THE EXPRESSION OF CRISIS MANAGEMENT STRATEGIC MODEL WITH STAFF BEHAVIOR APPROACH, A CASE STUDY OF TEHRAN BUS COMPANY

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ABSTRACT

Crisis management is very critical for cities and countries according to the current situation of land and problems arising from urban industrialization and its effects on environmental factors such as global warming and the resulting natural disasters. Tehran is one of the largest and populous cities, with a daily population layer of 15 million people, and urban planning in crisis situation is an integral part of the management in this city. Before pursuing any lofty goals, crisis management is essential for ensuring the stability and continued success of an organization. Transportation or movement of people and goods from one point to another is an ancient and enduring characteristic inherent in human. Movement, in primitive societies to the basic form was regarded as the most basic daily requirements and a certain amount of movement was required to take place for the production or handling of any product from production to consume place to deliver needed goods to consumers. In this paper, by an overview of the theoretical papers on crisis management, crisis management approaches and models of crisis management, the importance of this issue is considered in bus transportation industries particularly in Bus Company of Tehran, and a model in facing with crisis management is presented in the bus company by extraction of transportation management operational components.

KEYWORDS: Crisis, Crisis management, Crisis management cycle

Today, crisis management is an essential part of strategic management. Organizations that are primarily exposed to the crisis need more preparedness against it. Effective crisis management requires a disciplined and systematic approach based on unconsciousness, management sensitivity and a good understanding of the importance of careful planning and organizational readiness. Although the science of crisis management helps managers to solve their problems and their internal crisis or organization environmental problems, but dominance on crisis identifying and also applying effective crisis prevention methods, control or neutralization of the crisis is not readily available. In addition, the best option to deal with disaster is disaster prevention and planning to deal with it. Prevention is a long-term and cost issue for dealing with the crisis, but in the long term, its economical saving is more than preparedness planning for disaster, and then the best way to reduce the losses and prevent disasters is to plan to deal with the crisis at the national level and strengthening crisis management and ultimately training.

Nearly five centuries is passed after the appearance of the word Crisis (Crisis) in Latin and during the last two centuries, words (Crisis), (Crise) have had a vast literature in English and French language (Lerbinger, 1997). In Persian literature, the fields of economic and political crisis and crisis management especially international crisis are less considered, despite the growing importance of these works.

THEORETICAL AND EXPLANATION

Considering existed theory of crisis management literature in this area indicates that in the crisis issue, there are three distinguished perspectives (Roshandel Arbtai et al, 2009):

A) Classic view: In this view, the crisis is essentially known negative and undesirable phenomenon and that it must be avoided in any way. According to this view, the crises have quite destructive and inhibitor nature.

B) Natural law view: Proponents of this view know the crisis as a part of human nature, and this group still has a negative attitude towards the crisis, the difference is that unlike the first view, it does not try to deny and avoid crisis, rather select a quite reasonable position to it.

C) Interactive view: This view sees the crisis as being positive and believes that not only it should be negated or denied, but it should be welcomed in some situations. Unlike the first perspective view of stillness and stability, and second view of the challenge and response; interactive view is a dynamic, change and social mobility view, and thus knows the crisis as a
social dialectics that is essential for the growth and development of society.

However, three approaches in crisis management can be identified based on three types of views (Roshandel Arbtayi et al, 2009):

**Crisis Aversion Approach**

Managers, who adopt such an approach, use passive and reactive approach in the face with crisis. They do not have any previous preparation and no clear plan for dealing with the crisis, and act passively and maximum reactively when facing with it. Managers, who use the strategy of passive or reactive, don’t have long-term planning perspective, and as long as they don’t feel the public opinion pressure in critical condition, don’t react or wouldn’t operate, as long as they don’t see any threat in connection with their own and organization in crisis situation.

**Crisis Fights Approach**

This approach doesn’t escape from the crisis, but deal and tackle with crisis by accepting it as a natural law, with an active strategy. Managers and organizations that have such an approach to the crisis benefit from all of their capacity and ability to anticipate crisis before occur and deal with it effectively in the event of occur. Such managers, enter the action scenes once the crisis occur, and actively attempt to control and inhibit it.

