

# Knowledge Management Research & Practice

## Special issue of SOItmC 2017 (2017. 06.10)

Website: <http://link.springer.com/journal/41275>

**Knowledge Management Research and Practice (KMRP)** provides an outlet for high-quality, peer-reviewed articles on all aspects of managing knowledge, from the organisational level to that of the individual, nation or profession. The journal places a particular emphasis on cross-disciplinary approaches, and on the mixing of "hard" (e.g. technological) and "soft" (e.g. cultural or motivational) issues. Rigorous contributions from both academics and practitioners are welcomed.

**Knowledge Management Research and Practice** brings together overlapping yet often fragmented areas of the knowledge management field, including managing knowledge (creating/acquiring, sharing, retaining, storing, using, updating, retiring), organisational learning, intellectual capital and knowledge economics. The journal also aims to both accommodate and seek common ground between the "codification" and "collaboration" schools of thought, and between "Western" (meaning North American) and "Eastern" (meaning Japanese) approaches.

Articles may be empirical research papers, theoretical papers, conceptual papers, case studies or surveys.

### Special Issue on: *'Open Innovation in Knowledge Management*

#### Guest Editors

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As limits to growth in capitalist economy are being observed, open innovation in knowledge management is regarded as new solutions for new growth. This special issue focuses on diverse open innovations in knowledge management of SMEs, governments, and universities, et al to conquer the growth limits of capitalism. This special issue of *Knowledge Management Research and Practice(KMRP)* gathered papers for above purpose.

#### Subject Coverage

Suitable topics include but are not limited to:

- Open innovation
- Knowledge Management
- Open Business Model
- Social Open Innovation

#### Important Dates and Importance notice

**Deadline for submission: 31th August 2017**

**Completion of first review round: 31th September 2017**

**Deadline for revised manuscripts: 31th October 2017**

**Completion of second review round: 30<sup>th</sup> November 2017**

**Publishing 10 December 2017**

#### Shooting Method

**Manuscripts should be submitted to managing guest editor, [jhyun@dgist.ac.kr](mailto:jhyun@dgist.ac.kr).**

#### Editors and Notes

Manuscripts and all editorial correspondence should be addressed to: Pro.Giovanni Schiuma([g.schiuma@arts.ac.uk](mailto:g.schiuma@arts.ac.uk)),

Editor-in-Chief, Knowledge Management Research and Practice, University of Basilicata and Vice

Mayor of Matera City, Italy(E-mail: journals@theorsociety.com).

### Invited Submissions to the Special Issue

The following selected research papers are invited to the special issue by by Guest Editor Professor JinHyo Joseph Yun, and Professor Min-Ren Yan . Among these, 8 papers will be selected by EIC of KMRM Professor Giovanni Schiuma.

### Special Issue Paper List (12 papers)

No.	Paper Title	Authors (** corre. author)	First or Corresponding Author's Affiliation & Email
1	Global Value Chains: Green Economy and Sustainable Development Challenges	Adam Albekov, Taras Medvedkin, Yevgeniya Medvedkina, Oleg Bodiagin** & Inga Mezinova	Rostov State University, Russia (interoffice.rsue@gmail.com)
2	Internal Evaluation of Intellectual Capital Management at Universities	Laura Vitola & Jana Erina	Riga Technical University, Latvia (Laura.Vitola@rtu.lv)
3	Managing Competence Based Synergy in Acquisition Processes: Empirical Evidences from Information and Communication Technologies Industry	Andrejs Čirjevskis	University RISEBA, Latvia (andrejs.cirjevskis@riseba.lv)
4	The Civil Servant Pension Reform in South Korea as Social Innovation: Using Advocacy Coalition Framework (ACF)	Keunyoung Lee & Kwangho Jung	Seoul National University, Korea (kwjung77@snu.ac.kr)
5	The Effects of Entrepreneurial Business Process on New Firm Creation: An Empirical Study Based on PSED Data	Sanghyun Sung, Seunghoon Lee & Junghyun Yoon**	Dongguk University, Korea (jyoon071121@naver.com)
6	Exploring open innovation network of safety technology convergence for future society: The patent class-based network analysis	YONGYOON SUH & JEONGHWAN JEON**	Gyeongsang National University, Korea (jhjeon@gnu.ac.kr)
7	HOW INNOVATION CONDITIONS THE SEARCH FOR EXTERNAL KNOWLEDGE: A STUDY OF NIGERIAN FIRMS	Aiodun Egbetokun	Obafemi Awolowo University, Nigeria (aaegbetokun@gmail.com)
8	ANT (Actor Network Theory) Simulation Model for Making R&D Policy	Boong Kee Choi, Woon-Dong Yeo & DongKyu Won**	KISTI, Korea (dkwon@kisti.re.kr)
9	Public Service Motivation and Creativity	Jane Workman, Kwangho Jung & Seung-Hee Lee	Seoul National University, Korea (kwjung77@snu.ac.kr)
10	Simulation-based Strategy Dynamics Decision Support System for Innovation-driven Green Business Development and Economical Evaluations	Min-Ren Yan**	Chinese Culture University, Taiwan (mjyen@sce.pccu.edu.tw)
11	Harnessing the value of open innovation: Change in the moderating role of absorptive capability in the South Korean Manufacturing Sector	JinHyo Joseph Yun**, Xiaofei Zhao & Sung Deuk Hahm	DGIST, Korea (jhyun@dgist.ac.kr),
12	Innovation and tradition-based firms: the case of “La Torrente”	Valentina Della Corte**, Gaudio Giovanna Del & Fabiana Sepe	University of Naples Federico II, Italy (valentina.dellacorte@unina.it)

## Global Value Chains: Green Economy and Sustainable Development Challenges

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### Abstract

**Purpose/ Research Question:** This paper substantiates the necessity for studying the complexity and ambiguousness of “green” economy’s principles’, opportunities’ and drivers’ influence in a view of the need for maintaining the economic growth in general and sustainable development in particular. On the basis of foreign experience review and publications’ analysis, the main dimensions of new international business philosophy (the transformation of classical global value chain theory, *R. Kaplinsky, M. Morris, 2000*) are proposed. These dimensions are related to preserving and expanding the role of human capital, forming the post-industrial business, developing horizontal links and the opportunities of sustainable development. The verification of hypothesis of the dense interconnection between “green” economy efficiency indicators, the process of international investment and achieving the economic growth in the framework of individual economic system as well as in human civilization in general, is conducted with economic-mathematical tools.

Present recession being the feature of macroeconomic advancement of either some developing and developed countries, makes relevant the necessity of adjusting current tools of financial-economic, industrial and social policy with simultaneous energizing of looking for new strategic directions and drivers of growth. Among these, there is search for the new paradigm of socio-economic relations capable of meeting the pressing challenges faced by economy and society: economic crises and recession, social inequality, state deindustrialization, unemployment, limited natural resources, environment pollution etc.

Thus, in one hand, three unresolved issues of record growth rate period of 1990-s and 2000-s, according the biennial reports by Organization for Economic Cooperation and Development (OECD) are declared to be poverty, unemployment and inequality since 2012. The same issues are mentioned as the consequences of economic crises and financial shocks in the transactions by Noble Prize winning economists J. Stiglitz, P. Krugman and M. Spence, who directly bring the matter of existential choice for human civilization into the context of evolutionary transformations. In other words, it is not about doubting the fairway of world economy, which is the necessity of resuming of economic dynamics and states’ well-being, but about revealing and definition of new triggers being the new key issue shifting the traditional emphases of states’ and global corporations’ industrial policy.

