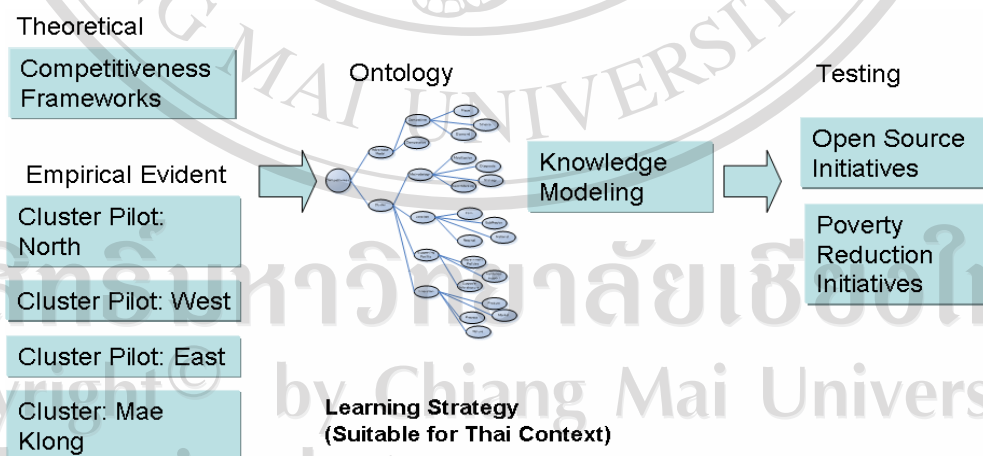**Chapter 8**
Discussion & Novelty

8.1 Research Approach Overviews

This study based on the incremental evolution process enhancing the underlining proven economic framework. It is intent to prove the novelty of the irresolvable dilemmas of cluster initiatives. It is prove that the novelty of this method is based on a new paradigm concepts of the dynamism elements adjusting to the externality governing parameters projected from the system thinking of maintaining the intersection between the government policies and firm strategies circles over the lifecycle of cluster implementation.

As concluded, the research was developed upon the multidiscipline domains in order to find an alternative solution. This study was diverted from the limitation of economic driven model onto social coexisting empirical studies. The cognitive knowledge model proposed in this research proved the viability of both the framework discovery and the research methodology.

In the early chapters of this research, it discovered the limitation of existing economic referring model in which the continuing studies reveals no significant improvement when expanding the internal cluster elements further. By constructing the new framework base on the intersection of the theoretical model with empirical evident (Figures 8.1) on the hypothesis of the hidden factors contribution from the externality, it yielded the positive possibilities

Figures 8.1 Research Methodology
Source: Tamprasirt, 2007

The new cognitive knowledge model can be consistently constructed base on 4 steps research methods described as followed:
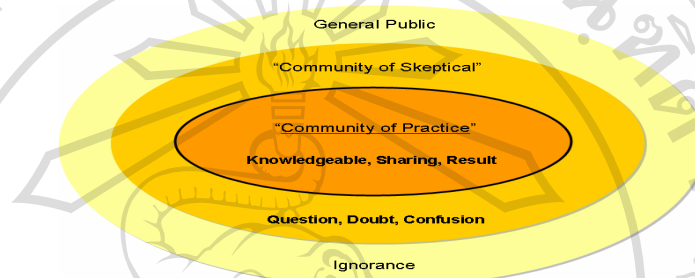1. **1st Method**: Cognitive Criteria Selection
2. **2nd Method**: Building Cognitive Knowledge Mode

3. **3rd Method**: Case Studies of Cognitive Knowledge Management System (KMS)
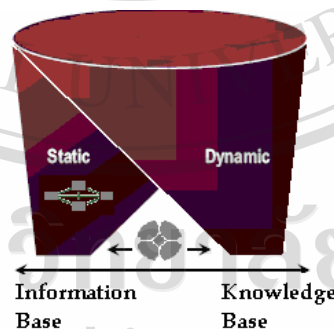
4. **4th Method**: Analysis and Results

8.2 Discussion on the Cognitive Knowledge Model Proposal

The hypothesis of this study was challenged by *confusion circle* (Figures 8.2). This described the cluster initiatives as the skeptical engagement with unpredictable results.

Figures 8.2 Confusion Circle
Source: Tamprasirt, 2006

The cognitive knowledge model, CogKnOS and designed Ontology were formulated base on three major schools of though namely, Nonaka's SECI bi-polar extreme learning methods, Cynefin Framework and Senge's System thinking accordingly. The discovery in this research revealed the dynamic engine model dealing with the entire system both internal contribution factors and externality attributes (Figures 8.3).

Figures 8.3 Dynamic Engine Model
Source: Solvell, 2003

8.3 Discussion on Cognitive Knowledge Management System

Knowledge Management System was the result outcome of this research. The KMS portal was designed and developed base on IEE compliance content management system managed by Software Engineering approaches. The analysis of the result based on a few significant indicators i.e. theoretical compliance, KMS

features and function requirements, Software Process Methodology compliance, Ease of Use and etc.

8.4 Discussion on Novelty and Research Questions

The following is a short summary related to Novelty and Research Questions

1. Problem areas and academic domains are related to Competitive advantage of the Nation, a macro-micro integration economy. They are the multi-discipline crossing between Economic, Management and Industrialization. Target knowledge workers are Cluster Developer Agents (CDA), Cluster Manager, Cluster Members and Government Officers and community involved.

2. The research problems justified and selected due to the interest of irresolvable nature of the contribution toward Social and Economic Development of the country, especially developing countries. This study proposed an attempt to find an alternative to reduce uncertainty of the cluster framework deployment in order to improve the benefit of the collaborative organizational productivities gain from the strategic thinking undertaken.

3. Main ideas of the hypothesis to approach the problems was to create a new paradigm methodology focus on the learning improvement process of the interaction of near-infinite external factors to reduce the skeptic of the uncertainty of cluster initiative which usually chronically in nature as well as building collaboration among parties involved.

4. The research novelties is the discovery the new cognitive knowledge model for chronic situation base on the externality contribution factors management interacting with well-defined internal controllable factors consideration. The result of this study yielded an alternative framework consists of, the Cognitive Knowledge Model, Knowledge Maps and designed Ontology.

5. The benefits of this research work are the expanding of the new research areas involved multidiscipline works outside the existing economic core areas. And, this research can be extended its' contribution towards academic society by expanded this into the multidiscipline areas to help reduce the complexity to leaser degree of the understanding the different between the limitations of theoretical frameworks and learning process i.e. Snow Balling Systematic Thinking, Enhanced Analogy Learning, and etc.

In contrary of the novelty of this research, there are a few limitations need to be further explored when considering the following criteria:

1. The misinterpretation of the model i.e. the bi-polar learning offered the knowledge base mechanism for judgment learning rather than the distinct variables which can directly quantity decided.

2. The alternative framework proposed must be further explored in the context of generalization to other developing countries. The intersection and strategic knowledge thinking between the social and business environment remains the same the detail complexity of each situation may be drastically different.