Journal of Economics and Sustainable Development
ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online)
Vol.7, No.24, 2016

Innovation for the Third Sector Economy: Enlightenment from Dematel method

Aries Heru Prasetyo*
PhD Program, College of Management, Fu Jen Catholic University, Taiwan, R.O.C
510 Zhongzheng Rd, Xinzhuang Distrcit, New Taipei City 24205, Taiwan, R.O.C

Anthony Kuo
Associate Professor, College of Management, Fu Jen Catholic University, Taiwan, R.O.C
510 Zhongzheng Rd, Xinzhuang Distrcit, New Taipei City 24205, Taiwan, R.O.C

Jersan Hu
Professor, College of Management, Fu Jen Catholic University, Taiwan, R.O.C
510 Zhongzheng Rd, Xinzhuang Distrcit, New Taipei City 24205, Taiwan, R.O.C

The research is financed by Ministry of Science and Technology Taiwan, R.O.C., no. MOST104-2632-H-030-001-MY3

Abstract
Innovation is needed by all types of organization including those who are coming from the third sector economy. This study tried to develop firmly-paradigm in addressing the term innovation into co-operatives, non-profit organization and social enterprise. Starting with performing a comprehensive literature review, the study found six possible dimensions for innovation namely: (1) organizational capabilities, (2) knowledge management capabilities, (3) external orientation capabilities, (4) learning network capabilities, (5) strategic capabilities and (6) dynamic capabilities. Aiming to provide clear evidence on how each dimension contribute to innovation, the study used Dematel approach to deal with multi-criteria issues. Having collected questionnaires from 26 experts, the study emphasized that external orientation capabilities shares as the greatest influencer among dimensions for the three types of organizations. As point to that, having considered the causal relationship among dimension, this study promotes a new thought in performing innovation. Socio-economy must use the identified-dimension as systematic paradigm. Finally the paper portrayed the sequence through causal-relations analysis, thus providing clear guidance for future agenda.
Keywords: innovation, third sector economy, Dematel, external orientation capabilities

1. Introduction

To date, industrial competition was driven mostly by unique-competitive advantage which is less imitable (Autant-Bernard et al., 2013; Hana, 2013; Martin de Castro et al., 2013; Galende and De La Fuente, 2003). Players are trying to perform their best strategy on cost leadership, differentiation and market expansion. Current reality proofed that only the best who can survive in facing all economic performance including booming and crisis.

The use of the term 'non-imitable' on competitive factors has made innovation stands as the pivotal element on business strategy. As results, former studies recalled clear directions to address the concept into daily operation (Amit and Zott, 2010; Teece, 2010; Lindgardt et al., 2009; Tidds, 2006; Amabile, 1988). Antecedents, process and models of innovation has become popular theme among business scholars.

Using Google scholar as database, the use of innovation as keyword is resulting on more than 3,600,000 academic references including conceptual and empirical studies, unfortunately, most of them found only using manufacture and service organization as unit of analysis, yet left third sector economy as research object. Meanwhile, field observation signaled that the third sector organization also needs innovation to deal with current competition (Abramovsky et al., 2005; Tether, 2002; Wilkinson and Balmer, 1996).

This study tried to uncover antecedents for innovations for three types of socio-economy organizations (i.e. co-operative organization, non-profit organization and social enterprise). In general, this paper is divided into two major parts: first is regarding comprehensive literature review to address several possible dimensions. Furthermore, due to limitation of findings in the related sector, the study tried to adopting the concepts from non-third sector facts. All antecedents portrayed were then been tested using Dematel (decision making trial and evaluation laboratory) approach. Our consideration to use Dematel is because it shares complex relations between criteria dimensions especially when we try to propose systematic flow of thoughts to develop a firmly framework.

The rest of the paper is organized as follows. The subsequent section will describe our comprehensive analytical review to (1) emphasized original character of socio-economy organizations and (2) address all possible dimensions fits to the characteristic. Section three will describe Dematel systematic procedures to solve the problem effectively. Section four will explain all findings and analysis during the process, including managerial implications and conceptual contribution of the study. Meanwhile, section five will proposed our conclusion and

directions for future research agenda.

2. Literature review

2.1 Innovation on the third sector economy – an early signal

As the third sector economy organizations, co-operatives, non-profit organization and social enterprise are treated normally. In most cases, they need to compete with business organization which carry-on different values (i.e. profit maximization). For example, credit based co-operative organization must dealing with retail commercial banking sector, the state-owned hospital that compete with fully-capital private-owned one stop health care services or even community-business that tried to get survived from massive expansion of franchise platform (see. Grillo, 2013; Milford, 2004; Angelini and Cetorelli, 2003; Molinas, 1998; Sexton, 1990; Attwood and Baviskar, 1988; LeVay, 1983). Former researches appointed false-perspective among society as the true-triggered factors, but some consider the facts in a normal lenses. Without prior justification to the two previous thoughts, this study tried to pose the importance for the third sector organization to have proper innovation paradigm in dealing with such circumstances.

The understanding of innovation must begin from the firm-level. Using financial perspective as the rule of thumbs, every organization is willing to achieve better performance, including providing better service or product quality to the customer, offering fair-price and value, and also preserving the best working atmosphere to the employee. Up to this point, an organization needs new ideas, methods or procedures to be fully integrated with its culture to develop unique character as vital point of difference. Moreover, all of these sets of perspectives are refers to the term innovation.

