How has “Management of Ba” been developed?
Itami’s research from Management control systems to Management of Ba

Kenji Inoue\textsuperscript{a1}, Kenichi Suzuki\textsuperscript{b}

\textsuperscript{a}Master Program, Graduate School of Business Administration, Meiji University, Japan
\textsuperscript{b}School of Business Administration, Meiji University, Japan

Abstract
This research aims to reveal the background of the “management of ba” (a Japanese term meaning “field”), which is proposed by Hiroyuki Itami, because his research has been shifted from management control systems to management of ba. We review Itami’s articles from the 1970s to the present to clarify why Itami created the management of ba. Itami revised his assumption of the organization to describe real-life management practices based on his research results. In addition, it was important to investigate how Itami’s assumption of human nature had shifted to include individuals’ autonomy and self-organization, key aspects of the management of ba. A management approach that enhances psychological energy is needed in order to increase individuals’ autonomy and self-organization. That approach is indeed refers to the management of ba. By reviewing Itami’s research, we identified that Itami’s research question was, “how can the liberty of an individual be ensured within an organization?” Itami noted that management control systems need to balance liberty and discipline; thus, we focused on the problem of the liberty of individuals in organizations from the point of view of management accounting research.

Keywords: Management of ba; Management controls systems; Individual and organization; Interaction

1. Introduction
Simons (1995) noted that there are four levers of control: diagnostic control systems, belief systems, boundary systems and interactive control systems. Malmi and Brown (2008) noted about management control systems as a package – planning controls, cybernetic controls, reward and compensation controls, administrative controls and cultural controls. These researches noted that the management control systems are a combination of traditional management control and other management controls. How can we reveal the background of such diversification or changing in
management accounting research? There is an example of such diversification and changing in Japanese management research, Management of Ba.

Management of Ba is proposed by Hiroyuki Itami (Itami, 1992a; 1992b; 1999; 2005). Ba is a situational framework that individuals participate, observe each other intentionally or unconsciously, communicate among them, understand each other, work among them and share same experience with each other (Itami, 1999). Management of Ba makes Ba in business organization and works Ba to manage business organization (Itami, 1999). Itami noted that there is a missing link between the argument of management structure (e.g. management organization, management system and so on), individuals’ decision-making and psychological energy and, Management of Ba fills it out (Itami, 1999). Itami noted that there is a Micro-macro loop in the process that Ba influences to individual’s decision-making and psychological energy (Itami, 1999). Micro-macro loop is a virtual cycle to link micro information with macro information and to provide feedback again to micro information (Imai and Kaneko, 1988). Micro-macro loop emerges when members who participated in Ba share “agenda”, “interpretation code”, “information carrier” and “association desire” with each other. So, Itami said that Ba is a framework to initiate Micro-macro loop (Itami, 1992a). The function of Micro-macro loop makes holistic order in business organization even if individuals behave autonomously (Itami, 1999).

Sasaki (1996) mentioned that Horngren’s Cost Accounting: A Managerial Emphasis was influenced by the results of other well-known researchers and that its fifth edition, published in 1982, was influenced by Itami’s (1977) article “Adaptive Behavior: Management Control and Information Analysis.” According to Sasaki (1998), before 1960s, Horngren’s cost accounting and management accounting research was focused on one’s decision making. However, after 1970s, it was focused on management control systems within groups. Sasaki (1998) further noted that Horngren’s (1982) argument related to motivation was changed to improve group decision making focusing on the situation in which group decision making was taking place and this change was influenced by Itami’s article.

Horngren (1982) also referred to Itami’s other research (e.g., the comparison between engineered cost and discretionary cost, and the problem of risk congruence with uncertainty).

Itami’s research started from management control systems (MCSs) and evolved into the management of ba. Therefore, the example of the diversification of management control systems could be clarified by exploring the research questions underlying Itami’s work. However, at present there is no literature which review Itami’s “Management of Ba.” Therefore, this research examined Itami’s books and articles from the 1970s to the present to reveal Itami’s research questions.

