



# Developing a conceptual framework for HRM measures in crisis using ISM Methodology

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## ABSTRACT

The recent crisis for HRM, as the business partner model, has been identified as an opportunity, and the HRM managers should use the recession and prove their capacity for making sound strategic decisions. However, in the face of crisis, these managers have in practice focused on a set of short-term measures aimed at retrenchment strategy, which will have long-term negative effects on the employees, corporate sustainability and competitiveness. Therefore, assuming crisis to be a natural part of a business, this research seeks to develop a model of HRM measures with a strategic approach that enhances effectiveness and minimizes the negative effects of the measures. Reviewing the literature, we identified the effective measures to deal with crises, and due to the influence of cultural and structural factors on the measures, we performed a survey of the senior managers of 87 industrial enterprises so as to get an accurate recognition and interpretation of the measures. The results of the first step were presented to a group consisting of 7 experts and beneficiaries in order to perform a ranking of the set of measures with strategic approach and consideration of the effects of the measures on one another using the interpretive structural modeling method. The final model presented the measures in seven levels to deal with the crisis, namely: Soft measures, Strategic and Hard (Reduction) measures.

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## Introduction

Studies have shown that the crises of the 1980s and 1990s have not changed the HRM models, and the role and status of HRM in companies, especially in making major and influential decisions has not significantly increased or decreased. In other words, the economic downturn caused by crises has created no opportunity for the human resource managers to have more impact on the changes and structuring of the organization [1] [2]. However, the recent have identified the recent crisis as an opportunity for human resource management- as the business partner model, and pointed out that the human resource managers should make use of recession and show their capacity in accurate strategic decision-making [3] [4].

However, empirical evidence shows that although HRM has found in recession and economic crisis the opportunity to influence the strategic decisions, it has in practice been involved in a set of different measures, which are mainly short-term and of the Hard and Reduction measures type [5]. The main reason for that is striving to survive in the short-term and avoiding the bankruptcy threat. By so doing, companies endanger their future because of the irrational reduction of their valuable assets (human capital=innovation factor) [6]. However, executive managers should notice that recession and economic crisis is to be assumed as a natural part of a business cycle, which will not last for good. Therefore, managers are required to respond to economic recession and simultaneously plan for economic recovery [3].

Therefore, in times of economic crisis, human resource managers need to employ a set of measures based on the strategic outlook, which maintain and enhance the competitiveness and sustainability of the company on the one

hand, and support the retrenchment strategy so as to pass the storm and reduce its negative effects on the other. This study seeks to present a model of measures including Hard (Reduction), soft (Stimulating) and Strategic measures in order to reach the above-mentioned purpose.

## Literature Review

Human resource managers are expected to make more efforts in times of crisis than in normal conditions, and play a rational and active role in turning the crisis into opportunities [7]. Roche and Teague [8] concluded in their recent study that due to economic crises, human resource managers have been able to influence organizational decision-making. This situation is mainly a result of the company's dependence on their knowledge and expertise for designing and implementing retrenchment programs and directing the company to pass the economic recession storm. However, these researchers believe that the human resource managers' role is limited to developing and implementing short-term measures in order to maintain the status of the company, and assert that "recession has not in practice provided the human resource managers with an opportunity to influence the future of the company and they preserve their role in the organizational life skillfully by applying practical adjustments".

In order to influence retrenchment strategy in economic crisis and recession, human resource managers apply a set of reduction measures. The threatening effects of crises are communication reduction, power centralization and attention directed toward the concepts of efficiency and reduction of expenses, which will lead to maintaining the interests and inflexible organizational behavior [9].

Daveni [10] and Cameron et al. [11] reported the negative consequences of the application of the reduction strategy, corporate downsizing and lack of flexibility observed in companies (loss of confidence reduction of innovation and creativity an increase in the conflicts in the working environment and so on).