Drawing back from its roots, innovation was first introduced by Joseph Schumpter in 1930 using five types of innovation: (1) introduction of a new product or a qualitative change in an existing product, (2) process innovation new to an industry, (3) the opening of a new market, (4) development of new sources of supply for raw materials or other inputs and (5) changes in industrial organization. Upon its development, the previous definition was then strengthen by The Oslo Manual produced by OECD in 1997 in which another term was introduced such as a technological product innovation and a technological process innovation. Though it seems firmly adopted by many companies and scholars, the manual is actually still debatable especially on the clear disseverance between innovation and improvement (Baregheh et al., 2009; Rogers, 1998; Wilkins, 1992).

One questionable point is when the manual addressing capital intensive as the background of innovation process. Today, more studies had focused on the social impact of innovations not only to emphasize the pivotal roles of social concern, but also to highlight that the source of innovation can also be found within collaboration platform. At this stands point, social-collaborative idea had been justified as the most prominent ways to proof that innovation might benefits the society (Damanpour and Kleinschimdt, 2006; Dunphy et al., 1996). For any reasons, we might conclude that this is the entry point to introduce the innovation perspective to socio-economy organization.

2.2 Revisiting the concepts of innovation

Adopting innovation perspective on the third sector economy requires multidisciplinary thoughts, ranging from social-sciences, psychology, economy, organizational theory and behavior point of views. Having considered the aim of this study, we begin with exploring the term of social innovation. As commonly recognized, third sector organizations are established to fulfill the unmet needs for a portion of society (Lester and Piore, 2004; Albury and Mulgen, 2003; Walker et al., 2002; Noteboom, 2001; Wolfe, 1994). Therefore, deeper understanding relating to society's need is a must, not just providing their desires and fantasy. These two rooms has been well-served by the commercial sectors. Acquainting member with new and sometimes not-needed product or services, commercial organization had leads the society to behave irrationally to innovation.

The similar concerns are also addressed by economic perspective. Considering the negative impact from innovation for example: production-waste which not fully environmental friendly or even creating higher consumptive society (Sveiby et al., 2009; McAulay, 2007; Smoller et al., 2001; Moseley, 2000), all third sector organization needs to act as balancers by promoting the importance of values in innovation. This is believed to be the foundation of the green business movement, one powerful supporter for regional economic development (Howells, 2005).

From psychological perspective, innovation must become the basic needs for all members within organization. Every managerial level must fully aware that innovation is required to maintain the sustainability of the organization. Referring to seminal works done by Woodman et al. (1993), organization must develop proper and firmly interactional framework in introducing the innovation culture. Every member must eager to discharge from their comfort zone by the means of innovation, thus innovative idea started from individual action which further combined into organizational policy and strategy.

Deriving the innovation process unto organizational infrastructure requires several concepts including learning network (Bertrand and Mol, 2013; Adner and Levinthal, 2001; Cassiman and Veugelers, 2006) and

dynamic capabilities (Rothaermel and Hill, 2005; Felin and Hesterly, 2007). Series of former studies emphasizes that the two concepts remind us the important for all social economy organization to develop productive learning network. This must be preceded by willingness to be open organizations which further connect it into some external parties. Moreover, these actions will affect organization's dynamic capabilities.

2.3 Possible dimensions

Relating to codified facts from several former studies, there are six possible dimensions for innovation capability in socio-economy organizations. The first dimension is organizational capabilities. We cannot despise the true that innovation needs strong cultural support since it always started from individual level. Therefore personal mastery should consider as the important point to address innovative-individual mindset. Point to that, appropriate leadership is also needed to lead every process into its ultimate goals.

The second dimension is knowledge management capabilities. As mentioned by Meihami and Meihami (2014), proper combination among knowledge system, structure and infrastructure might ended up with unique-inimitably core competence as inputs to innovation. Though it has been emphasized by most former studies, our study tends to focus more on the term capability. It's not only how well the KM system can be performed, but more to how the system can trigger new ideas for innovation.

The third dimension is relating to external orientations capabilities. The justification of positive social impact as the ultimate outcome from responsible innovation has raise new needs to acquire external paradigm. Innovation is no longer defined as producer's strategy to induce their potential market, but more to alignment process among all parties to enhance the quality of life from the stakeholders. The paradigm is somewhat posing stakeholder's interest and organizational objective at the balanced portion. With this spirits, innovation should be understood as collaborative action to achieve the common goals of the society.

The previous studies reminded us that innovation must begin with individual thinking. At this point, organization needs to build up strong relations with other respective stakeholder to create productive learning network. The idea comes from the fact that knowledge – no matters tacit or formal – needs to be cultivated among society. By positioning innovation as collective efforts, then the fifth and sixth dimensions would be strategic capabilities and its dynamic capabilities. Details of our conceptual definition regarding each dimension can be seen on table 1.

