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Article

Determinants of perceived effectiveness in crisis management and company reputation during the COVID-19 pandemic

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MANAGEMENT | RESEARCH ARTICLE

Determinants of perceived effectiveness in crisis management and company reputation during the COVID-19 pandemic

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Abstract: COVID-19 pandemic is a newness to various aspect of life, including business sector. In this high uncertainty, business still need to deliver effective crisis management in order to safeguard organization reputation. Literature state that there are three important elements in crisis management which are leader, team of crisis management, and organizational communication. What type of leader and communication are the most suitable during crises? This study aims to confirm the influence of the transformational leadership style, communication quality, and team crisis to organization reputation mediated by the effectiveness of crisis management. During crisis innovation also influences the survival of organization during crises. A new type of innovation, frugal innovation type, still has limited empirical evidence. This study also aims to see how the implementation of the frugal

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PUBLIC INTEREST STATEMENT

COVID-19 causes a new kind of crisis. The world has faced several crises recently. However, the crisis caused by COVID-19 pandemic catches everyone by surprise. No one can understand all of the situation. It impacts not only a particular area or region but also everyone worldwide on a large scale. There is high level of uncertainty involved. For this type of crisis, in order to survive companies need to have an effective crisis management to ensure company reputation. This paper explains what factors influence the effectiveness of a crisis management.

Transformational leadership showed to have influence in an effective crisis management. This study also explains how crisis management team and quality of communication in the organization play important role in the effectiveness of a crisis management. Another factor to support the effectiveness of a crisis management is the implementation of frugal innovation type.

innovation type is influenced by the transformational leadership style and influences the effectiveness of crisis management. A descriptive quantitative study was conducted in May 2020 with 293 participants from the various organizations in Indonesia. SEM-LISREL was used for data analysis. The findings show that transformational leader, crisis management team, quality of communication and frugal innovation type positively influenced the effectiveness of crisis management which will lead to corporate reputation. The main contribution of this paper is providing the body of evidence the effectiveness of transformational leadership during crisis with high uncertainty. This study is also among the first empirical study on frugal innovation type.

Subjects: Organizational Communication; Business; Management and Accounting; Leadership

Keywords: Communication quality; company reputation; frugal type innovation; transformational leadership

1. Introduction

The COVID-19 pandemic has impacted many aspect of life. The crisis it caused has hit the business sector hard. However, unlike any other crisis this crisis catches everyone by surprise; no one has a full understanding about the situation; it impacts not only particular area or region, but everyone worldwide in the large scale; and it last moths and changes almost every aspect of people life. The situation is unknown with high uncertainty.

In Indonesia by March 2020, the COVID-19 pandemic has hit hard lots of businesses across different industries and disrupts the economic activities nationwide. For example, the travel agency has noted potential losses of around USD 244.96 Million in February 2020. Hotel occupancy rates have dropped to a significant low 30–40%. Indonesian airlines have reported a drastic plunge of passengers. F&B Industry is another industry that has been hit hard by the COVID-19 pandemic. Data from digital cashier services shows that above 30,000 sellers from 17 cities in Indonesia have significant drops in daily earning (Wardhana, 2020). The COVID-19 has caused major disruption in the business sector in Indonesia.

For any organization, major disruption, such as crises because of the COVID-19 pandemic, can threaten business continuity (Carrington et al., 2019a; Lockwood, 2005). Regardless of the magnitude of crises impact, however, literature shows that the issue of crisis preparation and crisis management process is still a secondary problem to organizations (Lockwood, 2005; Tomastik et al., 2015). Lack responsiveness of crisis, including the COVID-19 pandemic, will cause the continuity of business. Therefore, effective crisis management is crucial.

To react properly and promptly with limited resources, the leader, as the head of the organization, plays an important role during the crisis (Alkharabsheh et al., 2014; Carrington et al., 2019a; Fener & Cevik, 2015; Hadley et al., 2009; Lacerda, 2019; Lockwood, 2005). Leadership literature in crises are still limited (Hadley et al., 2009; Lacerda, 2019; Stoker et al., 2019). Previous studies state that not all leadership styles are effective in crisis (Alkharabsheh et al., 2014; Bowers et al., 2017a). For example, transactional leadership is known to be not effective in crises (Lacerda, 2019). During crises, leaders need to be able to calm, motivate and direct the organization through difficult time. Therefore, transactional leadership style which is lack motivating and inspiring behaviour, is not suitable during crises.

Previous studies claim that transformational leadership has shown effective during crises (Dwiedienawati et al., 2020; Hadley et al., 2009; Lacerda, 2019). However, study from Alkharabsheh et al. (2014) and Stoker et al.(2019) argue that there is the inconsistency of the

effectiveness of transformational leadership in crises. Therefore, Alkharabsheh et al. (2014) called for further research to investigate the role of transformational leadership during crises.

During crises, command and control are inevitable. With time, uncertainty and limited resources as constraints, leaders of the organization cannot act alone. Leaders need to lean heavily to the crisis management team. The existence of the team of crisis management is critical. The crisis management team is responsible to manage both resources and people in response to critical events (Dubé et al., 2010). The team needs to act immediately, reliable and effectively (Van Der et al., 2008). The effectiveness of crisis management team is core to the resolution of crisis in the organization (Salveti et al., 2019). Since the role of crisis management team is key, this study aims to see whether the perceived effectiveness of crisis management team will influence the perceived effectiveness of crisis management.

The third important factors to ensure an effective crisis management is internal organization communication. Communication is essential in crisis management (Lockwood, 2005). During the terrorist attack on September 11 and Superstorm Sandy crises, the effective communication has been shown to play important role in resolving the crises. However, there is still limited studies investigating the impact of the communication in organization during crises. Therefore, Carrington et al. (2019a) has called academic to further investigate the role of organization communication during crises.

The introduction of new innovative product during crises might help the survival of the organization. However, during crises, due to the high uncertainty, the high investment innovation most unlikely to be the options of the organization. Therefore, the new type of low investment innovation might be suitable. It is frugal innovation type. Frugal innovation is considered as a new type of innovation (Hossain, 2016) (Soni & Krishnan, 2014) At present, there are still limited studies available in this field (Hossain, 2016) (Soni & Krishnan, 2014)

During crisis the, the ultimate goal of the organization is to safeguard organization reputation which will impact to organization sustainability. The effectiveness of crisis management has crucial role to safeguard organization reputation. This study will see the impact of crisis management effectiveness impact to organization reputation as the outcome. Previous studies have measured the organization reputation through the evaluation by their external stakeholders. However, employees have an important role in communicating and convey the reputation of the organizations. Because how employees see and feel about the organizations will reflected as what the employees will express about the organizations to the external stakeholders (Olmedo-Cifuentes & Martínez-León, 2014). In this study, employee perception about company reputation was used as the criterion variable.

This paper is structured as follows: the next session presents the literature review of crisis and leadership, innovation during crisis, corporate reputation, the crisis management team and corporate reputation. Thereafter, hypotheses are developed based on current literature, the methodology of empirical study is described and the findings are presented. Finally, the conclusion, limitation and recommendation for further research are drawn.