On the other hand, in the United Nations Environment Programme defines green economy as “one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities”. In simple terms, it is low carbon, resource efficient, and socially inclusive. In a green economy, growth in income and employment should be driven by public and private investments that reduce

carbon emissions and pollution, enhance energy and resource efficiency, and prevent the loss of biodiversity and ecosystem services..

Therefore the logic of this research contemplates the study of how the latest challenges by sustainable development of economic systems with various taxonomic attributes influence the achieving of positive dynamics and key development indicators increasing in the framework of assumptions and limitations provided by the principles for the green economy, which the authors propose to be considered not as the result of purposeful activity of economic entities but as the tools for long-term balanced business planning.

The authors of this paper exercise the scientific search for the possibility to transform the traditional pattern of global value chains of international business (*R. Kaplinsky, M. Morris (2000)*) being exposed to the system of assumptions and limitations provided by the principles for the green economy with the aim of achieving sustainable development of economic systems with various taxonomic attributes.

### **Key Literature Reviews:**

How is life? Measuring well being. OECD. URL [Electronic resource] // Mode of access: [http://www.keepeek.com/Digital-Asset-Management/oecd/economics/how-s-life-2015\\_how\\_life-2015-en#page28](http://www.keepeek.com/Digital-Asset-Management/oecd/economics/how-s-life-2015_how_life-2015-en#page28). – Date of access: 24.11.2015.

Stiglitz J. *The Great Divide: Unequal Societies and What We Can Do About Them*, W.W. Norton Company, 2015

Krugman P. Return of Great depression. *Global Crisis from the Nobel Prize Winner's point of view*. 2009

Spence M. *The Growth Report: Strategies for Sustained Growth and Inclusive Development*. Washington, DC, 2008

UNEP. 2010. *Green Economy Developing Countries Success Stories*. UNEP, Geneva., p. 5.

### **Design/ Methodology/ Approach:**

With the aim of meeting the stated purpose of the research the authors implement the following fundamental theoretical and applied objectives:

- to analyze the fundamental basis of economic growth as the result of economic systems' transformation;
- to study the theories and methodology background of global value chains of international business;
- to contemplate the place and role of international business in the system of modern world economy;
- to investigate the key concepts for transnational corporations' interactions with the public institutions within the advancement of synergetic economic growth;
- to undertake the analysis of quantitative and qualitative characteristics of the system of assumptions and limitations provided by the principles for the green economy;
- to reveal potential locations for the incorporation of green economy influence factors into the patterns of global value chains of international business;
- to examine foreign experience of implementing the system of green economy's assumptions and limitations within cluster analysis of economic systems by the structural features of national economies;
- to perform the economic-mathematical analysis of the influence by the investment process in the field of economic systems transformation financing aimed to achieve the sustainable growth;
- to form the concept "Global value chain 2.0" (GVC 2.0) as the modern paradigm for sustainable growth of economic systems in a view of the opportunities of green economy.

For the working hypothesis of this research stands the following statement: there is a dense interconnection between the rate of economic growth, the investment process, the transnationalism level and such indicators of the green economy's assumptions and limitations system as the role of renewable energy sources, urbanization level, research-and-development spending.

### **(Expected) Findings/Results:**

The nominated research's hypothesis of potential interconnection between the green economy's assumptions and limitations system, the imperatives of sustainable development and the process global value chains transformation, requires the verification within following aspects:

1. The maintenance and improving of theoretical and methodological background of subject and object basis of the research;
2. Expert assessment of applied indicators of expanded reproduction system transformation on regional and sub-regional levels within the implementation of green economy's assumptions and limitations system principals and sustainable development imperatives;
3. Economic-mathematical proof (or disproof) of existence of economic effect in the dynamics of macroeconomic

development of regions at all economic levels in a process of quantitative and qualitative shift in content of traditional global value chains' elements

**Keywords:** supply chains, innovation, sustainable development, green economy.

## **Internal Evaluation of Intellectual Capital Management at Universities**

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### **ABSTRACT**

#### **Introduction**

Nowadays higher education sector have growing role of the knowledge based economy. Higher education sector is playing an increasingly prominent role of intellectual capital and it's development. Universities are the main creators of knowledge and higher education sector has significant role in the intellectual capital creation, development and transfer.

Emphasize the higher education sector role and the need for implementation of the new objectives are set in several policy planning documents. That fact stressing the importance of knowledge and innovation, as well as the need for a competitive economy, including the several reform at the national level.

Universities need for greater exchange of information on intellectual capital for both the public and decision-makers and management process should be more focused on results of intellectual capital components.

Evaluation and analysis of the intellectual capital management at universities are meaningful in order to develop intellectual capital and define priorities and tasks for next planning periods.

Authors would like to emphasize internal evaluation as one of important instruments what gives opportunity to develop and manage intellectual capital at university.

The significance of research is based that intellectual capital evaluation process at universities in Latvia and Baltic States practically not exist. Several components of intellectual capital concept are analysed separately for specific purposes, instead of analysis of intellectual capital and evaluation like unified concept.

Intellectual capital is complex definition what consists from several elements of intellectual capital. For purposes of the evaluation authors started with identifying process of elements of intellectual capital in theoretical basis in publications and find out most common components of concept in scientific literature. For intellectual capital component analysis we use systematic literature review and content analysis for well cited articles about intellectual capital structure.

Authors analysed intellectual capital components at universities and identify most popular components and analyse how often elements are related with strategies at universities. Important is to identify how the planning documents - strategies meet real intellectual capital management and related processes on a daily basis. For assessment of intellectual capital management process questionnaire now is under development stage. Questionnaires will provide an internal intellectual capital management evaluation at universities.

The principal objective of the research is to identify, systemize main intellectual capital elements at university strategies and internally evaluate its significance at university intellectual capital management process.

Scope of the research is to analyse intellectual capital elements which are linked with three types of capital: human capital, organizational capital and relational capital.

Research object is intellectual capital.

Research subject is evaluation of intellectual capital management.

Research question: Whether there a relation between intellectual capital management and intellectual capital elements of strategies at the universities?

#### **Methods and research design**

For formation of scientific background for the research a systematic literature analysis and content analyses methods was used to describe intellectual capital division and main components.

The analysed scientific articles are covering a wide range of theoretical base and having a high citation. For analysis article fragments that answers the research question were selected: what elements characterize the intellectual capital concept? Priority was selected articles that created the new theoretical concept of the intellectual capital. Content analysis categories were established for each fragment individually as well as all text fragments together. Each article were selected 20 most commonly used features and as a result the elements sorted by frequency. From the analysis removed elements which include adjectives and verbs that are not directly attributable to the studied object. Not all the leading value applicable to analyse the intellectual capital at universities, but most of the value used as the basis for content analysis.

In order to analyse intellectual capital elements at strategies of universities, also content analysis and comparative data analysis is used. For data processing both – qualitative and quantitative research methods are applied.

Within the research relation of main intellectual capital elements and their interaction with strategies at universities and intellectual capital management are analysed.

For purpose to analyse intellectual capital management the questionnaires will be applied at universities and analysed. Questionnaires ensuring internal evaluation of intellectual capital management process according to intellectual capital elements included at university strategies.

