

## ORIGINAL ARTICLE


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## Reputation stability vs anti-crisis sustainability: under what circumstances will innovations, media activities and CSR be in higher demand?

**JEL Classification:** M14; M31; L21; D22

**Keywords:** reputation management system; corporate reputation; reputation ranking; reputation stability; corporate social responsibility; CSR; Ukraine

### Abstract

**Research background:** The difference of war and peace can help gain an understanding of the differences in the management of a company's reputation in terms of its stability as compared to the state of a reputation crisis. The question of practical confirmation, which is left open, is whether there is a positive correlation between the anti-crisis activity of the reputation management system and its stability in a long-term perspective, or whether these two factors are inversely related.

**Purpose of the article:** This research is essentially aimed at studying the impact of innovation activity, media activity, and corporate social responsibility on reputational stability as well as on anti-crisis reputational sustainability.

**Methods:** Indicators of innovation activity, media activity, corporate social responsibility, reputational stability, and anti-crisis reputational sustainability were collected in a sample of the most frequently mentioned in the media leading companies of the Ukrainian economy (N = 315), using an online survey done among 110 industry experts within the framework of the Reputation ACTIVists All-Ukrainian Ranking of Corporate Reputation Management Quality over February-March'2019 period. Structural equation modeling (SEM) in using the maximum likelihood estimation method was applied to examine the associations between above-mentioned indicators, according to the aim of the study.

**Findings & Value added:** The results of our study revealed: 1) the existence of a significant correlation between CSR and reputational stability; 2) innovative and media activity are the most significant variables to provide anti-crisis sustainability; 3) CSR is less important for ensuring anti-crisis sustainability than for maintaining reputational stability; 4) anti-crisis sustainability is significantly more dependent on media activity than reputational stability is. By better understanding the roles of innovation activity, media activity, and corporate social responsibility, the company's management in Ukraine can leverage the results of the study to improve reputation management performance, differentiating approaches in circumstances of a crisis and stability.

## Introduction

War and peace are at the opposite ends of the social system's spectrum. Due to their fundamental difference, we ultimately need to employ different approaches in order to manage these systems. That being said, the system still uses the same resources i.e. time, people, money, and tangible factors. The question appears to lie precisely in a different approach to the use of the factors: some of them serve to maintain peace and prevent war, whereas others are aimed at winning and restoring the balance of the system.

The aforementioned analogy of war and peace can help gain an understanding of the differences in the management of a company's reputation in terms of its stability as compared to the state of a reputation crisis. Consistent and time-tested procedures are the backbone of the system's stability. Nonetheless, the anti-crisis measures require new innovative solutions from reputation management. Interacting with the company's stakeholders is absolutely essential for addressing the crisis: the rate at which dangerous rumors and scandals spread in the media is considerably higher than the rate at which positive information travels. However, it can be assumed that specific crucial reputation management practices, such as the CSR will remain unchanged in the event of crisis and will balance out the system. In addition, the question of practical confirmation, which is left open, is whether there is a positive correlation between the anti-crisis activity of the reputation management system and its stability in a long-term perspective, or whether these two factors are inversely related, meaning that an increase in one will cause a decrease in the other.

This research is essentially aimed at testing the hypotheses about the effects on reputation stability versus reputation anti-crisis sustainability (positive, negative or neutral) of innovation activity, media activity or corporate social responsibility (CSR).

The analysis was carried out based on the data collected through a survey done among the experts within the framework of the Reputation ACTIVists All-Ukrainian Ranking of Corporate Reputation Management Quality. The said survey was implemented in February-March 2019 with

110 industry experts taking part in the evaluation of the companies' reputation management. To get the relevant expert opinions, the experts were asked to complete the questionnaires on <http://repactiv.com.ua/ru> website where the findings of our previous four annual surveys starting from 2015 are publicly available. Econometric analysis was done based on information gathered from 315 companies, each of which has been evaluated by at least five experts.

Theoretical approaches that describe the relationship between the concepts studied, namely, innovation, media activity and CSR on the one hand, and reputational stability and anti-crisis sustainability on the other, are given in the theoretical part. To summarize, based on literature analysis, we assumed that anti-crisis sustainability is more directly dependent on innovation and media activity, and CSR is equally important in maintaining reputational stability and in overcoming a reputation crisis. The following section explains the data collection methods and the methodology used to analyze the data. The following sections present, discuss and summarize the results obtained.

## **Literature review**

Reputation is an element of Intellectual capital and an essential part of a company's value (Lentjushenkova *et al.*, 2019). On one hand, maintaining reputational stability and anti-crisis reputation management are the components of a single reputation management system (Kiambi & Shafer, 2016). Nevertheless, practices of dealing with reputational crises seem to be contrasted with regular reputational management at the same time (Malkawi *et al.*, 2015), meanwhile, it has been argued that anti-crisis management tools can be aimed at a minute-to-minute effect and therefore contradict the long-term and strategic goals of reputation management (Mason, 2016; Szwajca, 2018a).

Alongside this, the ability of a stable operating management system to instantly mobilize, readiness for an instant response to a crisis, is one of the functions of the regular reputation management system (Parker *et al.*, 2019), which is aimed at ensuring everyday stability. The availability of a quick response to the crisis is laid down in the practices of regular reputation management and is institutionalized in its procedures: a crisis response plan, distribution of responsibilities between company personnel, who become members of anti-crisis team at the right moment, etc. (Szwajca, 2018b). Consequently, timely and effective anti-crisis activities are a condition ensuring reputational stability in the long term.