Section two describes the method of the study, which explicates the review process adopted in the present study. Next, the paper presents and analyses how Itami’s concept of the management of ba evolved from his assumptions regarding the organization and human nature (organizations as the aggregation of informative interaction, human nature as “holon” that behaves in self-interested and cooperative ways). Further, it reveals the research questions that motivated Itami’s work. Finally, it concludes with implications and suggestions for future research.
2. Method

2.1 Review Process

We searched CiNii (Scholarly and Academic Information Navigator, released by National Institute of Informatics) for Itami’s books and articles using the name ‘伊丹 敬之’, which is Kanji for ‘Hiroyuki Itami’. We found 198 Japanese articles and 6 English articles (as of June 4, 2013) as well as 112 books (as of July 21, 2013). We then classified the articles by type of journal in preparation for reading them: 71 in business magazines published by a company or institution, 27 in business magazines published by a university, 7 in academic journals, 62 in bulletins published by a company or institution, 14 in bulletins published by a university, 3 in commercial journals (excluding accounting), 4 in commercial accounting journals, and 16 in literary magazines. As a process of selection of subjects, this research examined the 52 articles published in academic journals, university bulletins, university business magazines, and commercial accounting journals. Apart from the above sources this research also examined 102 books.

Figure 1 shows a graph of the works examined, classified by year and publication type.

Figure 1: Itami’s Research Classified by Year and Publication Type

These results show that before 1990s, Itami mainly published his articles in academic journals (e.g., Organizational Science etc.), university bulletins (e.g., Hitotsubashi Review of Commerce and Management etc.), university business magazines (e.g., Hitotsubashi Business Review etc.), and commercial accounting journals (e.g., Accounting (Kigyou Kaiki) etc.). In the 2000s, he began releasing articles in business magazines not published by a university and in bulletins not published by a university. This research examined the articles published in academic journals, bulletins (published by a university), business magazines (published by a university), and commercial journals (accounting). The article “Management of Ba” was published in 1999, and there are a total of 52 articles and 102 books covering Itami’s research on MCSs and the management of ba.
2.2 Subjects Selected

This research examined 52 articles and 102 books by Hiroyuki Itami. The pre-result showed changes regarding the assumptions of organization and human nature. To further investigate this pre-result, we reviewed Itami (1978), Itami (1986), Itami and Kagano (1986), and Itami (1999).

In addition, by perusing the references of the articles and books under examination, we found strong research questions that may have caused Itami to change his assumptions of organization and human nature. To further investigate this pre-result, we reviewed Itami (1987a) and Itami (1987b).

3. Findings

This section clarifies our findings on how Itami’s assumption of organization shifted his research from focusing on MCSs to the management of ba. In addition, this section clarifies how Itami’s assumption of human nature was used to explain the concepts of individual autonomy and self-organization proposed in “Management of Ba.” We also compare his assumption of human nature with his assumption of organization.

3.1 Itami’s Assumption of Organization

In this research, an assumption is used to explain how to define managing of an organization. For example, when imagining a business organization, one may think of individuals working in a factory or an office, and another may think of a fixed organizational structure. By reviewing Itami’s articles and books from the 1970s to the present, his assumption of organization has changed from a focus on MCSs to a focus on the management of ba. In other words, in researching MCSs, Itami considered organizations as networks of decision making. However, in his research on the management of ba, Itami considered organizations as the aggregation of informative interaction. To elucidate the problem of a “missing link,” Itami used the phrase ‘aggregation of informative interaction’. With this shift, Itami’s thoughts on managing organizations also evolved. Table 1 outlines this shift in Itami’s assumption of organization and approach to management.

Hierarchy and Decision Making

Itami, in his initial writings (1978), recognized organizations as hierarchical decision-making systems. He mentioned that MCSs are designed “to control delegated subordinates’ decision making by superior” (p. 80). The unique contribution of Itami (1978) was that he identified and incorporated group decision-making in the MCS. In addition, Itami (1978) noted that subordinates have personal objectives, learning abilities, and emotions; they are not focused exclusively on the physical aspect. This point of view is different from that of industrial control. There were also problems of “coordination”, such as in integrating subordinates’ control activities in operation processes. Figure 2 presents a simplified model of the MCS framework.

