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Investigating the concept of "goal congruence" suited for the modern corporate environment
-Expansion and strengthening in the environment, time, and organisational structure axes-

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Takashi Ando
Associate Professor, Chiba University of Commerce, Faculty of Commerce and Economics
1-3-1 Konodai, Ichikawa-shi, Chiba 272-8512 Japan
e-mail: tando@cuc.ac.jp

Maki Makoto Foundation

Nagoya, Japan

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Abstract

The current corporate environment is characterized by the rate of change and people's diverse values compared to the past. Under such circumstances, it is difficult to demonstrate the original significance of the concept of goal congruence, which forms is the basis of the management accounting system, without expanding it. This is because goal congruence is a means of contributing to management objectives. The central function of the management purpose is to enhance the internal control of the company and bring about long-term development of the entire organisation while ensuring harmony with the external environment. At present, the demands from are diverse, and not all stakeholders are satisfied with achieving economic goals alone, contrary to the approach as in the past.

Therefore, in today's corporate environment, it is desirable to expand and strengthen the conventional concept of goal congruence in three ways. First it is important to determine the external environment dimension(①external environmental axis). Not every company must tackle all economic, social, and global environmental challenges at every stage of corporate growth. However, working in a well-balanced manner over the long-term can further improve the sustainability and survival of the corporate system. Second there is a need to reflect the long-term vision of the management objectives, which includes incorporation of social and environmental objectives into medium-term plans and specifically, develop them as short-term management control systems (performance evaluation systems)(②time axis). Thus, social and environmental indicators should be introduced into performance evaluation systems to strengthen relationships over the time. The third the verticality of the organisational structure (from the top management to the members)must be analyzed, and modified in line with company goals: it is important to share the vision of the entire company (management objectives, medium-term management plans,

and annual management plans). Thus, there is a need for a communication systems (centered on informal systems) that has a quality higher than that of conventional systems; this would not only ensure the development of effective performance evaluation systems (formal systems) but also promote the understanding of the original and its duties.

In other words, emphasizing the process of value creation in terms of the dimension of time axis integrates the external and internal environmental systems organically, thus improving the quality of communication between the conventional layers (i.e., becomes meaningful). I propose this new concept defined as "environmental goal congruence".

In conclusion, the study indicates that the essence of "environmental goal congruence" is the integration of "total and partial optimization" in the following three dimensions: (1) from global (social and economic systems) to corporate systems, (2) from management purpose (medium-to long-term management plans) to short-term management plans (performance evaluation systems), and (3) from top management to member's mindset structures.

KW: environmental goal congruence, environmental management control, , management purpose, CSV (Creating Shared Value), communication

1. Introduction

"Goal congruence" is one of the central ideas in management accounting and control and can be considered as be the ultimate goal of management control. This concept integrates partial and total optimization of different systems to provide a certain direction to the activities of the entire organisation. Anthony (1965) was the first conceptualized this concept in accounting: however, it is my opinion that Drucker (1954) was the first to systematize the concept. This is because business administration and accounting are practical studies and Drucker(1954）practically developed the above concept in the field referred to as the "management by objectives". However, it has been over half a century since this concept was proposed, and due to the current evolved structure of the management in the corporate environment, there are some issues that need to be re-examined.

Over the past 50 years, the corporate environment has undergone major changes, in terms of both quality and quantity. The rate of change has also accelerated, and it is well known that there are various needs and expectations regarding the effectiveness of the management control systems. During such changes in the corporate environment, is the concept of company's goal congruence still effective? Even though various management accounting methods have been

developed since Johnson and Kaplan (1987) proposed the "Relevance Lost", it is difficult to state that the ultimate objective of the effectiveness of the goal congruence concept has been systematically discussed to date.

The objective of this study is to investigate the ideal way for goal congruence that is suitable for today's market and social environments while determining the problem areas and directions for improvement in the environments. Specifically, the concept of "environmental goal congruence" (concept definition) is presented in an attempt to overcome the above-mentioned problems with the aim of approaching its essence. The most significant aspect of addressing these issues is that their potential to enhance the effectiveness of future management accounting systems. Management accounting systems ultimately contribute to the improvement of goal congruence. Therefore, it is important to discuss the underlying assumptions. In addition, I believe that this study can provide a thought-provoking and systematic perspective on company's approach to social and environmental issues (social environmental accounting), management (based on a reexamination of management philosophy and long-term planning; purpose management), and the interaction and creativity endeavors with the members of the company. One of the most important objectives of management accounting systems is to enhance the motivation of the company members. I believe the discussion in this study can also prove essential suggestions to improve management accounting systems.

In the next section (Section2), I explain will take up goal congruence and similar concepts (cohesiveness and aggregation) and re-examine the related literature. After approaching the essence of the concept by comparing and investigating these concepts, an analysis was conducted on the characteristics required for the ideal goal congruence concept in today's corporate environment. Section 3 describes the actual examples of recent corporate efforts to solve such

issues（Japanese drink manufacturing company: Kirin Holdings Company Ltd.）. In Section 4,

I analyze the examples provided in the previous section (Section 3), and define a new environmental goal congruence concept, after depicting its grand design. The final section (Section 5) summarizes the major conclusions discussions and describes the significance and challenges of this study.