In all analyzed articles, the reputational crisis is seen as a temporary state from which you need to return to the state of reputational stability as soon as possible (Shu, 2017). In the information age, the speed of actions, necessary to stop the spread of negative information flows, has increased dramatically: if previously the response from a company (a televised address or publication in the press) was normal during a day (Janney & Gove, 2011). Nowadays such reaction should take place within the next two hours since the appearance of scandalous accusations against the organization (Downes, 2017). The need for such a quick response is caused by the emergence and spread of information and communication technologies, the Internet, and the growing popularity of social networks. Technical innovations require novelty from companies, restructuring their business processes and using modern technologies (Ardito *et al.*, 2019). Many authors write about the active use of new information technologies in reputation management, as well as convincing research results (Zhao *et al.*, 2019; Fang *et al.*, 2016; He & Xiong, 2017). However, research on reputational management does not emphasize that reputational crisis causes increased innovative activity in the use of new channels and tools for communication with audiences.

The central idea of enhancing the use of innovations during the crisis has been proven in classical works on dynamics at the macroeconomic level — that is described in the theory of "long waves of the economy" by Nikolai Kondratieff (Coccia, 2018). Innovations help macro systems to break out of crisis and establish stability at a new, more sustainable level in modern conditions according to this theory. Thus, innovations are introduced at the level of subjects of economics, i.e. on micro levels, helping them to get out of the crisis. Anti-crisis effects of innovation on the company is studied and proved by the researchers (Masharsky *et al.*, 2018; Ranga, 2012). However, such studies also touch the state of financial and industrial crises.

This study combines the central ideas of the articles listed above. It (this study) extrapolates to the company's reputational management of the idea of innovation as a universal anti-crisis tool used in economic systems of different levels (both macro and micro).

In this study, we also touch theories of 1) the destructive effect of innovation on the system and 2) the opportunistic behavior of management systems in relation to innovations. Thus, this contradiction between stability and innovation is one of the tenets of our research.

Firstly, there is a philosophical contradiction between the goal of ensuring stability and the goal of constant variability as a response to the challenges of the changing environment. This phenomenon has been studied in

relation to innovation in large stable companies. It was revealed that instead of improving in the heretofore-stable system, disruptive innovations lead to problems like losses and bankruptcy (Schuelke-Leech, 2018; Baily & Bosworth, 2014). The authors of the researches have concluded that the introduction of innovations in the conditions of the company's stability requires carefully considered management.

Secondly, stability is bureaucracy and procedures. On the contrary, innovations are chaos giving birth to later sustainable practices. Resistance to change is a deeply studied topic, especially with regard to the restructuring of business processes and organizational development (Ranci & Arlotti, 2019). The authors study reasons and provide psychological explanations of employees' behavior inside the organization who resist the introduction of new, innovative in essence duties (Javed *et al.*, 2018).

The academic novelty of this article is that it uses the results of the above-given theories and applies them to practical testing in reputation management. In accordance with the general logic of these theories, applying them to reputation management, innovation activity may reduce reputational stability.

The reputational crisis is associated with increased media activity in relation to the company; this is stated in scientific studies (Mason, 2016; Zheng *et al.*, 2018). The crisis is indicated by the fact that many negative publications appear in the media containing accusations addressed to the company (for example environmental pollution, the release of poor-quality products or low social responsibility regarding personnel, etc.) which cause a response wave publications from the company with explanations or refutations.

Consequently, the increase in the media activity during the reputational crisis is explained taking into an account theoretical point of view. Firstly, negative publications and scandalous accusations spread in the media space at enormous speed (significantly higher than the speed of propagation of positive or neutral information). This is because a reader/viewer is interested in the scandal, but not boring press releases about routine activities, which the PR services bombard the editorial boards with. The phenomenon of scandal is revealed in studies (Wang & Wanjek, 2018; Sims, 2009). Secondly, high media activity during the reputational crisis is also explained by the fact that the company seeks to dissuade wide audiences (not only those who buy its products). Often we learn new names and brands from the negative side thanks to the scandals. Thus, media activity increases during the reputational crisis. This indirect evidence is also provided in the study (Chung *et al.*, 2019). At the same time, there are no direct comparisons and there are no models where media activity as a factor in reputational stability

and media activity as a factor in anti-crisis reputational sustainability are compared the same type of companies. This is what the article is about.

Corporate social responsibility (CSR) is a trend of modern management. The popularity of CSR practices increases as well as their complication and bureaucratization, which naturally leads to an increase in the amount of research in this scientific field (Hejjas *et al.*, 2018; Gangi *et al.*, 2018; Vo *et al.*, 2017; Burianová & Paulík, 2014). CSR, as a necessary and indispensable condition for the formation and maintenance of reputation, and therefore as a component of the reputation management system, is explained in studies (Caruana *et al.*, 2018; Duhé, 2009; Vallaster, 2017).

The "CSR — reputation" relations were studied in the context of 1) strength and positive orientation (the more improved CSR, the higher the reputation) (Kim, 2017; Aguilera-Caracuel & Guerrero-Villegas, 2017). 2) the extent and diversity of applied CSR activities (identification of critical CSR for the formation of reputation for certain audiences) (Bruyaka *et al.*, 2012); 3) the recommended mode of CSR activities application in various business conditions (Aramburu & Pescador, 2017; Hogarth *et al.*, 2016). Because of the applied research, reputation's positive dependence on CSR is proved, and this article proceeds from preliminary proof of such positive relations.

