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Viable System Model for Managing Organizational Transformation: A Case Study on Korean Food-Services System

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ABSTRACT

Purpose: In this article, the Viable System Model (VSM) is introduced and used as systems approach for managing organizational transformation at the Korean company. It aims to utilize strategic change management for understanding the nature of organizational transformation from systemic perspectives.

Design/methodology/approach: Systems study using the VSM carries out regarding systemic understanding of the strategic change management of the system-in-focus within the organization. Semi-structured interviews were selected to elicit the history, decision-making process about the company's objectives, strategic plans and operation of the food-services system within the company.

Findings: The Viable System Diagnosis (VSD) helps to design an effective food-services system to make this system viable in rapidly changing markets. It sets out the autonomous units of food-services system which has the necessary functions of operation, regulation and coordination, operational control, intelligence and policy that should be present in the organization. This helps initiate and facilitate the strategic change management of the company through providing the ability to respond environmental changes to the company in advance.

Research limitations/implications: In this research, focus was on exploring the complex nature of strategic change management in how VSD helps design an effective food-services system to make this system viable in turbulent situations. This research can be justified only if the VSM approach is associated with its interpretivist paradigm, referred as soft systemic thinking.

Originality/value: The VSM is introduced and applied in an effort to manage organizational transformation of the Korean food-services system in association with strategic management. The value of research was to explore the complex nature of organizational transformation using Espejo and Reyes' notion of the *archetypes*. It was able to demonstrate it through a case study on Korean food-services system as it shows the nature of the self-organizing whole.

Keywords: Organizational transformation, Strategic change management, Viable systems model

I. Introduction

Action-based systems studies had been developed to bring about changes in the fields of strategic

management and organizational change (Espejo & Reyes, 2011; Kalendra, 2016; Yu, 2021). The evolution of digital technology, as evidenced by enterprise social networks and clouding is driving a recent development for business learning and profoundly affecting changes in social systems and organizational systems (Kroenke & Boyle, 2017; Peng, 2022) There has been a great achievement in the field of systems-based research as regards different systems philosophies

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'hard', 'soft' and 'critical' (Jackson, 2019). Hard systems thinking was based on the mechanistic thinking for dealing with mechanical problems which can be fully understood only through an analysis that is developed from the positivist paradigm (Checkland, 1999). The mechanistic thinking of *elementalism* proceeds from the principle of ontological reality of the ultimate elementary chunks of any objects. As the elementary approach begins with the assumption that the reduction of the complex to the simple, of the whole to its parts. This study lies at the basis of numerous varieties of mechanism and reductionism in classical science (Espejo & Reyes, 2011, p. 214). In classical science, the systems study based on reductionism enabled the development of civilization to be made from the seventeenth to nineteenth centuries. However, discoveries in organizational cybernetics, the interpretivism of soft systems methodology, complexity theory are leading to critique of the mechanistic thinking and its methods. As a result, a new way of thinking in systems approaches such as pluralist approach and a variety of systems methodologies has emerged to embrace systems ideas. The diversities of the basic principles of systemic investigations explains a certain ambiguity in the interpretation of the systems approach.

Understanding the processes of organizational transformation and learning, systemic thinking is useful to the extent that the principles of a scientific world view (*Weltanschauung*) was made in connection with the critique of a mechanistic thinking, which tends to support functionalist assumptions. A holistic or systemic thinking extends to understanding the role of technological development such as digital economy and metaverse technology, which are extended to human thinking on the virtual reality of online areas instead of physical workplaces (Espejo & Reyes, 2011). The recent developments of systems study in association with systemic innovation are leading to a rethink of the potential of a human being who has self-consciousness with human desire (Jackson, 2019). In the era of digital revolution, systemic thinking offers a method for the development of strategic management that should make it possible to appreciate

the complementarity of corporate strategy, organizational structure and culture towards a market orientation. The potential contribution of the systems discipline relates to how systems approaches can be applied in service of strategic management, organizational transformation and learning, and it leads to change the way of systemic thinking and action that innovate the management and operations in organizations (Espejo & Reyes, 2011; Yu, 2018). In this sense, systemic thinking has been useful to explore and manage organizational transformation and learning in association with strategic change management.