Limitation of research is bound with the availability of information and strategic planning policies at universities. Despite the need to systematically plan and manage intellectual capital, it is still a challenge in several public universities. Summarizing publicly available information from universities, we must conclude that a relatively large part of the universities have no strategies or not published in English. None of the universities of the Baltic States have no intellectual capital strategies, as it is practiced in the leading European universities. Taking into account the limited university's information policy, a large part of the university does not publish complete information, but only very shortened version.

## **Results**

Through content analysis and systematic analysis of the literature, authors conclude that there are countless intellectual capital concept definition with a variety of elements, categories, typologies, but most are faced with three main categories of intellectual capital elements of characterization: human capital, structural capital and relational capital.

Result of the analysis, we obtained 50 more often prevailing intellectual capital elements and the frequency of how many times a given element is mentioned in the text fragments and how those factors value under the program NVivo calculations. Uncommon found the concept of frequency of 7 times and more often found element 85 times.

According to the content analysis the most important elements are "knowledge", "relational", "structural", "employees", "organization", "process", "human" and other elements. Frequently those concepts clearly characterizes the 3 most common categories - human, structural and relational capital. Other elements are sorted under these categories that fall into these main categories.

Mentioned basic categories of intellectual capital is also in line with the most widespread opinion in the scientific literature. Other frequently mentioned categories, often characterized by the elements and processes (eg, knowledge, personnel, organization, process, customers, information, innovation, etc.) in relation to the concept of intellectual capital. Also, each individually analysed fragment content analysis carried out within the framework dominated by the same elements, which is also often referred to common article fragment analysis.

Element analysis of intellectual capital concept of the university strategies and relation of internal evaluation of management according to intellectual capital are currently in the research process stage.

## **Conclusion / Discussion (expected results)**

According to the research undertaken expected conclusion that exist medium strong correlation between intellectual capital elements in strategies and intellectual capital management process at universities.

From the results we can conclude that large part of the strategies already includes intellectual capital concept key components. Therefore, necessity for separate intellectual capital strategies are under discussion. Author's recommends develop intellectual capital chapters to the universities strategies.

For possible further research authors will analyse the strategies from top universities in Europe and also intellectual capital strategies. Similarly, the authors conclude that a useful research would be analysis of the national policy planning documents on the context of intellectual capital components and relation with strategies of the universities.

The research results give conclusion whether universities (in specific region) need separate intellectual capital strategies and or intellectual capital management conform to the strategies at universities.

**Keywords:** intellectual capital, strategies, universities, intellectual capital management.

## **Managing Competence Based Synergy in Acquisition Processes: Empirical Evidences from Information and Communication Technologies Industry**

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### **Abstract**

#### **Purpose/ Research Question**

Acquisitions remain one of the most intriguing and controversial issues in contemporary management science. The process of a new venture birth from combination of different resources and competences in acquisition is very intriguing in terms of synergy. In situation, where one or both companies change business process after acquisition, prediction of synergy and estimation of economic gains from this change has crucial important. This research looks for interdependence between synergy gain in acquisition process and core competences used in it from both sides. The aim of this research paper is to develop an integrative and more holistic research model *which would help to estimate possible competence-based synergy in acquisition process*. In order to reach the aim, the research question has been pondered: *how core competences should be evaluated as sources of synergy in acquisition?*

#### **Key Literature Reviews**

Synergy effect has been named as a major motive to initiate the process of M&A. This effect is commonly described as  $2+2=5$  or according to Rappaport (1998) synergy increasing in competitiveness and resulting cash flows beyond what the two companies are expected to accomplish independently. Recently a valuable piece of study was provided by Bauer and Matzler (2014) in those researches on antecedents of M&A success. Seth (1990), Homburg and Bucerius (2006), King, Slotegraaf and Kesner (2008) identified and resume in their prominent research stream in strategic management literature that the *strategic fit* as decisive for M&A success. The central argument of Cartwright and Schoenberg (2006) is that a high fit enlarges market power and productivity. Researchers Pehrsson (2006) as well as Stimpert and Duhaime (1997) using the resource based perspective operationalized the construct of fit with product market, resource, and/or supply chain-related similarity. Meyer and Altenborg (2008) argue that strategic fit is an indicator for the *synergy potential* of a transaction. According to Cartwright and Schoenberg, (2006), Bijlsma-Frankema (2001), Lodorfos and Boateng (2006), Nguyen and Kleiner (2003) one more important factor is *cultural incompatibility* or *misfit*, this is one of the most cited reasons for the low success rates of M&As. Although it seems obvious that cultural similarity fosters integration and success, there is empirical evidence that *cultural differences* have a strong positive impact on *synergy* and potential realization and,

therefore, on value creation as pointed out Cartwright and Cooper (2001), Schraeder and Self (2003), Teerikangas and Very (2006).

The post-merger *integration* phase is often cited to be decisive for M&A according to Haspeslagh and Jemison (1991) and Stahl and Voigt (2008). In the post-merger integration phase, well-established operational sequences and patterns are partially or completely changed and, throughout the new company, harmonized as revealed by Haspeslagh and Jemison (1991) and Bueno and Bowditch (2003). Therefore, this phase is due to employee resistance and a cultural clash, would be very risky. But acquisitions without any *integration*, resource redeployment and exploitation, as well as the elimination of redundant resources, are not feasible, it has been found by Homburg and Bucerius (2006); Cording, Christmann and King (2008); Karim (2006) and Pablo (1994). The study of Angwin (2004) also revealed that *speed of integration* can lead to faster exploitation of *synergies* and to faster returns on investment. What's more, Angwin (2004) and Bauer and Matzler (2014) argue that speed leads to a faster exploitation of *synergies* and *returns on investment*, reduces uncertainty among employees, minimizes time spent in a suboptimal condition, and takes advantage of the momentum in the direct aftermath of a deal. Thus, *synergies* in acquisition are a function of strategic similarity which foster internal advantages and relatedness to external settings, cultural fit, and the degree and speed of integration. In absence of one or more elements, the process will go wrong from the very beginning. What's more, Devers et al. (2013) argue that CEOs will make acquisitions when they obtain information suggesting that the combination of their firm and a target firm offers a firm-specific *synergistic opportunity* to create value by exploiting one or more common or complementary resources or capabilities.

Capabilities and competencies of an enterprise should be classified and valued in terms of potential benefits they can bring. Hamel and Prahalad (1990) have created a framework for establishing core competence agenda. One more evaluation model has to be mentioned, which probably is the most important one in terms of this study. This is Barney (1996) VRIO framework for resource and capability analysis. Barney evaluates each competence of a company in terms of its value, rareness, imitability and organization. According to Barney, each competence can be a source of sustained competitive advantage only if it creates value, is unique, is hard to imitate or substitute and enterprise has structure, which allows to exploit this competence. Although this model is initially used by the author for evaluation of key strengths of the company, he also outlines the potential benefits of core competence usage in M&A.

There is not only one way to visualize core competence overlap in M&A process. For example, interesting contributions to the literature on technological acquisitions has been recently provided by Sears and Hoetker (2014). Firstly, authors offer a conceptually and empirically more accurate and nuanced measure of technological overlap in M&A process. Secondly, they show that target and acquirer overlap have distinct, but interrelated, impacts on the value created from each firm's technological capabilities. Although Porter's model is not originally designed for this purpose, his methodology fits very well to see, how different resources (not only technological one), capabilities and thus core competences can be combined in the process of M&A. Barney recommends searching for valuable and rare synergies in acquisitions for core competence implication. Barney (1996) states that core competence should be analyzed in terms of their ability to produce valuable and rare *synergies* and therefore bring competitive advantage to the company. The author believes, that it is not enough to outline the core

competences of merging companies, they have to be investigated and a question should always be asked, *if they work together?* In order to answer this research question and based on literature review outcomes, we have developed an ARCTIC model for core competence evaluation in M&A.

