European Journal of Business and Management ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online) Vol.7, No.9, 2015



# Modeling Drivers of Political Risk in Offshore Outsourcing

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## Abstract

Offshore outsourcing presents many opportunities that are not available domestically. Lower labor costs are the primary driver, but companies also want to focus on their core businesses and create value for their shareholders. Recently, companies even move beyond non-strategic functions into important operational and strategic functions. Smart companies have gained strategic advantage by offshoring processes. Many risks involve in offshore outsourcing of professional services because on behalf of client organization service provider provides services. Political instability in offshore destinations is one of the risks related to offshore outsourcing. Political risks are very volatile and also often more difficult to observe, so they may go unnoticed. Terrorism, Fiscal & Monetary policies, and Corruption are obvious problems that complicate offshore process management. The main objective of this paper is to identify and understand the mutual interaction among various drivers of political risk which affects the performance of offshore outsourcing. To this effect, authors have identified various drivers through extant review of literature. From this information, an integrated model using interpretive structural modeling (ISM) for drivers of political risk in offshore outsourcing is developed and the structural relationships between these drivers are modeled. Further, MICMAC analysis is done to analyze the independent power and dependency of drivers which shall be helpful to managers to identify and classify important criterions and to reveal the direct and indirect effects of each criterion of political environment on offshore outsourcing. Results show that Domestic policies of host country, Civil war, Terrorism and Human resource availability are act as independent drivers

Keywords: Political risk, offshore outsourcing, interpretive structural modeling, MICMAC analysis

## 1. Introduction

Offshore outsourcing presents many opportunities that are not available domestically (Ellram et al. 2008). The outsourced activity could either be the manufacturing of a good or the performance of a service, Outsourcing to third party firms based in other countries is commonly referred to as offshore outsourcing (Varadarajan, 2009). According to (Mankiw & Swagel, 2006) outsourcing is just a new way of doing international trade and we're very used to goods being produced abroad and being shipped here on ships, what we're not used to is services being produced offshore and being sent here over the Internet or telephone wires. Attractive reasons for offshore outsourcing are low cost, availability of experts of domain field, follow the sun etc. Lower labor costs are the primary driver, but companies also want to focus on their core businesses and create value for their shareholders. Recently, companies even move beyond non-strategic functions into important operational and strategic functions (Laura & Ray, 2004). Smart companies have gained strategic advantage by offshoring processes (Aron & Singh, 2005). One of the main reasons is phenomenal development related to Electronics and Communication Engineering. Due to increasing globalization, firms strive to develop service capabilities and flexibilities by engaging in outsourcing activities and adopting modular systems (Kumar et al., 2014).

However, offshore outsourcing is more risky than domestic outsourcing, due to the lack of vendor's information, managerial difficulties, political or economical uncertainty, and the cost of knowledge transfer in a culturally different environment, and further adding the costs of stolen intellectual property, the challenge become greater (Jiang et al., 2007). Political risk includes geopolitical risks, sovereign risk, or exchange rate risk etc. and these are the risks associated with different regions with their different sociopolitical systems and different historical contexts (Aron et al., 2005). Political risk is where a country's policies or situation will become unsupportive of nature and negatively affect an institution's profits (Currie et al., 2008; Tjader et al, 2010). Subjective views of governments create challenges to resolve issues. Political uncertainty in developing

countries is generally considered a risk that raises transaction costs (Wright, 2005; Stratman, 2008). The choice between licensing, service-only subcontracting and conventional foreign direct investment also depends on other factors identified in international business theory, including the political risks of expropriation (Casson, 2013). Emerging economies are also more risky due to uncertain economic and political systems, and inadequate institutional support (Gaur & Kumar, 2009). Sometimes relations between nations are affect the International business scenarios between companies which are belong to these nations. Political instability in offshore destinations is one of the risks special to offshore outsourcing (Nakatsu & Iacovou, 2009). (Hahn & Bunyaratavej, 2010) considered the possibility for firms to prefer their business in relatively more stable political environment. Unexpected supply chain disruptions can further aggravate longer lead times, higher delivery variability, the higher incidence of fees and taxation, and the need for expediting operations and these disruptions occur due to different sources of risks such as political, economic, governmental, and quality related issues (Kusaba & Moser, 2011). Problems with infrastructure or political stability can make operations in other countries a greater failure risk (Cappelli, 2011). Risk should include several dimensions such as political, ecological, economic/ financial, and technological, that can potentially have an adverse effect on the establishment of new and ongoing operations of Multinational firms (Sambharya & Rasheed, 2012). According to (Wu & Olson, 2013) even financial risks are also influenced by political risks. The political unrest stemming from a state of emergency deterred businesses from setting up operations in such countries (Bhattacharyya et al., 2010). Differences in cultural, economic, political, and legal variables are likely to affect international projects and offer much scope for future research (Prasad & Babbar, 2000).