In this article, an action-based systems research can be used to make an inquiry and design the organizational system (e.g. Korean food-services system) from systemic perspective. Dealing with the problematic nature of the management and operation of the organizational system, the study aims to explain how it is possible to apply Beer's Viable System Model using Espejo and Reyes' notion of the *archetypes* and explaining the nature of self-organizing whole. Put differently, this paper aims to explain that how the Viable System Model (VSM) and Viable System Diagnosis (VSD) are useful to explore the complex nature of strategic change management and organizational transformation at workplaces. A case study on Korea food-services system, which operates in Korean company, is shown in order to articulate the usefulness of the VSM approach in conjunction with the understanding of the nature of strategic change management and organizational transformation at workplaces.

II. Literature Reviews

A. An action-based systems research

Recent years, there has been an increasing interest in systems research and studies for understanding a 'systemic perspective on control and performance measurement' using the Viable System Diagnosis

(VSD) (Gregory, 2017). During the COVID-19 pandemic, online shopping and digital transactions have become the best means for customers to satisfy their consumption needs. Digital leadership is to facilitate a suitable strategic change management, which includes strategic planning process for changing organizational culture towards a market orientation, which also support digital innovation (Karakose et al., 2021). Digital innovation supports the change of consumer behaviour in order to attract young people known as 'Generation Z' (aged 16-26) and millennials (aged 27-41).

Coping with the revolution of digital technology, a new way of systemic thinking is required to understand how organizations operate with real world and change the organizational culture towards strategic change from systemic perspective and use an action-based systems research (Yu, 2015, 2021). American professor West Churchman made a great effort to develop 'systems research' (Churchman, 1971). British professor Peter Checkland firstly coined 'soft system methodology' as systems research seeks both actions to improve a situation perceived as problematical and through reflection using the system model and a framework of ideas, high quality of observations and learning which may be transferred to other situation (Checkland, 1995, p. 50). Hard systems approach aims to ensure continuity and balanced effectiveness, need to think in terms of inputs, flows and outputs of organizational systems (Miser & Quade, 1985). Previous soft systems research tends to focus 'problem-solving' guided by systems analysts or experts (Checkland, 1981; Mingers & White, 2010). New developments of an action-based systems research had been used to increase understanding and knowledge of researchers, participants or clients (Yu, 2021). An action-based process-oriented systems research had been used to make systems approaches viable in fields of strategic change management and organizational transformation and learning (Espejo & Reyes, 2011; Yu, 2021). A process-oriented systems research leads us to focus a participant-driven approach that is supportive and constructive to facilitating the process of enquiry in practice (Yu, 2018, p. 17). A participants-driven approach does not merely look

for plan for actions, but make an enquiry of the problematic situations within organizations (Yu, 2006, p. 327).

B. The Viable System Model

Organizational cybernetics embodies in a highly usable form the 'viable system' model and its principles seek to help us design effective organizational systems to make them viable in changing environments (Beer, 1985). It sets out the requisite functions of implementation or operation, coordination and regulation, control, intelligence and policy, which makes processes of self-regulating systems according to the principles of law of requisite variety (Ashby, 1966). In the case of the development of digital technology, the VSM is entirely concerned with the contribution which cybernetics, the science of control and communication, can make to management both of complexity or uncertainty and of its impact. The VSM is the design of an adaptive system which gradually moves towards the attainment of organizational goals (Adamides et al., 2022). A viable system is continuity in business to produce itself, to be what it is, to perceive identity. Here is an explanation of the power of self-production. The self-production perspective allows for the recognition of processes that contribute to a greater potential for organizational transformation and learning, adaptability, innovation, and flexibility than those contained in traditional command hierarchies (Espejo et al., 1996).