### **Design/ Methodology/ Approach**

The research model consists of 4 stages. They used a theoretical example of company “A” acquiring company “B”. *First*, all core competences of both companies are identified using the *VRIO framework*. On the *second stage*, type of acquisition is defined and future structure is drawn, using the *value chain* of Michael Porter. Then, future positions of all core competences to be transferred are shown on this structure. The *third stage* is competence transferability analysis. *ARCTIC* (A – Advantage, R – Relatedness, C – Complexity of Competence, T – Time, I – Implementation Plan, C – Culture compliance) model is developed by the authors to evaluate, if core competences can be transferred in M&A process. Use of the model is very similar to VRIO network. First three factors concern potential *compatibilities and similarities of core competence* in new organization. Another three factors are more on *implementation process*. To be implemented in the new structure successfully, core competence has to satisfy all six criteria. Of course, each factor has to be explained in more detail.

Advantage – is *value* that core competence usage can bring to the company and *rareness* of this value. If the competence is useless, because it does not satisfy any important needs in the new market, then there is no rationale behind the merger.

Relatedness – ability to bring value strongly depends on relatedness *of the environment*, in which the competence will be applied. By this, the author means not external market environment, but company business as well. If the competence is valuable, but it should be implemented in a really different *perspective*, chances of success fall.

Complexity – every competence has a degree of complexity, which hinders its transfer, as to the competitors, so as to the partners. If a competence is based on some special technology, know-how, if it is highly vulnerable and developed upon a great *piece of time*, its usage gets harder.

Time – it empirically tested, that the longer integration process takes before operations start running in a normal way, the less chances of being successful the acquisition has. Time scale (or speed of integration) can be a very important factor in acquisitions where valuable core competence *takes so much time to transfer, that it becomes useless*.

Implementation plan – by the time top management evaluates potential acquisition, at least some steps of practical implementation should be developed. When a company enters M&A process *without a strict plan to follow*, chances again go down.

Culture compliance – at last, it should be tested, how core competences fit other company culture. Cultures are the subject of main importance in acquisition, but as this framework is competence related, management should see, if cultures of both companies *accept use of selected competencies*. Therefore, ARCTIC framework uses 6 success factors for future acquisition, but apart from VRIO model it does not mean, that a case, lacking at least one of those factors would definitely fail. The authors believe that in cases where 3 or more factors

are missing in the model, competence-based M&A is unlikely to succeed.

ARCTIC methodology is designed not for predicting, whether M&A will fail or succeed. It is impossible, because some acquisitions bring value by absolutely other means, than originally planned. This model, of course, needs some empirical testing to assure its effectiveness.

Finally, the *fourth stage* is a final decision whether to acquire or ally according to Dyer, Kale and Singh (2004).

### **Findings/Results:**

Based on literature review in depth, an ARCTIC model has been developed and tested. We have selected Facebook acquisition of Instagram in 2012 and WhatsApp in 2014 year as well as current Microsoft acquisition of LinkedIn (a deal expected to be completed by the end of 2016) to test empirically developed methodology.

### **Research limitations/ Implications:**

Illustrative case studies involved explore empirically the competence transfer as main drivers of successful acquisition process. The author suggests further empirical testing on illustrative case studies and possible development of methodology for evaluation of all six factors. Research identified four steps to investigate whether core competence transfer in an acquisition process is an important source of synergy and whether is better to acquire or ally for competence transfer. The ARCTIC model can be used effectively in evaluating core competencies as a means of synergy creation in the M&A context. The authors believe that six factors of ARCTIC models allow to make preliminary evaluation of core competences as sources of synergy in acquisitions and new ARCTIC model should be helpful to managers facing mergers and acquisitions, as well as to management academic specialists, studying this area.

### **Acknowledgements**

The paper was supported by the project 5.2.2 «The Development of Innovation and Entrepreneurship in Latvia in Compliance with the Smart Specialization Strategy» within the National Research Program 5.2 «Economic Transformation, Smart Growth, Governance and Legal Framework for the State and Society for Sustainable Development – a New Approach to the Creation of a Sustainable Learning Community (EKOSOC-L).

**Keywords:** synergy, core competence, value chain, M&A process, ARCTIC model.

**The Civil Servant Pension Reform in South Korea as Social Innovation:  
Using Advocacy Coalition Framework (ACF)**

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<Abstract>

This study aims to analyze the policy-making process of the 2015 South Korea's civil servant pension reform act by using the Advocacy Coalition Framework model designed by Sabatier and Jenkins-Smith. The study will focus on South Korea's civil servant pension reform act that occurred in the end of May, 2015. The temporal scope covers from 2009 latest reform, and the 2014's President administrative policy speech that had strongly been showed her will to reform the pension issue to the end of May, 2015 when the reform bill enacted. The study investigates each advocacy coalition in order to elucidate the actors that constitute the two coalition groups, and to scrutinize whether a policy broker had been existed in the process. The paper also tries to find the relatively stable parameters and external events that affected the reform and also the belief system that shared by two advocacy coalition group. The result clearly shows that the two coalition group shared their normative beliefs ultimately for example, the need to change the current civil servant's pension system, but, the gap in the numerical change in the policy core belief and secondary belief between the two actors had seemed to be excessively large and uncompromising. It led the policy formation to follow the advocacy coalition of opposition (The Civil Servants'). However, due to the adjustment by the policy brokers, the reform bill dramatically has been realized in the end of May, 2015. The paper concludes that in order to conduct and adjust the conflict between the advocacy coalition groups, the existence of policy broker can play major role to produce the successful policy outcome.

Key words: Civil Servant's Pension Reform Bill & Act, Advocacy Coalition Framework, Policy Innovation

## **The Effects of Entrepreneurial Business Process on New Firm Creation : An Empirical Study Based on PSED Data**

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### **Abstract**

#### **Purpose/ Research Question**

: This study proposes the entrepreneurial business process (EBP) that reflects how to search and manage the necessary activities, resources, and stakeholders for managing startups from the viewpoints of Know-Why, Know-What, Know-Who, and Know-How. In this study, using resource management, organization theory, stakeholder theory and business process management, we focus on role of resource and stakeholder of startup firms on their survival.

#### **Key Literature Reviews (About 3~5 papers)**

: Most entrepreneurship studies have concluded that startup companies fail due to the lack of resources and the absence of network with external stakeholders (Dahl and Nesheim, 1998). Early-phase startups face difficulty in obtaining the knowledge and information about how to systematically secure and manage insufficient resources. The three important factors that directly affect the performance of new venture creation are team, resource, and opportunity (Song et al., 2008). Startup companies should maintain consistent relations with external stakeholders or partners who have the complementary ability and resources required for different entrepreneurial activities in the growth process (Gulati and Gargiulo, 1999). Entrepreneurial processes have a close relation with entrepreneurship and may be regarded as a series of processes of creating value, searching for business opportunities for development into a business idea, and commercializing it for practical business through management of resources and organization (Tötterman, 2008; Moroz and Hindle, 2012).