Shen and Dnetto [3] studied the impact of the 2007-09 global economic crisis on human resource management among Chinese export-oriented enterprises. Their findings revealed that retrenchment strategy is the most common strategy contributing significantly to the company's sustainability and competitiveness in the long-term. To implement this strategy, a set of measures including stopping employment, using temporary staff, having flexible working hours and continuing the work contracts without revision of its provisions have been taken. Moreover, precise tools for assessing performance and performance-based bonuses were used to increase productivity, but they strongly influence the employees' motivation and desires. They are pragmatic tools without a long-term outlook due to lack of trust in the economic recovery. Mishra revealed in a study that decentralization in decision-making, undistorted communication and collaboration among the organizations in crisis by building trust will have a positive relationship with organizational performance. Teague et al. [13] called the measures related to reduction strategy "Hard Measures", the negative effects of which are modified through Soft Measures (Mishra's Study). Then, following their study of the human resource managers' measures in crisis in Ireland they asked the respondents to rank the measures, and recognized communication and disclosure of information as the most effective measures. However, only few companies had practiced these measures. The second effective measure was attempting to enhance efficiency and take cost control measures in the company. These measures include reviewing the remuneration policies to ensure that they can afford the projects costs and implementing cost-reduction projects in terms of wages, salary retirement, and additional benefits.

"Companies need to try hard to balance the hard and soft aspects of HRM in response to the crisis they have confronted. The hard aspects, which arise due to the processes and changes of the system, are justified and modified through creating motivation and preserving the staff (medium-term soft measures)" [13].

According to the studies conducted by the Bostan Consulting Group and the European Association [14], there are two (short-term and long-term) strategies for the companies subject to crisis. In the first approach, companies will recover after the crisis and will return to their previous income level fast. Such an approach involves taking flexible measures based on reducing the reversible costs (reduction of temporary staff elimination of overtime pay, reduction of the working hours, and reliance on differing pay arrangements). In the second approach, companies are not expected to reach their previous level of income growth in the short-term and even in the medium-term. These companies keep sinking in the water whereas the other companies have returned to the surface. Such an approach involves measures such as restructuring, reduction and closure of some units. Thus the overall conclusion is that according to studies, the chief executive managers are required to employ a set of measures in such a way that:

1. Company's sustainability in the current conditions (by reducing the costs and increasing the productivity and efficiency of human resources) and competitiveness in future (through maintaining flexibility) can be simultaneously maintained.

2. The negative effects of the hard measures (due to the retrenchment strategy) can be justified through the soft measures.

3. It becomes possible to use the crisis as an opportunity and to create sustainable competitive advantage through a strategic perspective.

Reviewing the researched done, we identified the efficient measures with such interpretations that can support the three mentioned points, as shown in Interpretive Structural Modeling (ISM):

ISM can be classified under the systematic knowledge methods. Introduced by Warfield, this method is an interactive learning process in which a set of different and related elements are structured in a comprehensive systematic model. In fact, due to the limitations of the human mind in analyzing the complex problems, this method makes use of paired comparisons and transitive logic in order to build a visual mapping of the problem and thus combines the concepts. ISM can also prioritize and determine the level of the elements of a system, which helps managers to use the designed model in a better way [18]. The ISM model used in this study is a combination of the plan structure type (the relationship among the measures) and the priority structure (prioritizing the measures) [19].

To use this method, a group of 7 people, including 3 scholars and experts in management, beneficiaries (senior managers of three industrial companies) and one facilitator was formed. Since the previous studies have suggested that the impact of economic crises on HRM is mediated and adjusted by culture and organizational factors [20] in order to reduce the possibility of diversion in the implementation of ISM (due to the limitations of the method including its reliance on the experts' judgments, not giving weight to the variables), the first step was done before using the ISM methodology in order to know how the domestic companies deal with the crises and to interpret the variables more accurately and favorably:

