

STRUCTURAL CONDITION DEPENDENCY THEORY: A GENERAL EVALUATION

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ABSTRACT

Structural condition dependency theory is based on hypothesis that organizations, which can adapt to environmental changes and can change their structures, easily can survive, others will disappear. Therefore it is separated from previous approaches in respect to its purposes. According to this theory, organizations, which can be adapted and complied with changing environmental conditions, are considered successful. Theory defends that best organizational structure and management model to be used for achieving success and survive can only be determined according to circumstances which organization faced and it does not consider emphasis of system approach "for each organization". In this study, firstly, meaning and basic problematic of theory and contextual dimensions and pioneer researches were discussed. General evaluation where criticism and proposals are considered was made in conclusion section.

Key Words: Management Theories, Structural Condition Dependency Theory.

1. INTRODUCTION

Organizations find out perspectives, which are similar with biological systems, together with development of system theory. System theory can be considered as turn of mind, management philosophy, method and approach that is used in examination of certain events, situations and developments rather than a new discipline alone (Şimşek and Çelik, 2016: 168). System theory, which is generally considers approach of transformation of inputs into outputs throughout process, has prepared and infrastructure for appearance of two different theory in organizational researches. These are structural condition dependency theory¹ and source dependency theory. Structural condition dependency theory asserts that organizations, which can change their structures easily by adapting to environmental changes, can survive and other will disappear. For this reason, the theory is separated from its previous approaches with its purpose. According to this theory, organizations which can be adapted and comply with changing environmental conditions are considered as

¹ Structural condition dependency is considered as condition dependency and contingency approach in literature. It will be referred as structural condition dependency theory throughout study.

² Dimensions expression was used instead of elements based on literature in study. Also dimensions were separated as contextual dimensions referring "conditions" and structural dimensions referring "structurality" within organization. Also basic theses based on contextual dimensions will be presented in this study based on this literature.

successful. Theory defends that best organization structure and management model to be used for achieving success and survive can only be determined according to circumstances which organization faced and acts from this defense (Jokipii, 2010: 117; Otley, 2016: 46).

Structural condition dependency theory was evaluated as important because of its new perspective, new understanding and effect which initiates particularly organization theories and considered as provider factor of transformation of value series. Thanks to this theory, understanding organizations and exploring relations between inner/external structures of organizations became easier and important (Pennings, 1975: 393). Understanding of “organizations will be able to sustain their lives and be more successful with effective performance by adjusting adaptation/coordination to conditions” has become sovereign with the reflections of open system approach on social science research in general dimension, on organizational research in particular dimensions. In fact, theory emphasizes that there cannot/will not be single organization structure, best organization structure and management model which is valid under all conditions. Depending on this emphasize, understanding of “manager should adapt their organization structure according to context namely conditions” is also dominant. (Pennings, 1975: 394; Otley, 2016: 46).

In this study, firstly meaning and basic problematic of theory were explained. Then contextual aspects and preliminary researches were considered. Contextual aspects were collected under for main titles (environment, technology, size and strategy) among themselves. Study was ended with general evaluation.

2. MEANING AND BASIC PROBLEMATIC OF THEORY

Structural condition dependence was suggested with the idea that “there is not any best organization form” and it is mentioned as organization theory which is formed by bringing more than one approach together. Basic problematic of theory is formed for researching whether changes, which occur environment, strategies, technology, size and culture which are referred as contextual dimensions², can have an effect on structural dimensions of organization and how these effect can occur. Here structural dimensions, that will be subjected to change, include formalization, specialization, authority hierarchy, centralization and employee rates. It is assumed that changes, which may occur in these factors, will change structure of organization and organizations, which will adapt to these changes, will survive and others will end (Pennings, 1975: 394).