Table 1. Proposed conceptual definition for each dimensions

No	Dimensions	Definition	References
1	Organizational capabilities	The capabilities of organization to preserve the innovation culture within. This capability consists of: personal mastery, transformational leadership, shared vision, proactivity spirits, structural fitness.	Garcia-Morales and Llorens-Montes (2006), Oskarsson (2003), Romijn and Albaladejo (2002), Guan and Ma (2002), Dess and Picken (2000), Maani and Benton (1999), Fahey and Prusak (1998), Slater and Narver (1995), Wick and Leon (1995), Senge et al. (1994, 1990), Clark (1994), Lall (1992), McGill et al. (1992), Barney (1991), Dosi (1988), Van de Ven (1986)
2	Knowledge management capabilities	The capabilities of organization to deployed their KM system to provide sustainable process in creating new idea which labeled innovation	Darroch (2005), Amabile et al. (1996), Antonelli (1999), Buckley and Carter (2000), Carneiro (2000), Connor and Prahalad (1996), Fernandez et al. (2000), Garcia and Calantone (2002)
3	External orientations paradigm	The capabilities to identify any opportunities from the external factors, including dealing with major constraints towards environment and stakeholder's needs	Eiadat et al. (2008), Ashford and Heaton (1983), Greenley (1995), Henriques and Sharma (2005), Madsen and Uljoi (2001), Porter and Van der Linde (1995), Prather and Gundry (1995), Tushman and O'Reilly (1997)
4	Learning network capabilities	The capabilities of an organization to perform its learning network system in order toa ccomplish the ultimate goals in terms of innovation. This will includes absorptive capacity, key-actor roles and preserving relationships for future needs	Bertrand and Mol (2013), Adner and Levinthal (2001), Brusoni et al. (2001), Cassiman and Veugelers (2006), Chesbrough (2003), Lewin et al. (2009), Grimpe and Kaiser (2010), Levinthal and March (1993), Singh and Mitchell (2005)
5	Strategic capabilities	The managerial capabilities that shaped the overall strategic implementations not only to coupe with externalities, but also in dealing with future development of the organizations	Damanpour and Aravind (2011), Damanpour and Schneider (2006), Hitt et al. (1996), Kimberly and Evanisko (1981), Li et al. (2010), Klein and Sorra (1996), Rogers (1995), Van de Ven et al. (2000)
6	The dynamic capabilities	The capabilities to provide new ideas for innovation that comes from series of systematic process including human capital, organization's stars of scientist, R&D capabilities which can be accomplish through advanced network	Rothaermel and Hess (2007), Felin and Hesterly (2007), Felin and Fross (2005), Almeida et al. (2002), Kogut and Zander (1992), Henderson and Cockburn (1994), Leonard-Barton (1992), Hitt et al. (2001), Gardner (2005), Latecerra (2004)

Source: own compilation data

3. Research method

Developing firmly thoughts on innovation among third sector economy should be done by examining the complex causal relations among possible dimensions while identifying the intertwined problematic faced by organizations. Therefore selecting the most appropriate tools tend to sets the quality of the final outcome. Having considered all aspects, our decision goes to Dematel method.

Dematel method was firstly introduced by the Science and Human Affairs Program of the Battelle Memorial Institute of Geneva around 1972-1979. To date, the method has been widely used and developed by many scholars, including within the field of organization theory (see. Lin and Tzeng, 2009; Tzeng et al., 2007; Chiu et al., 2006). In details, Dematel consists of six major steps, including (1) collecting expert's opinion and calculate the average matrix 'Z', (2) normalized the initial direct-relations matrix 'D', (3) deriving the total relation matrix 'T', (4) calculating the sums of rows and columns of matrix 'T', (5) setting up the threshold value and (6) building a cause and effect relationship diagram. Moreover, the study follows the steps as seen on figure 1.

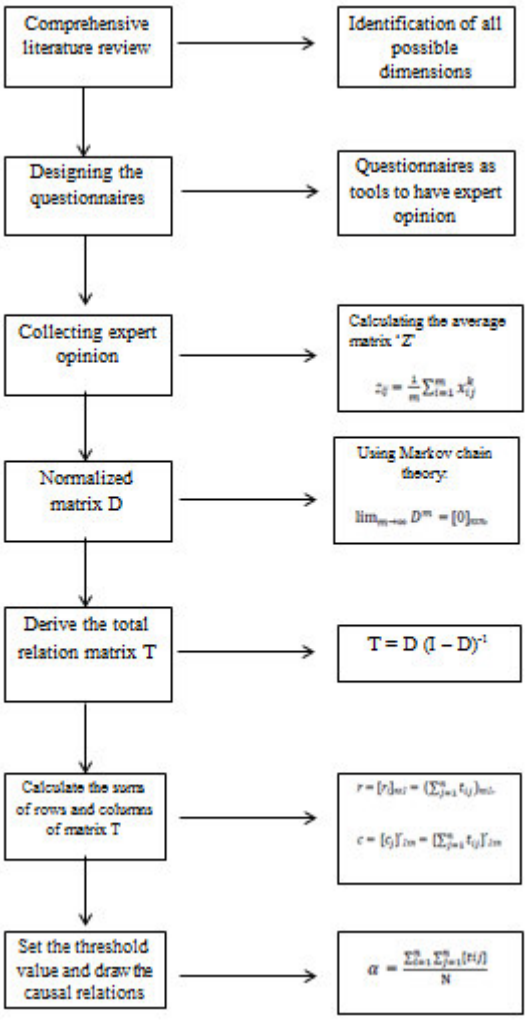


Figure 1. Research framework.
Source: own data

The questionnaires were then distributed to 28 experts in the field of co-operative, non-profit organization, social enterprise and innovation field of works. From those numbers, only 26 returned and completed, showing a percentage of 92.85% response rates. Upon complete questionnaires, 8 experts are having co-operative background, 5 experts from non-profit organization, 5 experts from social enterprise and 8 experts from innovation academic point of views. Each respondent were asked to share their opinions regarding the influence power of each dimensions in every type of organization (co-operative, non-profit organization and social enterprise) using five scales: 0 for low influence up to 4 for strongest influence.