Note the arrow between subordinates in Figure 2. Itami (1978) noted that information communication among subordinates could be done either formally or informally. For example, a meeting among related divisions or a written request for a decision (Ringisho, in Japanese) in a Japanese business organization represents information communication among subordinates. Therefore, supporting coordination among subordinates’ behavior was imperative for the framework.

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1 Itami (1978) based on Section 2 of Itami (1977).
In addition, Itami (1978) noted that the purpose of communication is to help the information receiver make better decisions. The communication of information from superior to subordinate is one way of using information to achieve influence. Regarding the use of information for influence, Itami (1978) noted that:

Integration of information among subordinates is also one of important roles of information communication. Thinking about how so many subordinates would behave with different information about same environment, it is more appropriate that subordinates behave with integrated information in terms of coordination. (p. 88)

**Figure 2: MCS Framework**

Source: Itami (1978, p.80)

Therefore, the arrow between subordinates (Figure 2) indicates how to coordinate subordinates effectively under the MCS framework.

Regarding decision making, Itami (1978) wrote, “there is an assumption that decision making by subordinates basically choose the best option in comparison with personal objectives. (It does not matter he or she choose the option based on utility maximization or satisfaction)” (p. 84). Itami (1978) created an “analytical framework with an assumption that subordinates are only interested of achieving personal objectives and focus on an outcome variable into an objective function” (p. 85). His decision-making model with five elements (i.e., subordinate’s personal objective, alternative option(s), result of the option(s), information of environment, and ability of information processing (decision making)) was unique in that it separated objectives from results. Objectives and results were equivalent to utility functions and results (or pay offs), respectively.

Regarding influencing subordinates’ objectives, Itami (1978) noted the following:

It is typically psychological and sociological process. However, if it could, it is the most powerful influence activity. Loyalty for organization, integration with organization’s objective and subordinate’s internalization of superior’s objective etc. would be results of the activity; for example, known business philosophy to all by internal training, raising loyalty for organization, socialization to newcomer through informal group and so on. Or, it is one of many examples of the activities for subordinates to understand organizational objectives by worker participation and to internalize the objective as a personal objective. (p. 89)
| Criteria                  | Itami (1978)                                    | Itami (1986)                                    | Itami and Kagono (1986) | Itami (1999)                                    |
|--------------------------|------------------------------------------------|------------------------------------------------|------------------------|------------------------------------------------|
| Assumption of organization | a1. Hierarchy                                  | a1. Hierarchy                                  | a1. Hierarchy          | a1. Hierarchy                                  |
|                          | b1. Decision making                            | b1. Decision making                            | b1. Decision making    | b1’. Decision making                           |
|                          | c1. Group of people                             | c1. Group of people                             | c1. Group of people    | c1. Group of people                             |
|                          | d1. Interaction among individuals               | d1. Interaction among individuals               | d1. Interaction among individuals |                                                        |
| Management               | MCS a2. Superior delegates authority to         | MCS a2. Superior delegates authority to         | Traditional motivation | Management of ba a2’. Decentralization         |
|                          | subordinates                                   | subordinates                                   | theory and traditional | b2” and c2’. Enhancing appropriate              |
|                          | b2. He or she controls subordinates’ decision   | b2’. He or she controls subordinates’ decision  | administrative theory   | decision making and increasing                 |
|                          | making and behavior to be consistent with      | making and behavior to be consistent with      | including incentive     | psychological energy                            |
|                          | organization’s goals via incentive system       | organization’s goals via incentive system       | system and MCS         | d2’, b2”, and c2’. Ensure liberty,              |
|                          | Other management behavior                       | Other management behavior                       | MCS                    | trust, and information sharing                 |
|                          | c2. He or she controls subordinates’ decision   | c2. He or she controls subordinates’ decision   | Management of Ba        |                                                        |
|                          | making and behavior to be consistent with      | making and behavior to be consistent with      | d2. Enhancing energy    |                                                        |
|                          | organization’s goals via organizational         | organization’s goals via organizational         | of Ba                  |                                                        |
|                          | structure, philosophy, and leadership           | structure, philosophy, and leadership           |                        |                                                        |
Itami (1978) said that firstly compensation or an incentive given by the organization or superior and secondly results of a social or human relations in groups in the organization, influence subordinates’ performance. The latter is important to help subordinates choose the option in many cases, but it would be an indirect influencing activity.

