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# **GLOBAL BUSINESS & FINANCE REVIEW**

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# Understanding the Action-based Research for Strategic Change from Systemic Perspectives

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#### ABSTRACT

**Purpose:** This study aims to serve a wider range of understandings about how the systems-based approach (e.g. SSM and VSM) of different strategic initiatives can help Korean company to utilize the strategic HRM in association with the development of the PMS for making a sustainable development within environmental changes. **Design/methodology/approach:** The study conducted an action-based research, using Soft Systems Methodology (SSM) and Viable System Model (VSM), which was applied in the field of strategic HRM and PMS (Performance Management Systems) with support from a case study of the Korean company. The data collection process includes in-depth interviews with general manager and participants from Korean company named ACE, which operates at Daegu, South Korea.

**Findings:** Prior studies of the PMS based BSC tend to inquiry and examine the proposed model for PMS from the hard HRM tradition. This study on the PMS from the soft tradition using systems approach tends to operating well within management practice. The findings indicate that an action-based research based on the combined use of SSM and VSM approach is useful for understanding the nature of strategic HRM in association with PMS within the organization.

**Research limitations/implications:** This study was aimed to understand and appreciate the value of an action-based research through the systemic intervention using SSM and VSM in the fields of strategic HRM in association with PMS. Therefore, it difficult to generalize the performance management systems that can be applied in other contexts. **Originality/value:** This study taken to develop the Performance Management Systems, which was based on the systems approach namely Checkland's soft systems methodology and Beer's viable system model, to understand and appreciate the value of PMS within the Korean company.

Keywords: Strategic HRM, Performance Management Systems, action-based research, soft systems methodology

# I. Introduction

Systems approach has a great influence on the management of strategic planning and changes (Baker, 2007; Mingers and White, 2010). Managing strategic

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change faces complex issues in social and business contexts, which include social environmental change through technology, human resource management, organizational culture, scientific approaches to culture change, people change, leadership development, the learning organization, strategy development, action plan, and humanistic orientation within practice (Baker, 2007; Tirmizi & Vogelsang, 2017). These issues take places due to the outbreak of Covid-19 that has first seen

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in Wuhan, China at November 2019. It continues to spread across the world. The pandemic has also introduced a huge magnitude in uncertainty considering changes in both domestic and global management practices and possibly the development of a new trend in multi-disciplinary and/or inter-disciplinary disciplines in the area of management practice. A new trend in multi-disciplinary disciplines facilitate by the process of digitalization in the past decades. It can lead human learning to a greater capacity of action-based research at the new era in scientific research and economic development of the digitalization, managing strategic change tends to depend on human learning and the use of knowledge using technological development and advancement. In order to satisfy human desire at the new level and achieve a greater goal in the development of human capital for learning in the field of strategic Human Resource Management (HRM) and Performance Management System (PMS), some researchers put more effort in developing systems approaches for designing and implementing a performance management framework that leads to human resource development in organizations (Yu, 2005; Liu et al., 2012). Research on the strategic HRM and PMS tends to overlook the importance of human capital development and R & D within organizations. This paper aims to appreciate the usefulness of soft systems approach and Viable System Model (VSM) to understand the problematic nature of the strategic change in association with PMS within Korean organization. A new form of corporate strategy is developed for leveraging the usefulness of human capital development for learning and R & D capability for maintaining the viability of the business organization. The study comprehensively aims to serve a wider range of understandings about how the systems-based action research of different strategic initiatives can help Korean company to utilize the strategic HRM in association with PMS for making a sustainable development of the business organization within environmental changes. This study is the first action-based research using Soft Systems Methodology (SSM) and VSM, which was applied in the field of strategic HRM and PMS, in the Korean company.

This paper falls into six main parts such as Introduction; Literature Review on performance management frameworks, SSM as action-based research and the description of SSM; Research Method; the Case Study of SSM applying the problematic nature of the management and operation of the PMS within Korean Company; Findings, and Conclusion and recommendations. The outcomes that result from the use of SSM for understanding and developing strategic HRM in association with PMS are noted, and finally the usefulness of action-based learning using systems approach in the field of strategic HRM and PMS is discussed.