2. Investigation of the Essence of Goal Congruence Concept and Practical Issues

In this section, the definition and content of the goal congruence concept are re-examined by looking at the theory of Drucker (1954), who systematized the concept for the first time; cohesiveness and aggregation are then taken up as similar concepts. The previous studies of these three concepts are re-examined in order to approach the essence of the concept (Section 1).

The characteristic issues required for goal congruence in today's corporate environment are then investigated (Section 2).

2-1. Re-examination of the Goal Congruence Concept and Similar Concepts

2-1-1. Essence of Goal Congruence Concept

Drucker (1954) called goal congruence the "integration of partial and total optimization". Top management needs managers with advanced skills that use those to reach the goals of the entire business, without making the acquisition of skills a goal in and of itself.

Drucker (1954) gives a dialogue with three stonecutters as an example. In response to the question, "what are you doing?", the three stonecutters answer, "I'm making a living.", "I'm doing the best job in the entire country.", and "I'm building a cathedral.". Drucker (1954), of course, said that the third man is the ideal figure. The first man does the work for the time being. He says that he will do work that is appropriate for the compensation. Drucker says that the problem is the second man. Craftsmanship is an important element. Good work is impossible without it. In fact, any organisation will fall unless it demands the best of its workers. However, first-rate craftsmen and professionals run the risk of thinking that they are "achieving something" even though they are just polishing stones or collecting trivial footnotes. Drucker (1954) emphasized that first-rate skills must certainly be emphasized, but that they must always be in the context of overall needs. In this way, there is a risk of pursuing specialized skills in work that is specialized by function. This is because it may divert the business perspective and efforts from its goals. This example suggests that the functional work itself has a tendency of becoming the goal.

Drucker (1954) has also stated the following. The organisation creates a team and brings together the functions of each person to conduct joint work. The person who works for an organisation should contribute toward the common goal. Their work should be directed in the same direction, their contributions should be integrated to produce a single seamless and frictionless whole without overlap. Each job must be directed toward the goal of the overall business for the business to be successful. The work must focus on overall success. Expected outcomes are determined based on business goals. These should be evaluated by its contribution to the success of the organisation.

Drucker (1954) also said that workers in an organisation must know and understand what the business goal demands of them. Their superiors must also know the contributions expected of them and evaluate them. If these are not done, then the individuals working for the organisation will be misdirected, and the work will be wasted. In place of teamwork, there will be friction, dissatisfaction, and conflict.

Drucker (1954) also said that management is the person who takes responsibility for the

whole by their own actions, i.e., building a church by cutting stones. In other words, members must take responsibility for participating in the setting of goals of the upper classes. Mutual vertical understanding in this hierarchical structure is obtained by upward communication. This requires a listening attitude from the superiors and a mechanism to convey the voices of their subordinates.

Drucker (1954) described the "management by objectives" based on this concept as follows. The "management by objectives" ultimately aims for self-management. What is important in today's environment is the management principle of maximizing each person's strengths and responsibilities, giving direction to their vision and actions, and demonstrating teamwork; in other words, the management principle of harmonizing the goals of each individual with the interests of the whole. This principle alone, not instructions or orders, motivates people to act according to their work needs. It is this principle that transforms the objective needs of an organisation into individual goals. In this way, members will independently make decisions and act based on their work needs rather than from instructions and orders.

Drucker (1954) convincingly explains the concept of goal congruence using such an analogy. Its practical development should also be highly regarded. From the next section, previous studies on two similar concepts are re-examined in order to further analyze the conditions for achieving this concept.

2-1-2.   Re-examination of the Cohesiveness Concept: from the Perspective of an Informal System

This study is the result of fieldwork on informal groups in apartment buildings in Massachusetts, USA. Here, insight was provided into the cohesiveness of organisations based on a survey of the formation process and manner of communication of informal groups. The cohesiveness of a group essentially is the preference that an individual has toward the entire group or the individual members of that group. Festinger et al. (1950) found that higher cohesiveness resulted in stronger friendships within the group, which activated the process of communication within the group; the result of this communication was increased performance. The uniformity of attitudes, views, and behaviors was brought out in that process, forming a group standard as a result.

This study investigates this formation process in detail. Here, the important aspect required of an individual in this group is that the attitudes and opinions of the individual are recognized by other members as group standard variables. Deviating from this results in other members slowing down the speed of their communication and trying to diligently communicate. There are no problems if the individual at this point follows the group standard, but if not, then the frequency of communication to that individual from other members decreases, and that

individual becomes "isolated" as a result. However, in the exceptional event that the individual who does not follow the standard is also a member of any other group, the result is that the groups may overlap. This is a case where the resistance of the individual was successful, but this event is rare in reality.