During the last decade, enormous research has been done in the offshore outsourcing specifically for Political risk mitigation e.g. Doh, (2005) suggested that international labor and environmental standards and corporate codes of conduct could mitigate some of the most intense concerns raised about offshoring. Mathew & Chen, (2013) focused on three major modes of relational norms: norm of flexibility, norm of solidarity and norm of information exchange for achieving offshore software development success, thus mitigating the risks involved. The resource dependency framework is used to address strategic and marketing issues, but the concept applies equally well to the political risk environment (Iankova & Katz, 2003). (Hosseini, 2005) developed behavioral economics based model for foreign investment decision. A structural equation modeling approach was employed to analyze respondents' foreign direct investment intention while regarding Political factor, Infrastructure factor, Cost factor and Market factor (Lu & Yang, 2007). (Bhattacharyya et al., 2010) uses seven third-party indices to gauge a country's internal environment and map those indices to corresponding country-specific operational risks. (Altay & Ramirez, 2010) suggest a supply chain-wide mitigation strategy to better understand disaster impact on business. The message from economists that offshore outsourcing is nothing new and likely to be beneficial is enormously frustrating to non-economists, especially politicians and to help bridge this communications gap, (Mankiw & Swagel, 2006) examine the differing ways in which economists and noneconomists talk about offshoring, focusing on ways in which economists can communicate more effectively to policymakers and the broader public. (Casson, 2013) examined issues related to offshore outsourcing from an internalization theory perspective by summarizing the contribution of internalization theory to supply chain analysis. (Kusaba & Moser, 2011) is introduced and test the construct of low-cost country sourcing competence of employees from purchasing and other participating functions. (Doh et al., 2014) shows that by increasing the stature and influence of the external affairs function, firms can achieve more effective and strategic actions and policies, ultimately serving to advance their competitive advantage for political and social issues.

As evident from above literature studies, number of approaches, models, empirical as well as conceptual has been developed by researchers to study or model the impact of political risk on offshore outsourcing. But very limited research, which examines the relationship between various drivers of political risk, is found. Owing to the complex nature of political environment at macro and micro level related to offshore outsourcing, it is very difficult to analyze the inter-relationship among the various drivers of political risk.

In literature, various methods such as AHP, ISM and ANP are used by authors to examine the interrelationships (see, e.g., Badri et al., 2012; Wei et al., 2005; Raj et al., 2008; Shukla et al., 2012; Lo & Chen, 2012; Shang et al., 2004).

Authors, in the present study make use of interpretive structural modeling (ISM), a well established methodology for identifying relationships among specific items, which defines risk.

The main objectives of this paper are:

- 1) To identify drivers of political risk related to offshore outsourcing
- 2) To establish the relationship between these identified drivers using interpretive structural modeling
- 3) To propose a structural model for drivers of political risk of offshore outsourcing
- 4) To classify the identified drivers into various categories using MICMAC analysis

The remainder of this paper is organized as follows. After Introduction in section 1, section 2 presents ISM methodology. Section 3 presents the literature review with respect to eight types of drivers of political risk in offshore outsourcing. Section 4 presents the details of ISM approach to model drivers of political risk Section

5 presents the discussions. Conclusion and further research directions are presented in section 6.

#### 2. An overview of ISM approach

Interpretive structural modeling (ISM) is an interactive learning process whereby a set of different indirectly and directly related elements are structured into a comprehensive systemic model. The presence of indirectly or directly related elements complicates the structure of the system which may or may not be articulated in a clear fashion. It becomes difficult to deal with such a system where structure is not clearly defined. Hence, a methodology needs to be developed which aids in the identification of a structure within a system, interpretive structural modelling is such a methodology. Several examples of the use of ISM have appeared in the literature. There are two basic concepts which are essential to understand the ISM methodology. One is the concept of reachability and the other is that of transitivity.