#### **Design/ Methodology/ Approach**

: More specifically, we argue that resource availability and stakeholder mentors outside the organization have an effects on failure of startup companies in the next five years. Using nascent entrepreneurs during the startup process with data from US Panel Study of Entrepreneurial Dynamics (PSED), we analyze whether they are actually reaching the new firm creation stage, disengagement stage, or startup active stage depending on resource and stakeholder management.

#### **(Expected) Findings/Results**

: We identify individual characteristics, environment and policy factors that affect the entrepreneurial activity of the entrepreneurs. We conduct the latent growth model analysis using structural equation modeling to measure changes in factors over time, and verify the effectiveness of the defined factors in the entrepreneurial business process. This is the first research of analyzing relationships among business process and organizational characteristics from the perspective of startup companies considering the limitations of startup companies.

#### **Research limitations/ Implications**

: Our results suggested that entrepreneurs can increase the chances of survival of their startup firms with external resource and stakeholder. We will contribute to more effectively model entrepreneurial business process and manage factors affecting the success and growth of startups.

**Keywords**

: Entrepreneurial Business Process, Business Process Management, Startup Process, Resource and Stakeholder Management, Latent Growth Model

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# **Exploring open innovation network of safety technology convergence for future society: The patent class-based network analysis**

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## **Introduction**

As the technology is improved and society is matured, the occupational and health safety has been recently highlighted. Risks have been derived from change in technology, product, service, and society. A new type of dangers is emerging in modern industry according to these changes. The importance of managing industrial and occupational accidents is increasing in various field systems such as factory, construction site, and real life. Amongst others, these risks have pointed out a distinct feature of safety convergence. Traditionally, a reason of risks is very simple, but recently, that of the risk becomes complex. Since industrial systems were designed intricately according to convergence of various technologies such as IT, mechanics, and ergonomics, it has become difficult to discover problems and fails of the systems. Thus, to solve problems of these systems' risks derived from technology convergence, the safety technology is being developed by integrating various technologies as well (Kokangul et al., 2017; Patriarca et al., 2017). It is also required to consider the interdisciplinary approach of ergonomics, machinery, chemistry, and building systems to safety issues.

The research on technology convergence has been studied in a last decade in manifold fields (Lichtenthaler, 2004; No and Park, 2010). A number of various methodologies are proposed to

investigate a core of technology convergence in terms of function, field, and industry (Yoon, 2008; Paulheim, 2014). However, in safety management, these approaches to identifying a state of the art in technology convergence have been not applied yet. As technology convergence is critical to design recently advanced systems, risks in the recently advanced systems become complicated more than previously simple systems (Wahlstrom and Rollenhagen, 2014). The solution for assuring safety in systems is also derived by technology convergence. For example, in a smart home, which is a result of technology convergence between building and information technology, a risk can be a complex one as managerial risks of lighting systems in building, incorporated by ICT. In this case, it is important to find the solutions in both areas, building and information technology. In other words, as technology convergence is intensified, it is needed to monitor safety convergence to design and maintain safety systems. These situations are strongly related with open innovation strategy. By combining various approaches, effective solutions to converging fields can be found. The needs for interaction between various industries for safety systems are being important in terms of open innovation.

In this respect, this study aims to explore technology convergence for safety for structuring open innovation network. By identifying knowledge flows interacting various technology fields for safety, we provide safety managers with effective solutions and indicative information. The patent is a fruitful resource for investigating the convergence information because patents related to safety technology are classified into various patent classifications. Here, we mainly use co-classification (hereafter, called as “co-class”) information of International Patent Classification (IPC) codes, consisting of code A to code H, to identify the converging fields of safety technology. In general, the patents have multiple classes because most of patents can apply various technology fields. These multiple classes are defined as co-class. For example, when such a patent related to information technology includes the mobile technology for unmanned vehicle, this patent has multiple codes related to mobile technology and vehicle. In this case, we determine this patent represents convergence between mobile and vehicle technologies. Thus, the co-class (which means multiple classification codes) is used to monitor technology convergence.

The co-class analysis has been widely applied in studies on monitoring technology trends and changes so far, but as aforementioned, being less conducted in the fields of safety management. A main part of the co-class analysis is to conduct network analysis for monitoring patterns of

technology changes and paths of technology evolution. Also, roles of patent classes are extracted by identifying a core node and patterns based on structure of co-class network. In this study, we conduct three types of network analysis to represent various results of core nodes and their patterns of co-class network: centrality analysis, brokerage network analysis, and association rule mining analysis. Based on three types of network analysis, we compare different network of safety technology convergence and reasonable results can be derived such as common core class and change patterns of co-class network. It is expected to identify core safety technology in convergence network formulate development strategy of safety technology.

## Research Procedure

To construct co-class network and analyze core class and change pattern, this research procedure is divided into five steps as depicted in Figure 1. First, in Step 1, patent documents related to safety technology are gathered and the classification code contained in patent documents is extracted. Second, in Step 2, the co-class network is constructed through the extracted classification codes. Third, in Step 3, social network analysis of centrality analysis and brokerage network analysis is applied to identify core classes and convergence patterns of co-class network. In addition, the association rule mining is used to identify the relationships between co-classes. In Step 4 and Step 5, focusing on the core classes and convergence patterns, we explore main technology and industry fields. The contents of safety technology convergence such as core technology and problem solution are summarized through mining text description of the patents such as title and abstract included in the core classes.

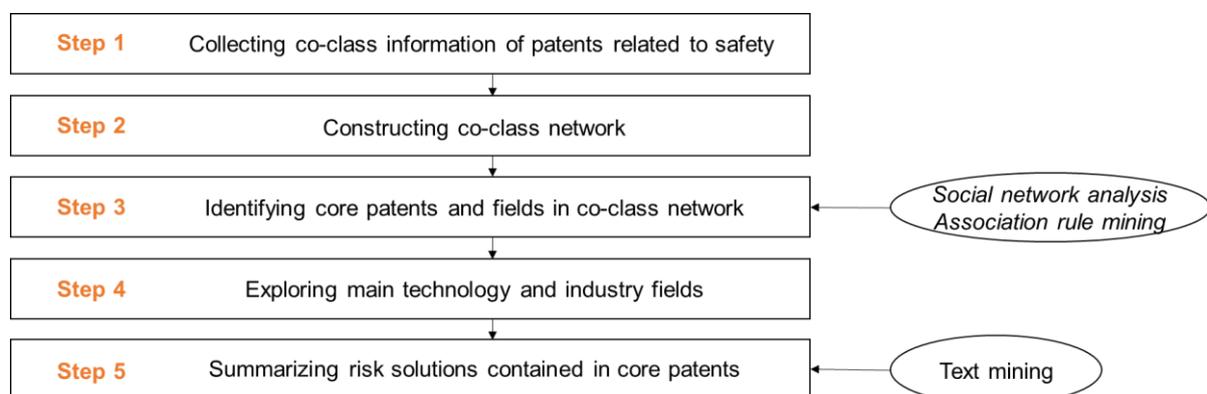


Figure 1. Diagram for research procedure

## **Data and Methods**

The patent data is collected from a patent DB website of Korea, WIPS. The WIPS provides various fields of patents such as patent title, abstract, assignee, class (i.e. IPC, USPC, and CPC), and citing and cited patents. Here, we use IPC information to structure co-class network. We collected 592 patent documents related to safety technology searched by such keywords, “safety”, “technology”, “risk”, “danger”, and “hazard” (In searching process, the keyword of “safe” was excluded since it usually means the product of “safe”, which is a strong metal cupboard with special locks). By constructing the co-class matrix, the network analysis can be applied to monitor core classes and patterns of safety technology in co-class network.

