THE ROLE OF MASS MEDIA IN CRISIS COMMUNICATION

Alice Reissová, Marta Žambochová, Vít Sláma

Abstract: The objective of our work was to identify the role mass media play in crisis communication. We chose the "methanol affair" as an example of a crisis situation which seriously affected the health and lives of people. We wanted to find out whether there are links between the number of published articles and the subsequent volume of spirits sold during the crisis situation in the Czech Republic such as the methanol affair. We used regression analysis and established that the number of articles related to the methanol affair significantly influenced the sales of spirits. The publication of each article was followed by a decrease in sales of spirits and vice versa, i.e., following a decline in the number of articles, sale volumes went up. Negative consequences have also been reported by producers whose annual sales have fallen in a year-to-year comparison. Last but not least, the government also suffered a loss by collecting significantly less money from excise duty as well as other taxes (VAT, income tax). The role of mass media is crucial in crisis communication, businesses should not underestimate the cooperation with mass media and they should be the first to promptly inform the mass media so that they can maintain the confidence of consumers.

Keywords: Crisis situation, Crisis communication, Influence of mass media, Decline in sales volumes, Excise duty.

JEL Classification: M37, M19.

Introduction

It is extremely important for most manufacturers whether their business (or their product) is evaluated by consumers as trustworthy and safe. The interest of consumers drops as soon as there are any doubts about product quality. Should such doubts be connected with a real impact on human health and lives, it can have a fatal impact on further operations of a business. This imbalance results in a crisis situation a business must deal with without delay.

Ideally, businesses should be able to prevent potential crises, however, there are situations where it is impossible without prejudice. For example, a crisis can originate in another business which offers similar products. Subsequent medialization of the case then results in mistrust of all similar products. We had such a situation in the Czech Republic in 2012 and the case is generally known as the methanol affair.

A well-managed business should anticipate all risks within its risk management programme, nonetheless, it is not always possible as the above-stated example shows. Once the first symptoms of a crisis have arisen, the business' management should immediately establish a crisis team, which will then develop a crisis plan. The situation should first be thoroughly analysed and steps taken upon the established facts. Each crisis plan should most decidedly respect all principles of crisis communication. Competences must be exactly defined (who will communicate on behalf of the enterprise), the means of communication will be selected (particularly printed mass

media and electronic mass media) and, last but not least, the content, i.e., what shall be communicated. Crisis planning at the level of business enterprises was dealt with by Penrose (2000), for example. He established that businesses are increasingly interested in crisis management and they want to be prepared for crisis situations so as to be able to respond to situations which have arisen and eliminate possible negative impacts. Similar conclusions were made by Johansen et. al. (2012) as well. The situation is different in small business enterprises (up to 25 employees). Only 10% of these deal with crisis management (Spillan and Hough, 2003).

1 Statement on a problem

Crisis situations with a wide-ranging impact occur all around the world. Many of them are analysed and published afterwards, e.g., the "Tylenol crisis" (Chicago) in which 7 people died after being administered Tylenol medicament (Gorman, 2006). In similar situations, mass media intervene in the crisis communication of a business enterprise, i.e., both serious mass media, primarily taking on the role of a source of information, and tabloids. Tabloids present information in such a way as to attract the widest possible number of readers, even at the cost of correctness, which can have very serious consequences especially in the case of crisis situations.

Social media also play a considerable role. Fišer and Mišič found that young people (students at Maribor University) look very critically and sceptically at mass media and show very little interest in watching the news on TV, for example. They distinguish between public media (which they trust more) and commercial media (where trust is considerably lower). However, it was social networks which are shown to be the preferred source of information (Fišer and Mišič, 2015).

The influence of the media on consumers is also confirmed by Vilella-Vila and Costa-Font (2008). The most important daily newspapers in Great Britain and Spain informed about the issue of genetically modified food. The authors conducted the research repeatedly (in 1999 and 2002). They established that in 1999, when the mass media repeatedly and frequently informed the public about the risks related to genetically modified food over a long period of time, respondents showed very negative attitudes towards it. After three years, when the media stopped writing about the issue, the public attitude changed. More respondents saw benefits in genetically modified food and fewer risks as well. Similar studies dealing with genetically modified food were published by Oguz (2009), Tongyang et al. (2015), for example. Social media play a very important role here, as well (Scherman et al. 2015; Stephen and Galak, 2012).