At the same time, preliminary studies do not take into account conditions in which the company's reputation is at the moment of CSR practices application (stable or crisis). Thus, the "CSR – reputational stability" and "CSR — anti-crisis sustainability" dependencies are a poorly studied area.

## **Research methodology**

To conduct research on the impact of innovation activity, media activity, and corporate social responsibility on reputational stability as well as on anti-crisis reputational sustainability, we collected the following data:

- Media Activity criterion;
- Innovative Approach criterion;
- CSR Image Capital criterion;
- Anti-crisis Sustainability criterion;
- Reputational Stability criterion.

The analysis was carried out based on the data collected through a survey done among the experts within the framework of the National Ukrainian Rating of Corporate Reputation Management "Reputation ACTIVists", the methodology of which was developed by the author of this article, Olena Derevianko. The said 2019 survey was implemented in February-March

2019 with 110 industry experts taking part in the evaluation of the companies' reputation management. To get the relevant expert opinions, the experts were asked to complete the online questionnaire (Table 2, also available after authorization for experts on the site on <http://repactiv.com.ua/ru> website where the findings of our previous five annual surveys starting from 2015 are publicly available).

The rating algorithm is an expert questionnaire. The rating criteria are built on the Reputation Management Model (developed by the author and published previously (Derevianko, 2014), which consisted of three dimensions (Table 1): institutionalization (I), activities (A), and communication result (C). Each criterion is decomposed in the format of a set of estimated indicators and features on a scale of 0–10 (1-point scale spacing). All indicators have equal weight.

The questionnaire included measurement items/questions of all constructs, which was developed and used in the National Ukrainian Rating of Corporate Reputation Management "Reputation ACTIVists". The questionnaire was in five parts including Innovative Approach, Media Activity, CSR Image Capital, Anti-Crisis Sustainability, Reputational Stability.

The following illustrates the details and items for all constructs.

*Independent variables.* Innovative Approach criterion: it was measured with Creativity of PR team (I); Number of PR innovations implemented in practice (A); New-media activity of an enterprise (A); Reaction of target audience to PR innovations use (C); Effectiveness of innovative PR practices introduction (C).

Media Activity criterion: it was measured with Openness of an enterprise for communication with journalists (I); Quality of information disseminated by/about an enterprise in the media (A); Promptness of neutralizing information risks by a company (A); Recognition of company speakers in information space (C); Effectiveness of media activity (C).

CSR Image Capital criterion: it was measured with Transparency of CSR procedures and practices (I); Socially significant social projects of an enterprise (A); Socially responsible organization of internal business processes of an enterprise (A); Stakeholder response to CSR activity of an enterprise (C); Effectiveness of CSR practices of an enterprise (C).

*Dependent variables.* Reputational Stability criterion: it was measured with Institutionalization of reputation management and authority of PR team (I); Systematic character of PR work (A); Fundamental prerequisites for the corporate reputation sustainability (A); Consistently high support of corporate activities by stakeholders (C); Effectiveness of the reputation management system (C).

Anti-Crisis Sustainability criterion: it was measured with Reputational response strategy (I); Anti-crisis PR tools of an enterprise (A); Efficiency of anti-crisis PR activities (A); Antifragility (C); Effectiveness of anti-crisis reputation management (C).

Using the questionnaire (see Table 2), which was posted online, we investigated the reputation management practices of companies. Wherein, the total score of each company for each evaluation criterion was calculated as the sum of five indicators representing the three dimensions of the reputation management system (see Table 1 and Table 2).

The experts were only external to the nominee companies: competent media experts of the country; independent industry experts; representatives of consulting companies; investment analysts; representatives of sectoral and professional public organizations uniting participants in relevant markets. The list of experts is available to the public at <http://repactiv.com.ua/ru/experts>.

The sample of companies is representative, which is proved by the three stages of sample formation: 1) the formation of a sample of the most mentioned by media companies based on content analysis; 2) a selection from the previous sample of large companies, based on the criterion of net income; 3) a selection from the previous sample of only those companies, each of which has been evaluated by at least five experts.

During the first stage of sampling, given the hypothesis that high-quality reputation management should leave a noticeable mark in the information space (Derevianko, 2019), companies with the highest media coverage rate were selected. Using the specialized search engines covering thousands of local and foreign sources, statistics of mentioning of each company were investigated (to determine indicators of mentioning in the media in the context of each of the markets). Based on the results, media leaders are determined by each market, and the number of nominee companies may vary depending on the degree of economic concentration in a particular market and the presence/absence of a statistically significant gap in media mentioning indicators. At this stage, it was revealed that the companies widely mentioned in the media mainly represent fourteen industries (FMCG, IT, agricultural sector, engineering, metallurgy, retail, construction and development, telecommunications, transport and logistics, fuel and energy, pharmaceuticals, finance, HoReCa) in Ukraine.

