BESD-BİR members add a section on information pollution to their websites	0	2	1	4	2	**3.66**
Having medical doctors appear as guests on radio shows	0	2	2	3	2	**3.55**
Having industry representatives appear as guests on radio shows	0	3	1	3	2	**3.44**
Advertising in newspapers	0	3	2	2	2	**3.33**
Preparing and distributing flyers	0	3	3	1	2	**3.22**

1=Would not be effective at all, 2=Would be slightly effective, 3=Would be moderately effective, 4=Would be effective, 5=Would be very effective

Cooperation is important in fighting information pollution. Corporation would be more likely to produce positive results in the fight against information pollution, compared to companies taking individual action. Therefore, participants were asked to evaluate cooperation among industry stakeholders and organizational effectiveness in the fight against information pollution. Participants were of the opinion that there was insufficient cooperation in the industry and relevant organizations were not sufficiently effective in fighting information pollution (*Table 10*). In comparative terms, BESD-BİR was the most highly rated organization in terms of effectiveness (3.55), whereas the Ministry of Agriculture and Forestry was not considered to be as effective (2.66).

Table 10. Cooperation and organizational effectiveness in the fight against information pollution

Factors	1	2	3	4	5	Mean
BESD-BİR is effective in the fight against information pollution.	0	1	4	2	2	**3.55**
Large companies/brands in the industry cooperate in the fight against information pollution.	0	2	4	2	1	**3.22**
All stakeholders in the industry take effective collective action in the fight against information pollution.	0	2	5	1	1	**3.11**
Domestic platforms established to fight against information pollution (e.g. Healthy Chicken Information Platform, Food Safety Expert Portal) are effective.	2	0	3	3	1	**3.11**
The Ministry of Agriculture and Forestry is effective in the fight against information pollution.	2	2	3	1	1	**2.66**
The Ministry of Health is effective in the fight against information pollution.	2	2	3	1	1	**2.66**

1=Strongly disagree, 2=Disagree, 3=Moderately agree, 4=Agree, 5=Strongly agree

3.4 Companies' views on reducing information pollution in the industry

To learn about companies' recommendations on reducing information pollution in the industry and strengthening consumer trust in chicken products, participants were asked the following questions and their responses were subjected to descriptive analysis: "What do you think should be done to reduce information pollution in the industry?" and "What do you think should be done to strengthen consumer trust in chicken products?" Because the two questions were related to one another and answers had a lot in common, joint analysis of the responses was possible. Participants were of the opinion that cooperation was needed among stakeholders and more effective information campaigns needed to be run with the contribution of relevant ministries in order to reduce information pollution and strengthen consumer trust. Participants also stated that the number of public service announcement should be increased, featuring trusted public figures, and organized action should be taken to protest media organizations that misinform the public (*Table 11*).

Table 11. Companies' recommendations to reduce information pollution in the industry and strengthen consumer trust in chicken products

Company Recommendations
- Producers should prepare ads containing healthy information about chicken and run these ads on prime time TV.
- Stakeholders in the industry should take more effective action in cooperation with one another, and discuss what needs to be done to eliminate the problem of information pollution in the industry.
- Communication channels that are the most effective for informing consumers should be identified and efforts should be focused on these channels.
- Industry stakeholders should contact media organizations that feature people who are not experts and misinform the public, express their joint protests, and take steps to prevent further such incidents.
- The Ministry of Health and the Ministry of Agriculture and Forestry should cooperate and take joint action to resolve this problem that hurts the industry and the national economy.
- Emphasizing the point that people involved in the industry, company managers, and employees also consume chicken, which is sufficient proof that the products they produce are safe.
- The Ministry of Health and the Ministry of Agriculture and Forestry should prepare a joint public service announcement to accurately and effectively inform the public that the production process is healthy.
- Industry stakeholders should contact popular and trusted celebrities to ask them to be the face of the industry to provide accurate information.

4. Conclusions

BESD-BİR (Turkish Poultry Meat Producers and Breeders Association) brings together the largest poultry producing companies in Turkey, which collectively account for a very large proportion of poultry production in Turkey. Data obtained from these producers show that the industry mostly consists of old and well-established companies. All companies included in the study had more than 250 employees and were categorized as large enterprises. Moreover, all of these companies exported poultry products. Given that they had their headquarters in six different provinces of Turkey and were large enterprises, these companies were highly representative of the poultry industry in Turkey.

Information pollution was found to be an important problem for poultry producers in Turkey. Information pollution in the industry had slight to moderate effects on the sales, production decisions, marketing decisions, and investment decisions of these companies. Sales and production decisions were affected to a slightly larger extent than marketing and investment decisions.

A significant proportion of the companies took action to resolve the problem and inform the consumers because they were affected by information pollution. These actions including adding sections on information pollution to official company websites, creating FAQ sections to respond to consumers' questions, allowing visits by the public to production facilities, and livestreaming from production facilities. Overall, companies are aware of the problem of information pollution. However, participants believe that they have not been successful enough in the fight against information pollution. This shows that the companies have not yet been able to find an effective solution to the problem.

Participants were of the opinion that running successful information campaigns was critical to resolving the problem of information pollution. They thought that an effective solution would be to reach consumers through ads and public service announcements containing healthy and accurate information about chicken, run on prime time TV. Another recommendation made by the participants was to have popular and trusted celebrities serve as the face of the industry. Participants also thought that industry stakeholders should protest media organizations and news that feature individuals who are not experts and misinform the public, and take joint action to avoid further such incidents. Company representatives also recommended emphasizing the point that they, along with other company managers and employees, eat chicken products safely as people with intimate knowledge of the industry, which is an indicator that these products are not bad for health.

On the other hand, participants were of the opinion that there was insufficient cooperation in the industry and relevant organizations were not sufficiently effective in the fight against information pollution. They thought that industry stakeholders and relevant ministries needed to make stronger efforts to cooperate and work with one another to solve the problem. Participants also thought that there was as yet insufficient cooperation among companies in the fight against information pollution. Given that all producers, or the entire industry, are subject to the effects of information pollution and negative discourses about the consumption of chicken, it is clear that further cooperation and sharing are needed among companies. The presence of BESD-BİR as an umbrella organization is a positive factor that can facilitate the fight against information pollution. In this context, improving coordination among companies and making joint efforts can help in the fight against information pollution.

Companies take various actions to fight information pollution, but overall, do not make effective use of their websites, which is notable as an important disadvantage. Failure to make effective use of companies' official websites, despite the strong interest in informing the public, is a factor that reduces the effectiveness of the fight against information pollution. Companies can reach consumers more easily if they were to make more effective use of their social media accounts and websites, featuring accurate information particularly on subjects that suffer from information pollution and a lack of consumer trust. Another measure that can help resolve the problem of information pollution is the creation of platforms that would bring companies and consumers together, and strengthen the communication among companies. This would create a more effective communication between consumers and companies, allowing both sides to better understand the concerns and ideas of one another, and help develop more effective solutions to the problem of information pollution.

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