Common terminology used to represent relationship between elements is discussed as under:

Four symbols used to denote the direction of relationship between the elements are given below (i and

- j)
- $V: \rightarrow$  element i will reaches element j
- A:  $\rightarrow$  element j will reaches element i
- X:  $\rightarrow$  elements i and j will help to alleviate each other
- $O: \rightarrow$  elements i and j will not related to each other

This information is represented in the form of binary matrix and it is called initial reachability matrix. If an element i reaches element j, then the entry in the cell (i, j) of the reachability matrix is 1 and if element i does not reach element j, then entry in the cell (i, j) of the reachability matrix is 0.If element i reaches to element j and element j reaches to element k, then transitivity implies element i reaches to element k.

The steps involved in ISM approach are shown in figure 1.



Figure 1: Flow diagram for ISM approach

## 3. Identification of drivers of political risk of offshore Outsourcing

A multinational organization, representing its home country, gathers good will or hostility unrelated to performance in a host country (Alon & Herbert, 2009). Outsourcing may be subjected to political risk from the home country protectionist pressures and operating in a foreign country (Sambharya & Rasheed, 2012). Emerging issues such as climate change, financial regulation and disclosure, cybercrime and terrorism, and the labor and human rights of workers in developing countries, however, all require proactive nonmarket strategies directed toward both political and social actors (Doh et al., 2014). Political turmoil, terrorism or wars are bringing instability to the host country (Tjader et al, 2010). The proliferation of weapons of mass destruction has created an uncertainty that is also related to the interstate and civil wars and it is further enhance political risk (Sambharya & Rasheed, 2012). Accounting standards and variation in currency exchange rate contribute to risk (Dhar & Balakrishnan, 2006). Developing countries usually have a poorly developed legal system, low per capita income, low literacy rates, inadequate infrastructure, and restrictions on foreign exchange transactions, low wages, high inflation rates, and variable monetary and fiscal policies (Prasad & Babbar, 2000). Relatively more resources would be devoted to track and insulate the firm from nationalistic trends of host country, although terrorism would still be a priority (Alon & Herbert, 2009). It is risky to outsource just because the vendor's costs are somewhat lower on present expectations than those of the in-house operations (Jiang et al, 2007). The Knowledge process outsourcing clients did not wish to publicize their outsourcing contracts, and specified that it could be interpreted by their customers as a sign that they had lost control of their business processes and systems (Currie et al., 2008). In case of outsourcing host country-level controls include GDP per capita, relative size of the banking sector, country risk and corruption (Altay & Ramirez, 2010).Based upon the extant review of literature, authors grouped them under eight categories presented in Table 1.

#### 4. ISM approach to modelling

The various steps involved in ISM technique used to model the structural relationship among identified drivers are discussed in the following paragraphs:

#### 4.1 Establishing the contextual relationship among variables (drivers)

After identifying and enlisting the 8 drivers, the next step is to analyze the relationship between drivers. For this purpose, a contextual relationship of 'reaches to' type is selected. This means that one driver drives another driver. Based on this principle, a contextual relationship is developed.

Some experts, from various organizations related to offshore outsourcing were consulted to assist in developing the contextual relationships between the drivers. Keeping in mind the contextual relationship for each driver, the existence of a relation between any two drivers (i and j) and the associated direction of this relation is decided. To analyze the driver for the development of the structural self-interaction matrix, the following four symbols are used to denote the direction of the relationship between the drivers (i and j).

(1) V is used for the relation from driver i to driver j (i.e. if driver i reaches driver j).

(2) A is used for the relation from driver j to driver i (i.e. if driver j reaches driver i).

(3) X is used for both direction relations (i.e. if drivers i and j influence each other).

(4) O is used for no relation between two drivers (i.e. if drivers i and j are unrelated).

## 4.2 Development of a structural self interaction matrix (SSIM)

Based on the contextual relationship between the drivers, the SSIM was developed. To achieve consensus, the SSIM was discussed in a group of experts. Based on their responses, the SSIM was finalized and is presented in Table. 2.