The three types of network analysis are applied: centrality analysis, brokerage network analysis, and association rule mining. They are applied to achieve different purposes. The centrality analysis is used to find the nodes which are frequently related to other nodes (Suh & Lee, 2017). The nodes that have many relations with other patents are derived as the core nodes in network. On the other hand, the brokerage network analysis is to identify roles of connecting the groups of nodes (Suh & Kim, 2015; Lee et al., 2015). Through brokerage relation indexes in co-class network, we extract different roles of brokerage: “coordinator”, “gatekeeper”, “representative”, “consultant”, and “liaison”. Based on these roles, the core classes and patterns can be quantitatively determined. Finally, the association rule mining has a somewhat different approach. The association rule mining is to probabilistically analyze the degree of relations based on *Bayesian* theory (Liu et al. 1998). Three indexes, which are “Support”, “Confidence”, and “Lift”, are used to represent relationships between technology classes. Consequently, through three network approach, the common core nodes and patterns are systematically summarized to monitor safety technology convergence.

## **Conclusions and Future Study**

This study focuses on monitoring safety technology convergence using three types of network analysis. From various methods of network analysis, we represent different results of core classes and patterns of safety technology convergence. The results contribute to identify the convergence patterns in various perspectives. By comparing the results of each network analysis, common core nodes and patterns are proposed as very significant results. In the future work, we apply network analysis based on the co-class matrix to represent various and useful

convergence patterns. Also, the potential safety technology that has a substantial influence future society will be derived. As new technology is continuously adopted in future society, unexpected dangers and risks can emerge. Thus, we should construct anticipatory safety systems by developing preventive safety technology in advance. The results of safety technology convergence can be applied to be cope with these unexpected dangers and risks.

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**HOW INNOVATION CONDITIONS THE SEARCH FOR EXTERNAL KNOWLEDGE:  
A STUDY OF NIGERIAN FIRMS**

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**ABSTRACT**

The use of external knowledge in innovation is widely acknowledged. However, there is limited evidence on how the innovative capacity of firms conditions their external search strategy. This paper presents fresh evidence from a developing country, Nigeria, on the use of external knowledge in the innovation process. The paper distinguishes between formal and informal search strategies that firms adopt and relates their complexity to the scope of firms' innovation. The data used is obtained from the first wave of the Nigerian innovation surveys. Tobit and ordinal logit regressions are applied to the data. The results support the conjecture that a firm's level of innovativeness conditions its external search behaviour. For informal interactions, a strong positive relationship is found between the diversity of innovative output and of external search. This relationship is absent in the case of formal search and in the manufacturing sector. The key policy lesson in this is the following. Policies and strategies aimed at enhancing firm-level innovation need to be aware of firms' current level of innovativeness and sectoral differences.

**Key words:** *innovation; external knowledge; Nigeria; search complexity; formal and informal search*

## ANT (Actor Network Theory) Simulation Model for Making R&D Policy

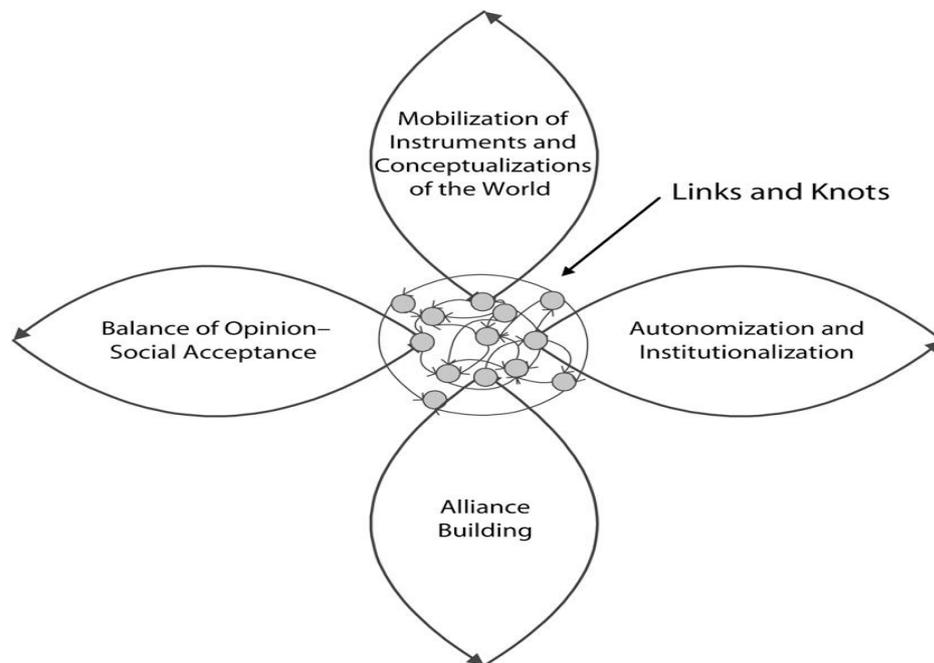
Boong Kee Choi (KISTI), Woon-Dong Yeo(KISTI), DongKyu Won(KISTI)

Actor-Network Theory (ANT) is rooted in science and technology studies. It has been developed from the 1980s by Bruno Latour, Michel Callon and John Law. Since the 1980s ANT has been used in multiple variations. Although ANT carries ‘theory’ in its name, it is better looked at as a method for doing research. Still ANT does carry some substantive elements in it that cannot be neglected when doing ANT driven research.

In short, ANT can be defined as a research method with a focus on the connections between both human and non-human entities. It describes how these connections lead to the creation of new entities that do not necessarily practice the sum of characteristics of constituent entities.

This thesis aims to address the following.  
The use of ANT will help to answer the following research question:  
“What needs to be done in order for NT (nanotechnology) of national R&D to be successfully implemented in Korea?”

The process of institutionalizing NT national policies has been broken into 3 overlapping stages: autonomization of the issue, contest to determine the solution, and convergence on solutions (resolution).



(Figure 1) The key processes in an actor-network theory analysis.

Source: Latour B. Pandora’s Hope—Essays on the Reality of Science Studies. Cambridge, MA: Harvard University Press; 1999.pp99-111

Through our analysis, we identified approaches to help overcome some systemic barriers to the solution of the NT R&D policy problem and comment on other complex transnational problems. Overall, it is the hope of this thesis that the use of ANT can help in plotting a successful path for the NT policy of national R&D.

Key Words: ANT (Actor Network Theory), NT(nanotechnology) policy, R&D Policy, Autonomization,

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## Public Service Motivation and Creativity

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### <Abstract>

**Research Question:** Little Empirical research has explored various relationships between creativity and public service motivation(PSM). Most previous research has discussed how economic incentives promote creativity. Recent research in organizational behavior has addressed significant relationships between creativity and innovation(Amabile, 1988; 1997; Rank et al, 2004) without clarifying what motivations can facilitate creative and innovative attitudes. In addition, previous studies have mainly focused on a relationship between ethics and entrepreneurship associated with creativity without identifying what kind of ethics involves in increasing(or decreasing) innovative and creative attitudes(Bacu, 1998; Berman & West, 1998; Bernier & Hafsi, 2007; DeLeon, 1996). There are, however, significant relationships between creativity and non-economic incentives. This study focuses on how public mind influences creativity. More specifically, this study explores how PSM can be related to creativity function. This study argues that creativity can be affected by various types of public motivations including attraction to public policy making, sympathy, public interest, social justice, and sacrifice. These sub-factors in public service motivation involve the propensity of risk-taking to serve common problems and public issues. Those with a higher level of PSM are likely to search diverse intricate issues, social dilemmas, and economic crises. Such efforts to explore appropriate solutions to these problems can induce creativity. In addition, those with a higher level of PSM are likely to promote creative attitude and ideas through cooperation and self-sacrifice (Alves et al., 2007; Bardach, 2001; Perry-Smith & Shalley, 2003).