Structural condition dependence theory was developed based on system approach³ and tries to eliminate its very general and abstract nature. This theory suggests that different conditions can be met by many different ways, actions of managers are mostly restricted by environment and there are many ways which will be appropriate for situations in which they are located. With different explanation, this theory argues that organization and its conditions are specific and depending on this environmental conditions determine inner working of organizations, management type, management technique and management process activities. Besides, this theory has the idea that there are not general principles which can applied for all condition except examined condition. Thereby properties for structural condition dependency can be evaluated as following (Lizarralde et al, 2011: 20-22; Otley, 2016: 46-47):

1. It objects with the idea of previous approaches that there is only single way and it argues that conformity should be maintained between environment and conditions and management activities. Relativity idea is dominant in this conformity to be maintained.
2. It gives importance for managers to improve their skills for selecting and applying strategies and concepts in accordance with environment.
3. It considers organization as open system. Thereby structural and organizational regulations should have flexibility to accommodate environmental changes.
4. It rejects that there are absolute truths regarding with organizational and managerial behaviors and there are a few absolute dogmas which can be used.

³ Even though structural condition dependency approach is similar with system approach very much, it differs in practice area with some aspects. Although theory has the idea that organization has upper and lower system, it is interested with mutual dependency between components of organization and emphasize importance of sustainability and compliance functions in management. Infact theory opposes the existence of universal principles by arguing that organizations has to be compliant with their environment for sustaining their life, growing and developing.

3. CONTEXTUAL DIMENSIONS OF THEORY AND PIONEER RESEARCHES

Environment, technology, size and strategy were considered as basic contextual dimensions of this theory. Starting from this point, firstly dimensions were emphasized. However actions were made as being oriented to pioneer researches of theory while explaining contextual dimensions. Thereby dimensions of theory, pioneer studies and basic theses were evaluated together.

3.1. Environment Size

Environment is the contextual dimension which is considered and is mostly emphasized as basic by theory. Unexpected, sudden, rapid or regular changes, which were encountered in environment, makes change in organizational structure mandatory and built new organizational form. In article, there are pioneer researches which are made from basis of structural conditions dependency theory and emphasize interaction with environment. These pioneer researches are Burns and Stalker (1961), Tavistock Institute Studies (Emery and Trist, 1965), Thompson Research (1967), Lawrence and Lorsch Research (1967), Duncan Research(1972), Scott and Meyer Research (1983) and Donaldson (2001) Researche. These researches are studies for environment which is most important contextual dimension of this theory and is form basis for structural condition dependency theory.

First important study which emphasized effect of environment on organizational structure is research of Burns and Stalker (1961). In the research, relation between organization structure and environment were examined but structure was not considered. "Research was conducted between organizations in machine sector which is generating artificial silk and organizations in electronic sector and lasted at six years. The goal, which is examining the relationship between organization structures and environment where they have activity, was achieved and it was determined that there are important environmental pressures over organization regarding with change. It was observed throughout research that employees work differently according to sector and operational type. It was found that serial production and quality standards have importance in machine business which performs silk production. Meanwhile it was determined that centralization and formalization in management are dominant since environment is not conceptual in organizations and working limits of employees are clearly defined. It was determined that there is no bureaucratic structure in electronic sector depending on environment changing continuously and there is flexible and compatible structure." (Sine, et al, 2006: 121-122).

Another important research regarding with environment is "Tavistock Institute Study". Part of this research which differs from Burns and Stalker is that "the rate of change" is also considered. Fred Emery And Eric Trist (1965) from London Tavistock Institute studied over determinants regarding with rate of change which occurs around environment of organizations and force of relation between environment and organization. Table 1 was developed by utilizing information regarding with consideration and classification of environment (Emery and Trist, 1965: 22).

Table-1: Environmental Structures for Tavistock Institute

Environmental Structures	Properties
Stable and Disordered Environment (1)	Environment varies very few, environmental threats are disordered structure and do not play important role over decisions of organizations. It is expressed as simplest and least efficient environment.
Stable and Clustered Environment (2)	In addition that environment changes slowly, environmental threats are in clustered form. Environmental forces are complex as being related to each other. Organizations should develop tactics against environment for surviving.
Disordered and Reactional Environment (3)	Number of organizations are very high in this environment together with complexity level. In addition that competition is very high, some major organizations effect and direct environment and may dominate industry.
Fluctuating Environment (4)	It is the environment where environmental uncertainty is highest. Relations between organizations are strong and efficient in this environment and there are many connections between factors/rules which form society and organizations give importance for research and development for being competitive.