#### **Step 1 of the research:**

In order to identify the strategic measures that human resource managers find effective in addressing crises, we designed a questionnaire based on the 14 efficient measures recommended and distributed it during Fall 1392 along with the strategic thinking questionnaire (which is a reliable and valid tool for evaluating the cognitive skills related to strategic thinking and assessing the flexible, conceptual and strategic thinking) among 87 senior executive managers of the industrial companies of Alborz Industrial City (1. that had autonomy of decision-making and independence from the governmental and public institutions; 2. that had experienced crisis/economic recession; 3. that had over 50 personnel). The goal of the first step is to identify measures prioritized by the senior executive managers with strategic thinking. An assessment of the effectiveness and impact of each measure on employee commitment is the second goal of the first step.

Step 2: Results of Step 1 were presented to the 7-people group in order for the ISM to be applied based on the consensus rule (the number of the group members has been recommended to be fewer than 8 people) [18]. For this purpose, the following steps are followed [22]:

#### **Determining the variables associated with the issue:**

For this purpose the group reviewed 14 efficient measures identified in the research literature and results of Step 1, and obtained a common operational concept for each measure on the basis of the sub-measures in Table 1 to do the next stages.

Obtaining structural self-interaction matrix (SSIM):

This matrix is a matrix of variables dimensions in the row and column of which the variables are included respectively, then the relations between the variables are specified by certain symbols. For this purpose the group were asked to specify the connection type of the measures based on Table 1 and by use of the symbols presented (V,A,X,O). The participants' responses in the group were delivered to the facilitator in the form of "Yes" or "No" and a vote of retention (relative majority) in case of disagreement. Then the completed questionnaires were presented in the form of SSIM matrix as shown in Table 2. Obtaining the Reachability Matrix and making it consistent:

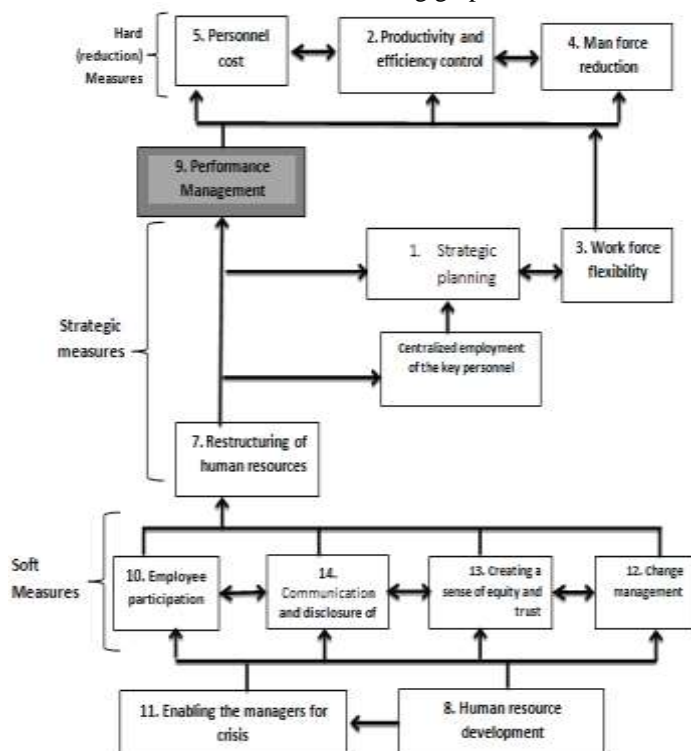
First the primary reachability matrix results from the conversion of the structural self-interaction matrix into a two-valued matrix (zero-one). In the next step, the group is given an opportunity to eliminate the consistency in the reachability matrix and make it consistent since ISM is a learning process in which the individuals' perceptions may change during the process and as a result of discussions or new information and they may wish to revise the decision that they made in the primary sessions or at the beginning of the session [18]. Appendix 1.