The second stage of sampling was selecting, from the previously mentioned list, up to twenty largest enterprises by the criterion of the annual production and sales volumes (net income) in each industry. Accordingly, the largest enterprises are the most well-known and have a high reputation among their customers (partners, investors and other stakeholders), which



means that they are most interesting from the point of view of researching their reputation management. It is clear that in the various industries the scale of activity of enterprises differs significantly and in the sample obtained there are enterprises of various organizational and legal forms located in different regions of Ukraine, having different approaches to management in general and to reputation management in particular. Thus, we excluded the cases where media mentioning indicators could be the result of a large reputation scandal over a small company, and not the efforts of its reputation management. As a result of this stage of sampling, the list of 623 large companies was formed. All this proves the substantiation of this sample of enterprises from the standpoint of conducting in-depth applied research of reputation management and testing of author's hypothesis.

At the subsequent stage, an online survey was conducted on 623 above-mentioned companies (<http://repativ.com.ua/en/participants>). However, the online survey methodology suggested that the expert should choose those companies that he/she personally knows well to evaluate. Unfortunately, the factor of closeness (non-transparency of management approaches) of many large companies has been revealed. Therefore, such companies were evaluated by a very small number of experts or were not graded at all. Based on this, at the next stage of selection to reduce the subjectivity of the assessment, we took for analysis only those companies, each of which has been evaluated by at least five experts; thus, the grade for each of the criteria is the average of five experts grades'. As a result of this third stage of sampling, 315 companies remained.

This three-stage sampling procedure allowed us to focus on the subsequent econometric analysis of the companies that are really significant for the Ukrainian economy and are widely known and mentioned in the media, as well as having a fairly transparent and understandable reputation management system.

In the next phase, our research and, hypotheses were interpreted as a structural model (Fig.1) using the IBM Statistical Package for Social Sciences (SPSS) 25 and Analysis of Moment Structure (AMOS) 18 software from IBM for analysis.

Structural equation modeling (SEM) is a methodology for testing a large number of parallel hypotheses about the presence of cause-effect relationships, which is especially effective for working with data in a correlation design (Riggs & Lalonde, 2017). SEM is a method that was originally developed for use in the social sciences, in particular for processing research data obtained from questionnaires (Spearman, 1904). Subsequently, the developer of the SEM method, Sewall Wright (Pearl & Mackenzie, 2018) showed how simple path analysis diagrams can be used to graphically rep-

resent how one variable determines another, and we used this approach. Applying the maximum likelihood method in SEM allows us to very efficiently use the available information to fill in the gaps in the values of variables in constructing correlation models (Gold *et al.*, 2003). Therefore, in general, SEM method and the path model format and the maximum likelihood method in particular are best suited for the purposes of our study, which include the analysis of complex causal relationships of five variables: Innovative Approach, Media Activity, CSR, Anti-crisis Sustainability, and Reputational Stability.

In addition, we performed several analytical procedures to verify that the sample is sufficient for analysis and the data were normally distributed and also free of outliers. Then the structural (path) model was analyzed to test the hypotheses and the model fit. Reliability was analyzed by internal consistency (Cronbach's alpha values — Table 3 and 4) and construct validity was proved by confirmatory factor analysis: it was confirmed that the received values were significant (Table 9). Because the chi-squared estimate of model fit is sensitive to large sample size (Schumacker & Lomax, 2015), we used other highly recommended model fit measures (Byrne, 2013), such as the ratio of chi-squared value to the degree of freedom (CMIN/DF), comparative fit index (CFI), normal fit index (NFI), Tucker Lewis index (TLI), root mean square error of approximation (RMSEA) to evaluate the models. To show model fit, the CMIN/DF must be less than 2.00, the CFI and TLI must be more than 0.90 and the RMSEA must be below than 0.08 (Byrne, 2013).

Application of the above-mentioned criteria allows to prove that the resulting model has adequate internal consistency, reliability and indices of model fit, allowing its feasible use to explain the impact of innovation activity, media activity, and corporate social responsibility on reputational stability as well as on anti-crisis reputational sustainability.

From this perspective, the following hypotheses formulated in this article are meant to assess the degree of influence of innovation activity, media activity and CSR on reputational stability, including anti-crisis reputational sustainability:

In order to achieve the objectives of the research, the suggested hypotheses were as follows:

*H1: Anti-crisis reputation sustainability requires higher levels of innovation activity than necessary to maintain reputation stability.*

*H2: Anti-crisis reputation sustainability requires higher levels of media activity than necessary to promote reputation stability.*

H3: *Corporate social responsibility equally strongly positively correlates with reputation stability and anti-crisis reputation sustainability.*

H4: *Anti-crisis reputation sustainability have a positive effect on reputation stability.*

## **Results**

Thus, the results of the analysis of the degree of influence of factors on the anti-crisis sustainability revealed innovative and media activity as the most significant variables. The results of the analysis of influence of media activity and CSR on reputational stability revealed CSR as the most significant variable.

Convergent confidence test results are acceptable. According to Taber, (2017), alpha values were described as excellent (0.93–0.94), strong (0.91–0.93), reliable (0.84–0.90): all Cronbach's Alpha values are reliable in the model (Tables 3 and 4).

Descriptive statistics of 5 analyzed variables are presented in Table 4. According to the mean values of reputation stability were on average higher than anti-crisis sustainability. We also see that innovation activity is the most volatile value (see standard deviation, Table 4), and CSR, on the contrary, is the least volatile value among the sampling companies.