The management of ba emphasizes information communication among subordinates, influencing subordinates’ objectives, and the results of social or human relations in the group or organization. Itami (1978) recognized such a role in MCSs but did not focus on these points.

**Group of People**

Itami (1986) continued to recognize organizations as hierarchic decision-making systems but began to recognize them as groups of people as well. Organizations, through cooperation, can do what individuals cannot do on their own. Therefore, managers delegate decision making and actual activity to the group hierarchically. This view is referred from Barnard’s view (as cited in Itami, 1986) view on organizations as cooperative systems.

The definition of MCS was changed as a result of this shift in perspective (i.e., a hierarchy, b decision making, plus c group of people).

Itami (1986) wrote the following:

> It is not accurate that all individuals behave to achieve organization goal when an allocation and an authority of individual in organization are fixed. Individual has personal reasons and characteristics, e.g. one’s way of thinking, interest, emotion and so on. In addition, H.A. Simon said human being’s ability of reasonable decision-making is essentially limited (Bounded rationality). Therefore, such individual factors significantly influence his or her behavior in organization. As a result, there is no assurance that individual’s behavior for organization is the best behavior for organization. Therefore, a system and process to motivate individuals and to integrate his or her behavior to organization objective ultimately are needed. The system and process is called management control system. (pp. 7–8)

Figure 3 illustrates Itami’s (1986) notion that organizational management should determine the management structure (e.g., strategy, management system, human relations).

It is important to generate the “psychological energy” needed to clarify and activate the decision-making process among a group of people (Routet A). Incentive generates psychological energy. Routes B and C both generate incentive. Route B leads to conceptual incentive and personal incentive through management philosophy and leadership. Route C leads to physical incentive and self-achievement incentive through management structure.

Psychological energy helps individuals not only to make decisions but also to behave appropriately. As Itami’s (1986) assumption of organization shifted toward emphasizing the importance of psychological energy, the definition of MCSs in Table 1 also changed, from “controlling subordinates’ decision making” to “controlling subordinates’ decision making and behavior to be consistent with the organization’s goals through the incentive system.” In addition, it is also important to note that psychological energy is influenced by various incentives.
Individual’s decision making and behavior are influenced by various incentives. Itami (1986) mentioned that not only MCSs but also management structures and fundamentals are designed to control decision making. There are two differences between MCSs and management structures and fundamentals. First, the purpose of an MCS is to control decision making, whereas the purpose of other management behaviors is secondary. Second, MCSs control delegated decision making specifically via influencing activities, while other management behaviors control it indirectly via decisions made through the general framework of delegated decision making. Itami (1986) noted that it is important for organizational performance to observe how MCS controls specifically and the synergy between MCS and the control of decision making by other management behavior.

In this synergy, the MCS controls individuals’ decision making, while other management behaviors also contribute to the psychological energy needed to lead group behavior (i.e., b2’, control subordinates’ decision making and behavior to be consistent with organization’s goals via an incentive system, and c2, control subordinates’ decision-making and behavior to be consistent with organization’s goal via organizational structure, philosophy, and leadership). This sounds like the management of ba; Itami (1986) mentioned that it is important “to have organization generate psychological energy and to breathe organization” (p. 19). However, he does not mention managing interactions among individuals and generating psychological energy from those interactions.

*Energy of Ba*

Itami and Kagono (1986) categorized three perspectives on business organization: (1) the aggregation of physical transformation activities (the physical view), (2) the aggregation of information processing and learning activities (the informative view), and (3) the aggregation of individuals’ psychological reactions (the psychological energy view). The second view is related to Itami’s (1978; 1986) assumption of organization. The third view is related to Itami’s (1986) view of psychological energy.
Itami and Kagono (1986) noted that the psychological energy view recognizes business activities as an aggregation of individuals’ psychological reactions; the psychological energy of organizations changes and grows as a result of these reactions, influencing other views (the physical view and the informative view).