### II. Literature Review

#### A. Performance management frameworks

Research on the fields of strategy management, strategic change decisions, strategic human resources management (HRM), operation management, systems thinking, viable system model and soft systems approaches are contributing to the fields of performance measurement and performance management systems (Bititci et al., 1997; Neely, 2002; Franco-Santos and Bournes, 2005; Liu et al., 2012). These different approaches towards performance measurement have led the concise definitions of performance management system, and there is consensus regarding the concepts of performance management systems (PMS). The performance management systems are an organizationwide management program that provides a structural approach to establish a shared understanding of what is to be achieved and how it is to be achieved, and communicate and monitoring the corporative strategy of the organization (Armstrong and Baron, 2005). It provides a structured approach to establish planning, monitoring and evaluating performance, and facilitate management of individuals self and others (Snell et al., 2013). PMS measures and motivates performance, and facilitates management of individual self and others within the organization. Research on the structural

integrated performance measurement framework, proposed by Rouse and Putterill (2003), tends to working towards common goals of individual performance that drives organizational performance. It important to ensure everyone understand the organization's vision and goals and its importance for developing High Performance Work Systems (HPWS) (Becker and Huselid, 1998). The HPWS to related to strategic human resource management with performance developed a name given to a set of management practices that attempt to create an environment within an organization where the employee has greater involvement and responsibility. An end result of a performance management system is the definition and implementation of key performance indicators. There is a large body of literature relevant to key performance indicators and well-known models for this. For instance, previous research on performance management tend to focus on linking strategy to operational decisions through integrated performance measurement framework, and performance management technique and tools such as Balanced Scorecard (BSC), developed by Kaplan and Norton (2001a). There is a large body of literature relevant to the usefulness of BSC to performance management. It is indeed that the Balanced Scorecard has been mostly widely used in practice and studied in the literature (Brewer, 2002; Letza, 1996; Lohman et al., 2004). However, there are criticisms of the BSC approach as the BSC approach is useful for the strategy developers who search for strategy change implementation with well-designed multi-dimensional matrix measurements (Kaplan and Norton, 2001b). Kaplan and Norton (2001a, b) claims that the BSC

embraces different viewpoints, however, it imposes the same viewpoint to a range of organizational activities and tends to stifle creativity. Thus, the BSC approach adopts a very machine-like view of the organization (Jackson, 2006). In order to overcome the mechanistic approach based BSC, there is systems-based approach namely soft systems methodology (SSM) used for developing a Performance Management System (Liu et al., 2012). This systems-based approach is useful to identify problem situation, make debate and to take action for improving ill-structured, messy situations which has been developed through engagement with real-world problem situations (Checkland, 1981, 1985, 1999, 2001; Checkland and Scholes, 1990; Checkland and Poulter, 2010). In systems science, there is the well-known model for the development of performance management systems such as Beer (1972)'s Viable System Model (VSM) from cybernetic perspective (Bititci et al., 1997). It is a model of the organizational structure of any autonomous system capable of producing itself. The Viable System Model identifies five management functions within an adaptive system which includes, System 1 (Implementation), System 2 (Coordination), System 3 (Control), System 4 (Intelligence) and System 5 (Policy) (Beer, 1985). The description of the five systems is shown in Table 1. The organizational performance can be measured through these five functions of the VSM. This suggests that the only way to assure adequate performance according to these five management functions that match with Ashby's Law of Requisite Variety. Ashby's Law establishes that only complexity absorb complexity in order to assure performance management that can be implemented

Systems	Description	
1 (Implementation)	It consists of the various parts of the organization concerned with implementation - with carrying out the tasks directly related with to the purposes of the organization.	
2 (Coordination)	It fulfils a coordination function designed to prevent tensions arising between the parts of System 1.	
3 (Control)	The role of System 3 is to exercise operational control over System 1 and, in so doing, optimize its performance	
4 (Intelligence)	It focuses on the "outside and future." It makes the case for innovation and change in response to what is happening externally.	
5 (Policy)	It has to articulate the identity of the whole system to the wider system of which it is part.	

Table 1. Description of the five systems in VSM (Jackson, 2019, pp. 301-304)

on the basis of the five functions of VSM (Espejo, 2009). The VSM regards as a tool for systemic thinking which helps to facilitate an action- based research such as Soft Systems Methodology (Espejo et al., 1996; Espejo and Reyes, 2011).