2. Literature review

2.1. Crisis and leadership

During the crises, based on the current literature, the leaders hold many roles and tasks in the pressure of time and resources constraints. Therefore, for an effective crisis management, leaders need to have “a complex leadership skill” (Mutch, 2015). Few leadership styles have been studied for crises. Zehir and Narcikara (2016) study about authentic leadership effectiveness during crises. They argue that authentic leadership foster employees self-efficacy by providing them confidence and trust. Furthermore, authentic leadership also create hope and optimism, and strengthen

resilience. Leaders who are able to manage their emotion are also effective during crises (Madera & Smith, 2009). During crises, when the situation is chaotic, the leaders need to be in control and calm. Lacerda (2019) claim that leaders who have the ability to predict and create future view of the organization (visionary leadership) are effective during financial crisis. Visionary leadership is able to build strong link among team and build barriers again uncertainty. Visionary leaders draw the big picture and create hope. Other study show that leader ability in building strong relationship during crisis is critical (Özşahin et al., 2011). Relation-oriented leaders concern about building relationship, helping people, increasing teamwork and cooperation which will lead to the improvement of organizational performance during crisis.

Lacerda (2019) state that transactional leadership is not effective during crisis. Transactional leadership focus on supervision, promote compliance and work based on reward and punishment. During crisis, people are confused, scared and uncertain. Transactional leadership is less attention in building relationship and long-term commitment. Transactional leadership is also not into inspired and motivated people with sharing values and big pictures, therefore study shows that transactional leadership is not effective during crisis.

To date, the crisis leadership literature has largely focused on the emergence transformational leaders and their effectiveness in crises (Bass, 1998; Halverson et al., 2004). The transformational leadership is leader who works with team with fostering team identity, creating vision through inspiration and executing the change or the organization and building team commitment. The transformational leadership style is charismatic, delegating, inspires, communicating, encourage innovation (Cismas et al., 2016). Leaders who have transformational style have four distinct factors; charisma (idealized influence), inspirational motivation, individualized consideration and intellectual stimulation, which are known as the four I's of transformational leader (Datche & Mukulu, 2015). Based on the previous studies, many characteristics which influence the effectiveness of leader during crises are aligned with transformational leadership characteristics (Lacerda, 2019; Özşahin et al., 2011; Zehir & Narçakara, 2016). The characteristic are such as building team confidence and trust, creating hope and sharing big picture, building team relationship and strengthening team work.

Belias et al. (2015a) reveal that the transformational leadership has a high impact on job satisfaction during financial crisis in Greek. The transformational leadership inspires and is able to make employees to think positive and makes them to have less defensive attitude and behaviour which will lead to better employee turnover and customer satisfaction (Belias et al., 2015a). Davis and Gardner (2012) argues that the most effective leadership style in time of crisis is the transformational leadership style because they are quick to respond to change. The transformational leadership has been claimed to be effective in turbulent and uncertain environments (Dwiedienawati et al., 2020). They are effective during crises (Bass, 1998; Halverson et al., 2004). However, Alkharabsheh et al. (2014) in their study show that both transactional leadership and transformational leadership are both effective during crisis. Therefore, there is a call for further investigation about the effectiveness of transformational leadership during crisis. This study try to answer the calling from Alkharabsheh et al. (2014) to further investigate the effectiveness of transformational leadership in the organizations in Indonesia during the COVID-19 crisis.

When employees are inspired, motivated and trusting their leaders, they will become confident to their leaders. They belief that leaders will make decision with employees and organization welfare as consideration. Transformational leaders has known to be able to transform their followers by motivating them to perform better (Pieterse et al., 2010). Transformational leaders are taking into consideration employees' needs, goals and interest Braun et al. (2013). This will foster trust to leaders and in turns make employees more willing to be open to their leaders. Transformational leadership has known to increase employees' performance mediated by trust (Braun et al., 2013; Gillespie & Mann, 2004; Chiang & Wang, 2012). In this study, how transformational leadership fosters employees confident to leader is being investigate.

Leaders with confident is defined as leaders who have strong belief in their capabilities to be successful, as well as self-perceptions of competence in their knowledge, skills, and abilities (Lacerda, 2019). The confidence leaders are more visible to the team member in unfavorable situation. Study has shown that leaders who can show high self-esteem and confidence are able to make a risky and controversial decision (Lacerda, 2019). Effective leadership during crises is not only ones who have knowledge and capabilities but also ones who confident and belief themselves in leading and making decision (Hadley et al., 2009). There is a significant relationship between leader self-confidence and leader effectiveness (Achdiyat, 2018).

Hypothesis 1: Transformational leadership has a positive causal relationship with the confident to leader

Hypothesis 2: Confident to leader has a positive causal relationship with the effectiveness of crisis management

Hypothesis 3: Transformational leadership has a positive causal relationship with the effectiveness of crisis management

2.2. Leadership and innovation during crisis

Innovation is one of the responses of the organization to internal or external environment changes, or in anticipation to influence the environment (Sariol & Abebe, 2017). Innovation is defined as the generation and application of new ideas, or the translation of ideas into actual outcomes (Klimentova, 2014). It is not always about a new product, service or process, but it can also be in the manifestation of a new way of thinking about a problem or issue. Innovation is not merely about coming up with an idea, but it should be about its application, its integration into the system process, and the monitoring of the results in the long term. OECD (2005) defined innovation as the implementation of a new and significantly improved product (goods or services) or process, a new marketing method or a new organizational method in business practices, workplace organization or external relations.

During crises the organization should quickly recognize the emerging threats and act fast with initiating effort to mitigate the threat (Mutch, 2015). The organization should come up with a solution come from a new way of thinking considering the new challenge. Sahin et al. (2015) emphasize that organization can take advantage with considering that a crisis can also bring opportunities. Even in crises, customer satisfaction should still be the main philosophy. Organization should engage the organization members, with shared value in mind, so that can come out with a creative problem solving to help organization thrive during the crisis yet still satisfy its customers (Mutch, 2015). It is leaders role to foster an innovative environment that permeates the whole organization (Lacerda, 2019).

Facing the economic crisis, willingness of firms to invest in innovation has reduced severely. However, not all innovation initiative was disappear. There were several organizations still pursuing innovation (Archibugi et al., 2012). Due to the high uncertainty, the high investment innovation most unlikely to be the options of the organization. Therefore, the new type of low investment innovation might be suitable. It is frugal innovation type. Frugal innovation has emerged as an important concept for scholars, practitioners and policy makers. This type of innovation is relevant for all types of organizations, MNCs, SMEs, non-government organizations, and state organizations (Hossain, 2016). Frugal innovation is considered as a new type of innovation (Hossain, 2016; Soni & Krishnan, 2014). There are still limited studies available in this field (Hossain, 2016; Soni & Krishnan, 2014).

The concept of frugal innovation overlaps with other concepts such as good-enough, the base of the pyramid, inclusive, grassroots, disruptive, and reverse innovations. However, the closest

concept to frugal innovation is reverse innovation. Both terminology are used interchangeably (Soni & Krishnan, 2014). Frugal innovation refers to “as a product, service or a solution that emerges despite financial, human, technological and other resource constraints, and where the final outcome is less pricey than competitive offerings (if available) and which meets the needs of those customers who otherwise remain un-served” (Hossain, 2016). Shibin et al. (2018a) define frugal innovation as “the unique way of thinking and acting in response to challenges by effectively spotting the opportunities even in the worst circumstances and improvising the solutions resourcefully in the simplest possible way”. Frugal type of innovation is suitable when organization in a resource-scarce environment (Soni & Krishnan, 2014). This type of innovation is considering the scarce resources and financial shortage, therefore it is best fit for economic downturn period (Shibin et al., 2018a).