#### Determining the level and priorities of the variables

In order to determine the level and priorities of the variables (the suggested measures), the reachability set and prerequisite set are specified for each variable, their common elements are extracted and the levels of the variables are then determined. In the first table, a variable with the same set of reachability and common elements has the highest level. After these variables are determined, they are omitted from the table, and this process will go on until the level of all variables is specified [22]. In this study, seven levels for the suggested measure were determined in six stages.

#### Drawing the Model

After determining the level of the variables, one can draw them in the form of a model. For this purpose, the variables are first set from up to down in terms of their level. The specified hierarchical model is like the following graph::



#### MICMAC Analysis

In this analysis, the suggested measures were classified in four categories. The purpose of this classification was analyzing

the Driving Power and Dependence Power of the measures. The first category (low driving power and low dependence power, the first area- autonomous measures) has little relationship with the system although this relationship can be very strong [23]. In the present research, "performance management" lies in this category. It can be said that this measure is the turning point of the model in transition from the Soft and Strategic level into the Hard and Reduction level. Studies have found that the most effective reduction measures are based on the individuals' performance [3], [14], which requires a performance management that uses justifiable performance evaluation tools accepted by all and used to create competitive advantage.

The second category (low driving power and high dependence – the second area – result measures) has low effect but high dependence on the system. Some of the measures in this category are productivity control, personnel cost management, man force reduction, work force flexibility, and centralized employment of the key personnel.

The third category (high driving power and high dependence power-the third area-linking measures) includes measures which affect the other measures and are affected by the feedback of the system [23]. No measure has been placed in this category in this research.

The fourth category (high driving power and low dependence-the fourth area, independent or determining measures) are considered the inputs of the system and are very essential. They can affect the system due to their amount of control on them. In this category, measures (mainly consisting of Soft measures) such as human resource development empowerment of managers for crisis, communication and disclosure of information, creating a sense of equity and trust, change management, and employee participation and counseling are placed in this category.

#### Conclusion

As a result of the controversy over the organizational role of HRM in crisis [8], there rises a challenge between the short-term outlook and the long-term outlook. However, studies supporting strategic thinking in the face of crises have introduced the reduction (Hard) measures as the most effective measures in the first place or second to the Soft measures [8]. The model presented in this research is the outcome of a combination of three approaches (1. Preparation for crisis and acceleration of the company's consistency with it, 2. Strategic approach; using crisis as an opportunity, 3. Reduction of the negative effects of the reduction measures. Accordingly, some points are made in the following way:

- Crisis is a natural part of the cycle of a business [3]. This research, in agreement with Fu and Shi [15], has regarded human resource development and empowerment of managers for crisis as two measures that prove efficient when taken prior to crisis. One may expect that companies with such thinking are able to pass the levels of soft and strategic measures more rapidly and make themselves consistent with the crisis and achieve competitive advantage.

- Soft measures [13] include 6 measures in this study (graph 1), which pursue two goals: 1. Reducing the negative effects of taking the reduction measures [13] 2. Taking measures which support the strategic perspective and use of crisis as an opportunity.

- Strategic measures includes 5 measures (Graph 1) which have the following goals based on the definition given in Table 1. 1. Maintaining the company's competitive power in future,