## Table 1: Identification of Drivers of Political Risk related to offshore outsourcing

| S.No | Name of factors      | Reference   |
|------|----------------------|---|
| 1    | Civil war            | (Esty, 2003), (Lu & Yang, 2007), (Tjader et al, 2010), (Allen & Giovannetti,    |
|      |                      | 2011), , (Sambharya & Rasheed, 2012), (Colgan, 2014),                           |
| 2    | Fiscal & Monetary    | (Prasad & Babbar, 2000), (Esty, 2003), (Hosseini, 2005), (Aron et al., 2005),   |
|      | policies             | (Dhar & Balakrishnan, 2006), (Lu & Yang, 2007), (Nakatsu & Iacovou, 2009),      |
| 3    | Terrorism            | (Tjader et al, 2010), (Alon & Herbert, 2009), (Sambharya & Rasheed, 2012),      |
|      |                      | (Colgan, 2014), (Doh et al., 2014)  |
| 4    | Industrial relations | (Esty, 2003), (Hosseini, 2005), (Jiang et al., 2007), (Currie et al., 2008),    |
|      |                      | (Ellram et al. 2008),   |
| 5    | Domestic policies of | (Dhar & Balakrishnan, 2006), (Stratman, 2008), (Hahn & Bunyaratavej, 2010),     |
|      | host country         | (Allen & Giovannetti, 2011), (Colgan, 2014)                                     |
| 6    | Corruption           | (Hosseini, 2005), (Nakatsu & Iacovou, 2009), (Bhattacharyya et al., 2010),      |
|      |                      | (Reuter et al., 2010), (Altay & Ramirez, 2010)                                  |
| 7    | International        | (Hosseini, 2005), (Dhar & Balakrishnan, 2006), (Alon & Herbert, 2009), (Allen   |
|      | relationship         | & Giovannetti, 2011),   |
| 8    | Human resource       | (Wright, 2005), (Dhar & Balakrishnan, 2006), , (Ellram et al. 2008), (Cappelli, |
|      | availability         | 2011)   |

#### Table 2: SSIM (Structural Self Interaction matrix)

| S.No | Variables(Drivers)                | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|------|-----------------------------------|---|---|---|---|---|---|---|
| 1    | Civil war                         | 0 | Х | V | А | 0 | V | А |
| 2    | Fiscal & Monetary policies        |   | 0 | 0 | А | 0 | V | 0 |
| 3    | Terrorism                         |   |   | 0 | А | 0 | V | V |
| 4    | Industrial relations              |   |   |   | А | 0 | V | А |
| 5    | Domestic policies of host country |   |   |   |   | V | V | 0 |
| 6    | Corruption                        |   |   |   |   |   | V | 0 |
| 7    | International relationship        |   |   |   |   |   |   | 0 |
| 8    | Human resource availability       |   |   |   |   |   |   |   |

## 4.3 Development of the initial reachability matrix (IRM)

The SSIM was converted into a binary matrix, called the initial reachability matrix by substituting V, A, X and O with 1 and 0 as per the case and is presented in Table 3. The substitution of 1s and 0s are as per the following rules:

(1) If the entry of (i, j) in the SSIM is V, the (i, j) entry in the initial reachability matrix becomes 1 and the (j, i) entry becomes 0.

(2) If the entry of (i, j) in the SSIM is A, the (i, j) entry in the initial reachability matrix becomes 0 and the (j, i) entry becomes 1.

(3) If the entry of (i, j) in the SSIM is X, the both (i, j) & (j, i) entries are become 1

(4) If the (i, j) entry in the SSIM is O, both (i, j) & (j, i) entries are become 0

| S.No | Variables(Drivers)                | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|------|-----------------------------------|---|---|---|---|---|---|---|---|
| 1    | Civil war                         | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 |
| 2    | Fiscal & Monetary policies        | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| 3    | Terrorism                         | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| 4    | Industrial relations              | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| 5    | Domestic policies of host country | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 6    | Corruption                        | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 7    | International relationship        | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 8    | Human resource availability       | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |

# Table 3: IRM (Initial reachability matrix)

#### 4.4 Development of the final reachability matrix (FRM)

The initial reachability matrix was converted into a final reachability matrix (FRM) and is presented in Table 4. It considers transitivity concept of ISM methodology. Table 5 shows final reachability matrix with driving power and dependence.