As it can be seen from table, Emery and Trist has examined environment in a structure which becomes gradually more complex. Accordingly environment becomes more complex from structure 1 to 4, their importance and effects of organizations increase and organizations must develop tactic against environment to continue their lives. Also in structure 3, organizations should make studies for foreseeing future and take managerial decisions for success. Organizations in this environment act reactional and flexibly. In structure

4, organizations, which are present in unpredictable and uncertain environments, have to make studies over differentiation together with research and development investments (Emery and Trist, 1965: 23-24).

Another important study within scope of environmental dimension of structural condition dependency theory was conducted by James Thompson (1967). Organizations encounter with some obstacles caused from environment depending on uncertainty while they are trying to achieve goals. Obstacles which cause uncertainty can be collected under three dimensions. First dimension, which is referred as organizational area, covers “customers, produced products and services. Second dimension which is referred as task environment of organization is related to “other organizations, used resources (labor, capital, raw material), unions, state organizations and profession chambers. Last dimension is referred as “power and dependency relations” which is caused from both dimensions (Pennings, 1975: 394).

Thompson argues that organization can cope with environment and environmental changes by means of adaptation, and mentions that conformity with environment can be realized by regulations to be made in inner and external environment. In this context, regulations to be made inner environment are examined under four separate components. “Formation of buffer, predicting strategies, reducing changes in environment and austerity” are internal adaptations to be applied by organizations to protect their core structure. “Inner methods” which is recommended by Thompson within adaptation model basically includes two reactions. First of this is “taking precautions against change” and the other is “downsizing when precautions cannot be improved”. On the other hand, main objective with “the method of reduction effects in environment” is to protect core which executes main activities of organization against all kind of seasonal fluctuations. Raw material and labor, which are in sources of organization, are the factors which are influenced mostly from seasonal fluctuations. Thereby in the event of sudden change and fluctuation, organization firstly should have flexibility which can make change in present raw material and labor force. Acquiring flexibility and maintaining continuously is possible by executing raw material and labor force changes simultaneously with fluctuation movement. This depends on success of organizations for competency of predicting strategies which is the previous adaptation method (Pennings, 1975: 395). Austerity which is final method is reducing costs of expenditures of organization. This method which is considered as final remedy becomes inevitable in some cases for survival of organization.

Other study which is conducted based on environment regarding with structural condition dependency theory was conducted by Paul Lawrence and Jay Lorsch from Harvard University. This study which was conducted in USA was made in plastic, packaging and food organizations. Reactions of organizations and functional structures against demands of close environment were examined (Lawrence and Lorsch, 1967: 3-5). Differentiation and integration balance were recommended in research for maintaining conformity with environment. Differentiation is alteration in subsystems/functional structures of organizations by developing different abilities depending on environment they encounter. Integration is to provide union between sub units/functional structures so that organizations can reach their goals. Lawrence and Lorsch classified subsystems of organization as production, sales, research and development and evaluated sub environments as market, technical-economical and scientific sub environments. According to results of research, uncertainty which is caused from environment was realized as high in scientific sub environment, medium at market sub environment and low in technical-economic environment (Lawrence and Lorsch, 1967: 6-8).

Another research was conducted by Duncan in 1972. Duncan examined and evaluated studies which were conducted for environment and developed two dimensional environmental typology. First of two dimensions is “stability and dynamism” and second is “simplicity and complexity”. If organizations are located in stable and simple environment, perceived uncertainty level is low, there are few components in environment, each component are similar and close to each other and mostly they remain similar. It is at low medium level in stable and complex environment. Even though there are many components in environment, these do not resemble with each other and generally they do not change. Uncertainty which is perceived in dynamic and simple environment is medium or high. A few components which are in such environment are close and similar with each other. But they are in continuous change. Finally there are a lot of components in dynamic and complex environment. However components do not resemble with each other and they are in continuous change (Zhao et al, 2010: 211-212).

Another study which is conducted based on environment regarding with structural condition dependency theory belongs to Scott and Meyer. Authors classified environment as “institutional” and “technical”. Institutional environment mentions rules, norms or beliefs which are projected by environment, and technical environment mentions dependency of environments with other organizations which they are in relation (Zhao et al, 2010: 211-212).

