

A STUDY ON APPLICATION FOR CO-WORKING SPACE MANAGEMENT EVALUATION

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ABSTRACT. *The purpose of this study is to develop evaluation method to Co-working Space for improvement of operating management. So, we established the evaluation model that is referred to Importance-Performance Analysis (IPA) and conducted qualitative survey to the five Co-working Spaces in Busan location which are supported by the government for analysis of the operating management performance. After then, we evaluated the centers operating status through IPA Matrix and analyzed with the Co-working Space managers and expert about the result. This method could apply to Co-working Space evaluation and help to improve the management. This study has a major implication on research into decision making for Co-working Space management strategy by evaluation application.*

Keywords: Co-working Space management, Co-working Space operating, Co-working Space, Management priority, Co-working Space strategy

1. **Introduction.** In the global economic crisis, unemployment among young people and retired baby boomers is still an unsolved problem. Therefore, the government and industry have found the solution and have tried to create jobs. However, changing from an industrial economy to a knowledge economy requires a different approach for this problem. In this context, current literature suggests that nonstandard forms of employment have become commonplace within a highly individualized labor market in which urban professionals work as casuals, project-based and freelance work-force [1].

The entrepreneurs who prepare start-up companies with developed IT technology that solve space and time constraints are also on the rise. However, many lonely entrepreneurs have suffered from lack of human and material resources. As an alternative, Co-working culture has appeared and the space for Co-working has become a very important place to entrepreneurs and start-up companies.

The studies associated with Co-working Space are not many yet, especially the operating and management strategies. More importantly, it is necessary to know how it develops and improves the operating management for customers. It was the motivation for our study, and we agonized on how to suggest the operating status base-line for the making strategy.

So, first, we define the basic concepts of the “Co-working Space” and identify the operating elements. Next, we adopt the evaluation model for the “Co-working Space” and the operating management improvement that is needed for the IPA. Then, we conduct the field survey for the operating management performance in five “Co-working Spaces” in Busan which are supported financially by government. In addition, those have similar management systems for application. After that, we evaluate the centers operating status through the IPA Matrix and analyze the result with the managers and experts.

2. What is Co-Working Space? Co-working means a style of work that involves a shared working environment, often an office and an independent activity. This word was first used by Bernie Dekoven in 1999 [2]. In this context, Co-working Space does not only mean ‘desk share’ but also ‘a place for working together’.

Spinuzzi generated three definitions of co-working, ‘Community Space’, ‘The Unoffice’ and ‘The Federated Workspace’ after conducting a qualitative case study based upon a twenty-month research study of nine Co-working Space in the Austin area, Texas, US [3].

The Co-working Space concept is a business model to support site for the ‘Co-working’. According to URS, the spaces provide a combination of workplace and supporting facilities at affordable rates with easy in-out contractual conditions. The renting of space is set up to attract users who require ad hoc and short term access to workstations and supporting facilities such as meeting rooms. The format of space is primarily an open plan and of an informal setting, aimed at facilitating an interactive and creative networking environment to form a sense of community among users [4].

The first business is created by Brad Neuberg, who worked as a freelance engineer in San Francisco. As an independent worker, Brad Neuberg tended to feel loneliness and struggle for ideas, so he opened a space called the ‘Hat Factory’ in a building in 2006. After that, similar examples gradually spread mainly in major American cities and eventually in Europe [5].

Co-working Spaces could be compared to business incubators. However, business incubators do not fit into the Co-working Space business because they often miss the social aspect of the work such as the collaborative and informal aspect of the process [6].

The system for operating management is also distinguished from business incubators. In order to identify operating elements, we analyzed advanced research.

Leforestier suggested importance figures and main benefits of Co-working Space operating elements such as ‘Community’, ‘Advice’, ‘Support’, ‘Promotion’, ‘Mentor’, and ‘Coworker’ [6].

Kojo and Nenonen found the service factor for strategy operating through user experience such as ‘Sense of welcome’, ‘Possibilities for multi-use of the building and spaces’, ‘Informality and ease’, ‘Inspiration and facilitation’, and ‘Constant narrative of spaces’ [7].

Seo et al. tried to integrate the operating elements [8]. According to the study, the elements were divided into high level and low level. The high level elements are ‘Co-working management’, ‘Membership management’ and ‘Supporting management’. The low level operating elements belong to each of the high level elements. Figure 1 shows the relation between the high levels and the low levels.

