

Centers of Knowledge Production in Rural Development Projects, Case Study: Rural Physical Guide Plans

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Extended Abstract

Introduction

Knowledge is continuously being produced in the process of formulating and implementing rural development projects. The capital is available without any cost, but it is neglected. Knowledge has been distributed along the extensive network through the country. If knowledge management is recorded and exploited, it could lead to dramatic changes as a result of the butterfly Approach.

Methodology

Rural Physical Guide Plan has been chosen as a case study. Physical Guide Plan tries to prepare the rural context for development through managing the physical environment. Iran has more than 63000 villages (CSI, 2008). Physical Guide Plan (PGP) has been prepared for more than 20000 villages and has been implemented in more than 11000 villages. The procedure of preparation and implementation of Physical Guide Plan (PGP) creates a network. It has about 73533 nodes which could potentially produce knowledge. The framework of knowledge shows that the amount of tacit knowledge creation is significant, but the main questions are: Where are the centers of knowledge production? and the second question would be: How do the related organizations manage the procedures of knowledge production and knowledge change process?

A special framework has been chosen for the following acts:

- 1- A theoretical base has been selected with the capability to first explain the volume of knowledge productions and secondly to elucidate its power.
- 2- A methodological and analytical framework with the ability to clarify centers that contribute in the procedures of knowledge production and secondly, an explicatory analytical framework for explanation of effective factors in managing knowledge production.

In the first step, the Nonaka-Takeuchi perception of knowledge management has been selected as theoretical KM (Knowledge Management). In this perception, two kinds of knowledge were identified: tacit knowledge and explicit knowledge. The role implies on change in the procedures of knowledge.

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In the second step, butterfly effect has been preferred in the framework of chaos theory. It says that a small change in a place in a nonlinear system can lead to spectacular changes in other areas.

Nonak's model is applicable for analysis of the procedures of knowledge. In addition, DPSIR method has been chosen to analyze casual relationships. Although DPSIR method describes interactions between the society and the environment, it could be used to in this field too. Two methods of analysis have been combined in the research process.

A number of experts related to Physical Guide Plan (PGP) were selected after the identification of knowledge production centers in order to collect the necessary data. The target groups were questioned three times. Cronbach's Alpha coefficient was used to check the accuracy of the questionnaires. The coefficients obtained from the questionnaires respectively were: 84.0, 79.0, and 77.0. Based on the survey, the centers of knowledge and knowledge exploitations system were investigated.

Results

Based on the DPSIR model, the main results can be summarized as below:

1- Driving forces in current processes are identified as temporary forces, unstructured, based on short term needs and pre-defined objects. Driving forces are very weak due to this system. The origin of driving forces didn't lay in KM. Their main character is focus only on problem solving. Driving forces did not search a strategic resource for innovation and revitalization of PGP planning system. No incentives are formed due to this short term approach.

2- Pressure: Driving forces lead to identify some small parts of nodes and knowledge production centers and ignore its major part. The total number of knowledge production centers in PGP is estimated to be 73533 centers. But the system could pay attention to a maximum of 1000 centers in the current system. Comparing the estimated volume of tacit knowledge production to explicit knowledge exploitation from knowledge centers shows a significant gap between the two types of knowledge.

3- State: Driving forces and pressure create a special state. The main results can be summarized as below:

Lack of knowledge flow from bottom to top,

Lack of knowledge structure and incapability to form,

Diminutive emphasis on extracting knowledge,

Exploiting a petite portion of the existing knowledge generalized incomplete knowledge to whole system.

Impacts: The state led to completely clear results as follow:

Deficient knowledge network formation,

Restricted opportunities in the knowledge integration,

Elimination of a considerable amount of tacit knowledge,

Neglecting knowledge as capital,

Overemphasis on specific and limited centers,

Shortage in knowledge Production cycle and so on.

4- Responses: Important responses could be divided in two categories:

-Reactions of responsible organizations:

a) Approximately 79% of knowledge centers lay in low levels of organizational and tacit knowledge is easily abandoned, even with awareness of knowledge production.

b) Pyramidal organizational structure in PGP projects normally restrict knowledge flow and eliminate a huge amount of knowledge.

c) Organizations don't change their structures, nevertheless negative role.

d) Some people try to create a semi structure to gain knowledge based on individual interests, but it isn't sufficient.

- Other people out of responsible organization use knowledge management in problem solving situations temporarily and the process cannot provide suitable context to use.

Conclusion

Nevertheless KM produces a vital capital as Knowledge, but unfortunately it rarely attracted executive administrators to the procedure of PGP. However, a huge amount of knowledge is produced in this procedure. Nonetheless, Km could maximize the benefit of projects, provide a suitable context for change, increase productivity, but no structure has been created for exploitation of this capital. Although knowledge flows in the system network, the network is too limited and serious shortages is visible in it. A significant part of the produced knowledge has been deleted and easily disregarded. To optimize the utilization of the produced knowledge and make improvements in the quality of the PGP plan, some actions seem to be necessary as follow:

- 1- Creating KM structures to obtain required knowledge,
- 2- Change organizational structures into project-oriented structures,
- 3- Constructing a network that is able to first collect knowledge and secondly deliver it to the headquarters,
- 4- Creating capacity according to KM leadership in organizations,
- 5- Utilizing an integrated approach to apply KM system,
- 6- Using successful KM patterns that have been applied in similar projects like the World Bank Pattern.

Keywords: Rural Guide Plan, Butterfly Effect, Knowledge convert Processes, Knowledge Production Canons.

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