**Crisis Acceptance Approach**

In this management approach, forecast and well come of crisis is considered in addition to accepting crisis as an inevitable issue. In other words, emphasizes on discovery of new opportunities and new prospects for growth and dynamics by adoption of a proactive strategy. Such organizations have structural characteristics such as creativity, flexibility, Career–oriented, focus, and formalization. According to this strategy, any crisis may have opportunities with it, so should expect crisis and find needed preparations and predictions in advance to deal with them, in order to exploit them in creating opportunities If they occur.

Those managers with proactive approaches not only function under critical condition and don’t try to adapt it, but also adopt the conditions with their goals and objectives and act leading. Such managers have the ability to turn crises into opportunities. This approach takes into consideration crisis management and all its stages before, during and after occurrence.

**The Role of Transport in Crisis Situations**

Transportation or movement of people and goods from one point to another, is an ancient and enduring features of human nature. Movement, in primitive societies to the basic form was regarded as the most basic daily requirements and a certain amount of movement was required to take place for the production or handling of any product from production to consume place to deliver needed goods to consumers.

Main and the same time old needs of transportation motivations is the needs of human beings, because the uneven distribution of production resources, uneven distribution of useable land and a steady increase in population in earth surface, have been identified as three main factors in the human movement. The three main factors which are actually a sign of spatial differences in surface are main encouragement of human transport throughout history, and regarded as the founder of the business transaction.

**Basic Principles of Transport in Crisis Situations**

1. The purpose principle: namely, passenger and cargo must be unloaded safely on target
2. The principle of self-reliance (autonomy): the creation of self-transportation system (maintenance and fuel)
3. Principle of Preparation: transportation readiness for service (at any time and place and with sufficient capacity), for rescue and relief operations in crisis situations
4. Planning principle: as semi-centralized and decentralized run.
5. The inhibition principle: means the reduction of injuries (passengers, injured and cargo) and limitation of the damage by applying necessary measures and appropriate equipments.
6. Observe the multi-purpose principle (flexibility): the transport systems ability to perform various transport activities including (Getting injured person, handling manpower, facilities, equipment, consumer products, pharmaceutical, food and other items).
7. The savings principle: in fuel, repairs and reduce unnecessary transfers
8. The speed principle: increase transport speed
9. The accuracy principle: the accuracy of the movement of goods and passengers
10. The timely and timeliness principle: movement of goods and passengers on scheduled time and place and under the effective and appropriate circumstances.
11. The principle of creativity and innovation: All actors and factors involved in the transportation should implement required effort property in Crisis situations and according to lack of deficiencies, facility gap and governing abnormalities on region and possible loss of roads and transport networks, by creating an appropriate and initiative plan to achieve the ultimate goal. It is worth noting that this requires education and training of human resources (managers and operational staff) in the transport sector and repeated exercise.

12. Altogether principle observes and combined transport of goods.

Policies Affecting Transport (in crisis situations)

Transportation management (in crisis), should implement their planning, predictions and performance directing to control transport fleet, according to the following frameworks:

1. Set of policies, strategies and outlook of the transportation in crisis situation (as great), in preparation step
2. Setting transport goals, missions and functions in the crisis in the preparation step
3. Organization of committees, groups and hierarchical operational teams (A combination of public and private transport), under the structure framework and organization logistics within the single transport management at different levels (national, provincial, regional and municipal), in preparation step
4. Identification and Evaluation (Calamities, accidents and disasters) and predict the occurrence and effects in the different parts of the country as well as planning and necessary policy adoption (as professional in macro policy framework), in preparation step
5. Preparing and charts setting, maps, timelines, navigation tools, and other similar information, step of readiness
6. The study and survey (vehicles, machinery, equipment and tools) of transportation, driver conditions and necessary planning to determine and provide the necessary capacity, in preparation step
7. Reviews stations situation and bases and consumer financing, including (Terminals, ports, airports, rail stations and other critical areas, loading and unloading in crisis areas), In terms of capacity, facilities, accommodations, current status (percentage of utilization) and anticipate of other used parts in the preparation step and after the occurrence
8. Check the status (roads, highways, bridges, tunnels, underpasses and related facilities) and estimate (estimate) the amount of damage or obstruction of streets and forecast facilities needed to maintain readiness, after the occurrence
9. Identify sources of transport (public and private), In the preparation step
10. Forecasting systems for communication and transport control, in preparation step and deployment of intelligent transportation systems for more effective rescue and relief in the crisis, through effective coordination and control
11. Predict and provide specialized machinery and vehicles needed in disaster areas (for example: water square installation to exploit fire-fighting vehicles), in the preparation step and after the occurrence