Here, "group standard" does not necessarily map objectively correct facts. There is a tendency for reinforcement toward the maintenance and survival of the group. This should be accepted as the premise of the thinking and attitudes of every member in the group. As a result, members within the group are oriented toward similar information, thoughts, and attitudes, responding in the same way depending on the situation. Essentially, Festinger et al. (1950) indicated that increased cohesiveness in an organisation facilitates member communication and enhances the functioning of informal systems. This is likely because it facilitates the adjustment of the thinking and consciousness vectors of the members.

In this way, increasing the cohesiveness of an organisation can allow for goal congruence to be more smoothly achieved. However, the increase in cohesiveness of the organisation is a necessary condition for the achievement of goal congruence, and it cannot be said that it

sufficiently satisfies the conditions. This is because it has only clarified that it contributes to the increase in functions of informal systems, and that it is not necessarily the case for formal systems. In this section, similar concepts to those of goal congruence relating to informal systems were investigated, but in the next section, similar concepts relating to formal systems will be investigated.

2-1-3.   Re-examination of the Aggregation Concept: from the Perspective of a Formal System

The case organisation POST in Bol et al. (2010) has a monopolistic comprehensive postal service in South Korea. Here, the goal setting process in their study is re-examined. The competitive environment at the time intensified due to the advancement of foreign-affiliated companies as well as domestic companies, and there was a need for strategic changes in business structure, improvement of service content, and the increased efficiency of operations (specifically, speeding up deliveries, etc.).

POST has a three-layer structure (one head office, eight regional headquarters, 103 stores). The company-wide sales goal is determined by the task force team at the head office in November of every year so as to be suitable for the corporate strategy. Here, the decision is made while considering macro-economic trends, the business environment, intensity of competition, and team forecasts for the next fiscal year. After undergoing the process in which the CEO re-examines these goals in December and the director approves these goals, the company-wide sales goal for the next fiscal year is determined.

Utilizing the financial goals of the entire company, the task force then allocates operational

and capital budgets to the eight regional headquarters. At the beginning of January every year, the CEO convenes a goal review meeting with top management. At this meeting, the budget that includes the sales goal by the regional director is announced and discussed in detail.

The regional director has the responsibility of allocating the sales goal of the overall region to the sales goal of each store. The head office formally requests the regional director to improve the initial goal (agreed upon with top executives), but the goal setting of each store is at the discretion of each regional director. What the head office requests from the regional director is to align the sum of the individual store goal values with the regional sales goal value presented by the head office. This is because the store managers have better information with regards to regional market trends, and from this point, the goal setting process can be said to be "participatory". Store managers can influence the sales goals they receive by sharing their information with regional directors. The detailed goal setting process is as follows.

First, the regional director personally determines the provisional sales goal for each store. Sales data to date is considered and the sales goal of the entire region is allocated to each store according to the relative weighting of each store. Simultaneously, each store manager is asked to express their opinion on the sales goal imposed on their store, without being informed of the sales goal values of other stores.

Here, the store manager is required to submit supplementary materials to the regional director. At this stage, the store manager does not know about the regional-level sales goals imposed by the head office or the individual store-level sales goals. The regional-level sales goal is then shared with other store managers at the regional sales goal review meeting in January.

Next, when information from all store managers is received, the regional director compares the initial prospects with the goals presented by each store. If there is a large gap between the two here, then the regional director requests further information from the store manager. Then, until the end of January, the regional director and all the store managers meet at the regional head office, and the regional director presents, discusses, and agrees on sales goals for many of the stores.

In this way, discretion can be said to be an ability of middle management to reconcile the abstract goals of top management with actual field conditions. In many cases, the goals presented by top management have not sufficiently considered actual field conditions. In contrast, taking the opinions of the field at face value and carelessly setting achievable goals will not lead to the expected growth of the company. Middle management plays an important role in effectively overcoming the dilemma of these two aspects. In other words, discretion is not just a collection of numbers in the field. In contrast, "aggregation" is the extent to which the total sales goal value of the lower organisation matches and is linked to the sales goal value of the immediately higher organisation. Therefore there is the characteristic that increased aggregation (i.e., the more aggregated and higher the goal of the higher system) results in lower concreate (extent to which

actual field conditions are reflected) of the goal content, and increased difficulty in drawing a vision of the specific behavior and activity for improving the values of those indicators. In other words, the middle management in this study used discretion to increase aggregation.

2-1-4. Summary

Up to this point, previous studies were re-examined to approach the essence of the goal congruence concept, but first, these are summarized to clarify the premise and conditions for establishing this concept.

First it can be seen from a re-examination of the concept of cohesiveness that an informal system within an organisation must at least function at a minimum level in order to achieve goal congruence. Organisational activities are conducted as a group, so achieving goal congruence is impossible under a state where the willingness to collaborate with each other is low. Next it can be seen from an examination of the concept of aggregation that the linking of goals within an organisation needs to be built throughout the organisation. This is because if the organisation achieve goals that were set at the beginning of the term, then the ideal state is likely to be achieved.