The psychological energy view is a new assumption of organization used to explain the psychological energy of a group. Itami and Kagono (1986) mentioned that individuals have psychological energy and that the sum of their activated (for organization objective) and actualized energy makes up the energy of the organization. This process involves several steps (see Figure 4): (1) actualizing potential energy, (2) activating the energy for the organization’s objectives, and finally there is a result different from simple sum up of energy. The actualization and activation steps include two mechanisms that influence individuals: (1) managing individuals directly via management systems and processes and (2) generating interaction between individuals to influence their psychological energy.

Itami’s assumption of organization came to include d1, the interaction among individuals and the notion of managing interactions to enhance the psychological energy generated from interactions.

Figure 4: Composition of Activated Energy and Energy of Ba

| Influence mechanism                  | Direct management to an individual by organization | Interaction among individuals in ba as organization |
|-------------------------------------|---------------------------------------------------|--------------------------------------------------|
| Step 1. Actualize potential psychological energy | Traditional motivation theory (e.g., incentive system, leadership) | Individual works as hard as other individuals do. Psychological energy of individual is actualized. |
| Step 2. Activate actual psychological energy | Traditional administrative theory (e.g., organization structure, management control system, coordination activity by manager) | Vector of psychological energy of individuals is faced in same direction, as individuals share same understanding as result of interaction. |

Source: Modified from Itami and Kagono (1986, p.4)

Itami and Kagono (1986) said that the psychological energy generated through managing individuals directly can be traced to individuals, whereas the psychological energy generated by interaction among individuals in ba, as the organization, cannot be traced to individuals; it is the energy of ba more than of the individuals. Traditional motivation theory includes an incentive system, and traditional administrative theory includes an MCS that manages individuals directly; however, the interactions between individuals in ba, as the organization, are not discussed. Itami and Kagono (1986) mentioned the lack of attention regarding the energy of Ba.

Itami and Kagono (1986) noted that managing interactions between individuals is necessary. Furthermore, they identified individuals and ba as areas to be managed. However, Itami (1986) incorporated the assumption of organization in c1. Regarding groups of people, Itami made no argument regarding how to manage them. However, Itami and Kagono (1986) identified that individuals can be influenced by MCSs and by managing the energy of ba generated from d1, the interaction among individuals can also be influenced.
Aggregation of Informative Interaction

Itami (1999) stated that management theory discussed organizational structure and management systems, but that there were no sufficient discussions on how organizational structure and management systems influence decision making and psychological energy. As there are so many individuals’ autonomy and self-organization in this area, extravagant and complicated phenomenon happens. This is the argument for the “process” of management. While this is an important part of real-life management practice, there is a missing link in the management framework. Itami (1999) suggested that the management of ba fills out this missing link (see Figure 5).

Figure 5: Management of Organization and Ba

Unlike the assumption of organization shown in Itami (1978; 1986) and Itami and Kagono (1986), the management of ba is characterized by an aggregation of informative interaction: First, there is an a1 hierarchy that is independent from b1 decision making. Organizations need to delegate the authority to make decisions; therefore, an a1 hierarchy is needed. However, Itami (1999) only mentioned the a1 hierarchy in that management “sets frame and point direction to informative interaction and decision making from upper side of organization hierarchy to lower side” (p. 57). In addition, the a1 hierarchy is related to individual’s autonomy because it delegates decision making.

Second, b1 decision making is not controlled directly by management (Figure 6). A is the leader, and B and C are team members. The arrows between individuals mean an interaction between individuals Figure on the left uses straight lines (as opposed to dotted lines) to emphasis individuals. On the other hand, figure on the right uses straight lines to emphasis the interaction between individuals. Itami (1999) said that in decentralized organizations, individuals obtain information and make decisions autonomously. Therefore, individuals’ decision making is not controlled directly by management, but informative interaction among individuals is controlled by management. Therefore, under this assumption, b1’ decision making (an individual’s decision making) is not controlled directly by management.
Third, decision making and psychological energy are related to individuals’ autonomy. Itami (1999) noted that individuals have the flexibility to make decisions, as decision making is dispersed in decentralized organizations. Furthermore, because the information used for decision making is not processed centrally but dispersedly, information-sharing activities are autonomous. In addition, psychological energy is not generated by someone’s orders, but they are influenced by management and organizational events. Psychological energy is generated by incentives (see Section 3.1.2) and by interaction among individuals (see Section 3.1.3). However, most importantly, it ultimately depends on individuals’ autonomy (Itami, 1999).