# B. Soft systems methodology as an action-based research

Baker (2006, p. 193-201) suggests that systems thinking and Soft Systems Methodology (SSM) would be a good technique or tool for strategic change implementation as SSM explicit focuses on action, in particular promoting or managing a strategic change or organizational change within the organization (Cunningham, 1995; Yu, 2020). According to Checkland and Poulter (2010, p. 191), SSM is an action-based research for tackling problematical, messy situations of all kinds. SSM should be used by the full-participation from participants, and soft systems thinking will evaluate an intervention on the basis of whether it has increased mutual understanding among the participants (Jackson, 2019, p. 507). SSM articulates a never-ending process of learning, shaped by an inquiring process, when an action is taken in order to improve a problematic situation, a new problem situation with systems thinking appeared and a cycle of learning and action can begin again (Checkland, 2001, p. 72). SSM has been used a variety of project management, the management of strategic and organizational change, organizational business process modelling. It can be used both for general problem solving and in the management of the systemic innovation and change (Yu, 2020). To engage in such contexts, soft systems methodology incorporates the concept of a "system" as an inquiry device that allows for discussion among participants involved. It seeks to build partnership and negotiations within organizations in order to facilitate improve participative decision-making and problem solving. SSM has shown its usefulness as an organized means to transformation issues that involves identifying and seeking advice from those interested in the concept of the intervention to be taken. The researchers who

use the SSM tend to see changes in what is seen to be a problem case. There are action researchers who attempt to define action-based learning (learning by doing) based on their academic background and projectsbased learning, knowledge and experiences. As a result, there is a wide range of definition relating to action-based learning (Checkland and Poulter, 2010). Application of SSM in the field of strategy and special issues on problem structuring research and practice can be found in Mingers and White (2010), and Sepehrirad et al. (2017). Systems scientist or action researcher has defined Soft Systems Methodology as a processoriented research of inquiry, which can make participants to think and behave in which users learn their way of finding out about the situation, taking action to improve it (Mingers, 2000; Yu, 2018). In SSM, a problem is defined as "a real-world problem in which ends, goals, purposes are themselves problematic" (Checkland, 1999, p. 316). It uses a flexible, yet organized process to bring about changes to improve problematical situations. The primary use of SSM is in the analysis of complex situations where are divergent views about the definition of the problem. These situations are 'soft problems' such as the way of the inquiry process of managing disaster planning, the strategic choice approach of supporting young homeless, etc. In this sense, SSM uses an inquiry process in a cycle of action research, learning and reflection to help understand the various perceptions that exist in the minds of the different people involved in the situation (Checkland and Howell, 1998).

## C. Description of SSM

Soft System Methodology (SSM) is based upon a phenomenological stance (Checkland, 1999, p. 318). It deals with people and their perceptions, values and interests. Soft systems thinking is most concerned with specifying what problems need to be addressed, that is, clarifying the existing problems as a prerequisite for defining the possibilities for change. Checkland (1985) observes that, while 'hard, engineering systems thinking' is very efficient when applied to well-defined

problems, it is notoriously ineffective when applied to ill-structured, soft problems with a broad human or social dimension. In such cases, an approach that allows the problem situation to be fully investigated while including problem respondents in the inquiry process, which is itself a process of learning about the problem, is expected. In comparison to hard systems approaches, which rely on engineering a product, soft systems methods focus on problem solving as a procedure, which, if done correctly, can result in improvements in the problem situation and the emergence of potential solutions. The methodology consists of two streams of analysis: logic-based and cultural (Checkland and Scholes, 1990). The logic-based stream of analysis deals with tasks (the 'perception of various purposeful actions in the problematic situation') and issues (the 'various things about which there are disagreements'). Cultural analysis is concerned with the cultural aspects of a situation. The cultural analysis in SSM is rather exploratory than coherently developed. The logic-based stream of analysis is shown in Figure 1. The figure suggests that one needs to draw a line between the real world and the systems thinking world in order to understand and improve real world situations. In the seven-stage model process of SSM, stages

1 and 2 are concerned with finding out the picture of problem that may be by observation or informal interviews. Stage 3 is concerned with the preparation of 'root definitions.' A root definition should be a condensed representation of a notional system, which captures particular viewpoints and at the same time they expose the viewpoints and make them explicit. A root definition should be a concise, explicit description of the relevant human activity system which captures a particular view of problem situation. Every root definition should satisfy the CATWOE (Customers, Actors, Transformation process, Worldview, Owners, and Environmental constraints) mnemonic (Table 2). In Stage 4, conceptual models are those minimum activities, which are necessary to reproduce the root definition. This is the point in SSM where other systems thinking can be introduced. In Stage 5, the comparison between the models and reality will generate debate, encourage participation and integrate with the process of defining changes. Stages 6 is concerned with the debates in the previous stage and the debate goes on to decide which change is culturally feasible in the organization. Stages 7 involves the implementation of changes that are desirable and feasible.