When the VSM is used in organizational analysis and design, it tends to be misused by functionalist assumptions. It means that the VSM offers to be powerful means for increasing control by the exercise of powerful groups or individuals instead promote autonomy and decentralization at workplaces (Jackson, 2019, p. 318). On the other hands, Espejo and Reyes (2011) proposes a possibility which explores the usefulness of VSM as a tool for understanding systemic thinking, which helps us to observe self-organizing wholes rather than collections of elements or independent part in an organizational system. As

Beer (1989) suggests that the VSM is an arrangement of the five functions of operation, coordination and regulation, operational control, intelligence and policy that should be present in any viable system (Figures 1 & 2). Viable System Diagnosis (VSD) uses an organizational cybernetic model, the VSM to tackle issues of organizational complexity (Beer, 1985; Schwarz, 1994; Espejo, 1996, 2001, 2008; Schwaninger, 2003; Rezaee, 2018). The contribution of Espejo and Reyes' interpretation of VSM from the interpretivism of soft systems thinking relates to how the VSM can be put in service of strategic management, organizational transformation and learning as follows. Firstly, VSM can be used as an identity archetype for analysing the present situations and proposing the diagnosis and design of organizational systems in terms of the possibility of effective organizations. Secondly, it can be used for identifying potential problems discovered in organizational systems when the viable system model is used as the structural archetype of the actual systems

of organizations. Espejo (2008) propose the use of 'identity' and 'structural' *archetypes* in order to reveal identity and structural systems in terms of corporate identity, structure and processes within organizations. In this sense, the notion of *archetypes* is useful to identify the diagnostic points. These are the kind of diagnostic points when the principles of systemic thinking help us to observing self-organizing wholes. Espejo and Reyes (2011, pp. 235-237) offer the usefulness of *archetypes* to support inquiring process of learning, which generates strategies to facilitate technological, social, organizational transformation and cultural changes within organizations. The *identity archetype* is concerned with the formation of an organizational identity which is developed from an attention on good communication and relationships rather than on functional operations and resources. For instance, how effective are organizational relationships with customers and strategic alliances or partners? On the other hand, the structural identity is concerned with an adequate development resources

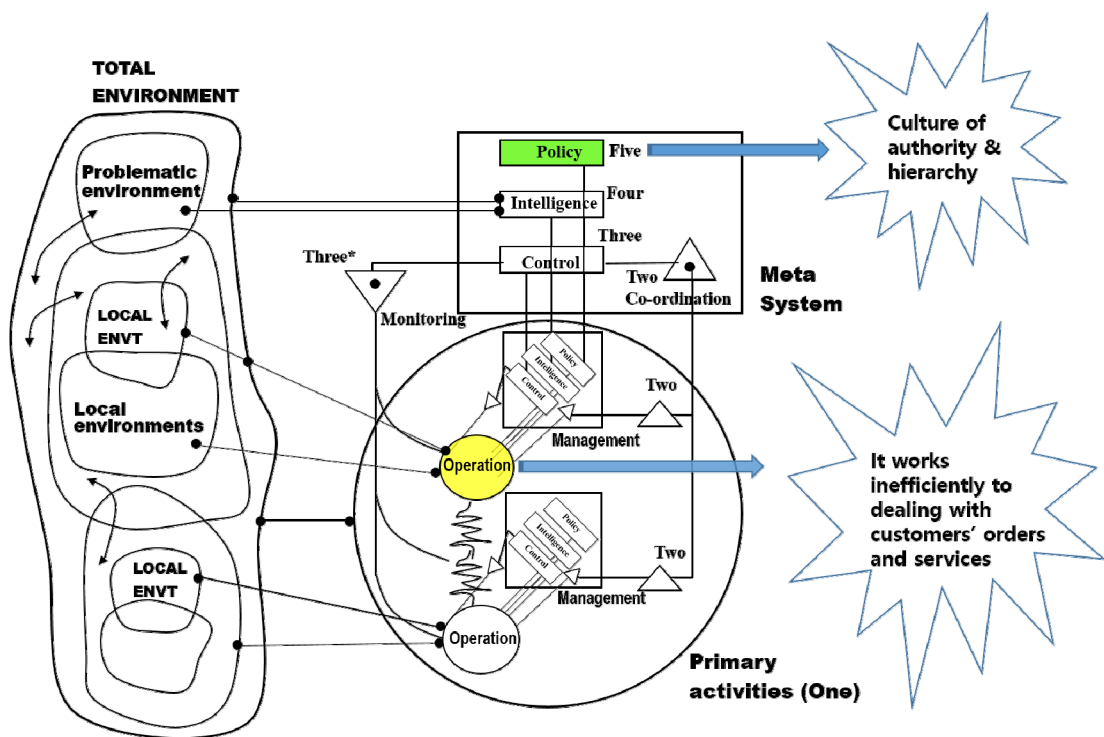


Figure 1. The VSM of food-services system within NHR

and reflection on the process of systems research using VSD. During the process of the VSM approach, the VSM was used to data analysis and interpretation, and the participative process of research was for making strategic planning process for managing organizational transformation of food-services systems that operates within the NHR. Semi-structured interviews with the managing director, operational managers and other participants from the NHR company were carried out to elicit the historical background of the company, decision-making process about the company's objectives, strategic plans and operation of the food-services systems within the NHR.

