Towards the Model of a Political Systems Using Interpretive Structural Modeling(ISM) approach

Dr. Yonas Bol deManial

Upper Nile University-Malakal

ABSTRACT

The paper is an attempt to structurctue political system. A political system includes many elements. Literature review and experts' views has determined that the '' chief executive, economic activity, social groups, legislative and judicial, political organizations, public administrative, civic and media, cultural and heritage, geograpghy and history, ethnic and tribal, religion and ethics and natural reources' are the most important elements that forming political system. The proposed interpretive structural modeling(ISM) based model for political system to potray its structure. The author has found a model that shows the structure of political systems as a hierarchy is f three levels. Then, concluded that in order to ensure a political system model. As a result, the author made a complex analysis and revealed the key elements of a political system. Political players and social groups existing in the society and political parties representing their interests. The analysis of a political system concept allowed author to establish a specific definition of the model with the aid of the intretive structural modelling techniques.

Keywords: Political System, Interpretive Structural Modeling (ISM), ICMAC Analysis, Reachability matrix, Complexity and Model.

1. INTRODUCTION

The theme of this study is a nature of the political system. It can provide a different response to the demands from the population. While a democratic system uses them to improve its performance, a totalitarian suppresses them, creating the image of powerful and infallible authority. That is why the term "political system" uses to characterize relations of the state and society, various subjects at non-governmental level.

Literature often refers to the four key groups of elements of a political system. They are political institutes (organizations and institutions), political relations, political principles, political consciousness and political culture. A systematic approach allows making distinguish between political life and public life as a separate subsystem in addition to a political system, social, economic, ethnic, legal, cultural and other systems exist in human society. A recent trend in contemporary western political theory is to criticize it for implicitly trying to "conquer," "displace" or "moralize" politics. J. Wiley (2016) takes the "next step", from criticizing contemporary political theory, to showing what a more "politics-centered" political theory would look like by exploring the meaning and value of politics. For instance, D. Rye (2016) assures that in the context of a flexible ontology, underlying approach could be summarised further by saying that power is concerned with the capacities of human beings to formulate, express and realise goals (specifically, political ones). In political parties these capacities can be developed, impeded

or imposed in a variety of ways, including through the actions of (other) individuals, the direction and operation of formal and informal rules and administration, through the cultural norms and practices of party life or the application of specific techniques of organisation, communication and so on. Modern literature contains a variety of political system definitions. Some scientists (Easton, 1965, Pulkkinen, 2015) consider a political system to be a set of ideas underpinning politics, others guess (Bertalanffyin, 1969, Lyubashits Smolensky & Shepelev, 2006) it as a system of interactions. A third group of scientists considers it as an aggregate of certain elements, subjects of politics, etc. The desire to reach universal interpretation of political life, its independence from history, social situation is natural for all these definitions.

The study is actuality may be explained as necessity to follow the political systems, determining its variabes. Thus, this work enriches political science by its character of analyzed works.

Research Objective:

The aim of the study contains in accumulation and unification the political system's theoretical knowledge and formulation the new full definition of the political system. The main objectives of this paper are: 1- To identify variables(elements) in political system 2- To find out the interactions among the identified variables using Interpretive Structural Modeling. 3-To propose structural model of variables in political system. 4- To analyse and categorize factors affecting political system in terms of Driving Power and Dependence.

Research Questions

The main question of the study is what are the key elements of the political system?. The next step of the scientific is what is the structural model of a political system?.

Methods

The historical review of the political systems explains how contemporary politics exists without a clear structure of the political system. Moreover, the main method of the study is the structure analysis, basing on the interpretive structural modelling method.

Literature Review

Systems have been defined, and therefore, as used in general theory of systems in order to construct theories of particular systems. The goal of this study is to construct a structure of political systems. Complex Systems can be defined in a broad manner and embrace concepts from different fields of science, from physics to biology, to computing and social sciences. Mainly, the definition includes nonlinear dynamical systems that contain large number of interactions among the parts.

Complex systems definition is usually attached to a specific context; however, it usually incorporates the following set of features. Firstly, the idea of interaction among parts from and across scales, space and time is relevant. These interactions, in turn, lead to a system that is not reducible; a system that cannot be described by the attributes of the parts alone.

Secondly, the interaction among parts can lead to self-organization of the system without the need of central control. This implies that local interactions can generate bottom-up emergent behavior.

A third attribute to highlight is that complex systems can experiment feedback. In complex systems, interactions have effects in time: actions in a given moment reflect on possibilities and constraints in the following moments.

That is why complex systems are said to be adaptive and evolutionary. All these briefly mentioned characteristics of complex systems seem to be useful to the study of political systems. As stated below most objects of public policies contain similar features and can be easily labeled complex systems. The relevance of viewing objects of political system as complex systems is that the associated methods and methodologies available for the study of such systems could be applied to political systems, helping improve their analysis, complexity methods and methodologies can help take into account the complex features of the systems under analysis.

1. Modeling is a good strategy to obtain better understanding of how a system works, and one which allows incorporating the complex features of the system. Modeling can help identify the important players in the system under analysis, their different characteristics (heterogeneity), their interrelations (interconnectedness), and how these components together give rise to complex. Examples of such modeling techniques interpretive structural modeling. A model is an abstraction or simplification of reality. Scientists often use models to explore systems and processes they cannot directly manipulate).