The influence of mass media is apparent also in situations we cannot consider as critical. Theobald et al. (2006) verified an increased demand (especially from females) for cosmetic dentistry confirmed by stomatologists (such as teeth whitening) after TV programmes which frequently focused on cosmetic dentistry.

Businesses must work closely with mass media within their crisis communication, as these can considerable influence public opinion. In some crisis situations, proper communication can save human lives. For example, disasters affecting large populations. The crisis communication of the Chinese government during the earthquakes in Sichuan was analysed by Chen (2009). The large investigation established that the strategy and all

the measures taken by the government, particularly the effective information provided to the public, helped reduce the impacts of the catastrophe.

A catastrophe can also be seen in situations where food or drinks containing poisonous ingredients are distributed on the market and can consequently damage human health or cause death.

Consumers' behaviour towards dangerous food is very sensitive. Vermeir and Verbeke (2008) verified shopping habits in students. They concluded that students are willing to pay more for environmentally-friendly products which do not contain substances harmful to health.

Xiao and Kim (2009) conducted a large research and divided consumers into individualists (who prefer brand products to satisfy emotional and social needs) and collectivists (who prefer brand articles because they link them with quality and credibility). In this case, credibility is bound to safety, i.e., food safety.

Food safety and quality was dealt with by Röhr et al. (2005), as well. They repeatedly conducted a similar investigation and concluded that consumers can be divided into two groups – price-sensitive consumers and those sensitive to food safety.

This proved true in the Czech Republic, when the so-called methanol affair affected primarily price-sensitive consumers. However, we suppose it has impacted other segments, i.e., consumers sensitive to food safety, spirits manufacturers and the government.

Our article deals with both the influence of mass media in crisis situations and the impacts on individual segments.

2 Methods

The objective of the work was to identify how mass media influenced the sale volumes of spirits as a result of the so-called methanol affair and what the impacts of the crisis situation were on other entities (consumers, producer and government)

The so-called methanol affair is one of the crisis situations with the most tragic consequences in the current track record of the Czech Republic. A group of businessmen who wanted to avoid paying tax illegally produced spirits containing a high percentage of methanol. Consumption of this substance can cause lasting damage to human health or even death. These spirits were illegally distributed on the market as well and it was consumers sensitive to price who bought them (Röhr et al., 2005).

The first spirit consumption-related death occurred in September 2012. More deaths followed in the following weeks all over the country. 48 people in total died.

The first measure taken was an official ban on sales of spirits with over 30% content of alcohol, followed by a prohibition on all drinks containing more than 20% of alcohol. Neighbouring countries (Poland, Slovakia, Russia) immediately responded with a prohibition on the import of these spirits from the Czech Republic. The whole progress of the crisis situation was given great attention by the mass media. We wanted to establish whether the media communication influences the shopping behaviour of consumers. Our first research question was whether the number of articles published in the mass media influenced the sales of spirits.

We worked with secondary data taken from more sources, e.g., the company Anopres IT, a.s. (Anopres IT, 2016), which provides professional monitoring of mass media (press, TV, radio, Internet) and ACNielsen Czech Republic s.r.o. (ACNielsen, 2016), which is engaged in monitoring sales volumes and consumer behaviour, and we also used data from financial statements of individual spirits producers (Ministerstvo spravedlnosti, 2016a až 2016d).

Anopres IT monitors the most important sources of information. Their monitoring also includes articles from national daily newspapers (e.g., Hospodářské noviny, Lidové noviny, Mladá fronta Dnes), radio (e.g., ČRo, Hitrádio, Blaník), TV (e.g., ČT 1, NOVA, PRIMA Family), regional magazines and daily newspapers (e.g., Ústecký deník), magazines (Ekonom, Respekt, E15), and the Internet (websites of printed daily newspapers, ceska-justice.cz, dtest.cz).

3 Problem solving

We restricted the period in which we monitored the influence of published articles on the volumes of sold spirits. The first article on the methanol affair was issued in the first week of September 2012, so we started with this week. The monitoring was finished after one year, i.e., the last week in September 2013. From October 2013, information focusing on this issue occurred sporadically, usually in relation to the punishment of guilty persons rather than the direct threat to consumers.