In his study at 2001, Donaldson has defined environment as three dimensional and considered relation of each dimension and uncertainty level with different manner. First dimension which is referred as “dynamism” is related to change and is increased uncertainty for organization. Here higher the dynamism of organization, higher the uncertainty. Second dimension which is referred as “resource abundance” is related to sources which organizations use or need and increase on dependency with those also increases uncertainty of organization. Final dimension which is referred as “complexity” is related to conflicts in area of activity of organization and increase in this will causes increase in complexity (Donaldson, 2001: 38-39).

3.2. Technology Dimension

Technology is evaluated as any kind of production information. Starting from this point, technology is considered as techniques or technical processes which transform inputs into outputs for organizations. Researches of “Woodward, Perrow, Thompson and Aston Grubu” gives remarkable results within pioneer studies for technology in structural condition dependency theory. However it can be observed that method for examining relation with organization and handling technology in researches differentiate (Heiens and Pleshko, 2011: 20).

First study which is pioneer study which discusses technology as structural condition dependency dimension was conducted by Joan Woodward. Woodward has conducted his study lasting nine years over manufacturing organizations in England. Even though direct relations cannot be found in research where relation between structure and performance was observed, it was concluded that relation depends on third dimension. He has revealed that this dimension is production technology which is used by organizations. In this research, production technologies which are used by organizations were divided into three groups such as small party and unit production technology, and massive big party production technology. Small party and unit production technology is used for organizations which produce products with low amounts and which generally use hand labor in their manufacturing. Standardization is not referred in such production and employees know/recognise entire manufacturing technology, and produce in accordance with order of customer. Properties and knowledge of employees are more valuable than technologic factors in such organizations. Organizational structure has horizontally hierarchy at low level and they are mostly evaluated as organic. Organizations in massive big party productions are organizations which perform mass production and use standardized processes. These organizations use assembly line in manufacturing technology and produce products which are similar with each other. There are many employees in these organizations, their hierarchy level is high and they have mechanical structures. Continuous process production is used for defining organizations which produce continuously. Machines which are used in production technology in these organizations perform entire production but employees supervise production process and performs change scheduling. In these organizations, their organizational structure is thin, long and organic since there are not many employees in production units (Drazin and Ven, 1985: 515-518).

Second study which has considered technology in structural condition dependency theory was conducted by American sociologist Charles Perrow in 1967. In his study, Perrow defined technology as activity which is made over raw material into a product by making several changes over them. Perrow moved on two dimensions while using organization technology. First dimension is variability which evaluates amount of repetition of the works which employees encounter throughout day. Accordingly with this, more difference in a job, more variability in that work. Differentiation level is very low in such works. In second dimension, it is the analysis ability for the work regarding with amount of research which was conducted by employees for solving problems. Problems which may be encountered in works which can be analyzed can be predicted before and can be solved easily. Starting from this two different dimensions, Perrow has presented for basic technologies such as routine, non routine, professional and engineering technology. Works where business diversity is low and properties regarding with work can be predicted are routine works. These works were scheduled before and does not have differentiation. Non routine technology is for work where business diversity is high. Predictions related to cases in these works are weak. Case, where technological diversity and ability of analyzing are low, is referred as professional technology. Firstly training and then experience is important in these technologies. This is followed by engineering technology which predictability of work-related characteristics and business diversity is high (Perrow, 1967: 195-197).

Another study which is conducted regarding with technology within scope of theory is the research of Thompson. This research has examined relation between organizational structure and technology. It separated technology which is used by organizations into three groups. First one is dependent technology where standardization in transformation of inputs into outputs is high, and activities are serial with each other. Second one is analyzing technology where inputs and outputs are special. However transformation

process for inputs into outputs are standard in this technology. Last one is intense technology. In this technology, inputs, outputs and transformation processes do not have standard structure (Perrow, 1967: 198).