4. Finding and discussion

4.1 Findings

After all questionnaires had been collected, we were then performing each steps on Dematel, began with

calculating the average matrix and followed with normalizing direct-relation matrix (matrix D). The results of matrix D for each sample (co-operative, non-profit organization and social enterprise) can be seen on table 2a, 2b and 2c.

Figure 2a. Normalized matrix D for Co-operative

	OC	KMC	EOP	LNC	SC	DC
OC	0.0000	0.1333	0.1067	0.1267	0.0933	0.1200
KMC	0.1200	0.0000	0.1067	0.1133	0.1267	0.1200
EOP	0.1867	0.2400	0.0000	0.2067	0.1800	0.1867
LNC	0.1333	0.1133	0.0933	0.0000	0.1067	0.1333
SC	0.1067	0.1067	0.1067	0.1067	0.0000	0.1067
DC	0.1067	0.1133	0.0600	0.1067	0.1067	0.0000

Source: own data compilation

Figure 2b. Normalized matrix D for Non-profit organization

	OC	KMC	EOP	LNC	SC	DC
OC	0.0000	0.1290	0.1452	0.1452	0.1290	0.1129
KMC	0.1452	0.0000	0.1290	0.1290	0.1129	0.1129
EOP	0.1935	0.2258	0.0000	0.2097	0.1613	0.2097
LNC	0.1129	0.1452	0.1129	0.0000	0.0968	0.1129
SC	0.1452	0.1452	0.1290	0.1452	0.0000	0.0968
DC	0.0968	0.1452	0.0806	0.1290	0.0645	0.0000

Source: own data compilation

Figure 2c. Normalized matrix D for Social enterprise

	OC	KMC	EOP	LNC	SC	DC
OC	0.0000	0.1290	0.1452	0.1774	0.1290	0.1129
KMC	0.1452	0.0000	0.1290	0.1290	0.1129	0.1129
EOP	0.1935	0.2258	0.0000	0.2097	0.1613	0.2097
LNC	0.2258	0.1774	0.1613	0.0000	0.1129	0.1129
SC	0.1452	0.1452	0.1290	0.1613	0.0000	0.0968
DC	0.0968	0.1452	0.0806	0.1290	0.0645	0.0000

Source: own data compilation

Once matrix D has been identified for each unit of analysis, the next steps would be creating matrix T which followed by analyzing the results to predict the rank of each dimensions. Details of the results can be seen on figure 3a, 3b and 3c.

Figure 3a. Details of the results for Co-operative

	OC	KMC	EOP	LNC	SC	DC	D	D+R	Rank	D-R	Rank
OC	0.17	**0.30**	0.23	**0.29**	0.25	**0.28**	1.53	3.21	3	-0.16	2
KMC	**0.28**	0.19	0.23	**0.28**	**0.28**	**0.29**	1.54	3.33	2	-0.25	4
EOP	**0.44**	**0.50**	0.21	**0.45**	**0.42**	**0.44**	2.46	3.74	1	2.46	1
LNC	0.29	**0.28**	0.22	0.17	0.26	**0.29**	1.51	3.21	4	-0.18	5
SC	0.26	**0.27**	0.22	0.26	0.15	0.26	1.42	3.01	6	-0.17	3
DC	0.24	0.26	0.17	0.24	0.23	0.15	1.29	3.01	5	-0.43	6
R	1.69	1.79	1.28	1.69	1.59	1.72					

Source: own data compilation

Figure 3b. Details of the results for Non-profit organization

	OC	KMC	EOP	LNC	SC	DC	D	D+R	Rank	D-R	Rank
OC	0.25	**0.39**	0.34	**0.39**	0.32	0.33	2.02	4.11	3	-0.06	3
KMC	**0.36**	0.26	0.32	**0.37**	0.30	0.32	1.93	4.26	2	-0.41	5
EOP	**0.51**	**0.57**	0.30	**0.55**	**0.43**	**0.50**	2.86	4.69	1	2.86	1
LNC	0.32	**0.37**	0.29	0.23	0.27	0.30	1.79	4.04	4	-0.47	6
SC	**0.37**	**0.40**	0.33	**0.39**	0.20	0.32	2.02	3.75	5	0.28	2
DC	0.28	0.34	0.24	0.32	0.22	0.18	1.58	3.53	6	-0.37	4

Source: own data compilation

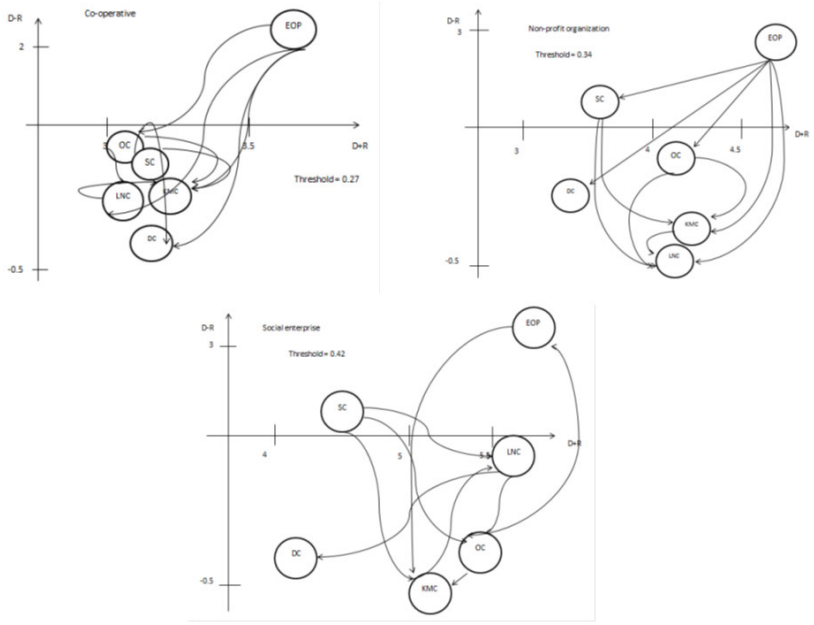
Figure 3c. Details of the results for Social enterprise