The number of articles in individual weeks in the monitored period was established from the Anopress IT database based on the entered key words. The news contained negative information (mentioned the number of victims, informed about new cases of poisoning, police procedures to find the offenders).

The information on the sales volumes of spirits was obtained from the ACNielsen database. A line chart was developed based on these two sources.

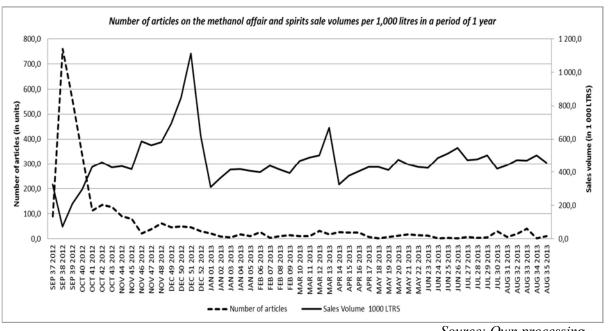
Chart 1 shows that the most articles were published in September 2012, i.e., at the time the crisis situation started with the first death. Sales of spirits dropped well below usual figures. In the following weeks, the number of articles significantly declined. A moderate increase was apparent particularly when a new case of poisoning or death occurred. The sales line apparently shows the increase at pre-Christmas time, followed by the Easter period, which is a typical seasonal fluctuation trend for spirits.

In September 2013, i.e., one year after the breakout of the methanol affair, the number of articles went up moderately – the mass media used the opportunity of the "one-year anniversary". However, sales were not influenced by the increase as no information on any acute threats was published.

Our research question was whether the number of articles in the media influenced the volumes of spirits sold during the crisis situation (the so-called methanol affair). We used regression analysis to establish the dependence. The input data were the data for the whole specified period, i.e., from the first week in September 2012 until the end of September 2013. P value = 0.003 was established, which is less than the limit value of 0.05. So, we can confirm that the number of articles on the methanol affair influenced the volumes of spirits sold. The final figure was -0.435. If the number of articles fell by one, the sales of spirits in the specific week increased by approximately 430 litres. The established value of the correlation coefficient is -0.39. Hence, there is a minor indirect

dependence, i.e., the more articles on the methanol affair that were published, the lower the sales volumes.

Chart 1: Development of spirits sales per 1,000 litres and number of articles on the methanol affair in the Czech Republic from September 2012 until the end of September 2013

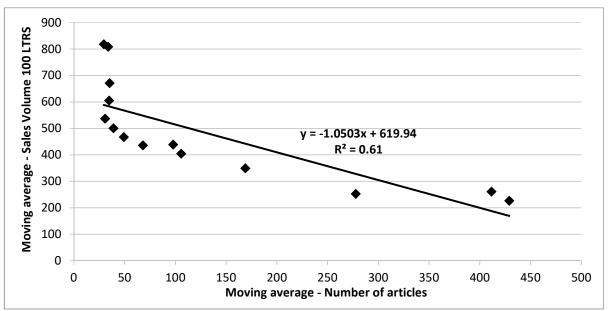


Source: Own processing

As Chart 1 apparently shows, the most news dealing with the methanol affair occurred from the first week in September until the end of 2012. For the subsequent calculation, we used moving averages (4 weeks) to compensate for more significant fluctuations (either as a result of further deaths or as a result of seasonal sales). The second reason for using moving averages was the fact that the influence of articles has a certain echo effect, i.e., not only is it manifested immediately after the article was published, but also in the following period.

The established P value= 0.001 was even lower than in the case of the first calculation. The value of the index determination is 0.61, from which it follows that the variability of spirit sales volumes was determined by 61 % of the number of articles. The final figure from the regression analysis was -1.05. This means that with each following article in this period sales of spirits declined by approximately 1,050 litres. The calculated correlation coefficient of -0.78 confirmed a strong and indirect dependence. Over a shorter time period with the used moving average the correlation coefficient was significantly stronger than in the period from September 2012 to September 2013. Our research question can then be positively answered. Figure 2 shows a graphical representation of data relating to the moving averages in the period from September to the end of 2012, together with the regression line. The number of articles in the mass media which related to the methanol affair significantly influenced the quantity of spirits sold.