## Table 4: FRM (Final reachability matrix)

| S.No | Variables(Drivers)                | 1 | 2 | 3  | 4  | 5 | 6 | 7  | 8  |
|------|-----------------------------------|---|---|----|----|---|---|----|----|
| 1    | Civil war                         | 1 | 0 | 1  | 1  | 0 | 0 | 1  | 1* |
| 2    | Fiscal & Monetary policies        | 0 | 1 | 0  | 0  | 0 | 0 | 1  | 0  |
| 3    | Terrorism                         | 1 | 0 | 1  | 1* | 0 | 0 | 1  | 1  |
| 4    | Industrial relations              | 0 | 0 | 0  | 1  | 0 | 0 | 1  | 0  |
| 5    | Domestic policies of host country | 1 | 1 | 1  | 1  | 1 | 1 | 1  | 1* |
| 6    | Corruption                        | 0 | 0 | 0  | 0  | 0 | 1 | 1  | 0  |
| 7    | International relationship        | 0 | 0 | 0  | 0  | 0 | 0 | 1  | 0  |
| 8    | Human resource availability       | 1 | 0 | 1* | 1  | 0 | 0 | 1* | 1  |

\* shows transitivity

# Table 5: FRM (Final reachability matrix with driving Power and dependence)

| S.No | Variables(Drivers)                | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Driving Power |
|------|-----------------------------------|---|---|---|---|---|---|---|---|---------------|
| 1    | Civil war                         | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 5             |
| 2    | Fiscal & Monetary policies        | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 2             |
| 3    | Terrorism                         | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 5             |
| 4    | Industrial relations              | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2             |
| 5    | Domestic policies of host country | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 8             |
| 6    | Corruption                        | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2             |
| 7    | International relationship        | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1             |
| 8    | Human resource availability       | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 5             |
|      | Dependence                        | 4 | 2 | 4 | 5 | 1 | 2 | 8 | 4 |               |

## 4.5 Partitioning the final reachability Matrix

Once the reachability matrix has been created, it must be processed to extract the structural model. The reachability set consists of the driver (i) itself and the other drivers which are reachable from that particular driver (i). For every column which contains 1 in the row of the considered driver (i), the driver that column represents is included in the reachability set. Similarly, the antecedent set consists of the driver (i) itself and the other drivers which contains 1 in the column of considered driver (i), the driver that row represents is included in the antecedent set. After finding the reachability and antecedent sets for each driver, the intersection of these sets is derived for all the drivers and levels. The variables for which the reachability and the intersection are the same are given the top level in the ISM hierarchy. This procedure is continued till all levels of the structure are identified. These identified levels help in the development of the model. In the present case the level identification process for the 8 drivers was completed in four iterations and is shown in Tabs. 6 -9. Further in Table 10, ISM based levels of variables or drivers are shown.

## **Table 6: First Iteration**

| Variables | Reachability    | Antecedent      | Intersection | Level |
|-----------|-----------------|-----------------|--------------|-------|
| 1         | 1,3,4,7,8       | 1,3,5,8         | 1,3,8        |       |
| 2         | 2,7             | 2,5             | 2            |       |
| 3         | 1,3,4,7,8       | 1,3,5,8         | 1,3,8        |       |
| 4         | 4,7             | 1,3,4,8         | 4            |       |
| 5         | 1,2,3,4,5,6,7,8 | 5               | 5            |       |
| 6         | 6,7             | 5,6             | 6            |       |
| 7         | 7               | 1,2,3,4,5,6,7,8 | 7            | Ι     |
| 8         | 1,3,4,7,8       | 1,3,5,8         | 1,3,8        |       |

## **Table 7: Second Iteration**

| Variables | Reachability  | Antecedent | Intersection | Level |
|-----------|---------------|------------|--------------|-------|
| 1         | 1,3,4,8       | 1,3,5,8    | 1,3,8        |       |
| 2         | 2             | 2,5        | 2            | II    |
| 3         | 1,3,4,8       | 1,3,5,8    | 1,3,8        |       |
| 4         | 4             | 1,3,4,8    | 4            | II    |
| 5         | 1,2,3,4,5,6,8 | 5          | 5            |       |
| 6         | 6             | 5,6        | 6            | II    |
| 8         | 1,3,4,8       | 1,3,5,8    | 1,3,8        |       |

#### **Table 8: Third Iteration**

| Variables | Reachability | Antecedent | Intersection | Level |
|-----------|--------------|------------|--------------|-------|
| 1         | 1,3,8        | 1,3,5,8    | 1,3,8        | III   |
| 3         | 1,3,8        | 1,3,5,8    | 1,3,8        | III   |
| 5         | 1,3,5,8      | 5          | 5            |       |
| 8         | 1,3,8        | 1,3,5,8    | 1,3,8        | III   |