Figure 1. The learning cycle of Soft System Methodology (Checkland and Scholes, 1990)

Elements	Definition
C (Customers)	Direct victims or beneficiaries of system outputs
A (Actors)	Who carry out the activities of the system
T (Transformation)	Process that produces the output as a transformed version of the input
W (Worldview)	That makes the activities of the system meaningful
O (Owners)	Who could create or destroy the activities of the system
E (Environmental constraints)	Constraints or givens that the system must accept

his students worked part-time at the ACE Company.

At a time of large-scale of social and organizational

of the ACE company has tried to adopt new ideas from

systems thinking which aims to understand problematic

Table 2. Elements and definitions of CATWOE mnemonic (Checkland, 2001)

## III. Research Method

This study conducted an action-based research, using Soft Systems Methodology (SSM) and Viable System Model (VSM), which was applied in the field of strategic HRM and PMS (Performance Management Systems) with support from a case study of the Korean company. The data collection process includes the use of discussions groups, and in-depth interviews with general manager and participants from Korean company named ACE (it is a pseudonym for protecting its confidentiality). Soft systems methodology was used for tackling problems which occurred during the process of designing and implementing the PMS based on VSM within ACE. Based on SSM, the interpretive type of information was gathered from various respondents. This type of information provides diverse viewpoints, opinions and suggestions on the problem situations, which occurred due to the designing and implementing of the PMS within ACE. In addition, VSM was used to carry out data analysis and interpretation, and SSM was used to take actions to improve the problem situations, and suggest the solutions for the problems within the organization.

# IV. Case Study: The ACE Company

#### A. Background to the study

This case study is based on a research project carried out while author acted as a consultant and

changes in the era of digitalization, the ACE Company, which operate at Daegu, since 2006. In 2008, they introduced the performance management system based on a balanced scorecard (BSC). The performance of the ACE was mainly measured and evaluated via quantitative key performance indicators (KPIs), which were developed at the levels of company, the divisions, and individual. More recently, they face the threat to survival for the organization inability to adapt to change effectively. In the light of the discontinuous, large-scale changes facing the world, ACE is involved in a massive strategic change to evolve from manufacturing Liquid Crystal Display (LCD) for producing in-line sputter system of the computer company to manufacturing solar devices for an environmentally friendly green energy company. For the ACE, managing the strategic change means raising fundamental questions about the problematic nature of the operation and management of a very simple performance management system (PMS) based on KPIs. The new PMS is needed to aim to facilitate and improve the performance of the individuals by building a teamwork and providing maximum opportunities to the individual workers or employees for participating in strategic planning and decision-making process. The project was carried out during September 1st and December 31st, 2018. The project aims to make successful results in the ACE by improving the organizational and individual performances and developing the capabilities of teams and individuals. The project aims to investigate the management problem

situations of strategic change within the organization. To do so, action-based research was undertaken to introduce a new Performance Management Systems (PMS) based on the combined use of Soft Systems Methodology (SSM) and Viable System Model (VSM). Within the ACE, the role of human resource in the present scenario has undergone a change and its focus is on evolving such strategic change, which enable successful implementation of the major corporate strategies. The study was carried out through the project of the system approaches to managing the strategic change of the ACE in order to produce the solar device for the environmentally friendly electric power. The ACE makes great endeavours to fulfil its responsibility through the provision of diverse social contribution activities on a global scale to build a sustainable management system. To do so, the general manager at ACE has to deal with managerial problems that have mainly come from human resource development and make the involvement and commitments of individual workers who can take charge of the actual work at the various 'profit-making areas' at ACE. Due to different cultural backgrounds and existing barriers between the higher managers and working staff, there are conflicts and misunderstanding amongst managers, local working staff and various divisional teams. There is little improvement being made through the use of the existing performance management systems which were designed to improve the overall performance within ACE. Dealing with these problem situations at ACE, action research team was formed. The team includes the researcher himself from Keimyung University, his project team and the managing director of ACE.