Models can be more or less quantitative, deterministic, abstract, and empirical. They help define questions and concepts more precisely, generate hypotheses, assist in testing these hypotheses, and generate predictions. Model building consists of determining system parts, choosing the relationships of interest between these parts, specifying the mechanisms by which the parts interact, identifying missing information, and exploring the behavior of the model. The model building process can be as enlightening as the model itself.

- 2. Modeling permits simulating scenarios as a decision-support tool to inform policy making. Models work as platforms for so-called *in silico* experiments, by means of which different policy options can be computationally simulated and "cheaply" tested.
- 3. Modeling stimulates a forward-looking, prospective view of policy, by allowing scenario building and testing. Models can enable prognosis that are less based solely on probabilities but that include essential interactions at various scales and with various agents' interests considered. Policymakers can thus work with spaces of scenarios and realms of probabilities that occur given known rupture points.
- 4. Models can be continuously improved, as more knowledge is gained about the system. Models can also be simple and provide general insights, or specific to help tackle a particular problem. 5. Models are a means of communicating one's ideas and theories and can work as a "meeting point" for collaborative work among interdisciplinary teams. "Models not only help formulate questions, clarify system boundaries, and identify gaps in existing data, but also reveal the thoughts and assumptions of fellow scientists".

6. The notion of multiple models contributes to the understanding of social phenomena in particular and of political system in general because it is based on the richness of diversity, difference and dissimilarities) argues, no single model can independently cover comprehensively the intricacies of some phenomena, especially those of subjective nature, complex ones. He also states that models section the analysis with specific parameters, be it from the theoretical, methodological or procedural point of view. Thus, the diversity of models implies a larger coverage of possible scenarios that are more keen to envelope unexpected sequences, unlikely important events, unique tipping points.

The cycle of data analysis, modeling, validation, simulation, implementation, data analysis, remodeling and so on might be the "strange loop" that can provide decision support for tackling complex problems through political systems. The state is a central part of a political system that serves the key governance link in policies ensuring unity of various components. It is designed to be not only an independent subject of political relations. It also performs the tasks to manage public affairs but also to create necessary conditions for a real provision of constitutional principles of political system organization and functioning, real enforcement of a citizen's political rights and freedoms. A central link of any political system is a state.

State power is the backbone of a political system. Identification of state power as a fundamental element of a political system allows the establishment of the system's components – in other words, the identification of its structure and borders. Furthermore, there is a lot of place to rethink the ethical value of content of the political system.

The preceding allowed us to formulate the following definition of a political system: complex universal mechanism ensuring a mutual relationship between the state and society, interaction of state authorities, political parties in state power practicing with the participation of religious associations, local self- governance bodies, and labor groups.

Political Systems: Meaning, Functions and Types of Political Systems! Meaning: Each society must have a political system in order to maintain recognized procedures for allocating valued resources. In large complex societies, many decisions must be made about the duties and responsibilities of citizens and also about the rights and privileges. If the society is to be orderly, people must obey the rules that are made. The political institution determines and enforces the laws and punishes those who disobey them.

To distinguish a political system from other social systems, we must be able to identify it by describing its fundamental units and establishing the boundaries that demarcate it from units outside the system. Units of a political system are the elements of which a system is composed. In the case of political system, they are political actions. Normally it is useful to look at these as they structure themselvs in political roles and political groups. The most significant questions with regard to the operation of political systems can be answered only if we bear in mind the obvious fact that a system does not exist in a vacuum. It is always emboded in a specific setting or environment. The way in which a system works will be in part a function of its response to the total social, biological, and physical environment.

POLITICAL SYSTEM

The social system consists of many sub systems. Each sub system has certain specified functions to perform. The political system is interwoven with other subsystems in society. There is close relationship between social and political systems. A study of the modern man is incomplete which does not include question like how does he earn his livelihood, how does he spent his moment of leisure relaxation, what kind of problems worry him the most, how and where does he come into conflict with his fellow-beings, to mention a few. Although for a political analyst all the above mentioned factors are important, his basic concern would always remain with regularization and institutionalization of power, making of authoritative decisions, conflict resolution to name a few aspects of human behavior with a clear political bias. The agency which has been entrusted with these functions is the state and its organ actively undertakes these jobs are known as government.

But it is realized that the term 'state' and 'government' have restricted legal meanings. The concept of 'Political System', write Almond and powell, "has acquired wide currency because it directs attention to entire scope of political activities within a society, regardless of where in the society such activities may be located".

- 1. **David M. Wood**. "Political system thus becomes a set of interrelated variables conceived to be politically relevant and treated as if they could be separated from other variables conceived to be politically relevant not immediately relevant to politics."
- 2. **S.H. Beer and A.B. Ulam**. "Political system has emerged as a part of the broad way of looking at all social behaviour. From that perspective, the political system is a structure that performs a certain function for a society. In the fewest possible words, that function is to make legitimate policy decisions."
- 3. **Almond and Powell**. "It directs attention to the entire scope of political activities within a society, regardless of where in the society such activities may be located." Further explaining the concept of political system Almond and Powell say, "When we speak of the political system we include all the interactions which affect the use or threat of use of legitimate physical coercion.