	OC	KMC	EOP	LNC	SC	DC	D	D+R	Rank	D-R	Rank
OC	0.35	**0.47**	**0.42**	**0.50**	0.38	0.39	2.50	5.33	3	-0.34	4
KMC	**0.45**	0.32	0.38	**0.43**	0.34	0.36	2.27	5.12	4	-0.58	6
EOP	**0.63**	**0.66**	0.39	**0.64**	**0.49**	**0.56**	3.37	5.70	1	3.37	1
LNC	**0.58**	**0.54**	**0.46**	0.39	0.39	**0.42**	2.79	5.59	2	-0.02	3
SC	**0.47**	**0.47**	0.40	**0.48**	0.26	0.36	2.43	4.54	5	0.33	2
DC	0.35	0.39	0.29	0.37	0.26	0.21	1.88	4.17	6	-0.42	5

Source: own data compilation

For all bold numbers in figure 3a, 3b and 3c are representing that the number is above the threshold alpha. One unique finding in this study is the concession to justifying external orientation paradigm as the most important dimension for innovation capability among the three types of social economy organization, whereas strategic and dynamic capabilities shares less important dimensions. After all ranks had been identified, the last steps would be drawing the cause-relations graph, as seen on figure 2.

Figure 2. The causal relationship graph for all unit of analysis



Source: own data

Referring to table 3a to 3c and figure 2 we can see that external orientation capabilities shares the highest influence to other dimensions, especially for non-profit organization. Meanwhile strategic capability had found as the second great influencer mostly on the social enterprise organization. These might implied that each type of socio-economy organization shares different approach in developing the innovation capability.

4.2 Discussion

For the three type socio-economy organizations, this study strongly recommended the use of external-orientation paradigm to address innovation capability. Innovation should be defined on reverse direction. Organization needs to performed innovation in order to provide better product or service for the goodness of the society based on their respective definition and measurement. Innovation is no longer can be understood as the way producers try to induce customer through their ideas. On contrary, the idea must coming from the stakeholder as a society. At this

point, stakeholder has the right to define their needs in which further must be acknowledged as future order to the producers. Therefore, collaboration between producers and the society is critical to external-orientation paradigm. Naming collaboration in terms of innovation is not simple. Each party required to share the same vision, objectives, idealism and knowledge. In this context, externality orientation reminds us the equality between parties. Innovation must be use as the common tools in which every party will benefit a lot from the collaboration. If one party identified the needs to address new opinion to another party, then they must define innovation as a process in which new knowledge can be distributed at the most objective ways. Once the society can be convinced to the new opinion, then it is good to have the new knowledge as evaluation criteria to define the level of success from innovation.

Reflecting our findings to co-operative context, innovation must begin from the members. Through proper and solemn mechanism, organization needs to provide guidance to help their member in defining their future needs. Using the analogy of learning process, at one side, co-operative must take the role as feeder to the members. They need to introduce the new knowledge while at the same time rely all decision to the members whether they will accept the new thoughts or not.

Unconsciously, these steps are the foundation of social innovation. Our study supports Pol and Ville (2009), Mulgen (2007), and Kanter (1999) in proposing that social innovation must be the true-future guidance for all economic players. Capitalism based innovation tend to rely on technology by forgoing the important of human in the process. As results, the outcome had only served temporarily to producer's profitability but not in terms of sustainability. Thus positioning member as the source of innovative idea would be plausible for co-operative organization.

The same spirits also applied for non-profit organization. Our findings proofed that innovation capability for the organizations begin with determining who is going to be served. As NPO tried to serve the community, the term innovation initially comes from 'what can I do better for the community' and not by 'I can do this to the community'. Stakeholder must become the object of all policies and strategy. By addressing this spirit, organizations are required to define the needs of innovation, exploring new innovative idea together, working together with the idea and making improvement to achieve better quality.

Putting all innovation process upon good collaboration with the community will results on long-term mutual commitment which might preserved the existence of the organization. NPO will not only see as an extension of the government bureaucracy but also as basis for the community to develop their quality of life. Our study supports McDonald (2007), Dees et al. (2002) and Kaplan (2001).

Another interesting finding can also be found on social enterprise organization. Innovation capability is found as the results of external orientation paradigm. Though it shares different thoughts with the original concept brought by Drucker in 1970, Schumpeter in 1965 and Knight in 1921, social entrepreneurship must aim for social purposes through their business innovation. At this context, social entrepreneur must be able to identify the roots of their social problem while trying to solve the problem with better innovative ideas. Thus, our definition should be able to end-up the debatable context on how it must be starts with the idea of establishing NPO or pure entrepreneurship.

Putting the findings of external orientation at its basis, we can see that being social entrepreneur is a matter of how to create powerful influence to solve the problems and thus requiring the existence of innovation. By posing the proper position of stakeholder, entrepreneur will have an objective perspective of how to bring the new idea to their life.