#### **Table 9: Fourth Iteration**

| Variables | Reachability | Antecedent | Intersection | Level |
|-----------|--------------|------------|--------------|-------|
| 5         | 1            | 5          | 5            | IV    |

## Table 10: ISM based levels of variables

| S.No. | Variables(Drivers)                | Levels |
|-------|-----------------------------------|--------|
| 1     | Civil war                         | III    |
| 2     | Fiscal & Monetary policies        | II     |
| 3     | Terrorism                         | III    |
| 4     | Industrial relations              | II     |
| 5     | Domestic policies of host country | IV     |
| 6     | Corruption                        | II     |
| 7     | International relationship        | Ι      |
| 8     | Human resource availability       | III    |

#### 4.6 Development of conical matrix

A conical matrix is developed by clubbing together drivers in the same level, across the rows and columns of the final reachability matrix is presented in Table 11. The driving power of a driver is derived by adding the number of ones in the rows, and the dependency is derived by adding up numbers ones in the columns.

#### **Table 11: Conical Matrix**

| Drivers (Number of driver)            | 7 | 4 | 1 | 3 | 8 | 2 | 6 | 5 | Driving Power |
|---------------------------------------|---|---|---|---|---|---|---|---|---------------|
| International relationship (7)        | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1             |
| Fiscal & Monetary policies (2)        | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2             |
| Industrial relations (4)              | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2             |
| Corruption (6)                        | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2             |
| Civil war (1)                         | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 5             |
| Terrorism ( <b>3</b> )                | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 5             |
| Human resource availability (8)       | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 5             |
| Domestic policies of host country (5) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 8             |
| dependency                            | 8 | 5 | 4 | 4 | 4 | 2 | 2 | 1 |               |

## 4.7 Development of diagraph

Based on the conical matrix an initial diagraph including transitivity links is drawn. This is drawn by the nodes and the lines of edges. After removing the transitivity, a final diagraph is drawn (Figure-2). If there is a relationship between the drivers i and j, like i reaches to j then it is shown by an arrow which points from driver i to driver j.



Figure 2. Diagraph showing the level of drivers of political risk

# 4.8 Development of ISM model

The diagraph is converted into an ISM model by replacing the nodes with name of risks as shown in figure 3.



Figure 3: ISM model showing the level of drivers of political risk

## 4.9 MICMAC analysis

Matrice d'Impacts croises-multiplication appliqu'ean classment (cross-impact matrix multiplication applied to classification) is abbreviated as MICMAC. The MICMAC principle is based on the multiplication properties of matrices. The purpose of a MICMAC analysis is to analyze the driver power and dependency of the variables (Govindan et al., 2012; Raj et al., 2008). This is done to identify the key drivers that drive the system. Based on their driver power and dependency, the drivers, in this present case, have been classified into four categories as follows:

(1) Autonomous drivers: These drivers have weak driver power and weak dependence. They are relatively disconnected from the system, with which they have few strong links.

(2) Linkage drivers: These have strong driver power as well as strong dependence. They are also unstable. Any action on them has an effect on others and also a feedback effect on themselves.

(3) Dependent drivers: This category includes those drivers which have strong dependence power but weak driver power.

(4) Independent drivers: These have strong driver power but weak dependence power. It is generally observed that a driver with a very strong driver power, called a 'key driver'. Figure 4, presents the results of MICMAC analysis.



#### DEPENDENCE POWER

Figure 4: Driving power and dependence diagram

#### 5. Findings and discussion

The objective of this research was to identify and analyze the drivers that significantly affect success of offshore outsourcing so that managers may effectively deal with these drivers. In this research, an ISM-based model was developed to analyze the relationship among different drivers of political risk of offshore outsourcing so that management can get an insight into these drivers and understand their relative importance and interactions. Some of the valuable findings from the study are as under:

(a.) From the driving power and dependence diagram (fig.4), it is observed that four drivers, namely Domestic policies of host country (5), Civil war (1), Terrorism (3) and Human resource availability (8) have strong driving power and are less dependent on other drivers. Therefore, these all independent variables are strong drivers and may be treated as the root causes for all drivers, so managers need to address these drivers as a priority for success of offshore outsourcing by reducing political risk.