Road Transportation Resource

These resources are divided into four categories of: public, private, commercial and institutional.

Functional Components of Transportation Management in Crisis Situations

In line with the proposed materials and transport activity diagram in crisis situation, transportation management is categorized into the following task / function subdivision to rescue properly and efficiently:

1. Manage the evacuation of affected areas
2. Management of transport support (in logistics department)
3. Management of emergency response (in emergency department, fire department, etc.)
4. Information Management and Communication in the transport sector

Based on the above two issues in our field, we are faced with two politics (movement of goods and passengers) and transportation planning, that include followings.

Distribution of Goods and Passenger Transportation Policy

The distribution of goods and passenger transportation policy and planning, has direct relation and is intimately associated with various factors, including regional conditions, the severity of the crisis, the extent and urgency of the needs, conditions of storage (Geographical location, capacity, strategic
location, the diversity and amount of deposits), the rate of consumption, government policies, aid (national, community and international), allocated budget, situation (weather, roads and transport arteries) of region and country, State rescue fleet in the transportation sector, automotive condition and handling equipment and the level of transportation fleet cooperation with the private sector, public and government sector and apply appropriate policies and requirements of the transport sector, and status of air transportation and other factors.

Transport Planning

Basically, the movement of goods and people in crisis requires essential foresight and planning and proper, efficient, and wise planning result in transportation missions implementation in terms of principles (speed, accuracy, safety, and timeliness) of the movement of goods and passengers. In this regard, it is necessary for transport management to apply following options with high-precision and skill: Before the crisis- after the crisis

Previous Research

• Frank and colleagues provide a model for responding to disasters in temporary conditions. They have proposed how to prioritize solutions to enable a dynamic and active process in countering crises arise in organizations. They also attempted to provide a model for reaction coordination in disaster response (Frank, J, 2010).
• Masys attempted to explain the accidents and disasters, and how to deal with unpredictable situations and causes of the crisis by studying accidents and disasters (Masys, A. J, 2012).
• Momany has studied events after the earthquake by considering the decision-making processes. He has developed an integrated framework for managing the results obtained after the earthquake. This framework includes results model, value analysis and economic-social analysis (Momani, N. M, 2012).
• Lambert and colleagues attempted to predict the established load on vital and non-vital arteries within the city in times of crisis (microbial bombing) (Lambert, J. H, 2013).
• Tatham and Sepanse have attempted to develop knowledge management body to support the logistical response to natural disasters and man-made actions by providing a conceptual model and relevant classification. They first recognized problems in the area of the logistic reaction and the model (SCOR) and (LOD), then integrated these two models and developed an approach for NGO’s use in disaster (Tatham, P, 2011).
• Parlak and colleagues provide about how they react in microbial attacks (in different location: home, work place, and synchronized traffic) as well as multi-criteria decision-making methods to prioritize performance measures in each of the different scenarios (Parlak, A. I, 2012).
• Gunderson and et al have identified five relevant behavioral factors that can help people after such disasters (Gunderson, J, 2012).
• Gismondi and his et al Huisman have provided a self-method for assessing the behavioral differences at any time after the earthquake (Gismondi, M, Huisman, O, 2012).