One example goes through a Taiwan social enterprise which produce fashion goods from recycle product. The original idea is actually coming from the facts that household-waste should be managed properly. Otherwise, it will affect society's quality of life and at the same time creating another social problem. Upon that condition, entrepreneur must have power to influence others mindset to receive the idea, and this is what social innovation should be defined. Awareness of one people can inspired the whole community as they work together with the idea. Again, collaborative idea tends to be the basis for innovation among the third sector economy organization.

Acknowledging external orientation as the primary point of thought doesn't mean forgoing the other important dimensions. Our finding had proposed an alternative to treat each dimension. Relating to diffusion innovation theory (Greenhalgh et al., 2004; Zahra and George, 2002; Frambach, 1993), one critical phase on the innovation process is relating to how to distribute the knowledge and the technical know-how to external party. This might be the pivotal factors for sustainability in innovation. Thus, instead of treating each dimension independently, using Dematel as an approach, we found the cause and relationship among them (please refer to figure 2). This idea is also believed as an adequate solution for current debate especially on terminology of innovation. Using proper construct, future research must focus on this matters in order to provide clear solutions for firmly-model.

5. Conclusion

This study has share three important contributions: (1) regarding how socio-economy organization needs to address

the innovation capability properly, (2) identifying the type of dimension which should be focus on and, (3) addressing an agenda for future direction. After performing comprehensive literature review, the study proposed six dimensions for innovation namely (1) organizational capabilities, (2) knowledge management capabilities, (3) external orientation capabilities, (4) learning network capabilities, (5) strategic capabilities and (6) dynamic capabilities. In order to identify the causal relationship, the study used Dematel approach for each unit of analysis: co-operative context, non-profit organization and social enterprise.

Deploying 26 collected and completed questionnaires, the study found that upon the three type of organization, external-orientation capabilities shares as the most influencer to the other dimension. Uniquely, each type showed good combination between organizational characteristic and the needs for innovation. For co-operative and the non-profit organization, innovation capability must be defined as social innovation. Meanwhile, for social enterprise, collaborative action between entrepreneur and their respective stakeholder will be the basis for innovation.

As point to that, having considered the causal relationship among dimension, this study promotes a new thought in performing innovation. Socio-economy must use the identified-dimension as systematic paradigm. Our study had succeeded in portraying the sequence through causal-relations analysis. Therefore future studies need to address these issues properly to develop firmly-model of innovation for the third sector economy.

References

Abramovsky, L., Kremp, E., Lopez, A., Schmidt, T., & Simpson, H. (2005). Understanding co-operative R&D activity: evidence from four European countries. Working Paper 05/23, The Institute for Fiscal Studies.

Adner, R., & Levinthal, D. (2001). Demand heterogeneity and technology evolution: implications for product and process innovation. *Management Science, 47*, 611-628.

Albury, D., & Mulgan, G. (2003). *Innovation in the public sector.* Strategy Unit, London.

Almeida, P., Song, J., & Grant, R. (2002). Are firms superior to alliances and markets? An empirical test of cross-border knowledge building. *Organization Science, 13*, 147-161.

Amabile, T. M. (1988). A model of creativity and innovations in organizations. *Research in Organizational Behavior, 10*, 123-167.

Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of Management Journal, 39*(5), 1154-1184.

Amit, R., & Zott, C. (2010). Business model innovation: creating value in times of change. Working Paper no. 870, IESE Business School, University of Navara.

Angelini, P., & Cetorelli, N. (2003). The effects of regulatory reform on competition in the banking industry. *Journal of Money, Credit and Banking, 35*(5), 663-684.

Antonelli, C. (1999). The evolution of the industrial organization of the production of knowledge. *Cambridge Journal of Economics, 23*, 243-260.

Ashford, N. A., & Heaton, J. G. R (1983). Regulation and technological innovation in the chemical industry. *Law and Contemporary Problems, 46*(3), 109-157.

Attwood, D., & baviskar, B. (1988). *Who shares? Cooperatives and rural development.* Oxford University Press.

Autant-Bernard, C., Fadairo, M., & Massard, N. (2013). Knowledge diffusion and innovation policies within the European regions: Challenges based on recent empirical evidence. *Research Policy, 42*(1), 196-210.

Baregheh, A., Rowley, J., & Sambrook, S. (2009). Towards a multidisciplinary definition of innovation. *Management Decision, 47*(8), 1323-1341.

Bertrand, O., & Mol, M. J. (2013). What goes around, comes around: effects of offshore outsourcing on the export performance firms. *Journal of International Business Studies, 42*, 334-344.

Buckley, P. J., & Carter, M. J. (2000). Knowledge management in global technology markets. *Long Range Planning, 33*, 55-71.

Carneiro, A. (2000). How does knowledge management influence innovation and competitiveness. *Journal of Knowledge Management, 4*(2), 87-98.

Cassiman, B., & Veugelers, R. (2006). In search of complementary in the innovation strategy: internal R&D and external knowledge acquisition. *Management Science, 52*, 68-82.

Chesbrough, H. (2003). *Open innovation: the new imperative for creating and profiting from technology.* Harvard University Press: Cambridge, MA.

Chiu, Y. J., Chen, H. C., Tzeng, G. H., & Shyu, J. Z. (2006). Marketing strategy based on customer behavior for the LCD-TV. *International Journal of Management and Decision Making, 7*(2), 143-165.