Leadership is considered one of the most important factors influencing the success of innovation (Abbas, Saud, Ekowati et al., 2020; Bledow et al., 2015; Rosing et al., 2011; Stewart, 2014; Zacher & Rosing, 2015). Studies have argued that innovation is influenced by both individual factors (e.g., cognitive abilities, personality, and motivation) and contextual factors (e.g., work characteristics and leadership) (Abbas, A., M. Saud, D. Ekowati, 2020; Zacher & Rosing, 2015). Therefore, leadership will play an important role in the innovation works. The role of leadership in innovation has been extensively studied and has gained increasing attention in the literature. Some researchers have proposed that leadership is one of the most important predictors of innovation (Atalay et al., 2013; Bledow et al., 2015; Rosing et al., 2011; Zacher & Rosing, 2015).

Various leadership styles and their influence on innovation have been reviewed. At present, transformational leadership is the most established leadership theory (Marques, 2015). Transformational Leadership style is considered as the most suitable type of leadership which can influence innovation (Aragon-Correa et al., 2007; Crawford, 2001; Moriano et al., 2014; Mumford et al., 2002). It is a leadership style which fosters, motivates and inspires change and innovation. Transformational leadership has been claimed to be effective in turbulent and uncertain environments (Baškarada et al., 2016; Dwiedienawati et al., 2020).

Hypothesis 4: Transformational leadership has a positive causal relationship with Frugal Innovation Type

Hypothesis 5: Frugal Innovation Type has a positive causal relationship with the effectiveness of crisis management

2.3. Leadership and corporate reputation

Reputation refers to a perceptual representation of a company's past actions and future prospects that describe the firm's overall appeal to all its key constituents when compared to other leading rivals' according to Olmedo-Cifuentes and Martínez-León (2014). Reputation is a perception which develops over time, and reflects the evaluations that different stakeholders, both internal (managers, employees) and external (consumers, users) have of a company (Olmedo-Cifuentes & Martínez-León, 2014). Reputation is overall evaluation of the organizations by their stakeholders based on their direct and indirect experience with the organization (Olmedo-Cifuentes & Martínez-León, 2014). Reputation of an organization is defined as the assessment of stakeholders about organization's social and economic potential (Hall & Lee, 2014). Organization reputation is also referred as overtime stakeholders' perceptions of the organization s over time (Yang et al., 2008). Based on the above explanation it can be defined that organization reputation is a perception about the organization assessed by various organization stakeholders' experience and organization prospect. Therefore, the assessment can be conducted by customers, suppliers, society, shareholders, even employees.

Another critical elements of reputation that it is developed overtime. Therefore, the assessors have exposed to the organization past actions several time.

Why reputation is important for an organization? (Barney & Hesterly, 2015) argue that organization reputation is a critical asset in a firms. Reputation provides organization to establish a sustainable competitive advantage which is difficult to imitate (Hall & Lee, 2014). Reputation is a delicate matter because, customer and users put high value in dealing with organization reputation. With that, reputation is crucial for the profitability and survival of the organization (Hall & Lee, 2014; Rose & Thomsen, 2004). The impact of reputation to performance has been reported by Rose and Thomsen (2004) who examine the relationship between corporate reputation and superior financial performance. Their findings that firms with relatively good reputations are better able to sustain superior profit outcomes over time. Hall and Lee (2014) also state that a good corporate reputation is beneficial to firm long-term success. Eltantawy et al. (2009) also find that there is a direct influence between perceived reputation and organization performance. Ou et al. (2012) report that perceived reputation is favourable for satisfaction and trust for the financial institution.

However, studies show that performance also influence organization reputation. As discussed in the definition of reputation, that reputation is developed overtime based on the actions or experiences of the organization. If the organization perceived by the stakeholders to deliver good performance consistently over some period of time, then the organization reputation will be built. The causal relationship between performance to reputation has been reported by Rose and Thomsen(2004) and Eltantawy et al. (2009). James and Wooten (2005) also mention that poor performance during crisis management will cause damage of organization reputation. Studies on the organization reputation usually based on the external stakeholder (e.g., customers, suppliers, etc.). Only few studies (Alkharabsheh et al., 2014; James & Wooten, 2005) explained that the organization reputation is based on employees assessment. This study will focus on the organization reputation during crisis based on employee perception.

During the crisis, how organizations handle the all related issues appropriately is critical. The mis-handling crisis management in an organization crisis will cause the damage of organization reputation for a very long time (James & Wooten, 2005; Yang et al., 2008). How organization handling the issues of the employees will determine how employees evaluate the organization reputation. If the organizations are evaluated to ignore the people issues during crises, it will damage the perceived reputation by employees. During crises, leaders and organization should build trust and confidence of employees (Alkharabsheh et al., 2014), so that employees assessment to company reputation will be favourable. Previous studies have measured the organization reputation through the evaluation by their external stakeholders. However, employees have an important role in communicating and convey the reputation of the organizations. Because how employees see and feel about the organizations will reflected as what the employees will express about the organizations to the external stakeholders (Olmedo-Cifuentes & Martínez-León, 2014).

Leadership style is also known to influence the perceived employee reputation (Turgut et al., 2012; Neves & Story, 2015). Transformational leadership style is charismatic, delegating, inspires, communicating, encourage innovation (Cismas et al., 2016). Transformational leadership style has provided employee to work with positive behaviour and build strong commitment to the organization. Turgut et al. (2012) has proven that transformational leadership have a positive relationship to perceived organization reputation.

Hypothesis 6: Transformational leadership has a positive causal relationship with corporate reputation

Hypothesis 7: The effectiveness of crisis management has a positive causal relationship with corporate reputation

2.4. The crisis management team

During crisis, command and control are inevitable. Considering the limited time, lack of resources and uncertainty, leader cannot act alone. In order to supports leaders in handling crises, organizations have to form a crisis management team (Brown, 2019). Leaders need to lean heavily to crisis management team. The objective of a crisis management team is managing and leading individuals, communicating the important information to all members of the organization, collecting information from every possible sources, analysing the problem and potential damages and suggesting problem solving (Richards, n.d.). Dubé et al. (2010) argue that the role of crisis management team is to manage both resources and people in response to critical events. Mutch (2015) state that the task of the crisis management team are supporting the leader vision and the actions, managing information flow across the organization and managing health and safety of organization members. The crisis management team acts as a support system of the organization, gives assurance and ensures that the information and the communication flow both ways. The crisis management team also acts as barriers against distrust (Lacerda, 2019). With so many tasks in hand, teams crisis is omnipresent in the crisis management domain (Dubé et al., 2010).

Brown (2019) argues that a diverse team is critical. Diverse team will bring about more options. Because they come from different field or expertise or background, they can criticize and challenge each other. They might come with a manageable solutions (Brown, 2019). The ability of crisis members and leaders to make a right decision is the predictor of the effectiveness of the crisis management (Tokakis et al., 2019).

Team crisis are keys elements in crisis management as well as leadership and communication (Fener & Cevik, 2015). The crisis management team plays important role in pre-crisis, during crisis and post crisis. During crisis, team crisis have to act promptly, reliably and effectively in the response of emergency, crisis and disaster (Van Der et al., 2008). In order to be effective, team crisis need to be able to adapt to sudden changes, coordinate and communicate (Dubé et al., 2010). They need to build trust of all stakeholders through transparent communication. During crisis, team crisis is in the front line and become the representative of the organization. How effective team crisis work will help the organization solve the problem easier (Fener & Cevik, 2015).

Hypothesis 8: Crisis Management team has a positive causal relationship with the effectiveness of crisis management

2.5. Internal organizational communication during crisis

Communication within the organizations or internal communication has been established as playing a vital role in influencing organization effectiveness (Ruck et al., 2017). Mirsha et al. (2014) depict communication as “lubricant” in corporate machinery. It is considered critical in building relationship between organization and employee (Mirsha et al., 2014). When employees perceive that they get information from the organization in timely, accurately and relevant, they will feel less vulnerable and more able to trust their leaders (Mirsha et al., 2014).