Final basic research for structural condition dependency approach is research of Aston group. A group of researchers from Aston University came together for investigating basic dimensions of organizational structure under leadership of Derek Pugh. Relationship between organizational structure and technology was found as result of research. According to results, technology was subjected to triple classification as material technology defining material properties which are used in work flow, operational technology which is used as technology in work flow and information technology which defines knowledge level which is used in work flow (Pugh et al, 1969: 91-95).

3.3. Size Dimension

One of pioneer studies which is conducted between size and structural condition dependency was conducted by Peter Blau(1970), In his study, Blau considered size of organization and number of employees as equivalent and mentioned that organization grows together with number of increase in number of employees. Thereby as the organization grows it will become more complex and managerial structure will expand. Organization will become more bureaucratic and mechanical depending on this extension.

There are many empirical study investigating relation between organizational structure and size within scope of structural condition dependency theory. It is emphasized that studies regarding with size which were conducted in recent years are relatively insufficient (Jokipii, 2010: 121-122).

3.4. Strategy Dimension

Strategy has become other contextual dimension which makes important contribution to structural condition dependency theory. Strategy is a way which is developed by organizations against changing environmental conditions. Strategy, which is such kind of analysis art, regulates relation between environment and organization and predicts activating sources which are used for maintaining superiority against components (Çetin, 2008: 42-43).

Alfred Chandler (1962), who has important study regarding with strategy, investigated how organizations accommodated with changing environmental conditions and how they change their strategy and structures for survival. It was observed as result of research that strategies are influenced from changes in technologic and market structure. Four different expansion/growing were expressed depending of research. Each growing effects strategy and considered as strategic factor. Firstly there is “volume expansion”. This expansion is the expansion as result of specialization of present works in organizations. Second one has occurred as result of expansion by “geographical distribution”. Geographical distribution of local manufacturing and sales units can be mentioned in this expansion. Thirdly there is “decision staged expansion” which provides vertical completion. Here there are situation of formation of some new functions in organizations and organizations start to produce them. Finally there is “variation” where organizational differentiation has experienced by expansion of new product lines (Jokipii, 2010: 120-121).

4. GENERAL EVALUATION, CRITICIS AND RECOMMENDATIONS

Several critics were made for structural condition dependency theory from different persons. If critics are determined with general manner, it is mentioned that theory is insufficient with respect to formation and it cannot be pointed out completely with conceptual manner. In addition to this, consideration of organizations and environment by theory was criticized. Schoonhoven (1981) is one of the major criticism director. Author mentioned that there are basic problems regarding with theory and mentioned that theory could not be expressed clearly. Theory could not be presented entirely since there is not clarity in theory. There are uncertainties in their hypothesis. These are indicated that this theory could not be tested exactly and hypotheses were made with careless manner (Schoonhoven, 1981: 349-377).

Studies which were made in condition dependency field are regarding that organization structuring can change under environmental effects and there are not organization structure which can be defined as standard. Several researches mentioned that changes which are mentioned in particularly contextual variables will bring radical changes structure of organizations (Mc Graht, 2006: 15-92).

Condition dependency theory has important place in development of organization and management theories. This theory is based on positivist and objective understanding and approached to human nature with necessarian understanding. There are several factors such as strategy, age, culture, size in environment around structure. Condition dependencies determine organizational structure. Organization will have high

performance in the event that conformity is acquired between these two variables, otherwise it will have difficulties. Different authors have defined different organizational structures in this case. Condition dependency approach has adopted open system approach for the first time. Transformation process has interaction with environment in open system approach. There is organism integrity and environment develops continuously as being different from organism and organism should implement negative entropy for survival. There is organization=structure analog form within condition dependency theory. Condition dependency theory has many deficiencies due to this thinking pattern which is deficient with many aspects since it is caused from natural sciences. In addition that several conditions may have different demands from organization, there is also human factor and this factor may change everything. Source approaches, which criticize condition dependency theory, mentions that it is not possible to determine external condition dependencies (Mc Graht, 2006: 93). In this point, suggestion of study is configurational approach. This approach has appeared as evolved version of theory. Approach points out several points which are missing in condition dependency theory and tries to remedy it. Holistic and integrative approach has replaced analog and minimalist approach of condition dependency.

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