The initial sample of data from 315 companies (Table 5) required normalization in order to be able to apply the most reliable modeling method — the Maximum likelihood method. Final sample size = 301 (Table 6).  $c.r. = 3,802$  that is significantly less than 5 and means the normality the distribution of data. Before that, 14 companies (which are not industry leaders, but rather little known and therefore received strange expert evaluations) or 4.4% of the original sample were excluded from the analyzed sample, which has increased the normality of the distribution of data. Therefore, the assumption of multidimensional normality of variables is not violated: the chosen evaluation method is correct. The value of asymmetry and kurtosis for each variable are also small (Table 6). All this testifies to the normal distribution of the sample and the suitability of the data for subsequent analysis.

Considering that CFI exceeds 0.95, and the  $CMIN / df < 2$  relation, as well as the very important RMSEA criterion  $< 0.05$ , and even though the statistical significance of the chi-square (p-value) does not meet the criterion  $< 0.05$ , the model can be considered empirically confirmed (Table 9).

A large sample size ( $N / T > 10$ ) also supports the recognition of the model as relevant to the data (Table 7).

The regression weights and their statistical significance are given in Table 8. All parameters of the model are statistically significant, as evidenced by the estimated regression weights, which indicates that the model is consistent.

The resulting model is reliable: the model as a whole explains 92% of the variance of the criterion of reputational stability and 95% of the variance of the criterion of anti-crisis sustainability (Fig. 3).

Below are explanations of the results obtained in the context of hypothesis testing:

During the analysis, it became necessary to correct the initial *hypothesis H1*. Thus, the parameter of “Innovation activity to Reputation stability impact” as statistically unreliable was *excluded from the model* (see Table 4). This led to the need to correct the hypothesis model in Amos (compare Fig. 1 and 2) and did not allow us to compare the influence of the innovation factor in two cases: for reputational stability and for anti-crisis sustainability. But the resulting model shows: in itself, innovation activity is an important factor for anti-crisis sustainability (regression weight 0.42, see Fig. 3). This is because companies that opt for anti-crisis reputation management are innovatively active to a significant extent. The crisis prompts the company to make changes, move away from established bureaucratic procedures, as well as try new methods, techniques and ways to interact with the stakeholders.

*Hypothesis H2: confirmed* that anti-crisis reputation sustainability requires higher levels of media activity than necessary to promote reputation stability. Media activity is much more important for coping with a crisis and ensuring anti-crisis sustainability than for maintaining reputational stability: the coefficient in the first case is more than doubled (Fig. 3). The companies that have experienced the reputation crisis this year are more media active. High reputation stability does not require higher levels of media activity. That being said, the media is especially prone to scandals which are, in turn, a manifestation of reputational crises. Furthermore, it should be noted that increased media activity is needed to settle the scandal.

*Hypothesis H3: disproved* that corporate social responsibility equally strongly positively correlates with reputation stability and anti-crisis reputation sustainability. It was assumed that corporate social responsibility is a modern-day trend, and so there will be no differences and dependencies between stable and anti-crisis reputation management systems. However, the most significant results of the modeling analysis: this is a high correlation of reputational stability and corporate social responsibility, namely:

this reputational stability at 0.55 is provided by corporate social responsibility (Fig. 3).

*Hypothesis H4: confirmed*, as was expected, that reputational stability positively depends on anti-crisis reputation sustainability. According to the results of the analysis, anti-crisis sustainability at 0.25 provides reputational stability (see Fig. 3).

## **Discussion**

The results of our study showed the existence of a significant correlation between CSR and reputational stability. This supports the findings of Vallaster (2017) that companies incorporate CSR into their practice in times of stability. This is also supported by Kim (2017), using national consumer research in the United States: the findings suggest the positive impact of CSR on knowledge, trust, and perception of corporate reputation. These results are consistent with Aguilera-Caracuel and Guerrero-Villegas (2017), investigating CSR in developing countries, based on a sample of 113 US multinational enterprises (MNEs) from the chemical, energy and industrial engineering industries for the period 2005–2010. This study argues that companies operating in developing regions can increase their level of corporate reputation through CSR initiatives that meet the expectations of specific stakeholders regarding the firm's activities in these areas.

However, the results of our study also indicate that CSR is almost four times less important for ensuring anti-crisis sustainability (dealing with a reputational crisis) than for maintaining reputational stability. This supports the conclusions of Shim and Yang (2016), which, based on the attribution theory, explain that during a reputational crisis CSR is perceived as hypocrisy. CSR companies experiencing a crisis lead the public to the conclusion about the underlying motives of CSR. Our results are also consistent with the results of Coombs and Holladay (2015), who detailed the process whereby CSR is transformed from a crisis resource to a crisis threat. According to their research, CSR should be considered not as an asset to protect reputation, but as an additional crisis risk. Thus, a CSR of a company with a bad reputation can provoke an even greater crisis.

According to our results, anti-crisis sustainability is significantly more dependent on media activity than reputational stability is. This is due to the high visibility of the crisis company in the media. These results are in line with the results of Carter (2006), who, by the example of consumers, proved that in high-visibility situations companies allocate more funds for media activities. Also, our results are consistent with the findings of Mason

(2016), who argue that trusted media can increase the reputational crisis. Therefore, it is important to actively cooperate with the media in times of crisis.

According to the constructed model, media activity has a positive effect on reputational stability. These results are consistent with the findings of Mariconda and Lurati (2015, pp. 957–964; 2015, pp. 87–98) about the cognitive foundations of reputation stability and underlying ambivalence toward a certain organization: the media increases people's awareness of the company, its activities, and in the event of a crisis, the opinion of people who know the company before is much more difficult to change. Thus, media activity affects the stability of reputation in the long term.