What should be noted here is that although aggregation is one of the business level requirements for achieving goal congruence, this does not necessarily sufficiently satisfy the conditions in today's corporate environment. Especially within companies in markets with intense environmental changes, achieving goals set at the beginning of the term, especially accounting figures such as sales or profits, does not always lead to an ideal situation at the end of the term. And it was confirmed from Drucker (1954) that the essence of cool congruence is in the "integration of partial and total optimization". However, what is the ultimate end of such integration? Generally, the concept of a "goal "is often positioned as a means of achieving a "purpose", or important points within the achievement process. Therefore, in the next section, the relationship between management purpose and goals is confirmed by re-examining research on management purpose

2-2. Aim and Function of Management Objectives

First, Takada (1978) explained the structure of management purpose as shown in Fig. 1 below. The solid arrows are regulatory relationships, and the dotted arrows are constraint relationships. The management purpose consists of the management creed and management objectives. The management goals aim for the realization of the management creed; in contrast, the management creed is also restricted by the means (methods) of the management objectives. Takada then argues that the management organisation needs to be controlled for the achievement of the management goal, systematizing the management economy as an important indicator in this context.

【Figure 1: Trinity structure of management elements】
Excerpt from Takada (1978), p. 30
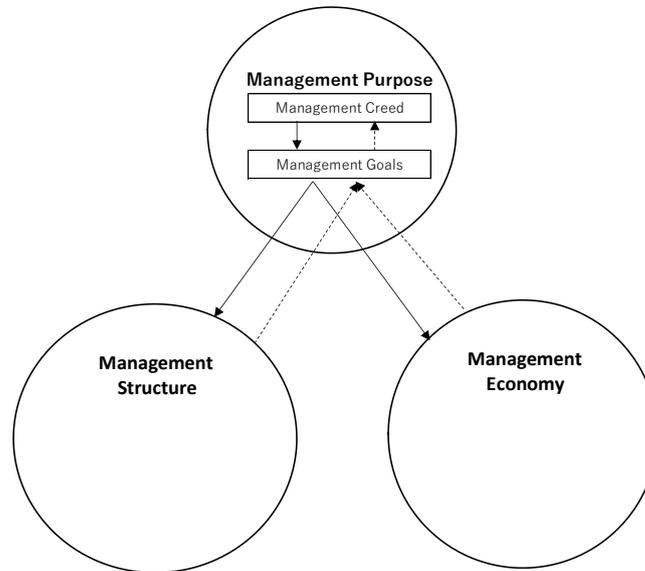
Similarly, Ackoff (1971) regarded ideal-seeking system as the hierarchical structure of "ideal (long-term objectives) – objectives (medium-term goals) – goals (short-term goals)", indicating that that achieving any one objective or goal tends to result in the pursuit of other objectives or goals that are closer to that ideal[1].

It can be seen from these previous studies that goal congruence is ultimately a means toward the realization of management purpose. In that case, what is the aim of management purpose, and what function does it have? These should have an indirect but meaningful effects on the company's actions toward goal congruence. Therefore, a re-examination of previous studies is conducted on the theories in Barnard (1938), who is the father of modern business administration.

Barnard (1938) stated that the formal organisation consists of three components (common purpose, willingness to serve, and communication). These components are dependent on each other. It is first important for organisations to find a balance between these, but the problem for the entire organisation is to adapt to the environment outside the company. Barnard (1938) theoretically developed the former problem as "efficiency" and the latter problem as "effectiveness". Here, Barnard (1938) said that of the three components, the common purpose was important as the premise of the organisation (expressed as "axiom"). This is because the common purpose is very important for extracting the efforts of the members and forming a single collaborative activity. Furthermore, the common purpose has an objective aspect in the form of

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[1] Furthermore, Ackoff (1971) states that the ideal is an objective that can be approached without limit but can never be reached. Please refer to the description by Ackoff and Emery (1972) for the positioning and characteristics of the ideal system.

the responsibility of the management, and a subjective aspect in the form of pursuit of the ideals of the organisation. The subjective aspect also includes the balance with the relationship between the general and social environment of the company, and consideration of feelings (sense of belonging) of the members of the organisation. Essentially, it can be said to be efforts toward human consideration and goodness.

Next, previous studies on the function of management purpose is examined. Sutton et al. (1968) defined the management creed as a "system of beliefs published with a clear intention to influence the emotions and activities of others", based on a systematic survey of the management creed of business owners and their organisations in the 1940s. It is important here to focus on the "strains are alleviated [for the business owner]" as a function of the creed. The business owner is forced to face various social conflicts due to their strong social influence, and it is said that the establishment of the management creed stem from such emotional conflicts, anxieties, and doubts. And with regards to the management , it is said that the ideology is formed in order to resolve these emotional conflicts, alleviate anxieties, and overcome doubts within the scope of certain cultural traditions and generally accepted ideas[2].