The political system includes not only governmental institutions such as legislatures, courts and administrative agencies, but all structures in their political aspects. Among these are traditional structures such as kinship ties and caste groupings; and anomie phenomena such as assassinations, riots and demonstrations; as well as formal organisations like parties, interest groups and media of communications."

Comparative Politics makes a deep and systematic study of different political system. Political system determines political power, political culture, and nature of the state, political mobility and so on. Its chief characteristic is political allocation which has been defined by Marion Levy, "As the distribution of power over and responsibility for the action of the various members of the concrete structure concerned, involving on the one hand coercive sanctions, of which force is the extreme from in one direction, and on the other, accountability to the members and in terms of

the structure concerned, or to the members of other concrete structures." The political system is sanctioned by the state and the political power.

Explaining the influence of political system Almond and Powell point out, "In the end it may be remembered that the political system produces a certain output for the society: legitimate policy decisions. The goals at which these decision aim may be precise and programmatic, or only vague and general. They may be accepted readily or reluctantly, by many or by few. But to call them policy decisions is to stress that they do have consequences for the society, and to note their legitimacy is to draw attention to the main characteristics that make them political. Through the political system goals for the society are defined and carried out by legitimate policy decisions."

Properties Of Political System:

According to Almond and Powell the political system is known by the following properties:

- 1. **Comprehensiveness**. A political system is comprehensive. It includes input as well as outputs. It includes all the interactions which affect the use of physical coercion. It is more concerned with the political aspect of kinship and lineage, status and caste groups, religious and cultural bodies as well as anemic phenomena such as violent riots and street demonstration.
- 2. **Interdependence**. A significant property of political system is the interdependence of its various parts. A subset of interactions produces changes in all other subsets. It is so because the functioning of the subsets is inter-dependent. For example, changes in the technology of communication transform the electoral process, the political parties, the legislature and the executive.
- 3. **Boundaries**. Every political system draws boundaries between society and polity. According to Almond, "When we talk about good and bad boundary maintenance, we must use criteria appropriate to the system. In one case diffuseness and intermittence may be appropriate boundary maintenance; in another specialised secular structure are appropriate,"

PROBLEM STATEMENT

For this research work, a case study methodology was adopted. A political systems variables(elements). was selected as the target organization. Hence, the need for finding factors influencing the political system. Determining the relationship among the variables(elements). is a complex task, as it may have many linkages with one or the other variables(elements). In such situations, ISM model is useful in constructing direct and indirect relationships among the said variables(elements).

2. Research Methodology:

This study is a descriptive qualitative research, which applies major methodologies Interpretive Structural Modeling (ISM) is used to obtain structural relationship among the factors of final proposed model. For this purpose, literature of political systems factors is reviewed deeply (Section 2). Then based on selected political system model, a conceptual model is presented by considering new factors. Also, research is performed using ISM in order to evaluate the relationship between the factors of final proposed model. The methodology followed in this paper is shown in figure 1.

Identification of political system variables:

An exhaustive literature review has been carried out, and expert opinions from the political science as well as faculty member in the politics domain were considered to identify variables that can be used for building the political system implementation model. Thus, twelve critical variables or factors(elements) have been identified, which are listed in the below table(1):

Number Factors Abbreviations Chief Executive CE 2 EA economic activity 3 Social groups SG 4 Legislative and LJ Judicial(Legal) **Political Organizations** 5 PO Public Administration 6 PA Civic and Media C M 8 Cultural and Heritage CH 9 Geography and History GH 10 Ethnic and Tribal ET 11 Religion and ethics RE 12 Natural Resources NR

Table 1:Factors of Political system

ISM Method

Warfield (1974) is believed to be the first who developed theoretical development of ISM and the objective of understanding the complex relationships among elements was presented by Borade and Bansod (2012). Farris and Sage (1975); Sage and Smith (1977); Sage (1977) contributed to the development and application of the ISM methodology for a variety of purposes—especially those concerned with decision analysis/ making (Jadhav et al., 2014). According to Bouzon et al. (2015), the main notion of ISM is to use experts' experience and knowledge to frame a complicated system into several sub-systems and construct a multilevel structural model. Interpretive Structural Modeling (ISM) (Singha & Kant, 2008):

ISM Methodology and Model Development

ISM was first proposed by Warfield in 1973 to analyze the complex socioeconomic systems. ISM helps to impose order and direction to a set of related variables and arrange them in a systematic hierarchical model known as structural model. ISM is an interactive learning process in which a set of different and directly related elements are structured into a comprehensive systematic model. The ISM methodology is based on the expert opinion and therefore the experts opine whether the variables are related to each other and the direction of the relationship. The various steps involved in the ISM methodology are discussed as follows:

a. Identification of factors: Identification of factors could be done with group problem solving technique like brain storming.