IV. Case study: The New Hometown Restaurant is South Korea

A. Background information

As part of action research, a case study of the New Hometown Restaurant (NHR) involves frequent visits for face-to-face interviews with the managing director and other staff to obtain the necessary and relevant information. The other way of collecting information by the researcher is through the use of the observation method by studying the internal

activities of the organization to establish the actual nature of these activities. The purpose of using the VSM approach was to make enquiring processes of action-based systems research that considers the use of *archetypes* (Espejo & Reyes, 2011). The project was carried out by conducting systems study based on semi-structured interviews with 8 participants from the NHR operating in Seoul and Gyeonggi Do, South Korea between January 2023 and March, 2023. Table 1 illustrates demographic characteristics of respondents comprising 8 employees from the NHR.

B. Research process

Stage 1. Identify problem and issues

An action-based system research was carried out by the researcher and participants. This stage involved the problem identification and finding out discussion issues which obtained through debate amongst participants. The questions asked by the interviewers during Stage 1 to identify problems and issues within the New Hometown Restaurant (NHR). For example, do you think communication and cooperation go well between operational managers and workers within the NHR? Do you think a current food-service system works effectively to attract new customers who want to have online food-services from the NHR? What are your ideas, experiences and thoughts on the design

Table 1. Demographic characteristics of respondents.

Measures	Contents	Number of respondents	(%)
Gender	Male	5	62.5
	Female	3	37.5
Employees work experiences	More than 1 year to less than 3 years	2	25.0
	More than 3 years to less than 6 years	3	37.5
	More than 6 years to less than 10 years	1	12.5
	More than 10 years	2	25.0
Employees position	CEO or owner	1	12.5
	Executives	2	25.0
	Senior workers	3	37.5
	Junior workers	2	25.0
Total		8	100%

of a new food-services system, which provides more effective and fast food-services business to customers? What are your ideas and/or experiences about a good strategic management of the NHR?

The initial perceptions of the problem situation expressed in stage 1. Different viewpoints understood and assessed the problem situations differently and named distinctive systems (Espejo & Reyes, 2011, p. 219). As the outcome of this stage, the notional systems of good communication and control system and strategic change system were identified. These are shown in the stage 2.

Stage 2. Develop notional systems

This stage is concerned with the definition of the notional systems that appear relevant to problem situation though making sense of participants' different perceptions (Espejo & Reyes, 2011, p. 220). These are given as follows.

Notional system 1: Communication and control

A notional system, which aims to increase the understanding and cooperation between operational managers and workers through communication, understanding and cooperation amongst employees, and monitors and controls between managers and workers in order to contribute to improve the organizational performance within NHR.

Notional system 2: Strategic change management

A notional system aiming to create strategic management and the formulation of corporate missions, strategies and objectives with the aim of creating suitable a strategic planning process for changing organizational structure and culture towards a better food-services system.

When participants were identifying notional systems of communication and control, and strategic change management, these systems provided into the nature of the problem situations, data for carrying out VSD which use the VSM as the conceptual model was built. As the VSM has a well-defined guideline to design the conceptual models from systemic

perspective, the VSM was used to proceed the further stage of the VSM approach. The detail of this stage was given as follows.

Stage 3. Implement the Viable System Diagnosis (VSD)

This stage is concerned with the Viable System Diagnosis (VSD). It uses Beer's Viable System Model using Espejo and Reyes's interpretation of the VSM as the identity and structural archetypes. It sets out studying the functions of Viable System Model (VSM) as the identity and structural *archetypes* for diagnosing problem situations within organizations (Espejo & Reyes, 2011, p. 226-255).