Connor, K. R., & Prahalad, C. K. (1996). A resource based theory of the firm: knowledge opportunism. *Organization Science, 7*(5), 477-501.

Damanpour, F., & Aravind, D. (2011). Managerial innovation: Conceptions, processes and antecedents. *Management and Organization Review, 8*(2), 423-454.

Damanpour, F., & Schneider, M. (2006). Phases of the adoption of innovation in organizations: effects of

environment, organization and top managers. *British Journal of Management, 17*(3), 215-236.
Darroch, J. (2005). Knowledge management, innovation and firm performance. *Journal of Knowledge Management, 9*(3), 101-126.
Dees, J. G., & Emerson, J. (2002). *Enterprising nonprofits: A toolkit for social entrepreneurs.* John Wiley and Sons Inc.
Dess, J. G., & Picken, J. C. (2000). Changing roles: leadership in the 21st century. *Organizational Dynamics, 28*(3), 18-34.
Dunphy, S. M., Herbig, P. R., & Howes, M. E. (1996). The innovation funnel. *Technological Forecasting and Social Change, 53*(3), 279-292.
Eiadat, Y., Kelly, A., Roche, F., & Eyadat, H. (2008). Green and competitive? An empirical test of the mediating role of environmental innovation strategy. *Journal of World Business, 43*, 131-145.
Fahey, L., & Prusak, L. (1998). The eleven deadliest sins of knowledge management. *California Management Review, 40*(3), 265-276.
Felin, T., & Fross, N. J. (2005). Strategic organization: A field in search of micro-foundations. *Strategic Organ, 3*, 441-455.
Felin, T., & Hesterly, W. S. (2007). The knowledge-based view, heterogeneity and new value creation: Philosophical considerations on the locus of knowledge. *Academy of Management Review, 32*, 195-218.
Fernandez, E., Montes, J. M., & Vazquez, C. J. (2000). Typology and strategic analysis on internal resources: a resource based approach. *Technovation, 20*, 81-92.
Frambach, R. T. (1993). An integrated model of organizational adoption and diffusion of innovations. *European Journal of Marketing, 27*(5), 22-41.
Galende, J., & De La Fuente, J. (2003). Internal factors determining a firm's innovative behavior. *Research Policy, 32*(5), 715-736.
Garcia-Morales, V. J., & Llorens-Montes, F. J. (2006). Antecedents and consequences of organizational innovation and organizational learning in entrepreneurship. *Industrial Management & Data Systems, 106*(1), 21-42.
Gardner, T. (2005). Interfirm competition for human resources: Evidence from the software industry. *Academy of Management Journal, 48*, 237-256.
Greenhalgh, T., Robert, G., Macfarlane, F., Bate, P., & Kyriakidou, O. (2004). Diffusion of innovations in service organizations: Systematic review and recommendations. *The Milbank Quarterly, 82*(4), 581-629.
Greenly, G. E. (1995). Market orientation and company performance: Empirical evidence from UK companies. *British Journal of Management, 6*(1), 1-13.
Grillo, M. (2013). Competition rules and the cooperative firm. *Journal of Entrepreneurial and Organizational Diversity, 2*(1), 36-53.
Grimpe, C., & Kaiser, U. (2010). Balancing internal and external knowledge acquisition: The gains and pains from R&D outsourcing. *Journal of Management Studies, 47*, 1483-1509.
Guan, J., & Ma, N. (2002). Innovative capability and export performance in Chinese firms. *Technovation, 23*(9), 737-747.
Hana, U. (2013). Competitive advantage achievement through innovation and knowledge. *Journal of Competitiveness, 5*(1), 82-96.
Henderson, R. M., Cockburn, I. (1994). Measuring competence? Exploring firm effects in pharmaceutical research. *Strategic Management Journal, 15*, 63-84.
Henriques, I., & Sharma, S. (2005). Pathways of stakeholder influence in the Canadian forestry industry. *Business Strategy and the Environment, 14*(6), 384-398.
Hitt, M. A., Hoskisson, R. E., Johnson, R. A., & Moesel, D. D. (1996). The market for corporate control and firm innovation. *Academy of Management Journal, 39*, 1084-1119.
Howells, J. (2005). Innovation and regional economic development: A matter of perspective? *Research Policy, 34*, 1220-1234.
Kanter, R. M. (1999). From spare change to real change. The social sector as beta site for business innovation. *Harvard Business Review, 77*(3), 122-132.
Kaplan, R. S. (2001). Management in nonprofit organizations. *Nonprofit Management & Leadership, 11*(3), 353-371.
Kimberly, J. R., & Evanisko, M. (1981). Organizational innovation: The influence of individual, organizational and contextual factors on hospital adoption of technology and administration innovations. *Academy of Management Journal, 24*, 689-713.
Klein, K. J., & Sorra, J. S. (1996). The challenge of innovation implementation. *Academy of Management Journal, 21*(1), 1055-1080.
Kogut, B., & Zander, U. (1992). Knowledge of the firm, combinative capabilities and the replication of technology. *Organization Science, 3*, 383-397.
Lester, R., & Piore, M. (2004). *Innovation – the missing dimension.* Harvard University Press, Cambridge Mass.