Meanwhile, Ackoff and Emery (1972) broadly divided social systems into three aspects (state-maintaining system, goal-seeking system, purposeful system) and stated that purposeful systems had the characteristic of undergoing trial and error for the methods of achieving the purpose, and that the purpose itself was re-organized in response to environmental changes. They position the ideal-seeking system among these as an important sub-system. This system has the characteristic of continuing to seek the ideal type according to a systematic process. Ackoff and Emery (1972) discussed the seeking of "Plenty, Truth, Good, and Beauty" as the four major functions of this system. "Plenty" is positioned at the top in this basic structure. This is because it is difficult to achieve the other factors without abundant resources. The trinity structure of "Truth", "Good", and "Beauty" is then formed toward the achievement of this absolutely legitimized ideal. Particularly in the seeking of "Good", there is a tendency to aim for a state without conflict, and "peace on mind and peace on earth" is emphasized as the basis of an all-powerful worldview.

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[2] Sutton et al. (1968) also indicated that (1) practical realism, (2) moral rigor, and (3) optimism as the three elements common to many management philosophies at the time.

【Figure 2: Relationship between Management Purpose, Goal Congruence, and Management Control】

Created by author

Management Purpose (Management Creed)	←	Goals	←	Management Control
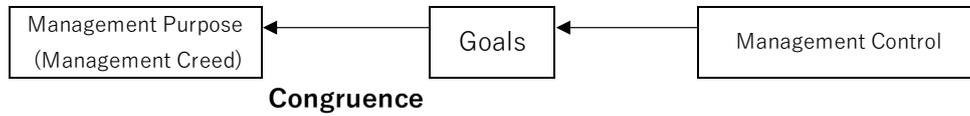
Congruence

Note: the start point of the arrow indicates the means,
and the end point indicates the objectives.

As shown in Fig. 2, goal congruence is positioned as a means for achieving the management purpose, but it can be seen that the management objectives include not only economic elements but also social and environmental elements[3]. In that sense, it would be appropriate that goals in goal congruence include not only include economic goals but also social and environmental goals. However, in the present -day corporate practice, there is a very limited number of companies that have incorporated social and environmental goals into medium- / short-term plans. Meanwhile, there are more companies that are developing environmental performance evaluations as part of their short-term management plans. The work of forming the theoretical basis for these practices will also be important. Furthermore, there are practices that can no longer be grasped by the current concept of goal congruence even in companies that are not particularly socially or environmentally advanced. These issues will be examined in the next section.

2-3.　Examination of Practical Issues relating to Goal Congruence

First, the characteristics of today's external environment surrounding companies are examined. The rate of changes in the market environment have accelerated compared to the past, but what is even more important here is not the rate of change but its quality. As argued by Simons (1995), even if today's companies achieve the goals they set at the beginning of the term, they are more likely to be unable to achieve their ideal situation. It can be seen in that sense as well that the significance of aggregation toward goal congruence is relatively declining (Clercq et al.2017;). What is further required under such circumstances is for each department or each individual to independently and flexibly judge and act based on the conditions for preparing an ideal situation, and to approach this situation by trial and error. One guideline for showing the ideal situation here is the management creed that depicts the objective of the corporate activities in the first place. Changing creed into the medium- / short-term (performance evaluation) goals concretely will

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[3] This aspect can be confirmed not only from the theoretical perspective but from the actual management philosophies of many companies.

encourage the sharing of long-term visions with the entire company. To that end, communication that promotes a deeper level of understanding among the members will be required.

Meanwhile, emphasizing goal congruence too much emphasizes the speed of decision-making through the sharing of values, which may inhibit the consideration of various opinions and creativity (Clercq et al.2017). In other words, efficiency is emphasized over effectiveness. Even in terms of dysfunction, it is easy to bring about a situation where people with different opinions or values are excluded from the group[4]. If this escalates further, this will encourage all members to take an inward attitude that makes then aware of only the survival of the organisation (i.e., maintaining the status quo), and will have the risk of being isolated from the values and trends outside of the company, industry, or society as a whole[5].

When these harmful effects become apparent, the significance of the goal congruence itself cannot be fully demonstrated. Therefore, there is a need in today's business environment to extend the scope of conventional targets of goal congruence to outside of the company. In other words, in order to achieve the original objective of goal congruence, it is important that values (higher-level systems such as society or global environment) and goals inside and outside the company have at least some kinds of association or causal / influential relationship in the medium- / long-term, even if they are not constantly closely linked.

It is not necessarily the case that previous studies did not have the view that the goal congruence concept should reflect factors outside of the company. For example, Anthony and Govindarajan (2007) indicated that it is important for the content of goal congruence to reflect factors outside the company. National character, regional character, and social norms were given as specific examples (Anthony and Govindarajan, 2007). However, Anthony and Govindarajan (2007) only indicated the need to deal with these within the scope of informal systems. In contrast, in the management control systems in environments developed today, requests from the social and environmental system beyond the economic system outside the company has already brought about the re-organisation of the formal system inside the company. Practices such as (single fiscal year) environmental plans and goals, environmental budgets, environmental performance evaluations, and social / environmental rewards are also currently underway as subsystems that constitute a total system[6].