The results of our research identified that anti-crisis reputation sustainability positively correlates with innovations. This is partly confirmed by Vallaster (2017): innovation in the field of CSR, revision practices contribute to the recovery from the crisis. But the model of our research considers innovation activity more broadly, including also the use of new PR practices, the use of new channels of media communication and improvements in feedback.

## **Conclusions**

The findings of the study revealed: 1) the existence of a significant correlation between CSR and reputational stability; 2) innovative and media activity are the most significant variables to provide anti-crisis sustainability; 3) CSR is less important for ensuring anti-crisis sustainability than for maintaining reputational stability; 4) anti-crisis sustainability is significantly more dependent on media activity than reputational stability is; 5) reputational stability positively depends on anti-crisis reputation sustainability.

The practical value of the study lies in its systemic view of the main areas of reputational management from the point of view of two opposite states: reputational crisis and reputational stability. The results of the reputation study cover 14 industries (FMCG, IT, the agricultural sector, engineering, metallurgy, retail, construction, telecommunications, finance, HoReCa) in Ukraine. On practical data using the methods of structural modeling, the following results are obtained that allow us to recommend the application of CSR for the maintaining of reputational stability; but in a crisis, management needs to give preference to innovations and to expand media activity.

With regard to the reliability of the results and limitations of use, it should be noted that our findings should be interpreted with caution be-

cause the study was conducted for Ukraine, which belongs to post-soviet economies, where many market processes have not yet been formed, and reputational management practices are just being developed. In addition, the study used a limited sample of large companies (this it is only 315 companies from 14 abovementioned industries), which limits the generalizability of the research findings to other market actors, e.g. for SME.

Further research in the field of factors affecting the stability of the reputation of companies and its anti-crisis sustainability could expand geographical coverage, which would allow a better understanding of trends in areas where most of the international business is concentrated. Secondly, the ability to add information about the funds of companies to maintain reputational stability and anti-crisis activities with this survey will also increase the reliability of research. Finally, further research can be directed to the study of innovative activities that companies use to maintain their reputation in the digital economy in a global context.

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## Annex

**Table 1.** National Ukrainian Rating of Corporate Reputation Management "Reputation ACTIVists": Rating indicators

Reputation Management Model: three dimensions	Reputation Management Evaluation Criteria				
	Innovative Approach	Media Activity	CSR image capital	Anti-crisis Sustainability	Reputational Stability
<b>INSTITUTIONALIZATION (I)</b>	Creativity of PR team (I)	Openness of an enterprise for communication with journalists (I)	Transparency of CSR procedures and practices (I)	Reputational response strategy (I)	Institutionalization of reputation management and authority of PR team (I)
<b>ACTIVITIES (A)</b>	Number of PR innovations implemented in practice (A)	Quality of information disseminated by/about an enterprise in the media (A)	Socially significant social projects of an enterprise (A)	Anti-crisis PR tools of an enterprise (A)	Systematic character of PR work (A)
	New-media activity of an enterprise (A)	Promptness of neutralizing information risks by a company (A)	Socially responsible organization of internal business processes of an enterprise (A)	Efficiency of anti-crisis PR activities (A)	Fundamental prerequisites for the corporate reputation sustainability (A)
<b>COMMUNICATION RESULT / FEEDBACK / EFFECTIVENESS</b>	Reaction of target audience to PR innovations use (C)	Recognition of company speakers in information space (C)	Stakeholder response to CSR activity of an enterprise (C)	Antifragility (C)	Consistently high support of corporate activities by stakeholders (C)
	Effectiveness of innovative PR practices introduction (C)	Effectiveness of media activity (C)	Effectiveness of CSR practices of an enterprise (C)	Effectiveness of anti-crisis reputation management (C)	Effectiveness of the reputation management system (C)

**Table 2.** National Ukrainian Rating of Corporate Reputation Management "Reputation ACTIVists": Questionnaire (an experts' grades on a scale of 0 to 10 points)

<b>Innovative Approach</b>	<b>Media Activity</b>	<b>CSR image capital</b>	<b>Anti-crisis Sustainability</b>	<b>Reputational Stability</b>
Assess the level of the company's PR service's creativity (or its separate experts)	Assess the company's PR-service's readiness to communicate (personally – assessed by media experts), in the form of messages regularly addressed at stakeholders (by non-media experts)	Does the company provide the public with enough information on the projects of corporate social responsibility (CSR) that are being realized?	Do you think (based on information in the media space or any other information you have access to) that the company has an integral and quickly tailored to a particular situation STRATEGY of reacting to reputation crises? If your answer is yes, assess this strategy on a scale of 0 to 10 points	Is there a "real" PR-service in the company? (assessed by presence of a professional PR-tram)
How many interesting and innovative PR- or marketing projects of the company have you heard of?	Assess information value of the company's press releases, official information in social networks	Are the projects that the company claims to be CSR projects useful for the society and / or target groups of stakeholders?	Do you think that the company has anti-crisis PR TOOLS? If your answer is yes, assess this skill on a scale of 0 to 10 points. (If you did not have an opportunity to make sure of that, leave the slot empty)	Does the company regularly perform PR activities that are clear to experts?
Is the company's presence in social Internet networks and other digital-variants of communication visible?	Assess the company's efficiency at neutralizing the media's negative information about it. If an expert does not know about any facts of any risk arising, a point is not given (an empty slot of the table).	Does the company treat its employees, consumers and business partners with social responsibility?	Can you say about the company that it QUICKLY recovered its reputation losses? If your answer is yes, assess the efficiency of anti-crisis activities on a scale of 0 to 10 points.	Is there an objective basis for reputation stability (product quality, unique product offer, innovative technologies, etc.)?
Can you say that target audiences who the company's PR innovations you know about are aimed at reacting to them in a positive way?	Assess visibility and image of the company's speakers	Are CSR projects implemented by the company perceived by its target audiences positively?	Do you think that CRISIS has ENHANCED the company's REPUTATION? If your answer is yes, assess it on a scale of 0 to 10 points	Is there a constant strong support from the company?*