Using GIS for Crisis Management

Earthquake is inevitable disaster that in the event, create countless damages and problems for the economy, environment and human life. Therefore, earthquake disaster management seems imperative. Because most of the data associated with the earthquake and its effects are spatial, reference of Geographic Information System GIS can be used to form a system of effective crisis management. So in the bus company, GIS modeling plays an important role to reduce the damage caused by the earthquake crisis. It uses the high power of modeling in GIS environment, a series of models are designed and built that can involve earthquake zoning laws in urban planning, especially in the bus transport network. Using analysis and tools in the GIS environment can identify most disaster-prone areas in the event of an earthquake disaster in headquarters, regional and bus company systems and take action to improve it. In other words, the GIS should be considered as an important opportunity to improve the decision-making process.

Figure 1: Management model based on GIS
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CRISIS MANAGEMENT FEATURES IN THE BUS ORGANIZATION

The First Step- The Face with Crisis

Deal with the crisis, is addressing any action that is necessary to reduce the damage and losses caused by the crisis. Some organizations have already attempted to develop a crisis management plan (CRISIS MANAGEMENT PLAN = CMP) that gives administrators the ability to desired response.

The Second Step- The Sense of Crisis

The main objective of sense, is finding the early danger signs of a potential crisis. In fact, this step is considering internal and external in bus organization. In other word, exact public environment study and detect of alarming trends that may threaten the bus organization, somehow can be achieved by analysis of strengths and weaknesses, opportunities and threats (STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS = SWOT). So in this case there is a good chance that will enable us to identify signs of it in the bus organization that warn news of the crisis in advance. Although the science of crisis prediction is not an exact crisis, it should be considered as an essential part of disaster planning in agencies.

Third Step- Intervention and Operation

Early signs of risk are so bright that you cannot ignore, therefore, managers may be forced to intervene. Review of these symptoms, consult with experts and assessment of all relevant factors to risk is important for managers to ensure that signs do not cause the crisis.

Forth Step– Reflexity

After checking a crisis through the face of it, crisis management need for a break (recuperation) for compensation of mental fatigue caused by this stress. However, this lag or break should not be too long. This break is an opportunity for crisis manager to find the best answer for the following questions:
1. What and how it happened?
2. What is the cause of this event?
3. Why this happened in this form?

Fifth Step- Modernization Program

If crisis management do not believe in to the principle of continuous improvement, rethinking absorb their attention to the analysis of organizational readiness in crisis. Hence the re-modernization approach is carried out as the next logical step after rethinking. If there is no crisis management plan, it should be added to the toolbox manager. Some ardent opponent of the organization may, before the crisis, insist on the introduction of a formal crisis management plan. Crisis management plan requires updates and changes should immediately be informed to all staff involved in the program of organization crisis management.

Sixth Step- Final Steps

The bus company has a crisis management plan that implements its program and alerts all members of the crisis management team, in other words, all sources of support (aid) including organization personnel and the equipment should be in standby mode. (Hellsloot, i.2007)

DEVELOPED MODEL OF CRISIS MANAGEMENT

Based on a review of literature and previous findings, and applying some specific variables of Tehran's city and Bus Company of this city, Crisis management model is drawn based on Figure 3.

![Figure 3: Conceptual Model of Crisis Management in Bus Company](image-url)

Based on the above model, the process of crisis management in Bus Company is done during four steps. Also, in order to assess the crisis management process based on the above model, we have 17 indexes as follows:
Table 1: Evaluation indexes of crisis management in Bus Company

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<tr>
<th>Human Factors</th>
<th>Fleet Logistical factors</th>
<th>Crisis Management in the Tehran Bus Company</th>
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<td>Organizational Commitment</td>
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<td>Individual experience and behavior of employees</td>
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<td>Citizens’ behavior</td>
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<td>Employee Performance</td>
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<td>Psychological readiness</td>
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<td>Physical condition of the fleet</td>
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<td>Access to firefighting equipment</td>
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<td>Anticipated emergency exits on buses</td>
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<td>Strategic planning, crisis</td>
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<td>Relevant training</td>
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<td>Citizens Insurance</td>
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<td>The crisis in forecasting and applications</td>
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<td>Status of repair shops</td>
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