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[4] In this regard, this can be said to be a harmful effect of an organisation with high cohesiveness. Festinger et al. (1950) made a similar point.

[5] For example, the scandals of Toshiba Corporation have been discussed from various aspects, but Ogasawara (2016) stated that the actual goal congruence being reduced to a mere formality and the systematic concealment activities that violate the law and ethics had been ongoing for multiple years.

[6] Sheng et al. (2022) also argued that by pursuing broader goal congruence with customers, who are entities external to the company, customer satisfaction and loyalty can be increased through

Furthermore, the "social norms" of informal systems outside the company as indicated by Anthony and Govindarajan (2007) are neither written nor quantified[7]. Meanwhile, as represented by the SDGs, social and environmental management in recent years is structured by clear goals (e.g., the 17 targets in the SDGs) and indicators. Essentially, it can be said that management that considers the social and environmental aspects of a company had a strong "protective" tendency, such as following social norms. However, it can be said that this is not the case today, and that is has begun to be regarded as a so-called "part of normal management activities". This is also clear from the fact that companies are re-organizing the formal system, as mentioned earlier. Under these circumstances, the concept of "goal congruence" that forms the basis of management accounting is not present in every circumstance, but in some advanced environments, it is important to re-examine the original meaning and make improvements according to the current situation. In this paper, the concept of goal congruence with new social and environmental elements added is called "environmental goal congruence" [8] due to the most characteristic feature of expanding and deepening the scope of the conventional environment that companies have perceived. Previously, most social and environmental activities by companies were handled in an ad hoc manner by remote departments. Using such a definition of the concept in the future, then there will be a rationale for the activity to develop while being properly positioned within the company-wide activities of the company. It is the author's belief that this is not just a "temporary

value co-creation activities.

[7] On the other hand, Kennedy and Widener (2019) is a study that examines the impact of informal systems within companies on goal congruence. Here, the analysis was based on survey data of 354 employees but did not establish a direct relationship between goal congruence with socializing within the company. But indirect and limited causal relationship was identified.

[8] There may be some readers who find it uncomfortable to redefine the concept of goal congruence by focusing only on social and environmental issues. Put simply, the mere effort toward social and environmental issues by a company tends to contradict (diametrically oppose) the fundamental principle of the activities of the company. More specifically, the necessity of this is as follows: (1) because the company is an economic entity in the first place, (2) these efforts may improve long-term corporate competitiveness, but normally have high costs in the short-term. In principle, companies do not aim to contribute to society and the environment as their primary activity and objective, but rather aim to improve short-term profits and long-term competitiveness. However, it can be said that it is much more difficult to outline a path to bring about such economic effects through efforts toward social and environmental issues compared to that of economic activities. This is because (1) it is difficult to limit the scope and period of influence of such activities, and (2) economic effects are also indirectly brought about. However, what can at least be said at this stage is that activities that put pressure on the "profit" that forms the basis of corporate activities, even in the short-term, are against the principles of the company. Therefore, it can be said that there is a need to expand the concept of goal congruence for social and environmental activities that have finally begun to develop as part of corporate activities in recent years.

effort" but an original way of long-term, continuous, and systematic "social and environmental management". In the next section, the practice of Kirin Holdings will be described as an advanced company toward the realization of such social and environmental management.

3. Design and utilization of environmental management control system at Kirin H.

In this section, the initiatives of Kirin Holdings (henceforth, "Kirin H"[9]) are described as an example of an advanced company that systematically designs and utilizes environmental management control systems.

There are still no companies that have been able to sufficiently implement environmental goal congruence and social / environmental management. However, some efforts and trends toward its realization can be confirmed. In this section, these concepts will be more specifically clarified by analysing the practice of Kirin Holdings (henceforth, "Kirin H"[10]), which is a leading example in this regard.

Kirin H has introduced and utilized the Balanced Score Card since 2004 in order to achieve the vision of group management through adaptation to the external environment (Fujino and Hiki, 2004; Yokota and Senoo, 2010). The Balanced Score Card consists of four perspectives, and the final fourth perspective can be said to be outcome measures from a financial perspective. However, Kirin H thought this tool was limited in its structure of the method.[11] This was because there continued to be periods of time when the final financial perspective did not produce results, no matter how effective the three perspectives that lead to outcomes (learning and growth, internal business process, customer perspectives). This is because the final financial performance index is greatly influenced by the competitive situation of the company in the external market. In this way, Kirin began to gradually emphasize external factors of the company rather than internally-oriented goal congruence.