**Table 2.** Continued

Innovative Approach	Media Activity	CSR image capital	Anti-crisis Sustainability	Reputational Stability
An expert's subjective opinion: do PR innovations applied by the company have any positive effect?	An expert's subjective opinion: do the efforts made by the company in the media field have any positive effect?	An expert's subjective opinion: do you think CSR projects implemented by the company guarantee reputation capital growth?	Do you think that the company experienced a positive FINANCIAL EFFECT due to application of anti-crisis PR tools? If your answer is yes, assess it on a scale of 0 to 10 points. (If you did not have an opportunity to make sure of that, leave the slot empty)	An expert's subjective opinion: do the company's efforts to manage reputation have any positive effect?

\* "a constant strong support" means a generally positive perception of the company by its target audiences, it is not subject to serious fluctuations during a long period of time.

**Table 3.** Reliability Statistics: Cronbach's Alpha

Evaluation	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
	,984	,984	5

**Table 4.** Descriptive Statistics on the online survey results

Variable	Number of companies	Minimum	Maximum	Mean	Std. Deviation	Cronbach's Alpha if Item Deleted
RStability	315	3.0000	50.0000	35.194940	8.6009650	.981
CSR	315	4.0000	50.0000	33.543515	8.5473079	.981
Media	315	8.0000	50.0000	34.160029	8.6783844	.979
Innov	315	7.5000	50.0000	32.472437	9.0839716	.978
RCrisis	315	7.5000	50.0000	32.773557	8.7347596	.980
Valid N (listwise)	315					

**Table 5.** Regression Weights (Default model): before model corrections\*

Parameters		Estimate	S.E.	C.R.	P	Label
RCrisis	<--- Innov	.382	.050	7.637	***	par_6
RCrisis	<--- Media	.400	.047	8.430	***	par_7
RCrisis	<--- CSR	.181	.047	3.857	***	par_9
RStability	<--- Media	.155	.061	2.563	.010	par_1
RStability	<--- RCrisis	.259	.066	3.934	***	par_5
RStability	<--- CSR	.546	.055	9.900	***	par_8
<b>RStability</b>	<b>&lt;--- Innov</b>	<b>.001</b>	<b>.063</b>	<b>.012</b>	<b>.990</b>	<b>par_10</b>

\*Chi-square = ,000. Degrees of freedom = 0.

Probability level cannot be computed. Parameter (in bold) as statistically unreliable should be excluded from the model.

**Table 6.** Assessment of normality after normalization of the data sample\*

Variable	min	max	skew	c.r.	kurtosis	c.r.
CSR	9.000	50.000	-.487	-3.448	.008	.028
Innov	7.500	50.000	-.406	-2.877	-.155	-.550
Media	8.000	50.000	-.611	-4.331	.001	.004
RCrisis	7.500	50.000	-.483	-3.421	-.156	-.551
RStability	7.500	50.000	-.702	-4.970	.322	1.140
<b>Multivariate</b>					<b>3.667</b>	<b>3.802</b>

\*Sample size = 301. c.r.= 3,802 that is significantly less than 5 and means the normality the distribution of data. Before that, 14 companies (which are not industry leaders, but rather little known and therefore received strange expert evaluations) or 4.4% of the original sample were excluded from the analyzed sample, which has increased the normality of the distribution of data.

**Table 7.** Sufficiency test of the data sample

Indicators	Evaluation
Sample size (N)	<b>301</b>
Number of distinct sample moments	20
Number of distinct parameters to be estimated (T)	19
Degrees of freedom (20 - 19)	1
Sufficient sample size ( $\gg 5T$ , optimally $10T$ )	<b>190</b>
<b>Conclusion: 301&gt;190, the sample is more than enough for analysis.</b>	

**Table 8.** Regression Weights (Default model): after model corrections

Parameters	Estimate	S.E.	C.R.	P	Label
RCrisis <--- Innov	.406	.049	8.349	***	par_4
RCrisis <--- Media	.415	.046	9.072	***	par_5
RCrisis <--- CSR	.148	.045	3.270	.001	par_7
RStability <--- CSR	.543	.051	10.640	***	par_6
RStability <--- Media	.178	.060	2.968	.003	par_8
RStability <--- RCrisis	.241	.062	3.861	***	par_9