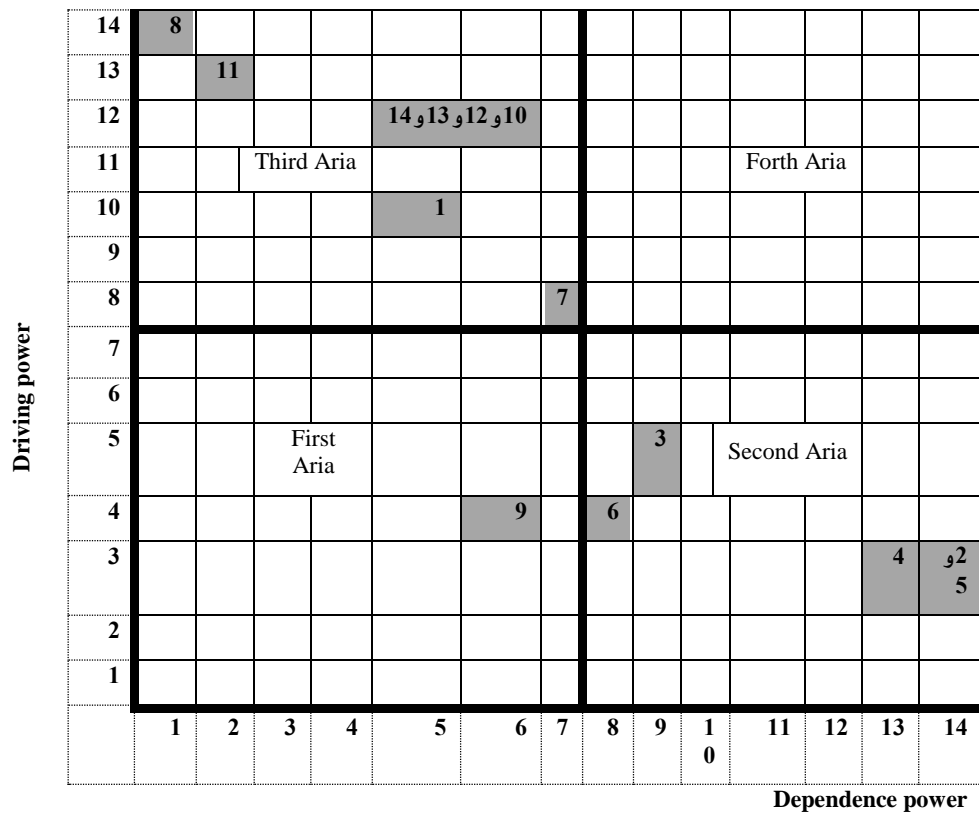
**Table 1. The suggested measures of human resource management to deal with crises**

Domain of action	Suggested measures	description	studies
Strategic planning (an outlook beyond the primary necessary measures)	Man force strategic planning	Linking man force planning with the company's business strategy via the scenarios of job group supply and demand (predicting shortages for transfers), analysis of the workforce in terms of the job skills needed in future, making HR involved in the company's commercial decisions, cooperation of HD leadership with the goals of the company	[13][14][15]
	Controlling productivity and efficiency	Using a new criterion for measuring productivity such as the value added-five marking- noticing the output elements for measuring productivity- evaluating the bonus policies to make sure that they are economical- sense of responsibility among all the colleagues	[13][14]
Work force matching	Workforce flexibility	Flexible policy is against the policy of reducing workforce which may be difficult and costly. Reducing overtime and working hours , using tools that allows the employees to save the time for future use- turning the part-time staff into full-time staff	[13][14][16][17]
	Man force reduction	Adjusting workforce size with the economic environment with regard to the predicted job group for companies which are in recession and long-term reduction trend	[14]
	Personnel cost management	Optimizing personnel cost programs by changing the monetary motives into non-monetary motives – renegotiating about the contracts- postponed payment	[13] [14] [15]
	Centralized employment of the key personnel	Using high-rank candidates for important managerial jobs	[14][3]
Improvement of human resources and management	Restructuring of the human resource of the organization	Evaluating all the activities of HR thoroughly by classifying the activities, optimizing the control processes and tools- omitting the unnecessary tasks- revising the processes team work- having several skills and tasks - less official management	[13][14][16][17]
	Human resource development	Emphasizing the importance of training- talent management- training for becoming multi-skilled and filling the vacant jobs- reducing the wastes through retraining- strategy of keeping the key staff	[13][15][3]
	Performance management	Determining performance criteria for the new environment through limiting the short-term outlook and making the long-term outlook dominant- all work harder- clarifying the standards- determining the goals and expectations- team work and internalizing the control	[13][14][15]
Sustainable application (reflecting the organizational culture)	Employee participation and counseling	Focusing on values such as honesty trust, sympathy, and using initiatives to balance discipline and motivation. When the instrumental motivations are not found, discipline becomes very important , involving the staff in decision-making, saving	[13][14]
	Enabling the managers for crisis (preparing them for the stormy weather)	Directing the managers to direct attention to crisis – goal: preventing from unconscious transmission of doubts and managers' distrust in the staff – training the managers to know what they should expect- developing more responsibility for the operational managers	[13][14]
	Change management	Creating desired supports by specifying the responsibilities , clarifying the responsibilities and asking for feedback from the staff – presenting a precise and sustainable program- determining criteria and pursuing them and the important stages – transferring the achievements and reforms to the staff to give them confidence regarding the future – creating communication channel of the commands and goals	[14]
Management's relation with the staff	Creating a sense of equity and trust	Creating a sense of justice- focusing on the fair methods. Supporting the staff while reducing manforce. Ensuring that the problems of crisis and its sufferings will be favorably shared among the staff.	[13][3]
	Communicative and disclosure of information	Developing clear communicative strategies for the chief executive management to be able to show and justify the relationship between values and decisions, goals and criteria – individual-to-individual communication- direct communication of the HR managers with the staff- free communication	[13][14][3]