# B. The use of the SSM

The study was carried out from September 2018 to December 2018. As a first step of applying a systems approach (e.g. Soft Systems Methodology) in ACE, the researchers look at the problematic situations of ACE at the present by applying SSM. The basic process of the application of the SSM is summarized by the following phases.

# Stages 1 and 2. Problem Situation and Problem Expressed

In the stage 1, the analyst first examined the complicated problem situation, reflecting its complexity without any preconceived notions regarding the form of situation being studies or even the existence of the problem itself. The original inquiry included evidence collection tactics such as face-to-face interviews and focus groups. In order to classify the key patterns and issues, the data from this investigation was processed using methods such as categorizing and coding. The investigation's aim was to learn about the problem situation from as many perspectives as possible. In the stage 2, when all information relevant to the problem situation was gathered and a rich picture was compiled. The word picture is used because it provides a way of representing the situation as a whole.

#### 1. Rich picture

The followings are "key issues" included the importance of performance management system for developing high performance work systems, strategic change, the leadership, employees' commitment and participation within ACE.

#### Person A:

"We have to make a strategic change through greater involvement and responsibility of our workers, and the use of technology. To do so, high performance work system (HPWS) should introduce and it focus on selective recruitment of new personnel, sustain and develop human resources in order to sustain our business in future."

#### Person B:

"We need to working towards goals of our company. Individual performance drives organizational performance so it is important to ensure everyone understand the vision and goals of our company." To do so, we need to prepare a performance management system (PMS) to measure and assess employees' performance in order to establish a shared understanding of what is to be achieved and how it is to be achieve."

#### Person C:

"Taking into consideration the importance of PMS for developing HPWS, the effective leadership commitment is absolutely important for our company."

At ACE, there are certain problematic situations. For instance, ACE employed a very simple performance management system with the 'authoritative' leadership style of the managing director. In order to evaluate individuals and their divisions within ACE, KPIs were assigned by each manager of their divisions. And the managers assessed their managerial performances with a certain weight, and appraisals were conducted annually with the existing PMS based BSC. This mechanistic approach was one of the problems with their existing system. Therefore, there are no clear understanding of job expectation of each employee within ACE.

#### Stage 3. Root definition and CATWOE Analysis

Stage 3 is concerned with the preparation of 'root definition' of the perceived reality in order to structuring problem situation within ACE. Here in the ACE company, the 'root definition' was formulated of the notional system named the Performance Management (PM) system.

#### 2. Root definition: The performance management (PM) system

ACE aims to understand and appreciate the objectives and strategy of new green energy business through a set of management practices that attempt to create an environment within ACE where the employees have greater involvement and responsibility. To do so the performance management system must establish to increase an opportunity for employees to participate in decisions or problem solving for planning, monitoring, and evaluating performance. This system will be given to s set of management program that includes training, employee's incentives, selective hiring of new personnel, more cooperative labor and employment security.

#### 3. CATWOE analysis

The correspond CATWOE for the root definition of the performance management system has been defined in Table 3.

# Stage 4. Building the conceptual model of VSM for performance management

The project team and managing director of ACE agreed to using the viable system model (VSM) as the conceptual model for the performance management system to show how it can help ACE to achieve its organizational goals more efficiently. It is essential the functions handled by those five systems be equally performed in all organizations (Beer, 1985). Here this model building has to be done based on the root definition of the performance management system of the ACE. The details of five management functions or systems in the VSM are summarized as follows.

#### (1) System one: The implementation function

As ACE is the company of making solar-devices for the environmentally friendly electric power, it must focus on the development and operations of the production

Table 3. Elements and definitions of CATWOE for the root definition of PM system

Elements	Definition
C (Customers)	Stakeholders, managing director, managers of each divisions, employees within ACE.
A (Actors)	Researcher, project team, managing director, and managers of each divisions within ACE.
T (Transformation)	New Performance Management Systems (PMS).
W (Worldview)	Importance of PMS that attempt to create an environment within ACE where the employees have greater involvement and responsibility.
O (Owners)	Researcher, project team, the managing director of ACE.
E (Environmental constraints)	Funds and personnel who carry out the project.

systems. In that case the managers of each division (e.g., Solar-Devices Design Technology, Coating Systems, Sputtering Systems, Heating Systems, Touch ITO Film, and Product Applications) should focus on the communication with engineers and other workers, informing about the problems, managing output and inside and outside smooth communication for understanding the present markets. Customer knowledge is a very important aspect of the knowledge an individual working staff, the working groups at production lines and sales division must integrate and manage. It includes both general knowledge on solar-devices technology, markets and preferences, and specific confidential information who buy what products and services are available. This information is crucial to attract and retain customers as there are fewer instances of captive markets left for the small and medium sized enterprises like ACE.