**Research Background:** Global economy and environment have increasingly requested creative mind and policy strategy for public organizations (Mazzucato, 2011; Nijkamp, 2003; Weerawardena, 2006). However, little empirical research has explored how public institutions can promote creative mind and environment for public employees. This study suggests that PSM can positively facilitate creative process and products for public employees surrounded huge bureaucratic constraint and burden. Since the last decade, the conceptual instrument of PSM originally developed by James Perry(1996) have been applied to various research areas including public performance, ethical activity, and job satisfaction. There are, however, many neglected areas strongly associated with public service motivation. For instance, PSM may influence innovation process and creativity function through various mediate mechanisms including intrinsic incentives and creative attitudes. In addition, PSM is expected to demolish various bureaucratic barriers to constraining creativity in public organizations(Borins, 2000;

Chen & Huang, 2010; Kim, 2010). Little empirical research has discussed a relationship between innovation and PSM and a relationship between PSM and creativity.

**Research Method:** Based on survey data from employees in public sector of South Korea, this study empirically tests whether or not the sub-elements of PSN are associated with creativity after controlling for various socioeconomic factors including job position and experience, education, income, age and gender. Creativity is measured by several dimensions including creative attitude and personality and the concept of PSM consist of 15 items from public participation, to altruism, to self-sacrifice, and to public interest.

**Expected Research Findings:** It is expected that public interest, empathy, altruism and attraction to policy making are likely to be positively associated with the level of creativity. These sub-elements of PSM are expected to positively related to attitudes such as intrinsic incentives(Dewett, 2007), risk-taking, imagination, flexibility, and non-conformity. All these findings come from multiple regression analyses, after controlling for socio-economic variables including age, gender, education, and income.

**Keywords:** Public Service Motivation, Bureaucratic Pathology, Creativity, Intrinsic incentives, Risk-taking, Imagination, Flexibility, and Non-conformity

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No.10

## **Simulation-based Strategy Dynamics Decision Support System for Innovation-driven Green Business Development and Economical Evaluations**

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### **Abstract**

In the globally competitive environment, continuous product and business model innovations have become a critical strategy for enterprises to develop competitiveness and market potential. However, in the product innovation process, in addition to technological and functional product innovations, business model innovations comprising the values of the social, environmental, and sustainable development have been highlighted as a new generation business model in recent years. To this vision, the strategic thinking of “Creating Shared Value” (CSV) has been proposed that encourages enterprises to re-define the concept of products, markets, production value chain and local clustering development.

To demonstrate the innovation-driven green business development and economical evaluations with innovative green supply chains, this research project takes a 70 billion NTD annually paper printing and publishing industry as the research object for investigation. Empirical data and in-depth interviews with industry experts will be adopted to explore the product innovation and market development strategy for international strategic alliances of green supply chain. Even though the green consumption and UPM green paper product innovation have been a global trend in the international community (UPM annual output already reached 10 billion euros), Taiwanese market is still in the early stages of development and thus worthwhile for research. In the past years, many manufacturers could merely rely on their experience to determine product pricing and promotion strategies due to the lack of a systematic decision support model to assist the dynamic planning for enterprise’s product innovation and market expansion strategies, and to assess the effectiveness of the strategic plans.

In order to enhance company’s strategic planning capability and business performance, this research project aims to combine the theory of bargaining power in the field of economics, management sciences and System Dynamics methodology to develop a Strategy Dynamics Planning Model for Product Innovation and Market Development (SDPM). SDPM could be a Management flight simulators (MFS) as well as a decision support system that help managers overcome the aforementioned obstacles. The concept of MFS is defined as the simulations of complex operational and strategic issues in businesses and other organizations. A management flight simulator is a learning tool that allows managers to compress time and space, experiment with various strategies, and learn from making rounds of simulated decisions in a designed learning environment that allow failure and reflection. Previous studies proposed that management flight simulators are required to improve people’s mental models in discover how complex systems behave. When experimentation is too slow, too costly, unethical or just plain impossible, simulation likes MFS become the main-perhaps the only- way we can discover for ourselves how complex systems work and where high-leverage points may lie.

Through computer simulation technique, the proposed model helps enterprises to increase the dynamic planning capabilities, business strategy performance and create added value. This study helps to analyze the competitiveness factors for the paper product innovation in green supply chain and market development. In addition, the potential customers and existing customers could be handled by five customer market stages in response to strategic planning under different resources and market conditions. The analysis of the customer base, product innovation strategy, market development strategies, operating cost, business performance assessment strategies could be performed by computer simulation. The quality of decision-making for industrial operations could be enhanced and the model could be further applied to China and international market.

The proposed simulation-based strategy dynamics decision support system demonstrates a powerful logic that offers substantial improvements in dealing with strategic planning for innovation-driven green business development and economical evaluations. Successful strategic business model development requires attention

on the performance over time. Since performance reflects the state of business resources utilized, this study supports a systematic evaluation for time-phase performance with anticipated resources. In addition, the strategic architecture of the business developments is enabled to cover the feedback structure of interrelated critical variables among innovations, business model development, technology adoption, consumer awareness, and business economics. The field of strategic management and innovation are eager for dynamic theories that explain the evolution of performance differences among difference business models and are increasingly looking to managerial decision making as the source of dynamics. Therefore, this study contributes to address dynamics and systematic decision making with business model innovations. The proposed model helps to explain how business performance has developed up to the current date, and how to develop and implement strategies to improve future performance. For further development, cloud computing technique is able to be incorporated with the scientific approach.

**Keywords:** product innovation, decision support, strategy, system dynamics, simulation.

**Harnessing the value of open innovation:  
Change in the moderating role of absorptive capability in the South Korean  
Manufacturing Sector**

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**Abstracts**

Despite the significant increase in the amount and ratio of R&D investment, slow economic growth since the global financial crisis has continued, and has had only 2-4 percent economic growth in South Korea. From this, we want to receive answer to following 2 questions.

Has there been any change in the moderating effects of R&D between open innovation (OI) and firm performance of small and medium enterprises (SMEs) in the South Korean manufacturing sector since the global financial crisis?

If so, do they include changes in the OI effect, the R&D effect, and the R&D open-moderating effect? We chose 2,743 and 4,075 SMEs in the South Korean manufacturing sector in 2005 and 2014, respectively, as samples for our empirical analysis. This study analyzed the effects of both OI and R&D investment on the performance of SMEs in the South Korean manufacturing industry in 2005 and 2014.