Internal communication is providing employees with information about their role and overall objectives and organization goals (Karanges, 2014). Karanges (2014) state that internal communication is “all methods (internal newsletter, intranet) used by a firm to communicate with its employees”. Both definition of internal communication were basically more of one way communication, by which, it is a process of leaders/organization communicate to employee. However, other authors introduce that internal organization communication it should be two ways. Karanges (2014) define internal communication as “the exchanges of information and ideas within an

organization". Ruck et al. (2017) state that "communication between an organisation's strategic managers and its internal stakeholders, designed to promote commitment to the organisation, a sense of belonging to it, awareness of its changing environment and understanding of its evolving aims"

Communication within the organization is known to play critical role in developing employee attitude (Karanges, 2014). It strengthen the relationship between organization and employee (Mirsha et al., 2014). With good communication, organization can bring employee commitment and shared interest (Balakrishnan & Masthan, 2013). All these attitudes are associated with favourable outcomes such as increase in employee productivity and organization performance.

Effective communication is known as one key factor in crisis management (Brown, 2019). During crises, due to lack of resources and information; and high of uncertainty, misinformation and disinformation can emerge in and around the organizations. That can create chaos and further uncertainty to the overall organization and make the crisis management even more difficult to manage. Therefore, an essential part of crisis management, organizations should have communication plan (Lockwood, 2005).

In critical situation openness and transparency in dealing with crisis situation is crucial. Leaders should speak with team members to update the situation (Lacerda, 2019). Continuous communication should be in place to encourage team member and shared the casual belief among the organization (Lacerda, 2019). The communication should address the "big picture" and encourage team members to share and propose creative solutions (Mutch, 2015; Lacerda, 2019). People in the organization also need to know the action taken by the organization as crisis response (Bowers et al., 2017a). Besides team members, organizations should also communicates with other stakeholders. Bottom line, the objective of crisis communication is to gain audience trust, creates and maintain organization credibility and reputation (Tkalac Verčič et al., 2019).

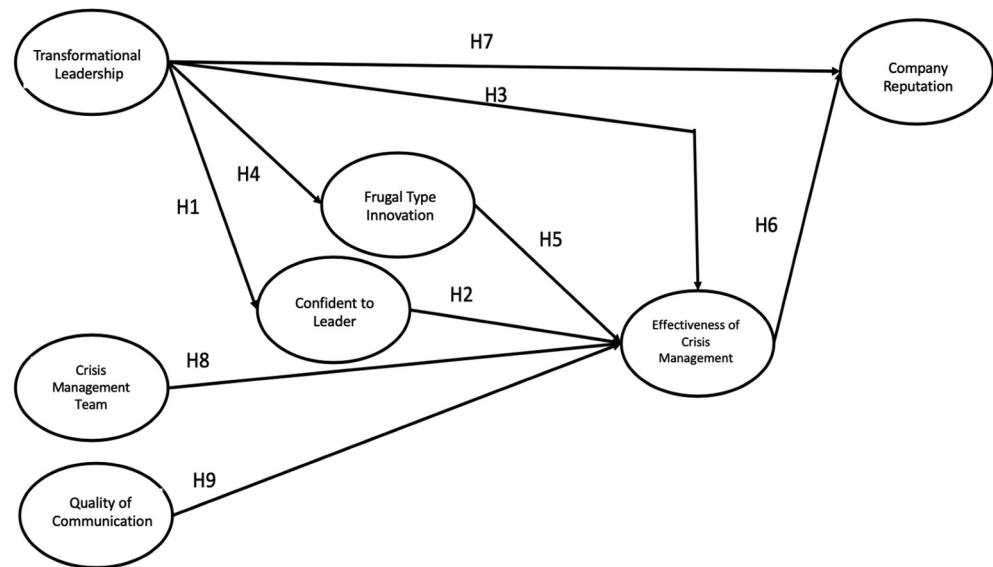
To have an effective communication, organizations should not only focus to the quantity of the communication. They also have to consider the quality of the communication. Quality communication will bring about effective response and fulfilling experience (Balakrishnan & Masthan, 2013). Mohr and Sohi (1995) argue that to assess of the overall communication quality there are 5 aspects should be considered, including completeness, credibility, accuracy, timeliness, and adequacy of communication flows. In this study the communication which covered those 5 aspects are called communication quality (Mohr & Sohi, 1995).

An essential part of crisis management, organizations should have communication plan (Lockwood, 2005). In critical situation openness and transparency in dealing with crisis situation is crucial. Leaders should speak with team members to update the situation (Lacerda, 2019). It is important to communicate that a clear action plan in order to have an effective crisis management (Bowers et al., 2017a).

Several previous crises show how effective communication can lead to effective crisis management. Hurricane Katrina, terrorist attacks on September 11 and Superstorm Sandy are the examples on how good communication deliver effective crisis management (Mutch, 2015; Suhaimi et al., 2014). Effective communication also creates organizational reputation (Bowen & Lovari, 2020; Tkalac Verčič et al., 2019). Study also reveal that internal organization communication promotes employee better performance (Mirsha et al., 2014). Other previous study also shows a strong correlation between effective employee communication and superior organisational performance (Balakrishnan & Masthan, 2013).

Employee who is experiencing a quality exchange and having a sense of team membership will become more engage to the organization (Karanges, 2014). One of the crucial quality exchange is quality of the communication. A quality communication between the organization

Figure 1. Research framework.



and employees foster a transparency and trust environment. Communication is important in fostering employee engagement (Bedarkar & Pandita, 2014). Internal communication a practice in organization, which effectively conveys the value of the organizational to employees. With good internal communication, employees feel that they are well informed about what is the value and what happening in the organization (Karanges, 2014). Since they understand, employee will more likely to support in reaching organizational goals (Bedarkar & Pandita, 2014). Studies from Karanges (2014) and Ten Brummelhuis et al. (2012) are evidence how effective communication between the organization and employees influence employee engagement.

Hypothesis 9: Communication quality has a positive causal relationship with the effectiveness of crisis management Framework of the research is depicted in Figure 1.

3. Methodology

3.1. Research design

This study aims to test the hypotheses. therefore a descriptive quantitative study was chosen. Survey with structured questionnaires as the instruments was conducted in May 2020. The structure of the questionnaires started with research information disclosure which consist of brief explanation about the survey. Then it was followed by participants informed consent whereas the participants stated their agreement to join the study. Questionnaires without informed consent were omitted from further analysis. The next part was questions to capture participants' information such as gender, location, also the size of the company and how long the company has been established and the type of the company. For part related to variable, questionnaires was designed with statements in which participants would respond with level of agreeable. A six-point Likert scale (from 1 strongly disagree to 6 strongly agree) was used for participant's rating. With a six-point Likert scale, the mid-point is omitted to avoid social desirability bias (Nadler et al., 2015).

3.2. Procedures and participants

The questionnaires were distributed online with a google form. Due to relatively high number, time and resources constraints, convenience and snowball sampling collecting methods were used in this study. The target was to collect 280 participants. The number of participants needed was

calculated based on Wolf et al. (2015). According to the work of Bentley and Chou in 1987 Wolf et al. (2015) argued that the number of samples is as low as 5 cases per indicators and Wolf et al. (2015) also referring to the work of Nunnally at 1967 said that 10 cases per variable adequate and widely accepted. In this study, there were 28 indicators therefore 280 participants was required (28 indicators times 10). The participants were managers, directors, and team leaders in the organizations in Indonesia. They were asked to self-rating their opinion for each statement in the questionnaires. Missing data was managed as followed. If missing data was only in one indicator, the data would be replaced with the mean value of that indicator. But if the missing data was more than one for one indicator, the questionnaire will be omitted from the analysis.