Meanwhile, Kirin H received social recognition of its various value creation activities and was awarded the Porter Prize in 2010. Afterwards, Mr. Isozaki, who was the present of Kirin Brewery Co. Ltd. at the time (current Kirin H president), met with Dr. Michael Porter and afterwards thought that the idea of CSV will be at the core of Kirin H's strategy in the future. Mr.

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[9] The company introduced a pure holding company system in 2007, launching Kirin Holdings. Therefore, the initiatives prior to this year in this text are only related to those by Kirin Brewery Co., Ltd.

[10] This company introduced a pure holding company system in 2007 and established Kirin H. Therefore, the efforts in the previous year in the main text relate to the efforts of Kirin Brewery Co. Ltd.

[11] The content of the following four paragraphs is based on the content of the two interviews that the authors conducted in 2016 and 2018. The interviewers were Professor Eri Yokota (Keio University), Professor Shoji Oka (Kansai University), and the author; and the interviewee was Hiroyuki Morita (Kirin H Group Management Strategy Chief CSV Promotion Office Manager). The first interview was conducted on June 17, 2016, and the second interview was conducted on February 6, 2018 at the Kirin Group Head Office (Nakano Central Park South, 4-10-2 Nakano, Nakano-ku, Tokyo, 164-0001, Japan). The time was approximately 1.5 hours.

Isozaki then reformed the organisation and established the CSV headquarters in Kirin Co. Ltd. (newly established intermediate holding company that comprehensively handles domestic beverages) in 2013.[12] Then in the next fiscal year in 2014, the CSV Promotion Office (within the Corporate Planning Department) was newly established within the Kirin H group management strategy section.

Initial CSV activities revolved around reconstruction assistance for the Great East Japan Earthquake.[13] At the same time, they began to organize what was usually developed as a corporate activity from the perspective of CSV. CSV began to be developed in long-term plans from fiscal year 2016 (This plan is called "New KV 2021" in Kirin H), and in the following year, this was linked with the three-year medium-term management plan. The CSV domain was then set. Here, areas of high importance for both the company and stakeholders (i.e., double materiality) were identified based on the materiality matrix presented by the Global Reporting Initiative (GRI). Then, in June 2016, the domains of CSV activities for the entire corporate group were set as (1) health, (2) local societies / communities, and (3) environment.[14]

Kirin H has positioned CSV as a means to achieve sustainability in the same way as CSR. The company's ultimate goal is to achieve sustainability, and CSV is a broad concept that includes CSR. Originally, the company has a strong defensive element that is centred on organisational governance in CSR (i.e., the central issue is how to reduce the negative impact of corporate activities on society and the environment), and in that regard, CSV has included CSR elements and positioned the difference between them as stating that CSV aims to improve the company's long-term competitiveness through the development of a wider range of social and environmental activities (i.e., the central issue is how to bring about a positive impact on society, environment, and economy).[15]

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[12] Kirin H was the first in Japan to use "CSV" as a corporate internal department name.

[13] Please refer to Ando (2020) for details in this main text.

[14] This was formulated and released in 2019 as "CSV Purpose", which is a guideline for co-creating value with society and achieving sustainable growth in a total of four domains: these three fields ((1) health, (2) local societies / communities, and (3) environment) and (4) responsibility as an alcohol producer. Then in February 2022, these domains and the icons of SDGs were revised, and (2) local societies / communities was revised to communities. Additionally, the policy was to independently leave each company's own efforts within the group companies. The activity domain is called a group materiality matrix (GMM: management issues for sustainable growth) by the company, and they are brought forth along with business activities of the company as it continues to develop its business in the future. This domain is also positioned as a social and environmental issue that is considered to be the most important in the fields surrounding the activity.

[15] However, currently in the company, these categories are becoming gradually less strict. In the company's Social Contribution Activity Policy, now CSR is positioned to further strengthen its role in strengthening the foundation of CSV management.

Kirin H reviewed the management philosophy in 2019 and declared that the company would be a leading CSV company worldwide in 2027.[16] Here, the basic guideline was set as a CSV Purpose. Opinions from outside the company were actively incorporated, particularly in the formulation of those guidelines.[17] However, the CSV Purpose is just a guideline and is abstract, so it can be interpreted in various ways. Therefore, the company sought to convey what its value specifically means to employees by formulating medium- to long-term management plans and short-term performance evaluation indicators. This has the aim of improving goal congruence on the time axis. Simultaneously, this CSV Purpose and medium-term management plan also reflect the voices outside the company (i.e., external voice), so achieving the goal can ultimately lead to the realization of the external voice. In other words, it can be seen that goal congruence here is not limited to just within the organisation, as in the conventional sense, nor does it only emphasize financial goals (i.e., goal congruence on the time axis / external environmental system axis).