1. The use of Viable System Model as the identity archetype

To design the effective organizational systems for NHR which tend to adapt a new market due to covid-19 pandemic during 2020 and 2022, the Viable System Model as the identity archetype can be utilized. It aims to understand how systemic thinking focuses on plans for developing the new organization which can fit into both online and offline food-services businesses operating in Seoul and Gyeonggi Do, South Korea. It identifies new issues and these encounter the most Korean restaurants today. For instance, how do Korean restaurants face the challenges of the Covid-19 pandemic, and dealing with the difficulties for Korean restaurants to adapt in the business environments of digital platform and satisfy online customers. To apply the VSD to these issues, the conceptual model of the VSM was used to design a good food-services system within the organization.

In the context of food-services system, a business opportunity may be found if organizations create their autonomous units or primary activities in order to maintaining core learning team to be viable rather than operating product-oriented units (Espejo & Reyes, 2011, p. 240). Dealing with online customers, autonomous systems units were operated within each of the newly formed food-services system. These were teams-based system which took place through

learning processes of operation and management of viable units, dynamically producing the horizontal structure. These processes were capable of providing food-services to online customers to serve strategic change management towards organizational objectives. Put simply, autonomous food-services system was formed through the processes of unfolding of the complexity to produce food and services to the online customers. Theoretically, this refers to the viable systems units are formed through processes of unfolding of the complexity to produce organization's missions and purposes (Espejo & Reyes, 2011, p. 96). In a diagnostic mode of using the VSM, it is likely supporting the processes of organizational transformation within the NHR to make an effective operation of food-services system. In this sense, its aim is an organizational diagnosis and design of good food-services system was possible within the NHR. It is indeed that the archetypes of the VSM helps participants support inquiring processes of design an effective food-services system within the NHR.

2. The use of Viable System Model as the structural archetype

To tackle the problem of adaptation to the new environment in South Korea during the covid-19 pandemic, the VSM as the structural archetype can be utilized. In the operation function (System 1) of VSM, primary activities or processes refers to the capability to consistently change raw materials into outputs to increase the productivity of autonomous units of food-services system. In this sense, the processes and the relationships among viable primary units are essential for any viable system model as the value-added activities generate through relationships and relations within an organizational system (Espejo & Reyes, 2011, p. 237). The NHR consists of locally recruited and centrally recruited staff. Centrally recruited staff leave after their period of assignment if they wish to leave. So, the organization is in a state of continuous flux. In the coordination and regulation functions (System 2) of the VSM, these functions were necessary to make up the implementation

of food-services system works in a harmonious manner. There is no clearly defined System 2 in the organization to coordinate various functions. For instance, conflicts took place between food-production and services functions which often went unsolved. Thus, the outsourcing of marketing function (e.g. the use of professional online platform company named 'Korean people of delivery') has to be introduced for smooth operation of works. In System 3, a control function operates to maintain internal stability. It allocates resources to the parts of System 1. The operation control (System 3) of the VSM exists in a dispersed manner in the sub-systems of System 1, but as a hierarchy to System 2 it exists within the functions of the Managing Director (MD). They control the resource bargaining with the operation of the food-services system and clarify audit enquiries. In the intelligence function (System 4) of the VSM, it provides information on the problematic market environments to the MD and operational managers within the NHR. However, the function of System 4 in the NHR is an existent but a weak function which has done very little work to gather 'intelligence' of the systems internal and external environment. In the policy function (System 5) of the VSM, it harmonizes the needs of System 3 (operational control) and System 4 (intelligence). To do this, it is responsible for policy making is embodied by the MD. So, any sort of change of the NHR creates an oscillation throughout the whole organization chart.

Figure 1 illustrates the problems and issues areas in the food-services system operating within the NHR. In this sense, systemic thinking using VSD was capable of providing adequate understanding of operational problems of food-services system. For instance, there were lack of vision on relationships of strategic planning, hierarchical structure and culture of authority and hierarchy, inefficient operational system of food-services business as well as insufficient information sharing among the MD, operational managers and working staff within NHR.