3.3. Measurement

All measurement scales used in the present study, were measured using measurements from a previous study. Transformational leadership measured included 6 items modified from Aragon-Correa et al. (2007) and Chen et al. (2014). Confident to leader was measured by 4 items modified from Hunt et al. (1999). For leadership measurement, participants were asked to rate their Top Management or CEO of the company. Frugal Type Innovation was measured by 3 items modified from Hossain (2017). Communication quality was measured with 5 items modified from Mohr & Sohi (1995). Crisis management team and perceived effectiveness of crisis management are measured with 3 items each from self-developed measurement. All measures are shown in Appendix 1.

3.4. Data analysis

This study is a confirmatory study, therefore CB-SEM using LISREL for the data analysis was chosen. Over several decades, the social sciences have used CB-SEM widely as the preferred data analysis method for confirming or rejecting theories through the testing of hypotheses (Wong, 2013). For analysis, a two-step approach was used. First, the measurement model analysis was employed to ensure that all indicators or observed variables used were valid and reliable. After the measurement model was confirmed to be valid and reliable, the next step in the two-step approach was to conduct a structural model analysis, which included: (a) an overall model fitness test and (b) an analysis/significance test on the relationship between two latent variables in the model.

4. Result

4.1. Descriptive analysis

Total questionnaires collected were 296. There were 3 questionnaires with missing data more than 1 for one variable, therefore those 3 questionnaires were omitted from further analysis. From total 293 participants 56% were male, 42% were female and 2% chose preferred not to answer (Table 1). Other participants demographic information also shown in Table 1.

More than 69% of CEOs have been in the position for more than 5 years. Only 31% of CEOs have in the position for less than 5 years (Figure 2). Participants were asked to rate the impact of COVID-19 pandemic to overall company operation (Figure 3). Thirty-two percent claim that the impact was quite big. Thirty-nine percent claimed that the impact was significantly influence the operation. However, 20% of participants claim than the impact of COVID-10 pandemic was small, even 5% stated that it was no impact.

4.2. Measurement model analysis

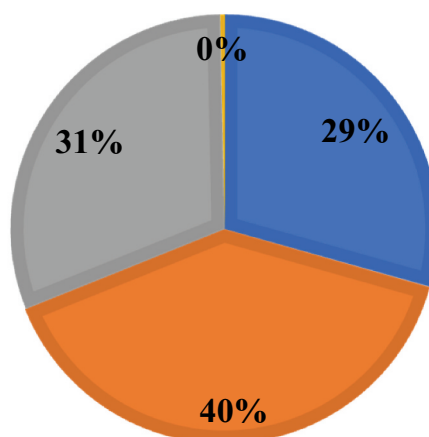
Factor loading analysis from LISREL showed that there were two indicators with SFL less than 0,5 which was TRF3. Therefore, the TRF3 was excluded from the further analysis. The re-analysis showed that after omitting TRF3, all remaining indicators have loading factor >0,5, therefore it can be concluded that all indicators for each variable are valid (Table 2).

Table 1. Participants' demographic

| Gender | % |
|-----------------------------------|----------|
| Female | 42 |
| Male | 56 |
| Not Answer | 2 |
| Job Title | % |
| Director | 18 |
| Manager | 40 |
| Staff | 16 |
| Others | 26 |
| Not Answer | 18 |
| Education | % |
| Bachelor | 54 |
| Master | 33 |
| Doctor | 4 |
| Others | 9 |
| Organization Establishment | % |
| >20 Years | 55 |
| 10–20 years | 22 |
| <10 years | 23 |
| Type of Company | % |
| MNC | 17 |
| Domestic | 19 |
| Family Business | 24 |
| Others | 40 |
| Size of Company | % |
| >1000 employees | 39 |
| 500–1000 employees | 7 |
| 100–500 employees | 14 |
| 50–100 employees | 10 |
| <50 employees | 30 |

Figure 2. CEO service years.

■ >10 years ■ 5-10 years ■ <5 years ■ Not Answer



From di-covariance matrix in Appendix 2, it was shown that indicators' outer loading on the associated construct had greater value than any of the cross-loading on other constructs. Therefore, it can be concluded that the determinant validity was established.

The reliability of measures was depicted by CR and VE. All variables had CR > 0.7 and VE > 0.5 as shown in Table 2. It can be concluded that the measurements of all variables were reliable.

4.3. Structural model analysis

The structural model analysis came out with RMSEA < 0.08 (0.0445), NFI > 0.90 (0.957), NNFI > 0.90 (0.975), CFI > 0.9 (0.979) and IFI > 0.90 (0.979). Therefore, the conclusion is that the model had a good fit. The model best represented the data underlying the theory.

Pathway analysis (Table 3) showed that all relationship between variables has *T*-value > 1.96, except for relationship between Transformational Leadership with the effectiveness of crisis management (*T*-value 0.575). Therefore, it can be concluded that all relationships in the framework were significant, except for relationship between Transformational Leadership with the effectiveness of crisis management. Table 3 also shows that communication quality had a higher influence on organizational effectiveness during crisis than transformational leadership and employee engagement. However, transformational leadership has a higher influence to employee engagement than communication quality.

5. Discussion

RBT has viewed that corporate reputation provides a sustainable competitive advantage to the organization because it is very difficult to imitate (Barney & Hesterly, 2015; Hall & Lee, 2014). During crisis, the ultimate goal of the organization is to safeguard organization reputation. Because mismanagement of the crisis which will damage the organization reputation, will be very difficult to recover and threat the survival or the company.

This study showed that in crisis, the reputation of the organization was directly influence by transformational leadership style and the evaluation of effectiveness of crisis management. It was also influenced indirectly by quality communication and confident to leader, mediated by effectiveness of crisis management. From the direct determinants, organization reputation was influenced more by how employees perceived the effectiveness of crisis management than leadership style.

Figure 3. Impact to operation. ■ Big Impact ■ Enough Impact ■ Small Impact ■ No Impact

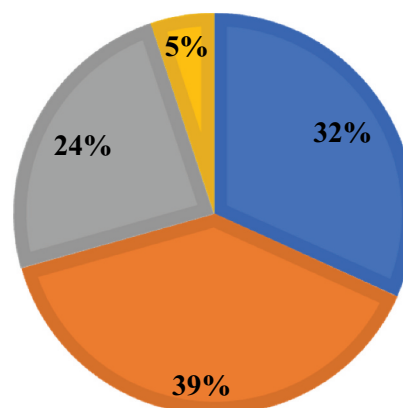


Table 2. CR and VE of measurement

| Latent Variable | Indicators | λ | CR | VE | Remark |
|------------------------------------|------------|-----------|-------|-------|----------|
| Transformational Leadership | TRF1 | 0,776 | 0,832 | 0,501 | Reliable |
| | TRF2 | 0,781 | | | |
| | TRF4 | 0,583 | | | |
| | TRF5 | 0,654 | | | |
| | TRF6 | 0,726 | | | |
| Confident to Leader | CTL1 | 0,857 | 0,889 | 0,667 | Reliable |
| | CTL2 | 0,811 | | | |
| | CTL3 | 0,797 | | | |
| | CTL4 | 0,801 | | | |
| Team Crisis | TCR1 | 0,910 | 0,960 | 0,890 | Reliable |
| | TCR2 | 0,961 | | | |
| | TCR3 | 0,958 | | | |
| Communication Quality | COQ1 | 0,746 | 0,921 | 0,702 | Reliable |
| | COQ2 | 0,874 | | | |
| | COQ3 | 0,747 | | | |
| | COQ4 | 0,895 | | | |
| | COQ5 | 0,910 | | | |
| Effectiveness of Crisis Management | ECM1 | 0,709 | 0,834 | 0,558 | Reliable |
| | ECM2 | 0,814 | | | |
| | ECM3 | 0,697 | | | |
| | ECM4 | 0,761 | | | |
| Company Reputation | COR1 | 0,811 | 0,851 | 0,655 | Reliable |
| | COR2 | 0,824 | | | |
| | COR3 | 0,793 | | | |
| Frugal Type Innovation | FIN1 | 0,741 | 0,790 | 0,557 | Reliable |
| | FIN2 | 0,795 | | | |
| | FIN3 | 0,700 | | | |