LeVay, C. (1983). Agricultural cooperative theory: A review. *Journal of Agricultural Economics, 34*(1), 197-215.
Lewin, A. Y., Massini, S., & Peeters, C. (2009). Why are companies offshoring innovation? The emerging global race for talent. *Journal International of Business Studies, 40*, 901-925.
Li, Y., Lee, S., Li, X., & Liu, Y. (2010). Knowledge codification, exploitation and innovation: moderating influence of organizational controls in Chinese firms. *Management and Organization Review, 6*(2), 219-241.
Lin, C. L., & Tzeng, G. H., (2009). A value-created system of science park by using Dematel. *Expert Systems with Applications, 36*, 9683-9697.
Lindgardt, Z., Reeves, M., Stalk, G., & Deimler, M. S. (2009). *Business model innovation: When the game gets tough, change the game.* The Boston Consulting Group.
Maani, K., & Benton, C. (1999). Rapid team elarning: lessons from team New Zealand on America's cup campaign. *Organizational Dynamics, 28*(4), 48-62.
Madsen, H., & Uljoi, J. (2001). Integrating environmental and stakeholder management. *Business Strategy and The Environment, 10*(2), 77-88.
Martin de Castro, G., Delgado-Verde, M., Navas-Lopez, J. E., & Cruz-Gonzales, J. (2013). The moderating role of innovation culture in the relationship between knowledge assets and product innovation. *Technological Forecasting and Social Change, 80*(2), 351-363.
McAulay, L. (2007). Unintended consequences of computer-mediated communications. *Behavior & Information Technology, 26*(5), 385-398.
McDonald, R. E. (2007). An investigation of innovation in nonprofit organizations: the role of organizational mission. *Nonprofit and Voluntary Sector Quarterly, 36*(2), 256-281.
Meihami, B., & Meihami, H. (2014). Knowledge management a way to gain a competitive advantage in firms evidence of manufacturing companies. *International Letters of Social and Humanistic Sciences, 14*, 80-91.
Milford, A. (2004). Coffee, co-operatives and competition: The impact of fair trade. Working Paper number R2004:6, Chr. Michelsen Institute Development Studies and Human Rights.
Molinas, J. (1998). The impact of inequality, gender, external assistance and social capital on local-level cooperation. *World Development, 26*(3), 236-257.
Moseley, M. J. (2000). Innovation and rural development: some lessons from Britain and Western Europe. *Planning Practice & Research, 15*(1), 95-115.
Mulgen, G. (2007). Social innovation: what is it, why it matters and how it can be accelerated. Working Paper Skoll Centre for Social Entrepreneurship. Oxford Said Business School.
Noteboom, B. (2001). *Learning and innovation in organizations and economies.* Oxford University Press.
Oskarsson, G. (2003). The antecedents and process of innovation. The 4th conference in Social Sciences, University of Iceland.
Pol, E., & Ville, S. (2009). Social innovation: buzz word or enduring term? *The Journal of Socio-Economics, 38*(6), 878-885.
Rogers, M. (1998). The definition and measurement of innovation. Melbourne Institute Working Paper No. 10/98.
Romijn, & Albaladejo. (2002). Determinants of innovation capability in small electronics and software firms in southeast England. *Research Policy, 31*(7), 1053-1067.
Rothaermel, F. T., & Hill, C. W. L. (2005). Technological discontinuities and complementary assets: A longitudinal study of industry and firm performance. *Organizational Science, 16*, 52-70.
Sexton, R. J. (1990). Imperfect competition in agricultural markets and the role of cooperatives: A spatial analysis. *American Journal of Agricultural Economics, 72*, 709-720.
Smoller, M. M., Osborn, R., & Price, K. (2001). Purposeful unintended consequences with innovative derivatives. *Thunderbird International Business Review, 43*(3), 433-449.
Sveiby, K. E., Gripenberg, P., Segercrantz, B., Eriksson, A., & Aminoff, A. (2009). Unintended and undesirable consequences of innovation. Published Conference Paper for The Future of Innovation, Vienna, Italy.
Teece, D. J. (2010). Business models, business strategy and innovation. *Long Range Planning, 43*, 172-194.
Tether, B. S. (2002). Who co-operates for innovation and why: An empirical analysis. *Research Policy, 31*(6), 947-967.
Tidd, J. (2006). A review of innovation models. In J. Tidd (ed), *Innovation Models*. Tanaka Business School, Imperial College London.
Tzeng, G. H., Chiang, C. H., & Li, C. W. (2007). Evaluating intertwined effects in e-learning programs: A novel hybrid MCDM model based on factor analysis and Dematel. *Expert System with Applications, 32*(4), 1028-1044.
Van de Ven, A. H., Angle, H. L., & Poole, M. S. (2000). *Research on the management of innovation.* The Minnesota Studies. New York: Oxford University Press.
Walker, R. M., Jeanes, E., & Rowlands, R. D. (2002). Measuring innovation – applying the literature-based

innovation output indicator to public services. *Public Administration, 80*(1), 201-214.

Wilkinson, A., Balmer, J. M. T. (1996). Corporate and generic identities: Lessons from the co-operative bank. *International Journal of Bank Marketing, 14*(2), 22-35.

Wilkins, M. (1992). The neglected intangible asset: The influence of the trade mark on the rise of the modern corporation. *Business History, 34*(1), 66-95.

Woodman, R. W., Sawyer, J. E., & Griffin, R. W. (1993). Toward a theory of organizational creativity. *The Academy of Management Review, 18*(2), 293-321.

Wolfe, R. A. (1994). Organizational innovation: Review, critique and suggested research directions. *Journal of Management Studies, 31*(3), 405-431.

Zahra, A. S., & George, G. (2002). Absorptive capacity: A review, reconceptualization and extension. *Academy of Management Review, 27*(2), 185-203.