#### (2) System two: The coordination function

System Two facilities the effective operation of all activities of production systems. System Two provides a specific type of regulation to coordinate the operational activities of each divisions. It works as a device for supporting various operational processes of each divisions and act in a harmony amongst all divisions within ACE. The senior staff should carry out the coordination function. The coordination function includes to manage the conflict that occurs between managers and staff who work at each division within ACE. System Two sets out complaints and troubles between managers and staff and perform activities at various divisions. Senior staff who act as the function of System Two should perform to get the selective hiring of new personnel for the ACE if necessary, and support the operation and management of London branch. However, the function of System Two is seen very weak and coordination function is not clear.

#### (3) System three: The control function

System Three is mainly connected to the managerial activities of System One within the ACE. It is the highest level of 'autonomic' for the ACE's management and the lowest level of corporate management. System Three specially deals with optimizing actual performance of the production and maintaining the stability within ACE. It includes the daily responsibly finance management, human resources planning and allocation, expect accountability for major activities within ACE. The managing director and the manager of HRM department who act as the function of System Three provide a structural approach to establish and operate the PMS that ensure every working staff understand its goals and objectives, identify ways in which to improve individual performance, and offers a variety of rewards for a job well done.

#### (4) System four: The intelligence function

The Intelligence function is the two-way link between the primary activity of the ACE company and its external environment. Intelligence function is fundamental to adaptivity. Firstly, it provides the primary activity with continuous feedback on market place conditions, technology changes and all external factors that are likely to be relevant to it in the future. Secondly, a focus on the future is essential to the management of intellectual capital. The human resources and their perspective must be integrated to prepare the planning for recruitment and succession to support the strategic plan of human resources management in association with the development of a new PMS, and identify the need of the research and development (R & D) activities for forecasting the new market opportunities. System Four deals with the external environment which System One's environment at related to the local competitor level.

#### (5) System five: Policy function

System Five is the highest level of corporate management like the board in an organization so it is responsible for the direction of the organization. To do so, ACE has taken steps to prepare a new policy for developing PMS in the field of strategic HRM. The Policy function includes to ensure that all employees are working towards common goals, that is, individual performance drives organizational performance so it is important to ensure everyone understand the vision and goals of a new green energy business of ACE and appreciate the introduction of a new PMS based on VSM.

# Stages 5 and 6. Comparison of the Model (VSM) and Problems and suggesting changes.

In the stage 5, it was concerned with the comparison of the conceptual model (VSM) with the identified problems. In the stage 6, it was concerned with making debate on the 'systemically desirable' and 'culturally feasible' changes. These changes were proposed through discussion amongst participants. The following actions were suggested in order to improve the problematic situations in ACE.

## C. List of proposed changes

#### 1. Making the effective leadership commitment

Here we recommended that the effective leadership commitment is absolutely important for ACE, which is the small and medium sized enterprise, in a severe crisis. Therefore, the commitment of the managing director is vital to implement essential initiatives of preparing and implementing a new PMS based on VSM to ensure the employees commitment and participation towards efficient productivity, in current situations. Therefore, the managing director and managers should act as leader to shape the vision and goals of the PMS. It creates an environment where the employees increase opportunity to participate in decision for themselves. The managing director must focus on both the inside of the company and the outside of the company. Here the corporate policy of the PMS must be related to the reinforcement of the capability of each autonomous working unit to constitute their dialogical relationships to create an 'open climate' within ACE.

2. Implementing the managerial innovation through changing the culture at the ACE

In a self-constructing process of organizational transformation and learning, various viable working groups within the ACE had to be taken into account. In this case the managing director, senior staff, other employees should know about new managerial innovation and its benefits for the ACE and its staffs. So that the misunderstanding must be eliminated and expected motivated and cooperative employees.