3. Method and Evaluation.

3.1. Method. We designed a model shown in Figure 2 for the effective application of the evaluation by Importance Performance Analysis (IPA). IPA is an easily applied technique for measuring the attribute importance and performance [9]. That can develop effective evaluation further. Many results of IPA research are used in the IPA Matrix. The IPA Matrix, a two-dimensional grid, is broken into four categories that ‘Concentrate Here’, ‘Keep Up the Good Work’, ‘Low Priority’ and ‘Possible Overkill’ by importance and performance figure. We also use this process and use the evaluation result in the IPA Matrix.

The evaluation for Co-working Space needs to be customized. So, we adopted the low level elements from Figure 1 without the high level elements which were integrated and verified in an advanced research. However, the definition of some elements in our research still needs to be modified. So, we should redefine the operating elements through discussion in order to evaluate the Co-working Space status shown in Table 1.

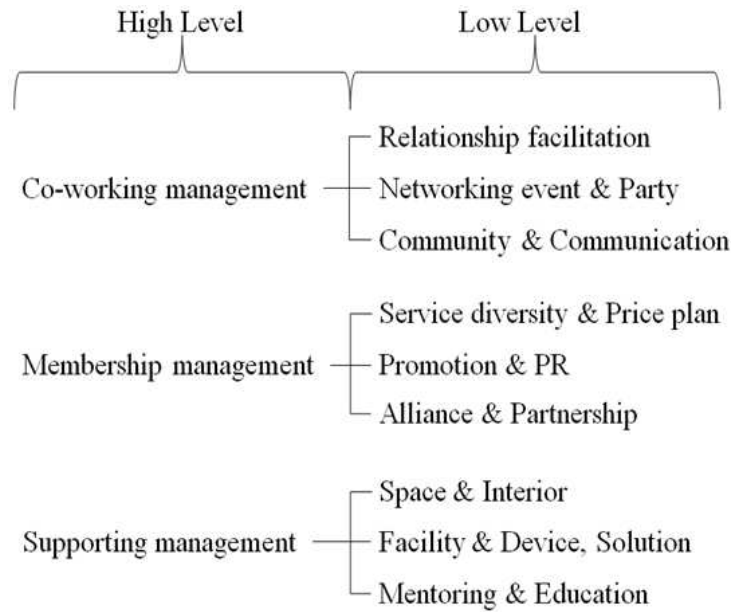


FIGURE 1. Co-working Space operating elements

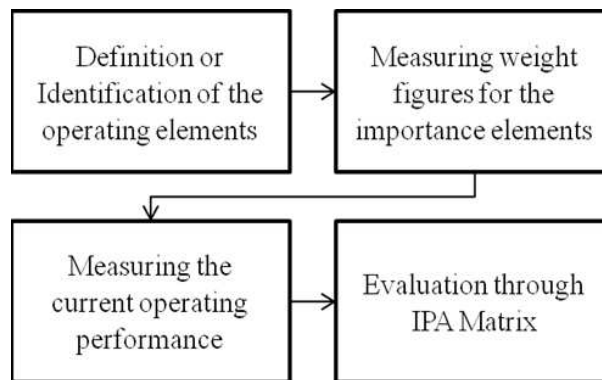


FIGURE 2. The evaluation model

3.2. **Definition of elements.** We defined the activities based on the elements. If each Co-working Space is applied to this evaluation model, it would be a method that would identify key operating elements from their management.

3.3. **Importance evaluation.** Table 2 shows the elements importance figures by AHP method through the questionnaire answered by 60 managers who worked for Co-working Space [8]. The importance makes it possible to identify which elements have management priority. According to the synthesizing result, ‘Community & Communication’ and ‘Space & Interior’ are the highest importance groups, and we knew what elements are important through the results. We would use this result value to make the IPA Matrix for the importance.

3.4. **Performance evaluation.** We need still performance figures to make the matrix. So, we conducted a field survey to the five Co-working Space belonging to business incubating centers in Busan. The centers are appropriate targets for collecting and comparing information. It is because the centers are supported by the government, which means that they have a similar operating management system.

We visited all centers from ‘A’ to ‘E’ and interviewed the managers about the operating performance related to the elements.

Through this survey and interview, we found the managers recognized enough of the concept and operating management to Co-working Space. They had the experience and

TABLE 1. The definition of operating elements

Operating Elements	Definition
Relationship Facilitation	The activities that encourage members to make relationships and natural collaboration.
Networking Event & Party	The activities that hold events to interact with experts in various fields and exchange information between the members.
Community & Communication	The continuous management activities to on-off line communication channel for effective exchange of information, interacting, cooperating work.
Service diversity & Price plan	The development and management strategy and revenue models for customer needs and member acquisition.
Promotion & PR	The activities to hold investment seminars or PR supporting for promoting member's business.
Alliance & Partnership	The activities that connect and interact to other regions and brand Co-working Space and other services such as theater, café and cultural facilities for expanding profitable business and members benefits.
Space & Interior	The activities for improving working efficiency and Co-working atmosphere through a variety of space arrangements and interior concepts.
Facility, Device & Solution	The activities about the supporting equipment, facility and service for member's convenience in the Co-working Space.
Mentoring & Education	The program is for improving member's business capability such as skill, knowledge and know-how.