Chart 2: Relation between the number of articles on methanol and the sale of spirits per 1,000 liters in the Czech Republic from September to the end of September 2012



Source: own processing

A regression analysis was also performed for the following period, i.e. from the beginning of the year to September 2013. The curve of the regression line appeared insignificant at the 5% level of significance (p-value = 0.07). The value of the correlation coefficient was only 0.29. It follows from both these values that the number of articles after the beginning of 2013 no longer affected the sales of spirits.

We were also interested in the impact on individual spirits producers on the Czech market. The data for the following calculation were taken from the financial statements of individual companies. It was not possible to obtain partial data which would indicate a decline in the sales volumes of spirits, however, it is obvious that the total sales of all legal producers dropped particularly during the methanol affair.

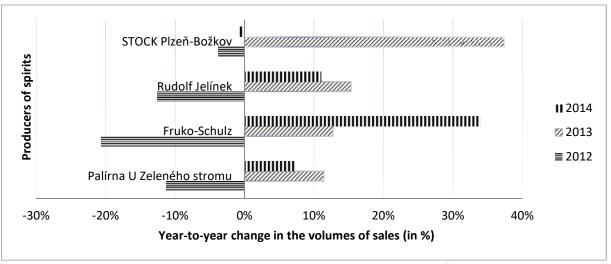
Tab. 1 Sales development showing sales of own products and services (Figures in thousands of CZK)

	2011	2012	2013	2014
STOCK Plzeň Božkov	1,639,569	1,577,408	2,167,808	2,148,841
Rudolf Jelínek	313,077	273,652	315,609	350,505
Fruko-Schutz	183,236	145,382	163,893	219,673
Palírna U Zeleného stromu	522,152	463,231	516,179	554 055

Source: own processing

The sales reported by the biggest players in spirits production in the Czech Republic were taken to calculate year-to-year changes in the volumes of sales from selling own products and services. The established values are shown in Chart 3.

Chart 3: Year-to-year change in the volumes of sales of the largest spirits producers in the Czech Republic

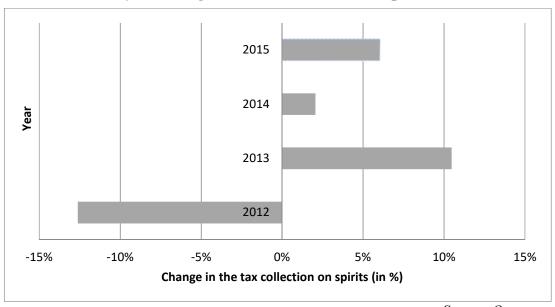


Source: own processing

The values show that in 2012, all spirits producers reported a year-to-year decline in sales of own products and services. The biggest decline was reported by Fruko-Schutz (more than 20 %), followed by Rudolf Jelínek with nearly 13 % and Palírna U Zeleného stromu with 11 %. STOCK Plzeň Božkov, which recorded a year-to-year decline of nearly 4 %, suffered the least impact in the crisis situation.

In the final part of our work we will also focus on the impact of the methanol affair from the point of view of the government. Chart 4 shows values of the collected excise duty. The collected excise duty is lower than the imposed tax, because the figure already includes the returned tax. Compared to the imposed tax, the collected tax also includes tax on imports from third countries.

Chart 4: Year-to-year change in the tax collection on spirits between 2011-2015



Source: Own processing

Chart 4 apparently shows that the methanol affair in 2012 considerably affected the amount of tax collected on spirits. In 2012, the total amount collected from excise duty on spirits dropped by nearly 13 %, which amounts to approximately 870 million CZK

in absolute figures. Lower sales volumes of spirits were also reported in the following periods. The amount collected for excise duties on spirits did not return to the figures of 2011 until two years later.

Apart from the above-stated impact of the methanol affair on the collection of excise duty on spirit, the crisis situation was also reflected in value added tax as well as the income tax of legal entities (see Table 1 Year-to-year decline in sales). Apparently, the methanol affair had very serious impacts on all stakeholders – consumers, producers as well as the government.

4 Discussion

Similar crisis situations have occurred in other countries as well. Dorazín (2016) informed about tragic deaths as a result of methanol poisoning in Irkutsk. Spirits are costly there so people consume other alcoholic drinks. In this particular case, it was a cosmetic preparation for baths which is cheap and at the same time has a high content of spirit. 77 deaths were reported. A similar situation had occurred before in Russia. In 2006, 15 deaths were reported due to methanol poisoning.