#### 3. Developing the information management system

To have the up-to-date inside production information as well as the market competitor's information effective information center is recommended to set up for the ACE. In that case PMS based on VSM aided information management by informing the redesign the development of the management system at the ACE.

#### Stage 7. Action to improve the problem situation

In stage 7, if those involved may find a consensus on 'systemically desirable' and 'culturally feasible' changes, the following actions are necessary within ACE. Finally, after realizing the changing situations at ACE, it has focused on the not only employee's commitments but also the operation and management of new PMS. The outcome of action research using systems-based approach (e.g., SSM and VSM) is getting well and making higher organizational performance including last 12 months the productivity rise in 10%, sales increased 25% and due to profit and bonus sharing schemes employee's real income increased 12%. These results happened due to create better communication process between managers and working staff within ACE. In addition, PMS was contributed to create an environment within ACE where the employees have greater involvement and participation to facilitating congenial working environment.

# V. Findings

Prior studies of the PMS based BSC attempts are subsequently required to inquiry and examine the proposed model for PMS from the hard HRM tradition or the 'Michigan approach' (Fombrun et al., 1984). This study on the PMS from the soft tradition or the 'Harvard approach' (Beer et al., 1985) using systems approach tends to operating well within management practice. The findings indicate that an action-based research based on the combined use of SSM and VSM approach is useful for understanding the problematic nature of strategic HRM in association with PMS within the organization, and suggest an alternative strategic initiative for the leverage of the PMS in order to maintain a competitive advantage within changing environments.

# VI. Conclusion and Recommendations

Action-based research for strategic change from systemic perspective should be understood from pluralistic perspectives of problematic situations which happen due to the change of strategic HRM in association with PMS based on VSM. It means that soft systems methodology was used to design and implement the performance management systems in the terms of Viable System Model. In this sense, action-based research using SSM, which is a qualitative research approach, emphasizes context, perceptions, commitment, participation, learning, and self-reflexivity. It is focused on behavior research and systems thinking philosophy (Jackson, 2003). As Checkland and Poulter (2010) clearly point out that it is a shift from positivism and functionalism, which they consider the "hard" approach, to phenomenology and interpretative sociology, or the "soft" approach. Since there will often be a multitude of challenges and various viewpoints involved in a case, the term "problematic situations" is used instead of "problems." SSM was useful to employ a scalable, action-oriented, and streamline learning mechanism to enhance difficult circumstances. SSM is thus suitable for use in the case with "ill-structured, real-world problems" which occurred from the complex inquiring process of managing strategic change within the organization.

In this paper, the researcher presents a Korean case study to illustrate a way how the company could proceed with the development of PMS based on the VSM approach in order to survive within environmental changes. The viable system model, when used in designing and implementing of the specific performance management systems, provides an integrating performance management framework to better understand the strategic HRM within Korean company. The Korean company needed to ramp up the existing PMS based on the BSC and invest the new green energy business with new performance management systems based on the VSM approach. To align the goals and objectives of the new business in the company and get all of its human resources and other resources at top capacity. As the VSM approach is generic, characterising a system's viability in terms of interactions with its external environment, it offers systemic perspectives to an analysis of strategic change on HRM policies and practices towards developing a performance management system (PMS) using SSM within the Korean company. It appreciates the importance of agents, participants and observers who can bring about changes in the organization. Although this approach provides constructive methods for designing and implementing PMS in participatory manner. However, it difficult to generalize the performance management systems that can be applied in other contexts. Therefore, future study would need to carry out to investigate the practicability of PMS based on systems approach in other contexts so local participants may serve interesting outputs in other organizations or other countries. Although PMS based on VSM has been developed and applied in the Korean context, arguably, it can be widely applied to other contexts. There are two reasons for supporting this argument. Firstly, the research method used in the case study of the Korean company is only extension to, and the amendment of the extant model

for soft systems approach for investigating the problems situation, when it used in designing and implementing of specific PMS from Western perspectives. The method using SSM and VSM has been tested from an Eastern perspective, especially Korean context. Secondly, the performance management factors appearing in this study have been evidenced by the case study of the Korean company. Applying this research method of designing and implementing a PMS in other contexts, however, given the complexity of the relations between and among intervening factors and strategic HRM policies and practices in association with PMS, the effect of these factors such as organizational culture, the leadership style, information systems that support the management and operation of PMS may need to be considered within particular and contingent contexts.

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