Effectiveness of crisis management was positively and mostly influenced by employees confident to their leader, then by communication quality and perceived effectiveness of team crisis. However, this study failed to proof the direct influenced of transformational leadership style to effectiveness of crisis management. The explanation of this can be because in the this study, perceived effectiveness of crisis management was evaluated by employees. During crisis, the front liner who communicate frequently to the employees was the crisis management team who coordinate, communicate and convey all important information. At the same time various communication was communicated via many channels. Therefore, the leader as the central player during crisis is less obvious. The case might be different if the evaluator of crisis management effectiveness is shareholder and external stakeholder. In this situation the role of leader as prominent player in the crisis management is more obvious.

Currently, transformational leadership is the most established leadership theory (Marques, (2015)). It is a leadership style which fosters, motivates and inspires change and innovation. Transformational leadership has been claimed to be effective for innovation (Aragon-Correa et al., 2007; Crawford, 2001; Moriano et al., 2014; Mumford et al., 2002) and also turbulent and uncertain environments (Baškarada et al., 2016). However, study from Rosing et al. (2011) shows that the effectiveness of transformational leadership for innovation is inconsistent. The

Table 3. Coefficient and T-value analysis of relationship between variables

| Relationship | Co-efficient | T-Value |
|-------------------------------------------------------------------------|--------------|---------|
| Transformational leadership → relationship with the confident to leader | 0,2444 | 4,990 |
| Confident to leader → the effectiveness of crisis management | 0,2556 | 5,317 |
| Transformational leadership → the effectiveness of crisis management | 0,0770 | 0,575 |
| Transformational leadership → Frugal Innovation Type | 0,3792 | 7,529 |
| Frugal Innovation Type → the effectiveness of crisis management | 0,2785 | 4,935 |
| Transformational leadership → corporate reputation | 0,1472 | 2,481 |
| The effectiveness of crisis management → corporate reputation | 0,2771 | 4,157 |
| Crisis Management Team → the effectiveness of crisis management | 0,1125 | 2,981 |
| Communication quality → the effectiveness of crisis management | 0,1236 | 2,470 |

argument that during complex process such as innovation, leaders should be able to explore and exploit, therefore, leaders should be beyond transformational leadership.

During crises, leaders face time and resource constraints and high uncertainty with the pressure to perform well. The situation is also complex. Leaders need to inspire and motivate the team. Leaders need also to be agile. In the high uncertainty, team are confused, therefore they need their leaders to be there to give assurance and motivation. At the same time, the uncertainty with lack of information or knowledge of the situation and time constraints, required leaders to be agile. During COVID-19, where leaders can lead by tight grips to the situation, required leaders to delegate more. Rather than commanding and controlling, leaders need to give other people the power to make decisions.

At the same time, during crisis, leaders need to be able to step in and make decision fast, even the tough one. They need to be around and available at any time. Leaders need to have discipline to monitor and check the team progress. Leaders need to ensure discipline and process is conducted and adapted along the way. Therefore during crisis leaders needs not only to explore but also needs to exploit. Therefore, during crises, leaders should be beyond transformational.

This study was among the first empirical study in frugal innovation type. Various study have shown that transformational leadership influences organization innovation (Aragon-Correa et al., 2007; Crawford, 2001; Moriano et al., 2014; Mumford et al., 2002). In this study, it is proven that the new type of innovation which is frugal innovation type was also influenced by transformational leadership style. Further, this type of innovation was proven to influence the effectiveness of the crisis management. During crisis, frugal innovation type is effective, since the investment involved is not as high as other type of innovation and the characteristics of this type of innovation are met customer need with affordable price. Therefore, frugal innovation type helps the organization effectiveness in crises.

6. Conclusion

Leadership plays an important role during crisis however there are still limited literature on leadership literature in crisis. What type of leadership is the most suitable during crisis? The role of transformational leadership is still inconsistent. Transformational leadership does not have a direct relationship with effectiveness of crisis management. During crisis, leaders need to inspire and motivate the organization but at the same time leaders but at the same time leaders need also follow strict rules and timeline. Therefore, leaders with leadership style beyond transformational leadership is needed.

The second gap of this study is the limited studies investigating the impact of communication during crisis. Yet, communication play important role during crisis. This study is provided a body of evidence that the quality of communication has a positive relationship with the effectiveness of crisis management.

During crisis, only few organizations that initiated innovation, due to the uncertainty and high investment. However, during crisis, organization needs to adopt and adapt to the situation. During crisis because of the COVID-19, existing products and existing way to do business just do not work. Therefore, innovation might play important role. This study showed that the frugal innovation type initiative during crisis influenced the effectiveness of crisis management. Frugal innovation type is a new type of innovation. This study is one of the first empirical evidence on the frugal innovation type.

6.1. Research implication

(1) Theoretical Implication

The effectiveness of transformational leadership during crisis showed inconsistent report from previous study. Bowers et al. (2017a), Belias et al. (2015a), Kelly (2003) and Dwiedienawati et al. (2020) argue that the most suitable leadership style during crisis is transformational leadership; however, Alkharabsheh et al. (2014) and Stoker et al. (2019) question the effectiveness of transformational leadership during crisis. Even though this study failed to show a direct effect of transformational leadership to effectiveness of crisis management, this study has provided additional body of evidence how transformational leadership is effective during crisis mediated by confident to leader.

This study also provides additional body of evidence in the literature of organization communication during crises. This study answer the challenge from Carrington et al. (2019a) to investigate the impact of communication in organization during crises.

This study also contributes to the literature of leadership and innovation. Further confirmation of how transformational leadership influence innovation is provided. Furthermore, this study focus to the new type of innovation which is frugal innovation type.

(2) Practical Implication

The COVID-19 pandemic is a new type of crisis with high of uncertainty. The role of leadership during crisis is crucial. However, what type of leadership style during crisis or even new type of crisis is still understudied. This study provides evidence, that during crisis with high uncertainty, transformational leadership is effective. This study gives insight to managerial that during crisis, leadership who inspired, motivate and challenge the organization will help the effectiveness of crisis management.

This study also provides evidence to managerial about the importance of the quality of communication. In crisis management, the perceived good quality of communication will improve the effectiveness of crisis management. Furthermore, this study also provides evidence that the existence and effectiveness of team crisis is also critical in crisis management.

6.2. Limitation and further research

This study has several limitations. First, the evaluation of crisis management effectiveness was evaluated as perceived effectiveness by the employees. Further study can be conducted to see the impact of dependent variables to the hard evidence such as the real performance of the company during crisis. The other limitation of this study is that this study did not see the impact of the crisis to the organization. Even though some industries were hit hard, but there might be some industries survived or even thrived. Understanding and comparing the nature of the organization and the crisis impact will give a better understanding why crisis management was perceived good. This study only saw transformational leadership, it did not compare with transactional leadership.