TABLE 2. Importance of the operating elements [8]

High Level Elements	Weight	Low Level Elements	Weight	Synthesizing	
				Weight	Priority
Co-working Management	0.3468	Relationship Facilitation	0.34807	0.12701	4
		Networking Event & Party	0.25616	0.10200	8
		Community & Communication	0.39577	0.13725	1
Membership Management	0.3371	Service diversity & Price plan	0.40169	0.12698	3
		Promotion & PR	0.35737	0.11297	5
		Alliance & Partnership	0.24093	0.07616	9
Supporting Management	0.3161	Space & Interior	0.39166	0.13203	2
		Facility & Device	0.30257	0.10200	7
		Mentoring & Education	0.30577	0.10308	6

know-how to create the Co-working culture through the 'Co-working Supporting Program' by the government policy.

The perspective of the 'Co-working management', is that all Co-working Space conducted promotes the relationships by providing a place and time for meetings, meals, including dinner parties once a month to introduce each member, sharing center status. Networking activities were conducted regularly in all centers according to business center's operating instructions which were made in the context of a conference format, such as workshops, seminars and promoting relationships. Community activities were monitored and managed through SNS but only in the center. The other places were not managed. In terms of the 'Membership management', 'Service diversity & Price plan' is basically free



FIGURE 3. The inside of Co-working Space which was conducted survey

of charge if all registered members are available. However, the two centers have not monitored and controlled the users and services. Except for one center, business promotion activity was shown to have progressed in all the centers. Notice and schedule investment or financial seminar were the most not having held event for the IR (Investor relations) or Business PR (Public relations) aggressively.

Alliances & Partnership was not a recognized necessary activity. Only associate and members' business were introduced on center's information board.

In the view of the 'Supporting management', space arrangement and interiors were only managed to a certain level to maintain it without changing or upgrading to the first setting because there are no needs based on what the users recognized. They judged that the users were satisfied with the facilities and space, generally. However, two centers were upgraded continuously and separately to make creative atmosphere for Co-working. Facilities and office equipments to support computers and printers, to kitchen and rest lounge had been managed well enough. It was confirmed by the users that it did not give them any discomfort. The mentoring and education program budgets are also allocated according to the operating instructions in all centers; at least once a month they have held the program for the members.

Table 3 shows the performance result through the survey and interview to the operating management status in each center.

We convert the result of the survey to the total figures through Formula (1);

$$f(x) = x/\Sigma x \tag{1}$$

In this formula 'x' is the number of the good operating performance.

Table 4 shows the importance and the performance figure to make the IPA Matrix. The importance is adopted by the advanced research and the performance figure is the converted result through calculation by the formula. We found that there was a lack of the performance in 'Community & Communication', 'Space & Interior', 'Alliance &

TABLE 3. The operating performance

No	Operating Elements	Status of the Operating Performance				
		A	B	C	D	E
1	Relationship Facilitation	○	○	○	○	○
2	Networking Event & Party	○	○	○	○	○
3	Community & Communication	×	×	×	○	○
4	Service diversity & Price plan	○	○	×	○	×
5	Promotion & PR	○	○	×	○	○
6	Alliance & Partnership	×	×	×	○	×
7	Space & Interior	×	○	×	○	×
8	Facility & Devices	○	○	○	○	○
9	Mentoring & Education	○	○	○	○	○

TABLE 4. Importance-performance figures

No	Operating Elements	Importance	Performance
1	Relationship Facilitation	0.12071	0.15625
2	Networking Event & Party	0.08883	0.15625
3	Community & Communication	0.13725	0.0625
4	Service diversity & Price plan	0.12698	0.09375
5	Promotion & PR	0.11297	0.03125
6	Alliance & Partnership	0.07616	0.125
7	Space & Interior	0.13203	0.0625
8	Facility & Devices	0.10200	0.15625
9	Mentoring & Education	0.10308	0.15625

Partnership' and 'Service diversity & Price plan'. The capabilities such as knowledge and skills are insufficient to do the activities through the analysis of the interview recoding.

4. Result and Discussion. Through these evaluation figures, we could make the IPA Matrix that is illustrated with examples taken from each of the four quadrants shown in Figure 4. We classified the sector by means of the total figures.