- b. Contextual relationship: From the identified factors, a contextual relationship is identified among factors. A structural self-interaction matrix (SSIM) is prepared based on pair-wise comparison of factors.
- c. The SSIM is transformed into a binary matrix called the initial reachability matrix by substituting symbols used to denote direction of relationship, i.e V, A, X, O by 1 and 0.
- d. Reachability matrix is then checked for transitivity. Transitivity is the basic assumption in ISM, which states that if a variable i is related j and j is related to k then i is necessarily related to k.
- e. Partitioning of the reachability matrix into different levels on basis of reachability and antecedents sets for each variable through iterations called as level partitioning.
- f. On the basis of reachabilty matrix and level partitioning, a canonical matrix is formed.
- g. From the canonical matrix form of the reachability matrix, a directed graph is drawn by means of vertices or nodes and lines of edges and the transitive links are removed based on the relationships given above in the reachability matrix. The resultant digraph is converted into an ISM by replacing enabler nodes with
- is interpretive as the judgment of the group decides whether and how the variables are related;
- is structural as on the basis of relationship, an overall structure is extracted from the complex set of variables;
- is a modeling technique as the specific relationships and overall structure are portrayed in a graphical model?

Generally, ISM approach is a combination of three modeling languages—words, digraphs, and discrete mathematics—that used for an effective decision-making process (Jia et al., 2014). Various steps involved in ISM approach are illustrated in Fig. 3.

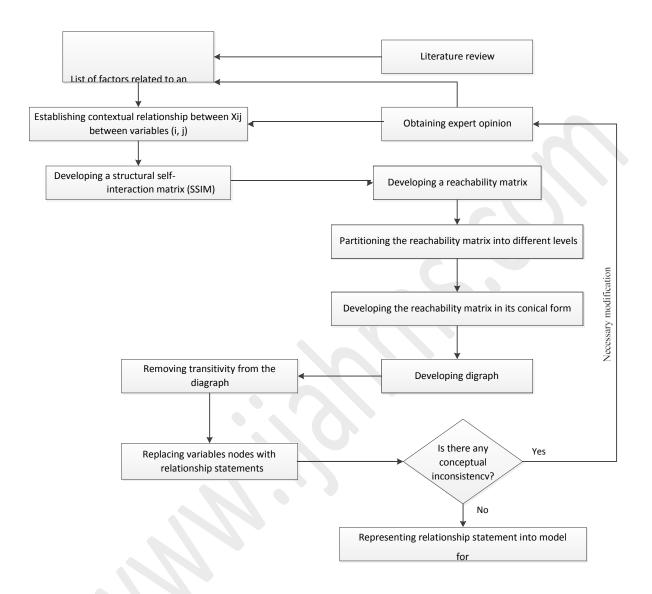


Fig. 1. Flow diagram for preparing ISM model

After obtaining the final model, ISM technique was applied in order to explain the interaction of these factors. The main steps, which lead to the development of ISM model, are illustrated below the structural self-interaction matrix represents these directional relationships among variables using following four symbols:V: Factor i will assist to reach Factor j; A: Factor j will assist to reach Factor j; X: Factor j and j are unrelated.

Step 1: Data gathering and formation of structural self-interaction matrix (SSIM):

As noted, before, final model included of 12 factors was obtained based on literature review and expert opinion (Table 2).

Table 2:Structural Self-Interaction Matrix (SSIM)

Factor	Factor	12	11	10	9	8	7	6	5	4	3	2	1
number		HS	RN	ETS	GNR	CHS	CMS	AS	РО	LJS	SES	ES	GS
1	Chief	V	О	О	O	О	0	V	О	V	X	X	
	Executive												
2	Economic activity	V	X	O	О	О	О	X	0	V	X		
3	Social groups	V	О	О	V	0	О	V	O	V			
4	Legislative and Judicial (Legal)	X	X	X	V	X	V	X	0				
5	Political Organizations	V	О	0	О	O	V	О					
6	Public Administration	X	A	A	0	V	O						
7	Civic and Media	X	0	0	O	V							
8	Cultural and Heritage	X	0	V	V								
9	Geography and History	V	О	O									
10	Ethnic and Tribal	V	X										
11	Religion and Ethics	X											
12	Natural Resources												

Reachability Matrix

The SSIM format is transformed into initial reachability matrix format by transforming the information in each entry as per the following rules:

if the (i, j) entry in the SSIM is V, then the (i, j) entry in the reachability matrix becomes 1 and the (j, i) entry becomes 0

- \Box if the (i, j) entry in the SSIM is A, then the (i, j) entry in the reachability matrix becomes 0 and the (j, i) entry becomes 1
- if the (i, j) entry in the SSIM is X, then the (i, j) entry in the reachability matrix becomes 1 and the (j, i) entry also becomes 1
- \Box if the (i, j) entry in the SSIM is O, then the (i, j) entry in the reachability matrix becomes 0 and the (j, i) entry also becomes 0.

The initial reachability matrix formed is shown in Table 3.