**Table 2. Structural Self-Interaction Matrix (SSIM)**

[illegible]

Level	Common Elements	Prerequisite Set (Input)	Accessibility Set (Output)	Variables
5	1,3	1,2,3,4,5	1,3,6,7,8,10,11,12,13,14	1
7	2,4,5	1,2,3,4,5,6,7,8,9,10,11,12,13,14	2,4,5	2
5	1,3	1,3,7,8,10,11,12,13,14	1,2,3,4,5	3
7	2,4,5	1,2,3,4,5,7,8,9,10,11,12,13,14	2,4,5	4
7	2,4,5	1,2,3,4,5,6,7,8,9,10,11,12,13,14	2,4,5	5
4	6	6,7,8,10,11,12,13,14	1,2,5,6	6
3	7	7,8,10,11,12,13,14	1,2,3,4,5,6,7,9	7
1	8	8	1,2,3,4,5,6,7,8,9,10,11,12,13,14	8
6	9	7,8,9,10,11,12	2,4,5,9	9
2	10,12,13,14	8,10,11,12,13,14	1,2,3,4,5,6,7,9,10,12,13,14	10
1	11	8,11	1,2,3,4,5,6,7,9,10,11,12,13,14	11
2	10,12,13,14	8,10,11,12,13,14	1,2,3,4,5,6,7,9,10,12,13,14	12
2	10,12,13,14	8,10,11,12,13,14	1,2,3,4,5,6,7,9,10,12,13,14	13
2	10,12,13,14	8,10,11,12,13,14	1,2,3,4,5,6,7,9,10,12,13,14	14





2. Making it possible to use crisis as an opportunity, as Dickel [24] states about large companies," they have tendency to invest on crisis and employ talented and competent employees from the companies with problems").

Hard measures (reduction reforms) consist of three measures the effectiveness of which obtains when they are based on performance management [14]. Different studies have suggested that in the face of crisis and following the retrenchment strategy, companies rapidly prioritize reduction measures. It was shown in this study that for the negative effects of the hard measures, one should make decisions regarding the measures after passing the previous stages (human development, soft measures and performance management).