(b.) From the driving power and dependence diagram (fig.4) it is observed that Industrial relations (4) and International relationship (7) are weak drivers but strongly dependent on the other drivers. These two drivers are among the top of the ISM hierarchy, therefore are considered as the most important drivers. Decision taking authorities should, therefore, accord high priority in resolving these drivers for achieving success of offshore outsourcing and should understand the dependence of these drivers on other drivers.

(c.) There is no driver in the category of linkage. It shows that the all drivers are in extreme side either good dependent or driver and few also comes in autonomous category.

(d.) The driving power dependence diagram (fig.4) indicates that Fiscal & Monetary policies (2) and Corruption(6) falls in the category of autonomous variable, also they are weak drivers and weak dependents and do not have little influence on the system.

## 6. Conclusion

Based upon the extant review of literature, authors identified 8 key drivers that could affect performance of offshore outsourcing due to political risk. Further to examine the complex relationship between them, an ISM model and MICMAC approach was used. The findings provide important classification of risks under four categories i.e. independent (Domestic policies of host country, Civil war, Terrorism and Human resource availability), linkage (no driver in this category), dependent (Industrial relations and International relationship) and autonomous (Fiscal & Monetary policies and Corruption). The results obtained with the help of ISM are

being used to gain insights into the driver and dependence power of drivers of political risk in offshore outsourcing.

Future research may be directed towards confirmatory approach to data analysis supported by structural equation modelling (SEM) and inclusion of more drivers which affect the process of offshore outsourcing.

#### References

Allen, F., Giovannetti, G. 2011. The effects of the financial crisis on Sub-Saharan Africa, *Review of Development Finance* 1, 1–27

Alon, I., Herbert, T. T. 2009. A stranger in a strange land: Micro political driver and the multinational firm, *Business Horizons*, 52, 127–137

Altay, N., Ramirez, A. 2010. Impact of disasters on firms in different sectors: implications for supply chains, *Journal of Supply Chain Management* 

Aron, R., Clemons, E. K., Reddi, S. 2005: Just Right Outsourcing: Understanding and Managing Driver, *Journal of Management Information Systems*, Vol. 22, No. 2, pp. 37-55

Aron, R., Singh, J. V. 2005. Getting offshoring Right, Harvard Business Review, Dec 2005

Badri, A., Nadeau, S., Gbodossou, A. 2012. Proposal of a driver-factor-based analytical approach for integrating occupational health and safety into project driver evaluation, *Accident Analysis and Prevention*, 48, 223–234

Bhattacharyya, K., Datta, P., Offodile, O. F. 2010. The Contribution of Third-Party Indices in Assessing Global Operational Drivers, *Journal of Supply Chain Management*, Volume 46, Number 4

Cappelli, P. 2011. HR Sourcing Decisions and Driver Management, Organizational Dynamics, 40, 310-316

Casson, M. 2013. Economic Analysis of International Supply Chains: An Internalization Perspective, *Journal of Supply Chain Management*, Volume 49, Number 2

Colgan, J. D. 2014. Oil, Domestic Politics, and International Conflict, *Energy Research & Social Science*, 1, 198–205

Currie, W. L., Michell, V., Abanishe, O. 2008. Knowledge process outsourcing in financial services: The vendor perspective, *European Management Journal*, 26, 94 – 104.

Dhar, S & Balakrishnan, B. 2006. Drivers, Benefits, and Challenges in Global IT Outsourcing: Perspectives and Practices, *Journal of Global Information Management*, vol. 14, issue 3

Doh, J. P. 2005. Offshore Outsourcing: Implications for International Business and Strategic Management Theory and Practice, *Journal of Management Studies*, 42:3.

Doh, J. P., Lawton, T. C., Rajwani, T., Paroutis, S. 2014. Why your company may need a chief external officer, *Organizational Dynamics*, 43, 96–104

Ellram, L. M., Tate, W. L., Billington, C. 2008. Offshore outsourcing of professional services: A transaction cost economics perspective, *Journal of Operation Management*, 26, 148-163.

Esty, B. 2003. Financing the Mozel Project, Harvard Business Review.