Table 3: Initial Reachability Matrix

Factor	Factor	1	2	3	4	5	6	7	8	9	10	11	12
number		CE	EA	SG	LJ	РО	PA	CM	СН	GH	ET	RE	NR
1	Chief	1	1	1	1	0	1	0	0	0	0	0	1
	Executive												
2	Economic	1	1	1	1	0	1	0	0	0	0	1	1
	activity												
3	Social groups	1	1	1	1	0	1	0	0	1	0	0	1
4	Legislative and	0	0	0	1	0	1	1	1	1	1	1	1
	Judicial												
	(Legal)												
5	Political	0	0	0	0	1	0	1	0	1	0	0	1
	Organizations												
6	Public	0	1	0	1	0	1	0	1	0	0	0	1
	Administration												
7	Civic and	0	0	0	0	0	0	1	1	0	0	0	1
	Media												
8	Cultural and	0	0	0	1	0	0	0	1	1	1	0	1
	Heritage												
9	Geography	0	0	0	0	0	0	0	0	1	0	0	1
	and History												
10	Ethnic and	0	0	0	1	0	1	0	0	0	1	1	1
	Tribal												
11	Religion and	0	1	0	1	0	1	0	0	0	1	1	1
	Ethics												
12	Natural	0	0	0	0	0	1	1	1	0	0	1	1
	Resources												

The initial reachability matrix is checked for transitivity rule as described in step d in section 4.2. If the transitivity rule is not found to be satisfied, the SSIM is reviewed and modified by specific feedback about transitivity relation from the experts. The driving power of a particular element is the total number of elements including itself, which it may help to achieve. The dependence is the total number of elements which may help achieving it. The final reachability matrix is shown in Table 3 along with the driving power and dependence of each element.

Also, the final reachability matrix (Table 6) indicates each factor's driving power and dependence power. The driving power of a factor is the total number of factors that can be alleviated by it. The dependence power of a factor is the total number of factors that can possibly alleviate it. The drive power of a factor is derived by summing up the number of ones in the rows and its dependence power by summing up the number of ones in the column.

Table 4: Final Reachability matrix

Factor	Factor	1	2	3	4	5	6	7	8	9	10	11	12	Driving
number	T de toi	CE	EA	SG	LJ	PO	PA	CM	СН	GH	ET	RE	NR	power
	Chief Eve outine					0	1	1*	1*	1*	1*	1*		-
1	Chief Executive	1	1	1	1						-		1	11
2	Economic	1	1	1	1	0	1	1*	1*	1*	1*	1	1	11
	activity													
3	Social groups	1	1	1	1	0	1	1*	1*	1*	1*	1*	1	11
4	Legislative and	0	1*	0	1	0	1	1	1	1	1	1	1	9
	Judicial (Legal)													
5	Political	0	0	0	1*	1	1*	1	1*	1	1*	1*	1	9
	Organizations													
6	Public	1*	1	1*	1	0	1	1*	1	1*	1*	1*	1	11
	Administration													
7	Civic and Media	0	0	0	1*	0	1*	1	1	1*	1*	1*	1	8
8	Cultural and	0	1*	0	1	0	1*	1*	1	1	1	1*	1	9
	Heritage													
9	Geography and	0	0	0	0	0	1*	1*	1*	1	0	1*	1	6
	History													
10	Ethnic and Tribal	0	1*	0	1	0	1	1*	1*	1*	1	1	1	9
11	Religion and	1*	1	0	1	0	1	1*	1*	1*	1	1	1	11
	Ethics													
12	Natural	0	1*	0	1*	0	1	1	1	1*	1*	1	1	9
	Resources													1
	Dependence power	5	9	5	11	1	12	12	12	12	11	12	12	

^{*} Used in matrix for "rule of transitivity".

Step 3: Level partitions

From the final reachability matrix, for each factor, reachability set and antecedent sets are derived. The reachability set consists of the factor itself and the other factor that it may impact, whereas the antecedent set consists of the factor itself and the other factor that may impact it. Thereafter, the intersection of these sets is derived for all the factors and levels of different factor are determined. The factors for which the reachability and the intersection sets are the same occupy the top level in the ISM hierarchy. The top-level factors are those factors that will not lead the other factors above their own level in the hierarchy. Once the top-level factor is identified, it is removed from consideration. Then, the same process is repeated to find out the factors in the next level. This process is continued until the level of each factor is found. The Factors, along with their reachability set, antecedent set, intersection set and the levels, are shown in Tables 7-9. The identified levels aids in building the diagram and the final model of ISM.

Table 5: Level partition—iteration 1

FACTORS	Reachability set	Antecedent set	Intersection	level
Chief Executive	1, 2, 3, 4, 6, 7, 8, 9, 10,	1, 2, 3, 6, 11	1, 2, 3, 6, 11	10 (01
Cinci Excedive	11, 12	1, 2, 3, 0, 11	1, 2, 3, 0, 11	
Economic activity	1, 2, 3, 4, 6, 7, 8, 9, 10,	1, 2, 3, 4, 6, 8, 10,	1, 2, 3, 4, 6, 8,	
	11, 12	11, 12	10, 11,12	
Social groups	1, 2, 3, 4, 6, 7, 8, 9, 10,	1, 2, 3, 6, 11	1, 2, 3, 6, 11	
	11, 12		, , , ,	
Legislative and	2, 4, 6, 7, 8, 9, 10, 11,	1, 2, 3, 4, 5, 6, 7,	2, 4, 6, 7, 8, 10,	
Judicial(Legal)	12	8, 9,11, 12	11, 12	
Political	4, 5, 6, 7, 8, 9, 10, 11, 12	5	5	
Organizations				
Public	1, 2, 3, 4, 6, 7, 8, 9, 10,	1, 2, 3, 4, 5, 6, 7,	1, 2, 3, 4, 6, 7, 8,	I
Administration	11, 12	8, 9,10, 11, 12	9, 10,11, 12	
Civic and Media	4, 6, 7, 8, 9, 10, 11, 12	1, 2, 3, 4, 5, 6, 7,	4, 6, 7, 8, 9, 10,	I
		8, 9,10, 11, 12	11, 12	
Cultural and Heritage	2, 4, 6, 7, 8, 9, 10, 11,	1, 2, 3, 4, 5, 6, 7,	2, 4, 6, 7. 8, 9,	I
	12	8, 9,10, 11, 12	10, 11,12	
Geography and	6, 7, 8, 9, 11, 12	1, 2, 3, 4, 5, 6, 7,	6, 7, 8, 9, 11, 12	I
History		8, 9,10, 11, 12		
Ethnic and Tribal	2, 4, 6, 7, 8, 9, 10, 11,	1, 2, 3, 4, 5, 6, 7,	2, 4, 7, 8, 9, 11,	
	12	8, 10,11, 12	12	
Religion and Ethics	1, 2, 3, 4, 6, 7, 8, 9, 10,	1, 2, 3, 4, 5, 6, 7,	1, 2, 3, 4, 6, 7, 8,	I
	11, 12	8, 9,10, 11, 12	9, 10,11, 12	
Natural Resources	2, 4, 6, 7, 8, 9, 10, 11,	1, 2, 3, 4, 5, 6, 7,	2, 4, 6, 7, 8, 9,	I
	12	8, 9,10, 11, 12	10, 11,12	