## References

- 1-Legge, Karen. "Personnel management in recession and recovery: a comparative analysis of what the surveys say." *Personnel Review* 17, no. 2 (1988): 2-72.
- 2-Jacoby, Sanford M. "Are career jobs headed for extinction?." *California Management Review* 42, no. 1 (1999).
- 3-Shen, Jie, and Brian D'Netto. "Impact of the 2007–09 global economic crisis on human resource management among Chinese export-oriented enterprises." *Asia Pacific Business Review* 18, no. 1 (2012): 45-64.
- 4-Cooper, C. "The recession could be the making of HR." *HRM Magazine* 3 (2009).
- 5-Roche, William K., and Paul Teague. "Business partners and working the pumps: Human resource managers in the recession." *Human Relations* 65, no. 10 (2012): 1333-1358.
- 6-Fodor, Péter, and József Poór. "The Impact of the Economic and Financial Crisis on HRM and Knowledge-Management in Hungary and Slovakia-Empirical Research." *Acta Polytechnica Hungarica* 6, no. 3 (2009).
- 7-Sendogdu, A. A., Karaman, A., Unal, A. "The Application Of The Human Resources Management In The Global Crisis Period: A Field Research", Clute Institute International Conference, Rome Italy, (2012)
- 8-Roche, William K., and Paul Teague. "Business partners and working the pumps: Human resource managers in the recession." *Human Relations* 65, no. 10 (2012): 1333-1358.
- 9-Staw, Barry M., Lance E. Sandelands, and Jane E. Dutton. "Threat rigidity effects in organizational behavior: A multilevel analysis." *Administrative science quarterly* (1981): 501-524.
- 10- D'aveni, Richard A. "The aftermath of organizational decline: A longitudinal study of the strategic and managerial characteristics of declining firms." *Academy of Management Journal* 32, no. 3 (1989): 577-605.
- 11- Cameron, Kim S., Myung U. Kim, and David A. Whetten. "Organizational effects of decline and turbulence." *Administrative Science Quarterly* (1987): 222-240.

12- Mishra, Aneil K. "Organizational responses to crisis: The centrality of trust." *Trust in organizations: Frontiers of theory and research* (1996): 261-87.

13- Teague, Paul, Anne Coughlan, and Majella Fahy. *Human resources in the recession: managing and representing people at work in Ireland*. Stationery Office, 2011.

14- Strack, Rainer, Jean-Michel Caye, Rudolf Thurner, and Pieter Haen. "Creating People Advantage in Times of Crisis: How to Address HR Challenges in the Recession." Report for People Management, Düsseldorf, BCG/EAPM, The Boston Consulting Group and the European Association (2009).

15- FU, D., & SHI, M. "The Researches on Enterprise Human Resources Management in Economic Crisis". (2010).

16- Zhu, Ying. "The Asian crisis and the implications for human resource management in Vietnam." *The International Journal of Human Resource Management* 16, no. 7 (2005): 1261-1276.

17- Sett, P. K. "Human resource management and firm level restructuring: the South Asian drama." *Research and Practice in Human Resource Management* 12, no. 1 (2004): 1-33.

18- Janes, F. R. "Interpretive structural modeling: a methodology for structuring complex issues." *Transactions of the Institute of Measurement and Control* 10, no. 3 (1988): 145-154.

19- Warfield, John N. "Interpretive structural modeling." *Group planning and problem-solving methods in engineering*. New York: Wiley (1982): 155-201.

20- Rowley, Chris, and Malcolm Warner. "The Asian financial crisis: the impact on human resource management." *International studies of management and organization* 34, no. 1 (2004): 3-9.

21- Pisapia, J., and D. Reyes-Guerra. "The strategic thinking questionnaire (STQ)." *Defray Beach, FL: Strategic Leadership International* (2007).

22- Singh, M. D., and R. Kant. "Knowledge management barriers: an interpretive structural modeling approach." *International Journal of Management Science and Engineering Management* 3, no. 2 (2008): 141-150.

23- Khurana, M. K., P. K. Mishra, R. A. J. E. E. V. Jain, and A. R. Singh. "Modeling of information sharing enablers for building trust in Indian manufacturing industry: An Integrated ISM and Fuzzy MICMAC Approach." *International Journal of Engineering Science and Technology* 2, no. 6 (2010): 1651-1669.

24. Dickel, T. Handling large-scale recruitment. *China staff*, no. 15