3.2 Itami’s Assumption of Human Nature

Itami (1978)

As mentioned in Section 3.1, according to Itami’s (1978) assumption of human nature, individuals have personal objectives, learning abilities, and emotions; they are not focused exclusively on physical factors. In addition, these excerpts, which were mentioned in the explanation of decision making, also shed light on the assumption of human nature: “There is an assumption that decision making by subordinates basically choose the best option in comparison with personal objective. (It doesn’t matter he or she choose the option based on utility maximization or satisfaction)” (p. 84). “Subordinates are only interested in personal objective and they focus on an outcome variable into an objective function” (p. 85).

Itami (1986)

Itami (1986) included c1, the group of people, to the assumption of organization. In this book, individuals are “doing judgment, having interest, willingness, emotion, psychological energy, strangeness, weakness and ideology” (Itami, 1986, p. 5). The inclusion of psychological energy makes this framework unique.

In addition, Itami (1986) mentioned two reasons to justify why individuals should be given liberty. First, if individuals can work autonomously, then they are willing to work (increasing psychological energy). Second, because the cognitive capability of individuals is limited (bounded rationality), cooperation is needed as well as the hierarchical delegation of decision making.
Based on these assumptions, Itami (1986) noted that management control should aim for a balance between liberty and discipline.

Itami (1986) may believe that liberty is a source of psychological energy and that when individuals have liberty in organizations, they also have autonomy. Itami’s (1999) notion (i.e., if there is no autonomy for individuals, then there is no psychological energy) may be based on the positive view of human nature that psychological energy is enhanced when individuals have liberty within organizations.

Itami (1987a)

Itami (1987a) noted that individuals are ‘Kind, weak, greedy, thinkers’ and have self-assertion but cooperate with other people and integrate themselves into group. Compared to Itami (1986), this view is focused more on psychological factors. Based on this assumption, Itami (1987a) said that a new management methodology should be created to manage such people.

Itami (1999) and Itami (1987b)

In this book, Itami (1999) noted that individuals have the autonomy to choose their behavior for self-interest and behaves cooperatively for the benefit of all in maintaining relationships among other individuals. This idea is based on “holon” referred from bioholonics research. Itami (1999) believed that the individual is like a cell of a creature. Regarding information, Itami (1999) noted that the individual chooses relationships, shares information, gets feedback, and processes information. In addition, from a psychological perspective, individuals get excited when they find others who look like themselves. These characteristics contribute to explaining the assumption of organization used in the management of ba, the aggregation of informative interaction.

Based on this assumption of human nature, Itami (1987b) noted that individuals develop a new informational macro-structure and psychological energy as a result of interaction. Therefore, informative interaction enhances appropriate decision making and psychological energy.

4. Conclusion and Implications

This research reviewed the process whereby Itami shifted his research interest from MCSs to the management of ba. The assumption of organization was clarified to explain how Itami revised his assumption of organization to describe real-life management practices based on his research results. He was concerned about the missing link between organizational structure and appropriate decision making/psychological energy. To resolve this issue, Itami suggested the management of ba. By reviewing the evolution of his assumption of organization, this missing link was clarified. In addition, it was important to investigate how Itami’s assumption of human nature had shifted to include individuals’ autonomy and self-organization, key aspects of the management of ba. A management approach that enhances psychological energy is needed in order to increase individuals’ autonomy and self-organization. That approach is indeed the management of ba.

In addition, by reviewing Itami’s research, we identified that Itami’s research question was, “how can the liberty of an individual be ensured within an organization?” Itami noted that MCSs need to balance liberty and discipline; thus, we focused on the problem of the liberty of individuals in organizations from the point of view of management accounting research.
This research only focused on a single researcher. The reason may be different in other case of diversification of management control systems and this can be considered as a limitation of the research. However, one of the contributions of this research is introducing an example of such diversification and changing in Japanese management research, especially in the research written in Japanese. In future research, the relation between the management of ba and the recent management control research are suggested to be examined.

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