Table 6: Level partition—iteration 2

FACTORS	Reachability set	Antecedent set	Intersection	level
CE	1, 2, 3, 4, 10	1, 2, 3	1, 2, 3	
EA	1, 2, 3, 4, 10	1, 2, 3, 4, 10	1, 2, 3, 4, 10	II
SG	1, 2, 3, 4, 10	1, 2, 3	1, 2, 3	
LJ	2, 4, 10	1, 2, 3, 4, 5, 10	2, 4, 10	II
PO	4, 5, 10	5	5	
ET	2, 4, 10	1, 2, 3, 4, 5, 10	2, 4, 10	II

Table 7: Level partition—iteration 3

FACTORS	Reachability set	Antecedent set	Intersection	level
CE	1, 3	1, 3	1, 3	III
SG	1, 3	1, 3	1, 3	III
PO	5	5	5	III

Table 8: Factors Political System at Each Level

Factors	Levels
PA, CM, CH, GH, RE, NR	I
EA, LJ, ET	II
CE, SG, PO	III

Table 9:Level Partitions of Factor- after 3 Iterations

Factors	Levels
Chief Executive	III
Economic activity	II
Social groups	III
Legislative and Judicial (Legal)	II
Political Organizations	III
Public Administration	I
Civic and Media	I
Cultural and Heritage	I
Geography and History	I
Ethnic and Tribal	II
Religion and Ethics	I
Natural Resources	I

Step 4: Formation of ISM-based model

Based on the level partition presented in Tables 5-7, and from the final reachability matrix (Table 4), the structural model is generated by vertices and edges. Out of 12 factors, three are lying at the bottom level and six are at top level of ISM model. 'chief executive, 'Social groups' and 'Political Organisations' have lying at the bottom level of model. 'public administrative', 'civic and media', 'cultural and heritage', 'geography and history', 'religious and ethics' and 'natural resources' has lying at the top level of model. Rest three factors i.e. 'economic activity', 'legislative and judicial (legal)' and 'ehnic and Tribal' are lying in between top and bottom levels. This graph is called digraph (fig. 2). After removing the transitivity's as described in the ISM methodology, ISM model has been made as shown in Fig. 3.

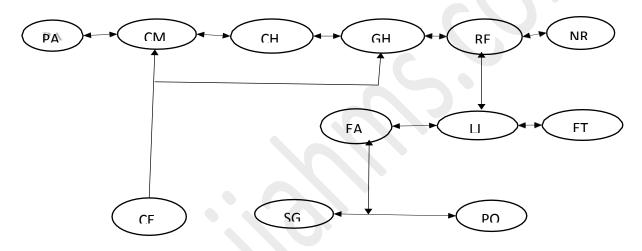


Figure 2: Diagraph of Political Systems Factors

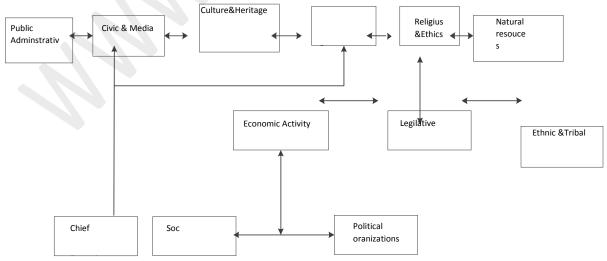


Fig.3: ISM-based model political systems

Based on their drive power and dependence power, the factors have been classified into four categories i.e. autonomous factors, dependent, linkage factors and independent factors (Fig. 5). Higher dependence and lower driver power indicate dependent factors, whereas lower dependence and higher driver power indicate independent factors. Lower dependence and driver power indicate autonomous factors, whereas higher dependence and driver power indicate linkage factors. It is observed that a variable with strong driving power called as the key variable falls in the category of the independent or linkage factor