Gaur, A. S., Kumar, V. 2009. International Diversification and Firm Performance, *British Journal of Management*, Vol. 20, 172–186, DOI: 10.1111/j.1467-8551.2007.00558.x

Hahn, E. D., and Bunyaratavej, K. 2010. Services cultural alignment in offshoring: The impact of cultural dimensions on offshoring location choices, *Journal of Operations Management*, 28, 186–193

Hosseini, H. 2005. An economic theory of FDI: A behavioral economics and historical approach, *The Journal of Socio-Economics*, 34, 528–541

Iankova, E., Katz, J. 2003. Strategies for political driver mediation by international firms in transition economies: the case of Bulgaria, *Journal of World Business*, 38, 182–203

Jiang, B., Belohlav, J. A., and Young, S. T. 2007. Outsourcing impact on manufacturing firms' value: Evidence from Japan, *Journal of Operations Management*, 25, 885–900

Kumar, S., Sharma, R.K., Chauhan, P. 2014. ISM Approach to Model Offshore Outsourcing Drivers, *International Journal of Production Management and Engineering*, Vol 2(2).

Kusaba, K., Moser, R. 2011. Low-Cost Country Sourcing Competence: A Conceptual Framework and Empirical Analysis, *Journal of Supply Chain Management*, Volume 47, Number 4

Laura L. Pfannenstein & Ray J. Tsai. 2004. Offshore Outsourcing: Current and Future Effects on American it Industry, *Information Systems Management*, 21:4, 72-80

Lo, Chi-Chun., Chen, Wan-Jia. 2012. A hybrid information security barrier assessment procedure considering interdependences between controls, *Expert Systems with Applications*, 39, 247–257

Lu, Chin-Shan., Yang, Ching-Chiao. 2007. An evaluation of the investment environment in international logistics zones: A Taiwanese manufacturer's perspective, *Int. J. Production Economics*, 107, 279–300

Mankiw, N. G., Swagel, P. 2006. The politics and economics of offshore outsourcing, *Journal of Monetary Economics*, Volume 53, Issue 5, Pages 1027-1056

Mathew, Saji. K., & Chen, Yuanyuan. 2013. Achieving offshore software development success: An empirical

analysis of driver mitigation through relational norms, *Journal of Strategic Information Systems*, 22, 298–314. Nakatsu, R. T., and Iacovou, C. L. 2009. A comparative study of important driver factors involved in offshore and domestic outsourcing of software development projects: A two-panel Delphi study, *Information & Management*, 46, 57–68

Prasad, S., Babbar, S. 2000. International operations management research, Journal of Operations Management, 18, 209-247

Raj, T., Shankar, R., & Suhaib, M. 2008. An ISM approach for modelling the enablers of flexible manufacturing system: the case for India, *International Journal of Production Research*, Vol. 46, No. 24, 6883–6912.

Reuter, C., Foerstl, K., Hartmann, E., Blome, C. 2010. Sustainable global supplier management: the role of dynamic capabilities in achieving competitive advantage, *Journal of Supply Chain Management* 

Sambharya, R. B., Rasheed, A. A. 2012. Global driver in a changing world: New paradigms and practice, *Organizational Dynamics*, 41, 308–317

Shang, J. S., Tjader, Y., & Ding, Y. 2004. A Unified Framework for Multi criteria Evaluation of Transportation Projects, *IEEE Transactions on Engineering Management*, Vol. 51, no. 3.

Shukla, R. K., Garg, D., Agarwal, A. 2012. Modeling barriers in supply chain coordination, *International Journal of Management Science and Engineering Management*, 7:1, 69-80

Stratman, J. K. 2008. Facilitating offshoring with enterprise technologies: Reducing operational friction in the governance and production of services, *Journal of Operations Management*, 26, 275–287

Tjader, Y. C., Shang, J. S., and Vargas, L. G. 2010. Offshore outsourcing decision making: A policy-maker's perspective, *European Journal of Operational Research*, 207, 434–444

Varadarajan, Rajan. 2009. Outsourcing: Think more expansively, Journal of Business Research, 62, 1165–1172

Wei, Chun-C., Chien, Chen-F., & Wang, Mao-Jiun J. 2005. An AHP-based approach to ERP system selection, *Int. J. Production Economics*, 96, 47–62.

Wright, T. 2005. Outsourcing - Financial Services Authority report on offshoring, Computer Law & Security Report, 21, 500-504

Wu, D. D., Olson, D. L. 2013. Computational simulation and driver analysis: An introduction of state of the art research, *Mathematical and Computer Modeling*, 58, 1581–1587

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