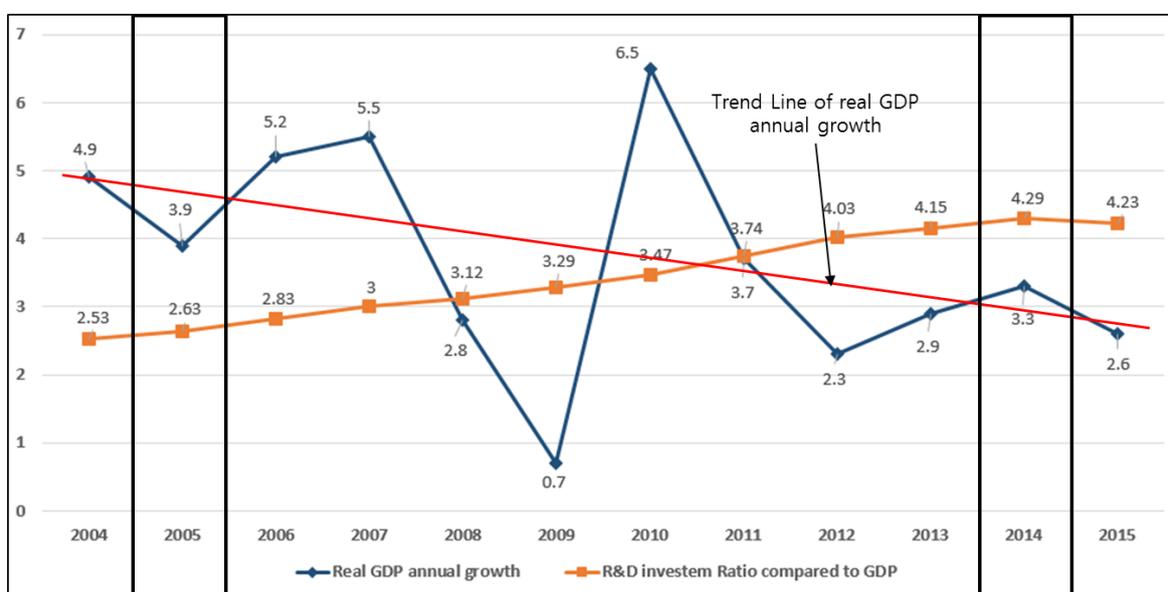
**Keywords;** open innovation, absorptive capability, moderating effects, manufacturing industry.

**Introduction**

Since South Korea's investment in research and development (R&D) reached 2.63% of its gross

domestic product (GDP) in 2005, the figure has been steadily rising (4.29% in 2014 and 4.23% in 2015) even after the global financial crisis in 2008 as shown in **Figure 1**. In fact, South Korea has one of the highest levels of R&D investment, taking into consideration its GDP. While South Korea's economic growth rate has fluctuated from 3.9% in 2005 to 6.5% in 2010, it has stayed below 3% for the past four years, showing no signs of change. Taking into consideration the inflation rates of the period, the actual economic growth rate has dropped even further. In other words, despite the significant increase in the amount and ratio of R&D investment, slow economic growth since the global financial crisis has continued and South Korea has had only 2-4 percent economic growth. Indeed, South Korea has settled into a low growth trajectory.

In this regard, we want to answer the following questions. Has there been any change in the moderating effects of R&D between open innovation (OI) and firm performance of small and medium enterprises (SMEs) in the South Korean manufacturing sector since the global financial crisis? If so, do they include changes in the OI effect, the R&D effect, and the R&D open-moderating effect?



**Figure 1.** Changes in GDP and R&D investment of South Korea from 2004 to 2015

Source: Korean Government Statistic Office

By analyzing the empirical changes in the effects of OI, R&D investment, and the moderation of R&D investment on the South Korean manufacturing sector before and after the global financial crisis, the purpose of this study was to understand why South Korea's economic growth has stalled or fluctuated despite the high R&D investment. Big corporations were excluded from our empirical analysis because the international macroeconomic environment largely affects their performance in certain industries. In addition, OI is an analytical tool for us to understand the industrial innovation of more traditional and mature industries in SMEs rather than that of the high level technology of big corporations, such as Lucent, 3Com, IBM, Intel, and Millennium Pharmaceuticals (Chesbrough and Crowther, 2006). The service sector was also excluded from our empirical analysis because the effects of OI and R&D investment on the service industry are often empirically difficult to measure, as argued by Laursen and Salter (2006) and van de Vrande et al., (2009) in their empirical analyses of the OI effect on SMEs

in the United Kingdom and in the Netherlands, respectively.

Following the OECD Frascati Manual, we conducted an empirical analysis based on data obtained from the South Korean SMEs Innovation Survey Results including the 2005 manufacturing industry and the 2014 manufacturing industry (OECD, 2015). We also employed additional empirical methods, such as intensive interviews with representatives of the South Korean manufacturing sector. In fact, we provide the related parts of the “Innovation Survey Questionnaire” in an attachment for reference. We also provide descriptive statistics on South Korea’s macroeconomic environment and its SMEs before and after the global financial crisis in 2008.

## Innovation and tradition-based firms: the case of “La Torrente”

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### Abstract

**Purpose/ Research Question:** Until recently, innovation studies have focused on radical, technology-based innovations in large firms, above all multinationals, whilst innovation patterns in family businesses have not been deeply studied. However, over the past years, some scholars have concentrated on innovation strategies with specific reference to family businesses (Terziovski, 2010; Rosenbusch et al., 2011). In contrast with conventional thinking based on the assumption that knowledge from the past can cause path dependence, inflexibility and conservatism (Leonard-Barton, 1992), several scholars have started to recognize the potential advantages of searching in the past to develop innovative products (Messeni Petruzzelli and Savino, 2014; Nerkar, 2003). Consistent with this research stream, the aim this paper tries to achieve is to understand how family businesses characterized by long-lasting traditions can implement innovative products, remaining anchored to past. This issue is notably evident in food industry, where family businesses are facing several changes that affect the way in which business is done: risk perception is growing international competition is always more dominated by cutthroat rules the boundaries among sectors are becoming blurred, leading to a kind of “industry convergence”.

**Key Literature Reviews (About 3~5 papers):** In light of these global and structural changes, the adoption of an effective innovation system seems to be crucial for food family businesses. These ones should implement innovative strategies combined with “secret” recipes related to the firm’s tradition and to that of their territory. Basically, knowledge pertaining to the past is increasingly recognized as a powerful and unique source of innovation (Messeni Petruzzelli & Albino, 2012). Consequently, firms need to develop capabilities to interiorize and reinterpret past knowledge to innovate. Specifically, we argue that long-lasting family businesses benefit from their past knowledge and the success of these firms depends on their ability to leverage tradition to create innovative products.

**Design/ Methodology/ Approach:** Adopting a qualitative research methodology, mainly focused on a case study, this paper tries to cover some unexplored points concerned to the possibility of combining tradition and innovation to gain success in the high-competitive international arena food family businesses are forced to face with. We analyse the case of “La Torrente”, that is an international recognized Italian firm operating in the food industry. “La Torrente” on one hand is characterized by a highly innovative business approach; on the other has long-lasting tradition and a strong connection to the territory of reference.

**(Expected) Findings/Results:** “La Torrente” has a winning formula, based on an integration of tradition and innovation in products and processes. Its efforts to innovate are related to both the large variety of products and the growing attention to the quality aspect.

**Research limitations/ Implications:** this study has some limitations due to the applied methodology. In particular, we choose to adopt a qualitative method of a single case study.

The implications are both theoretical and managerial. From a theoretical perspective, there emerges the need to deeply study the formalization of an effective blend of tradition and innovation, above all in family businesses. As for the practical implications, the case study “La Torrente” constitutes a best practice, especially for family businesses with a long-standing history and a strong connection to the territory.

Further developments of this research will concentrate on other representative case studies in the food sector.

**Keywords:** tradition, innovation, food industry