Low Dependence Power High

Fig. 4: Driving Power and Dependence Power Diagram

Table 10: Driving, dependence power and category

Variable	Driving Power	Dependence Power	Category
Chief Executive	Very High	Low	Independent
Economic activity	Very High	Very High	Linkage
Social groups	Very High	Low	Independent
Legislative and Judicial	Very High	Very High	Linkage
Political Organizations	Very High	Low	Independent
Public Administration	Very High	Very High	Linkage
Civic and Media	Low	Very High	Dependence
Cultural and Heritage	Very High	Very High	linkage
Geography and History	Low	Very High	Dependenc
Ethnic and Tribal	Very High	Very High	Linkage
Religion and Ethics	Very High	Very High	Linkage
Natural Resources	Very High	Very High	linkage

2. Discussions and Conclusion

A political system is composed of the elements. The political process developing includes any actions to implement the ruling of people, community and public affairs in governance. The term "political system" consists of two components - in particular, "politics" and "system." The word

"politics" if translated from Greek means the art of state governance, or a certain method to attain the objectives of the state both domestically and internationally. Aristotle (1983) stressed a specific feature of politics meaning its direct or indirect connection with authority. "Politics" as a term means relationships among classes; the area of all the classes and strata attitude to the state and to the government. In our opinion, these statements have the most important methodological meaning for identification and analysis of the relations among the subjects of political system of any state. The word system, when translated from Greek, means something whole, made of components, which are connected (Tikhomirov, 1997). It is a multitude, naturally interrelated elements (subjects, phenomena, views, etc).

The term system was introduced into scientific language by German biologist Ludwig von Bertalanffyin the 20th century to identify metabolic processes between the cell of the environment. He considered the systemic aggregate of interdepending elements as an integrity comprising of elements involved into interaction (1969). The relations of interdependence mean that if one element of the system changes, the entire integrity would change American scientist D. Easton was one of the first political scientists to survey political system. In his monographs: Systemic Analysis of Political Life (Easton, 1965), "Political System" (Easton, 1974a) and "Threshold of Political Analysis" (Easton, 1990) he studied the fundamentals of political system theory. According to D. Easton (1974b), a political system is a developing and self-regulating organism composed of a variety of components which, in aggregate, create an integrated whole. The system has its entry, which receives outside impulses or the requirements impulses or support impulses. Political decisions, underpinning political actions are at the exit of the system.

In our opinion, the views of V. Malakhov & V. Kazakhov (2002) that the factors setting certain characters of a political system of society, forming certain views are multidimensional, deserves support. They include not only organizations of state power, not only political establishments (parties, political movements and other public associations), their fight for powers and control over state institutions in own purposes including army, police, governing institutions, mass media, but also other deeper layers of these factors.

The elements of political system of society include political consciousness and political culture (Malakhov & Kazakhov, 2002). Mirroring and forming first of all under the impact of certain social and political practice, the ideas, value orientations of political life of participants, their emotions and prejudices have a significant impact on their behavior and the entire political dynamic. It is extremely important to consider political moods of masses in the process of managing and governing society.

Based on the analysis and generalization of existing opinions regarding the term "political system", we made a conclusion that a political system is a mechanism of universal nature including several levels of communication and interaction of institutes of state and society.

According to M. Farukshin (2005a), thanks to the mechanisms of a political system, society as a whole (or the ruling elite) opposed to destructive social forces, respond to infringements on the principles and foundations of a state system. A politically literate and socially active person should know how a political system looks like and how it functions, what are its external attributes and hidden mechanism, what are the real factors impacting its dynamics.

In contrast to M. Farukshin (2005b), we believe that a political system of any society, as a complex mechanism, is characterized with the presence of certain sub-mechanisms, guaranteeing its existence. Such sub-mechanisms allow it to settle social contradictions and conflicts, coordinate the efforts of various public groups, organizations and movements, harmonize public attitudes, and reach consensus with the regard of the key values, objectives and directions in social development. In the research of the term "social system," special attention is devoted to its elements as concepts and their meaning.

According to M. Farukhshin (2005), a political system of society includes directly political and non-directly political organizations. The latter relates to a political system with the aspects of their activities directly related with the participation in political authority practice.

Modern theory on state and law pays huge attention to the political system of society considering it as objectively developing unity of various social institutions, mutual connections of a certain type. So, a political system is a system of interacting norms and political institutes, institutions organized of functioning based thereon. A political system of society is a complex set of state institutions, political parties and public associations, where political life of society is developing and state and public authority is implemented.

The relation between politics and ethics is studied by C. Schmitt (2008), which conceives that politic system is an ethical system. T. Parsons (2013), an American sociologist transferred the term "system" to society research, presented society as interaction of four subsystems: economic, political, social and moral that are interdependent and exchange mutual relations. Every subsystem performs certain functions, responds to requirements it receives from inside and outside and together they ensure existence of society in general.

In our opinion, correctly identifiy the following elements of a political system including religious organizations, local self-governance authorities, labor groups and criminal organizations. Religious organization is a voluntary association of citizens, other persons permanently and legally residing in the territory of a state established with the aim of joint practicing and spreading their beliefs and registered as a legal entity.

Although, political system uses as a synonym of the specific group of people and society in context of recognition and self-establishment. We cannot ignore this aspect of the sociology because its mental value of the definition.