Further study to compare the two styles for crisis situation will give better understanding on the effectiveness of transformational leadership during crisis. The new leadership style has emerged, which is ambidextrous leadership. Comparing ambidextrous leadership to transformational leadership will also give better insight whether during crisis we need leadership beyond transformational. In this study, all the assessments were conducted by the employees. Further study with multistage assessors, such as leadership style is assessed by leader, crisis management effectiveness is assessed based of real organization performance, and organization reputation is assessed by employees and other stakeholders, can be recommended.

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Appendix 1. Measurement

| Variable | CODE | Indicators |
|-------------------------------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Transformational Leadership | TRF1 | Company leader gives priority in finding new opportunities for the company |
| | TRF2 | Company leader always communicates clearly the short-term goals of the Company |
| | TRF3 | Company leader provides more motivation to employees than to control the course of the company |
| | TRF4 | Company leader plays an important role in the operation of the company |
| | TRF5 | Company leader coordinates with his team in making decisions |
| | TRF6 | Company leader looks for new perspectives in solving problems |
| Confident to Leader | CTL1 | Company leader has high confident in dealing with crisis |
| | CTL2 | Company leader has integrity in dealing with crisis |
| | CTL3 | We trust our company leader to lead us through crisis |
| | CTL4 | We satisfy on how our leader deals with crisis |
| Frugal Type Innovation | FIN1 | During COVID-19 crisis company innovate in producing goods that needed by customers |
| | FIN2 | Goods that produced has affordable price |
| | FIN3 | Product design of goods produced by the company is met customer needs |
| Team Crisis | TCR1 | In our company, there is crisis management team available to support company leader in dealing with crisis |
| | TCR2 | Crisis management team is effective in supporting our leader in dealing with crisis |
| | TCR3 | Crisis management team has enough competency in supporting our leader in dealing with crisis |
| Communication Quality | COQ1 | During COVID 19 communication from the company was carried out in a timely manner |
| | COQ2 | During COVID 19 the information provided by the company was quite accurate |
| | COQ3 | During COVID 19 the communication provided by the company was judged to be sufficient in quantity (not too much and not too little) |
| | COQ4 | During COVID 19 the communication provided by the company was considered quite complete |
| | COQ5 | During COVID 19 the communication provided by the company was quite credible |
| Effectiveness of Crisis Management | ECM1 | The company run quite well during COVID-19 outbreak |
| | ECM2 | Companies are able to effectively deal with crises |
| | ECM3 | The company will survive in facing this crisis |
| Company Reputation | COR1 | During COVID-19 outbreak, company still can operate well enough |
| | COR2 | Employees satisfy with all effort done by the company during COVID-19 outbreak |
| | COR3 | There is company value which is firmly hold and shared to all employee when dealing COVID-19 crisis |
| | COR4 | Company is transparent in communicating during COVID-19 crisis |