Stage 4. Plan for action

This stage is concerned with making plan for action to improve problem situations and creating conditions to learn how to learn (Espejo & Reyes, 2011, pp. 241-242). In the NHR, relationships and relations are necessary to produce primary activities of viable system, which has the capacity to be viable in its own right. These relationships and relation serve as criteria to enable the viable system to maintaining a separate existence in a turbulent environment only if an organization has a requisite variety in accordance with the principle of Law of Requisite Variety (Schwarz, 1994; Espejo & Reyes, 2011). The following Figure 2 illustrates the new conceptual mode of the VSM for the new system, showing the changes made to address those problems and issues within the NHR.

As we can see in Figure 2, the new system upgrades as top down decision-making approach changed to bottom-up approach. At the beginning, the policy system (System Five in the terms of VSM) has been upgrades as culture of open, trust and participation will be necessary for more cooperation in the system. Also order system changes from desk to online system using smartphones or mobile phones. In this case, the delivery system now incorporates through outsourcing using motorcycle riders as operation 1 (System One in in the terms of VSM as highlighted in Figure 2), identified as problem areas at workplace.

A new food-services system was to introduced in order to provide food service to online customers using online platform business (e.g. Korean platform company called the 'Korean people of delivery'). It increased the production of the NHR by making a higher order from online customers with excellent services providing from operational managers and staff. This structural capacity would be in the context of a digital online business viable core learning team towards a market requirement. That means that the company was able to change the organizational structure and culture towards a horizontal relationship amongst operational managers and working staff. This was to lead enabling to share information and knowledge amongst managing director, operational managers and workers in the various divisions within NHR.

Stage 5. Reflection on the process of systems research

As the VSM approach was used to make the evaluation of the project from systemic perspective, the participative process of the VSM approach can be summarized as follows. Firstly, it was identified that the possibility of the notional systems (e.g. the use of the *identity archetype*) were built by the NHR in which systemic thinking took place to resolve the problematic situations to happen from the mismatch from the problem situation and systems idea. Secondly, it was discovered that the possibility of an actual systems of the effective organization (*structural archetype*) was possible form the diagnostic use of VSM when researchers and participants were collaborated for making good food-services system in the organization when the VSM was used as the structural archetype. Using these archetypes and understanding a way of systemic thinking from Beer's Viable System Model using Espejo and Reyes's notion of archetypes, participants were enabled to take action that identified the identity and structural archetypes in order to understand problematic situations and bring about changes within the NHR. As a result, the VSM approach was able to offer the design of more effective and fast food-services system that was to facilitate strategic change management process for changing the organizational structure and culture toward an effective food-services system within the NHR. More precisely, regarding processing time, the old system usually takes 30 to 40 minutes but the new system takes 15 to 20 minutes. According to opinions of customers, efficiency of the production and delivery system improved around 30 to 40 percentage.

V. Conclusions

In this article, the VSM is introduced and applied in an effort to manage organization transformation of the Korean food-services system in association

with strategic change management. The Viable System Diagnosis (VSD) was used in conjunction with Espejo and Reyes's interpretation of Viable System Model (VSM) as archetypes. The VSD was useful to design an effective food-services system as shown at case study of Korean food-services system operating at the NHR. Looking at theoretical contribution of this research, the classical model of strategic management tends to be a senior management activity, involving directing the organization towards goals of the organization. This is done through the 'hard' approach, which stresses strategic management's focus on the crucial importance of the close integration of corporate policies and plan, systems, processes and activities with business strategy. On such management systems being used by Pettigrew and Whipp (1991) to drive the strategic objectives of the organization. On the hand, a 'soft' version of strategic management stress strategic management focus on 'developmental humanism' (Hendry & Pettigrew, 1992) in which human factors are crucial as employees are proactive and they are capable of 'development', worthy of trust, belongs, communication and collaboration to be achieved through participation and relationships rather than on particular organizational functions and resources (Espejo & Reyes. 2011, p. 92). In this way, the argument is articulated in this article that the potential contribution of the VSM approach can be put in service of strategic change management and provide the alternative way of looking at the complex nature organizational transformation and learning at workplaces. This VSM approach can also be applied in other industries like cosmetics, clothes, and supermarkets as these industries need to have effective strategies to manage complexity from systemic perspectives. In conclusion, from the findings we can see that production and delivery time has reduced but the respondents did not mention whether they have improved cost efficiency or not. The findings imply that this research will have some limitations and other issues would be explored in the further research.

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