As a result, the Concentrate Here Sector has 'Community & Communication', 'Service diversity & Price plan', and 'Space & Interior'. The Keep Up With The Good Work Sector has 'Relationship Facilitation'. The Low Priority Sector has 'Promotion & PR'. The Possible Overkill Sector has 'Mentoring & Education', 'Facility & Devices', 'Networking Event & Party' and 'Alliance & Partnership'. We would know that what elements would be improved or restrict and what activities should be focused on and developed in these centers. According to the matrix, these centers should concentrate more on 'Community & Communication', 'Service diversity & Price plan', and 'Space & Interior'.

We discussed and verified with the managers and experts about the evaluation result. After that, we found the key issue was that the managers spend too much of their effort in operating the 'Mentoring & Education', 'Facility & Devices', 'Networking Event & Party' and 'Alliance & Partnership' which are less important based on the analysis of the matrix. As a result, the centers should modify their operating plan and do corrective action to reduce time for the less important activities.

Especially, the centers should be more improved on 'Community & Communication', 'Space & Interior' because the elements are the most important among whole operating ones but the performance is low. They only have noticed some information at the SNS for

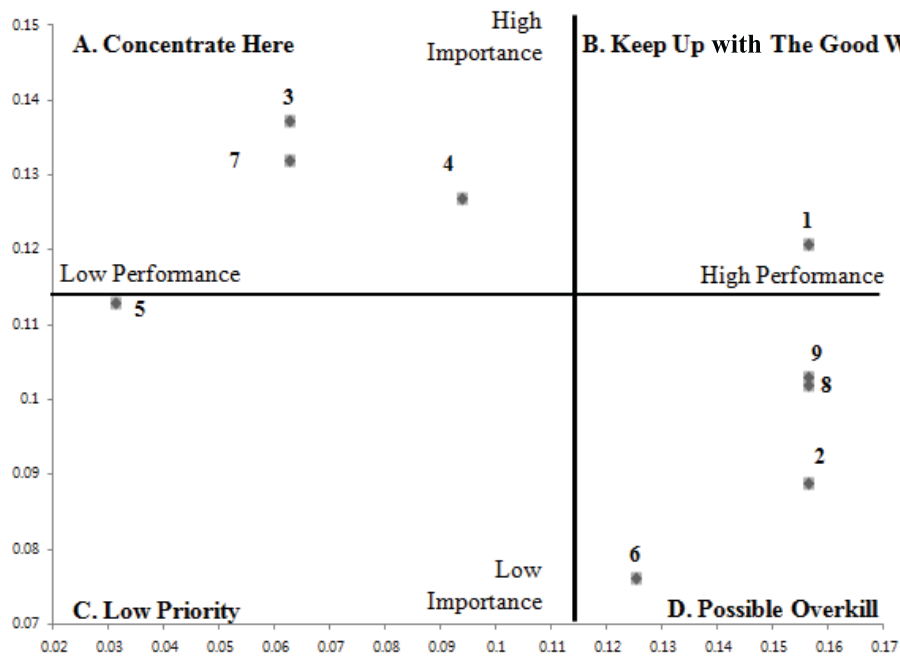


FIGURE 4. The evaluation result with IPA method

‘Community & Communication’ and have not improved or upgraded space arrangement and changed interior through considering members needs.

The ‘Relationship Facilitation’ is doing great. The centers consistently promote and develop the members relationships through various programs and did not spend time in ‘Promotion & PR’ which is of low importance.

Most of the managers recognized the evaluation result through discussion. We found that this method could be applicable for Co-working Space evaluation.

5. Conclusion. Co-working Space business model has been spread and created continuously by a real demand for it all over the world. However, the operating strategy is still insufficient in its early stage.

We designed the evaluation model and applied it to Co-working Space centers. We adopted the IPA method and analyzed the advanced research and conducted a field survey. As a result, we made the IPA Matrix for evaluation and discussed with the managers and experts about the combined figures and the matrix.

We believe this study will help to establish the strategy and be a guide-line. Because this study suggests the application method that finds the operating status base-line of the Co-working Space for improving management, it is able to identify the importance elements and the performance status. In the progress of the evaluation, the Co-working Space managers could find that they should be focused and restrict the activities related on each operating element through the IPA Matrix. It would also help the decision making for the improvement strategy.

In this study, we only surveyed the government supported Co-working Space in business incubating centers and this result is limited in a particular location. We wish the future research would be founded by the successful management strategy of Co-working Space by application of this evaluation and expanded to different sites all over the world.

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