| | 2311 | 2312 | 2314 | 2315 | 2316 | CL11 | CL12 | CL13 | CL14 | CL15 | CL16 | CL17 | CL18 | CL19 | CL20 | CL21 | CL22 | CL23 | CL24 | CL25 | CL26 | CL27 | CL28 | CL29 | CL30 | CL31 | CL32 | CL33 | CL34 | CL35 | CL36 | CL37 | CL38 | CL39 | CL40 | CL41 | CL42 | CL43 | CL44 | CL45 | CL46 | CL47 | CL48 | CL49 | CL50 | CL51 | CL52 | CL53 | CL54 | CL55 | CL56 | CL57 | CL58 | CL59 | CL60 | CL61 | CL62 | CL63 | CL64 | CL65 | CL66 | CL67 | CL68 | CL69 | CL70 | CL71 | CL72 | CL73 | CL74 | CL75 | CL76 | CL77 | CL78 | CL79 | CL80 | CL81 | CL82 | CL83 | CL84 | CL85 | CL86 | CL87 | CL88 | CL89 | CL90 | CL91 | CL92 | CL93 | CL94 | CL95 | CL96 | CL97 | CL98 | CL99 | CL100 | CL101 | CL102 | CL103 | CL104 | CL105 | CL106 | CL107 | CL108 | CL109 | CL110 | CL111 | CL112 | CL113 | CL114 | CL115 | CL116 | CL117 | CL118 | CL119 | CL120 | CL121 | CL122 | CL123 | CL124 | CL125 | CL126 | CL127 | CL128 | CL129 | CL130 | CL131 | CL132 | CL133 | CL134 | CL135 | CL136 | CL137 | CL138 | CL139 | CL140 | CL141 | CL142 | CL143 | CL144 | CL145 | CL146 | CL147 | CL148 | CL149 | CL150 | CL151 | CL152 | CL153 | CL154 | CL155 | CL156 | CL157 | CL158 | CL159 | CL160 | CL161 | CL162 | CL163 | CL164 | CL165 | CL166 | CL167 | CL168 | CL169 | CL170 | CL171 | CL172 | CL173 | CL174 | CL175 | CL176 | CL177 | CL178 | CL179 | CL180 | CL181 | CL182 | CL183 | CL184 | CL185 | CL186 | CL187 | CL188 | CL189 | CL190 | CL191 | CL192 | CL193 | CL194 | CL195 | CL196 | CL197 | CL198 | CL199 | CL200 | CL201 | CL202 | CL203 | CL204 | CL205 | CL206 | CL207 | CL208 | CL209 | CL210 | CL211 | CL212 | CL213 | CL214 | CL215 | CL216 | CL217 | CL218 | CL219 | CL220 | CL221 | CL222 | CL223 | CL224 | CL225 | CL226 | CL227 | CL228 | CL229 | CL230 | CL231 | CL232 | CL233 | CL234 | CL235 | CL236 | CL237 | CL238 | CL239 | CL240 | CL241 | CL242 | CL243 | CL244 | CL245 | CL246 | CL247 | CL248 | CL249 | CL250 | CL251 | CL252 | CL253 | CL254 | CL255 | CL256 | CL257 | CL258 | CL259 | CL260 | CL261 | CL262 | CL263 | CL264 | CL265 | CL266 | CL267 | CL268 | CL269 | CL270 | CL271 | CL272 | CL273 | CL274 | CL275 | CL276 | CL277 | CL278 | CL279 | CL280 | CL281 | CL282 | CL283 | CL284 | CL285 | CL286 | CL287 | CL288 | CL289 | CL290 | CL291 | CL292 | CL293 | CL294 | CL295 | CL296 | CL297 | CL298 | CL299 | CL300 | CL301 | CL302 | CL303 | CL304 | CL305 | CL306 | CL307 | CL308 | CL309 | CL310 | CL311 | CL312 | CL313 | CL314 | CL315 | CL316 | CL317 | CL318 | CL319 | CL320 | CL321 | CL322 | CL323 | CL324 | CL325 | CL326 | CL327 | CL328 | CL329 | CL330 | CL331 | CL332 | CL333 | CL334 | CL335 | CL336 | CL337 | CL338 | CL339 | CL340 | CL341 | CL342 | CL343 | CL344 | CL345 | CL346 | CL347 | CL348 | CL349 | CL350 | CL351 | CL352 | CL353 | CL354 | CL355 | CL356 | CL357 | CL358 | CL359 | CL360 | CL361 | CL362 | CL363 | CL364 | CL365 | CL366 | CL367 | CL368 | CL369 | CL370 | CL371 | CL372 | CL373 | CL374 | CL375 | CL376 | CL377 | CL378 | CL379 | CL380 | CL381 | CL382 | CL383 | CL384 | CL385 | CL386 | CL387 | CL388 | CL389 | CL390 | CL391 | CL392 | CL393 | CL394 | CL395 | CL396 | CL397 | CL398 | CL399 | CL400 | CL401 | CL402 | CL403 | CL404 | CL405 | CL406 | CL407 | CL408 | CL409 | CL410 | CL411 | CL412 | CL413 | CL414 | CL415 | CL416 | CL417 | CL418 | CL419 | CL420 | CL421 | CL422 | CL423 | CL424 | CL425 | CL426 | CL427 | CL428 | CL429 | CL430 | CL431 | CL432 | CL433 | CL434 | CL435 | CL436 | CL437 | CL438 | CL439 | CL440 | CL441 | CL442 | CL443 | CL444 | CL445 | CL446 | CL447 | CL448 | CL449 | CL450 | CL451 | CL452 | CL453 | CL454 | CL455 | CL456 | CL457 | CL458 | CL459 | CL460 | CL461 | CL462 | CL463 | CL464 | CL465 | CL466 | CL467 | CL468 | CL469 | CL470 | CL471 | CL472 | CL473 | CL474 | CL475 | CL476 | CL477 | CL478 | CL479 | CL480 | CL481 | CL482 | CL483 | CL484 | CL485 | CL486 | CL487 | CL488 | CL489 | CL490 | CL491 | CL492 | CL493 | CL494 | CL495 | CL496 | CL497 | CL498 | CL499 | CL500 | CL501 | CL502 | CL503 | CL504 | CL505 | CL506 | CL507 | CL508 | CL509 | CL510 | CL511 | CL512 | CL513 | CL514 | CL515 | CL516 | CL517 | CL518 | CL519 | CL520 | CL521 | CL522 | CL523 | CL524 | CL525 | CL526 | CL527 | CL528 | CL529 | CL530 | CL531 | CL532 | CL533 | CL534 | CL535 | CL536 | CL537 | CL538 | CL539 | CL540 | CL541 | CL542 | CL543 | CL544 | CL545 | CL546 | CL547 | CL548 | CL549 | CL550 | CL551 | CL552 | CL553 | CL554 | CL555 | CL556 | CL557 | CL558 | CL559 | CL560 | CL561 | CL562 | CL563 | CL564 | CL565 | CL566 | CL567 | CL568 | CL569 | CL570 | CL571 | CL572 | CL573 | CL574 | CL575 | CL576 | CL577 | CL578 | CL579 | CL580 | CL581 | CL582 | CL583 | CL584 | CL585 | CL586 | CL587 | CL588 | CL589 | CL590 | CL591 | CL592 | CL593 | CL594 | CL595 | CL596 | CL597 | CL598 | CL599 | CL600 | CL601 | CL602 | CL603 | CL604 | CL605 | CL606 | CL607 | CL608 | CL609 | CL610 | CL611 | CL612 | CL613 | CL614 | CL615 | CL616 | CL617 | CL618 | CL619 | CL620 | CL621 | CL622 | CL623 | CL624 | CL625 | CL626 | CL627 | CL628 | CL629 | CL630 | CL631 | CL632 | CL633 | CL634 | CL635 | CL636 | CL637 | CL638 | CL639 | CL640 | CL641 | CL642 | CL643 | CL644 | CL645 | CL646 | CL647 | CL648 | CL649 | CL650 | CL651 | CL652 | CL653 | CL654 | CL655 | CL656 | CL657 | CL658 | CL659 | CL660 | CL661 | CL662 | CL663 | CL664 | CL665 | CL666 | CL667 | CL668 | CL669 | CL670 | CL671 | CL672 | CL673 | CL674 | CL675 | CL676 | CL677 | CL678 | CL679 | CL680 | CL681 | CL682 | CL683 | CL684 | CL685 | CL686 | CL687 | CL688 | CL689 | CL690 | CL691 | CL692 | CL693 | CL694 | CL695 | CL696 | CL697 | CL698 | CL699 | CL700 | CL701 | CL702 | CL703 | CL704 | CL705 | CL706 | CL707 | CL708 | CL709 | CL710 | CL711 | CL712 | CL713 | CL714 | CL715 | CL716 | CL717 | CL718 | CL719 | CL720 | CL721 | CL722 | CL723 | CL724 | CL725 | CL726 | CL727 | CL728 | CL729 | CL730 | CL731 | CL732 | CL733 | CL734 | CL735 | CL736 | CL737 | CL738 | CL739 | CL740 | CL741 | CL742 | CL743 | CL744 | CL745 | CL746 | CL747 | CL748 | CL749 | CL750 | CL751 | CL752 | CL753 | CL754 | CL755 | CL756 | CL757 | CL758 | CL759 | CL760 | CL761 | CL762 | CL763 | CL764 | CL765 | CL766 | CL767 | CL768 | CL769 | CL770 | CL771 | CL772 | CL773 | CL774 | CL775 | CL776 | CL777 | CL778 | CL779 | CL780 | CL781 | CL782 | CL783 | CL784 | CL785 | CL786 | CL787 | CL788 | CL789 | CL790 | CL791 | CL792 | CL793 | CL794 | CL795 | CL796 | CL797 | CL798 | CL799 | CL800 | CL801 | CL802 | CL803 | CL804 | CL805 | CL806 | CL807 | CL808 | CL809 | CL810 | CL811 | CL812 | CL813 | CL814 | CL815 | CL816 | CL817 | CL818 | CL819 | CL820 | CL821 | CL822 | CL823 | CL824 | CL825 | CL826 | CL827 | CL828 | CL829 | CL830 | CL831 | CL832 | CL833 | CL834 | CL835 | CL836 | CL837 | CL838 | CL839 | CL840 | CL841 | CL842 | CL843 | CL844 | CL845 | CL846 | CL847 | CL848 | CL849 | CL850 | CL851 | CL852 | CL853 | CL854 | CL855 | CL856 | CL857 | CL858 | CL859 | CL860 | CL861 | CL862 | CL863 | CL864 | CL865 | CL866 | CL867 | CL868 | CL869 | CL870 | CL871 | CL872 | CL873 | CL874 | CL875 | CL876 | CL877 | CL878 | CL879 | CL880 | CL881 | CL882 | CL883 | CL884 | CL885 | CL886 | CL887 | CL888 | CL889 | CL890 | CL891 | CL892 | CL893 | CL894 | CL895 | CL896 | CL897 | CL898 | CL899 | CL900 | CL901 | CL902 | CL903 | CL904 | CL905 | CL906 | CL907 | CL908 | CL909 | CL910 | CL911 | CL912 | CL913 | CL914 | CL915 | CL916 | CL917 | CL918 | CL919 | CL920 | CL921 | CL922 | CL923 | CL924 | CL925 | CL926 | CL927 | CL928 | CL929 | CL930 | CL931 | CL932 | CL933 | CL934 | CL935 | CL936 | CL937 | CL938 | CL939 | CL940 | CL941 | CL942 | CL943 | CL944 | CL945 | CL946 | CL947 | CL948 | CL949 | CL950 | CL951 | CL952 | CL953 | CL954 | CL955 | CL956 | CL957 | CL958 | CL959 | CL960 | CL961 | CL962 | CL963 | CL964 | CL965 | CL966 | CL967 | CL968 | CL969 | CL970 | CL971 | CL972 | CL973 | CL974 | CL975 | CL976 | CL977 | CL978 | CL979 | CL980 | CL981 | CL982 | CL983 | CL984 | CL985 | CL986 | CL987 | CL988 | CL989 | CL990 | CL991 | CL992 | CL993 | CL994 | CL995 | CL996 | CL997 | CL998 | CL999 | CL1000 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 2311 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0.538 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