There were further cases of deaths related to methanol consumption. In resorts, there are usually individual deaths as a result of failures of individual persons. In Indonesia, two tourists died after consuming gin in which methanol was found afterwards, similarly, two young females were poisoned in Bali (Pointer, 2013).

The countries which report increased volumes of home-made alcohol in large scales show high rates of deaths. For example, 68 people died in Estonia after consuming home-made spirits (Kreč, 2012), 20 people died in Turkey after consuming illegally distilled spirits, 50 people were hospitalised in Norway in 2002 – 2004, of whom 17 people died. The highest number of methanol-related deaths was reported in India – the east Indian state of Orissa - 200 people, and 170 in Sangrampur (Zdravi.euro.cz, 2016). Hence, a similar situation can occur in any country. The risk grows in countries featuring low purchasing power of the population and at the same time high prices of alcohol, where alcohol is often burdened with high taxes (excise duty, VAT and others). To reduce the consumption of illegally produced alcohol, Lachenmeier et al., (2011) propose reducing the excise duty on spirit. This would reduce the difference in final price of spirits between the legal and "black" markets. However, the government opposes this argument, stating that the subsequent income for the national budget would be reduced. However, our study clearly shows that the state budget income would be considerably reduced as a result of a similar crisis situation. Even though the incentives of consumers for purchasing goods may differ in individual countries (Honkanen and Frewer, 2009; Novotný and Duspiva, 2014; Prescott et al., 2002; Röhr et al., 2005), safety and food safety is a priority in economically advanced countries.

Businesses should not underestimate the preparation of crisis plans. Johansen et al. (2012) conducted research in Denmark and found that there is a relationship between the size of a business and its readiness for crisis situations. They also draw attention to the necessity of internal crisis communication. Consequently, each enterprise should think about co-operating with mass media as the impact is great (Mugwisi, 2015).

Conclusion

The objective of our work was to establish whether there are links between the number of published articles and the subsequent sales volumes of spirits in the period of a crisis situation in the Czech Republic such as the "methanol affair". We have established via regression analysis that the number of articles related to the methanol affair significantly influenced the sales volumes of spirits. With the number of articles reduced by one, sales of spirits in the specific week increased by approximately 430 litres. The more articles that were published on the methanol affair, the lower the sale volumes that were reported. We established from the analysis using moving averages that the variability of sales volumes of spirits was largely determined (61 %) by the changes in the number of articles. With every subsequent article sales of spirits fell by approximately 1,050 litres. The number of articles in the mass media which related to the methanol affair significantly influenced the quantity of spirits sold.

A demonstrable decline in sales must necessarily affect spirits producers as well. We have established from the financial statements of the five most important spirits producers that a year-to-year decline in sales were reported by all of them, one producer reporting more than a 20% year-to-year decline.

The government was in the end affected as well. We managed to calculate the decline in the collected excise duty. It amounts to 13 % (i.e., approximate CZK 870 million). Lower amounts of collected excise duty were reported in the next two years. Logically, other taxes fell as well, such as VAT (lower turnovers) or corporate tax (lower overall sales).

The above-stated shows how important communication in crisis situations is. The mass media can significantly influence the behaviour of consumers. Hence, it is necessary to always cooperate with the media, and particularly proactively provide information in a crisis situation.

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Contact Address

PhDr. Alice Reissová, Ph.D.

Jan Evangelista Purkyně University in Ústí nad Labem, Faculty of Social and Economics Studies, Department of Management

Moskevská 54, 400 96 Ústí nad Labem, Czech Republic

Email: alice.reissova@ujep.cz Phone number: +420 602 456 781

RNDr. Marta Žambochová, Ph.D.

Jan Evangelista Purkyně University in Ústí nad Labem, Faculty of Social and Economics Studies, Department of Mathematics and Informatics

Moskevská 54, 400 96 Ústí nad Labem, Czech Republic

Email: marta.zambochova@ujep.cz Phone number: +420 603 753 844

Bc. Vít Sláma

Jan Evangelista Purkyně University in Ústí nad Labem, Faculty of Social and Economics Studies, Department of Management

Moskevská 54, 400 96 Ústí nad Labem, Czech Republic

Email: slama.vit@seznam.cz Phone number: +420 606 108 109

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