Also, a political system includes the institutes (organizations, institutions, parties) related to political authority's function. The rate of its involvement in political life, the practice of powers makes it possible to identify three types of organizations: directly political, non-directly political and non-political.

Moreover, political principles and norms are significant elements of a political system. They compound its regulatory framework. Political regimes (for instance totalitarianism and political pluralism) differ from each other to the same extent as the principles and norms underpinning the functioning of appropriate political systems. Thus, the results of the study seem to be convenient in the obtainment of the current thing's picture. The place of this knowledge in political science is very essential because of its theoretical actuality.

Conclusion:

Literature review and experts' views has determined that the '' chief executive, economic activity, social groups, legislative and judicial, political organizations, public administrative, civic and media, cultural and heritage, geography and history, ethnic and tribal, religion and ethics and natural reources' are the most important factors that forming political system. The proposed ISM based model for political system to potray structure. On the other hand, if the nature of political system was complex and so embedded. The complex and embedded requires an increased level of interaction between the elements to expedite the process of political system. Despite the complexity and embeddness of political system, the modeling will be able to take advantage of its structure of the source to remove the existing gap by reducing the level.

3. Implications and Recommendations

The scientific value of this study is a determination of political system elements, which is enough for the modern politic society's demands. The study's abilities are wide in case of managing sphere. The last one involves everybody and that fact allows concluding the empirical implications of the study. Based on the survey and generalization of opinions with the regard to the political system concept, we concluded stability and appropriate functioning of a political system. It is necessary to consider the interests of the political life, including participants and contradictions arising among them, reaching an optimum alignment of interests, coordinated efforts of classes and social groups existing in the society and political parties representing their interests. A political system must integrate various elements of social and national structures based on consensus on the key values and ideals as leading political forces in society. The advantage of the offered study's method contains in contemporary character involving analyzed current models. Theme of the study may be prolonged in next politic studies in the discourse of political interactions in political system.

REFERENCES

- i. A.P. Sage, "Interpretive Structural Modeling: Methodology for Large-Scale Systems", McGraw-Hill, New York, NY, 1977, pp. 91-164.
- ii. Jacob P. George, V. R. Pramod,(2014), "An Interpretive Structural Model(ISM) Analysis Approach in Steel Re Rolling Mills", International Journal of Research in Engineering and Technology, Vol.20,Issue.4,pp.161-174.
- iii. Nitin Upadhye, Devendra Awana, Sandeep Mathur.(2014), "Interpretive Structural Modeling of Implementation Enablers for Just in Time ICPI", International Journal of Lean Thinking, Vol. 5, Issue 1, pp.61-76.
- iv. Reza Sigari Tabrizi, Yeap Peik Foong, Nazli Ebrahimi(2010), "Using Interpretive Structural Modeling to Determine the Relationship among knowledge Management Criteria inside Malaysian Organizations", International Journal of Social Behavioral, Educational, Economic, Business and Industrial Engineering, Vol.4,No.12,pp.2270-2275

- v. Borade, A. B., & Bansod, S. V. (2012). Interpretive Structural Modeling-based Framework for VMI Adoption in Indian Industries. *The International Journal of Advanced Manufacturing Technology*, 58(9-12), 1227-1242.
- vi. Bouzon, M., Govindan, K., & Rodriguez, C. M. (2015). Reducing the extraction of minerals: Reverse logistics in the machinery manufacturing industry sector in Brazil using ISM approach. *Resources Policy (In Press)*.
- vii. Aristotle. (1983). Full Collection. Moscow: Academia. 593p.
- viii. Bertalanffyin, L. (1969) *Researches in General Theory of Systems*. Moscow: Progress. 326p.
- ix. Easton, D. (1965) System analysis of political life. New York: Wiley. 32p.
- x. Easton, D. (1974a) *The Political System*. New York: Routledge. 320p.
- xi. Easton, D. (1974b) *The Political System: An Inquiry into the State of Political Science*. New York: *Routledge*. 320p.
- xii. Easton, D. (1990) The Analysis of Political Structure. New York: Routlege. 336p.
- xiii. Farukshin, M.Kh. (2005a) *The Face and the Mask: Notes on Political Leadership in Tatarstan*, 1989-2005. Kazan: L-press. 263p.
- xiv. Farukshin, M. Kh. (2005b) The politic system. Political science in Russia and for all the world.
- xv. *AST Press*, 113, 1-22.
- xvi. Malakhov, V. & Kazakhov, V. (2002) *Theory of State and Law. Academic project*. Ekaterinburg: Business book. 583p.
- xvii. Parsons, T. (2013) Social system. London: Routledge. 488p.
- xviii. Pigolkin, A., Golovistikova, A., Dmitriyev, Yu., & Saidov A. (2007) *Theory of State and Law*.
- xix. Moscow: Yurayt-publishing. 239p.
- xx. Pulkkinen, T. (2015) *The postmodern and political agency*. Jyväskylä: University of Jyväskylä, 230p.
- xxi. Rye, D. (2016) Political Parties and the Concept of Power. *Party Politics*, 22(4), 563-564.
- xxii. Schmitt, C. (2008) *The concept of the political*. Chicago: University of Chicago Press. 162p.
- xxiii. Wiley, J. (2016) *Politics and the Concept of the Political*. London: Routledge. 310p