\*Chi-square = ,390. Degrees of freedom = 1. Probability level = ,532

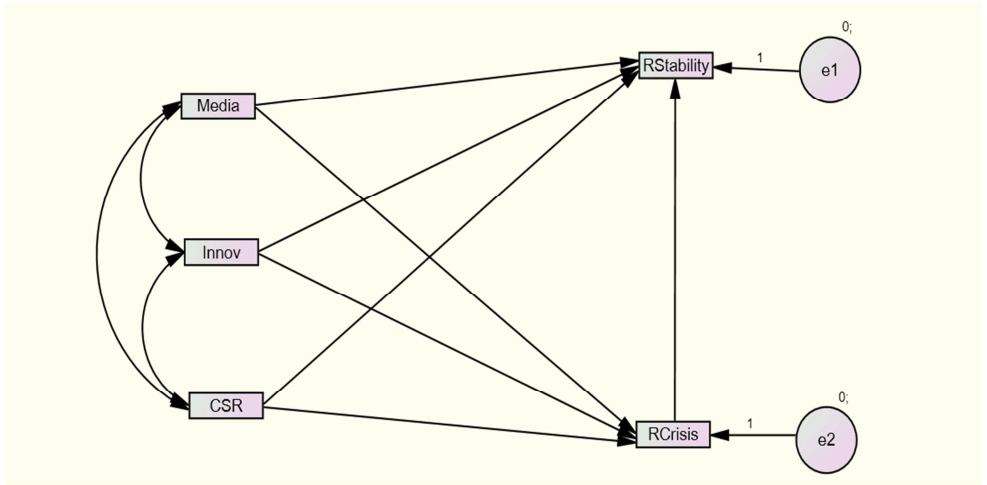
The model is recursive. All parameters are statistically reliable: they are more or about ,001.

**Table 9.** Model Fit Summary: main criteria

Models	Criteria				
<b>CMIN</b>					
Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	19	.390	1	.532	<b>.39</b>
<b>Baseline Comparisons</b>					
Model	NFI	RFI	IFI	TLI	CFI
	Delta1	rho1	Delta2	rho2	
Default model	1.000	.999	1.000	1.002	<b>1.000</b>
<b>RMSEA</b>					
Model	RMSEA		LO 90	HI 90	PCLOSE
Default model	<b>.000</b>		.000	.130	.664

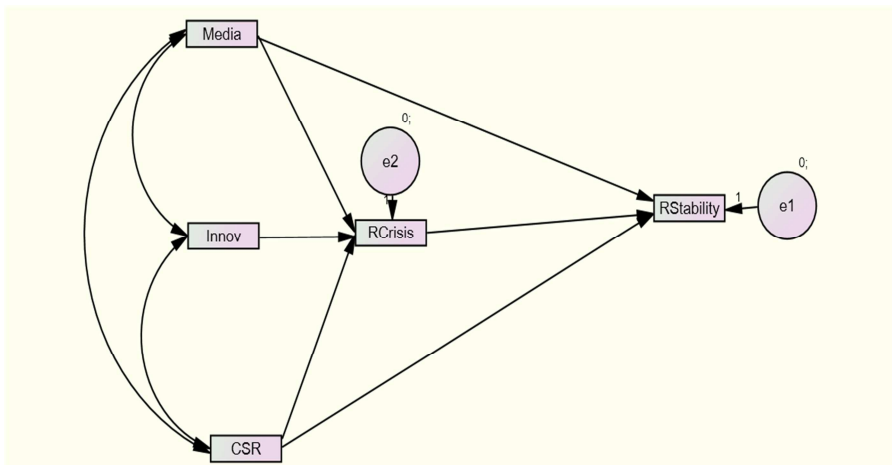


**Figure 1.** Research hypotheses formulated in the AMOS structural (path) model format



Source: own developed based on IBM SPSS Statistics 25 with AMOS 18

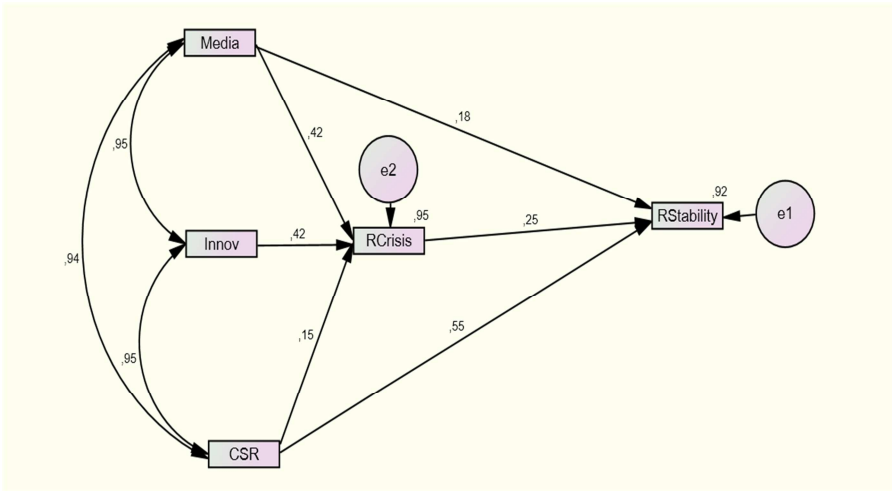
**Figure 2.** Research hypotheses after model corrections in updated AMOS structural (path) model format\*



Previous model corrections: normalization of the sample and excluding of “RStability<--- Innov” parameter

Source: own developed based on IBM SPSS Statistics 25 with AMOS 18.

**Figure 3. Standardized model**



Source: own developed based on IBM SPSS Statistics 25 with AMOS 18.