The activities that are aimed at achieving goal congruence within the organisation at a certain point in time are now investigated. Kirin Beverage Co. Ltd., which is a subsidiary of Kirin H, has conducted direct dialogues with employees by President Hideki Horiguchi (at the time) in order to disseminate the company-wide policy of CSV within the company.[18] Particularly in FY2021, the president aimed to have a dialogue with a total of 1,000 people, which he then conducted. Especially during COVID-19, there was progress in the development of information infrastructure, and employees can now freely talk remotely regardless of their location throughout Japan. Eight management teams (top management) were in charge of discussions in groups of 5–6 members. Dialogues involved discussions on CSV management and deepening of mutual understanding. There is no specified moderator, and the management team (top management) first begins to talk about the significance of the company's management, emphasizing health and the

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[16] The content of the following four paragraphs is generally based on the content of the two interviews that were conducted by the author. The interviews were conducted on April 22, 2022 (approximately one hour) and April 25, 2022 (approximately one hour). The interviewer was the author, and the interviewee was Hiroki Kaneda (Kirin H CSV Strategy Department Group Planning Head). Due to COVID-19, the interview was conducted in an online format (using Microsoft Teams). Incidentally, in the main text, this declaration is called "KV2027" within the company.

[17] Specific examples of entities outside the company include investors, business partners, experts, NPO associates, and labor unions. The forum for listening to the opinions of these people is generally called "Stakeholder Engagement", and this is used as a place to incorporate the opinions of various stakeholders surrounding the company. The company holds regular meetings once every three years according to the medium-term management plan and holds irregular meetings about twice a year (first: environment-related themes, second: other themes).

[18] Kirin Beverage Co. Ltd. is one of the major companies that consist of the Kirin Group. Other major companies include Kirin Brewery Co., Ltd., and Kyowa Kirin Co., Ltd.

environment (i.e., importance of CSV). There are some instances where employees are asked to come up with a theme related to CSV prior to the discussion. In such cases, there were some people who wondered, "What will happen if I incorporate CSV into my own work?". Top management may listen to and support such employees' concerns on a one-on-one basis. Meanwhile, there are some employees who feel, "I directly felt CSV through this way!". As various opinions from various departments are raised, employees' understanding of CSV deepens while they engage in mutual learning.

Such two-way dialogues are usually one hour in duration, and the aim of such practices is to have employees perceive CSV as a personal matter. The dialogues aim to deepen employees' understanding of CSV and have them specifically develop them as normal management activities. In Japanese society, under the progress of "work style reform", there is an ongoing trend of devising more ways of working and creating an environment and system that facilitates work. Meanwhile, Kirin H is promoting "work satisfaction reform". Especially after COVID-19, the ideal forms of communication are also changing due to work from home. Kirin Group is making efforts so that each employee can work in a positive manner even when the environment changes. The company believes that improving work satisfaction of employees involves having them reflect once again on their own work, and for each employee to have a deep understanding on an individual level, asking themselves, "Why am I doing this work?" and "What are the specific goals to that end?". Understanding how one's own work is connected to the goals of the entire company and communicating with leaders and members promote various forms of awareness in the employee and leads to ideas that may never have emerged under conventional settings. This can be said to be an effort to harmonize the external environment of the company with the values of individual members (traditional goal congruence by integrating external and internal environmental system axes).

President Horiguchi (at the time) believes that "the source of long-term maintenance and development of a company is in the creativity of its members". He believes that the most important element when conducting company management is to have passion at the individual level and to act independently and creatively. CSV management is a basic policy for the entire group company, but Kirin H is still exploring how to maintain and develop itself under this policy.

4.　Proposal of Environmental Goal Congruence concept

In this section, "environmental goal congruence" is presented as a concept that complements the concept of goal congruence based on the cases described in the previous section. This has the characteristic of expanding and deepening the scope of the environment that is assumed by the conventional goal congruence concept. Its significance and development are

examined based on the case in Section 3.

4-1. Definition and essence of environmental goal congruence concept

As in the previous section, it was shown that the (1) aiming to create shared value (CSV) in the long-term with entities outside the company from short-term value creation with an emphasis on the inside of the company, and (2) aiming to change values and behaviour that are suitable for society through communication with members regarding various methods and issues were important aspects for corporate social and environmental management. Both of these aspects have content that greatly exceed the conventional concept of goal congruence, so a new concept will be created with these aspects (1) and (2) in mind.

First, social and environmental management does not merely extend the scope of the conventional environmental system to the outside, as its name suggests. It has the characteristic of reading the roles that society demands from a company and reconsidering it at all levels of the company (whole company, business divisions, individuals) through relationships with other companies and organisations in society. This process is called "reflection", where the results of actions are reflected upon, and this leads to the improvement of subsequent ways of thinking and actions. In other words, social and environmental management has the characteristic of "expanding and deepening" the scope of conventional corporate systems. Furthermore, the content of this reflection includes not only the daily operational level but also themes related to the *raison d'etre* of the subject as the paramount qualitative issue. This is because ultimately, social and environmental management emphasizes the realization of the management philosophy and aims to harmonize the environment inside and outside the company.

【Figure 3: Expansion and Strengthening of Goal Congruence concept】

Created by author
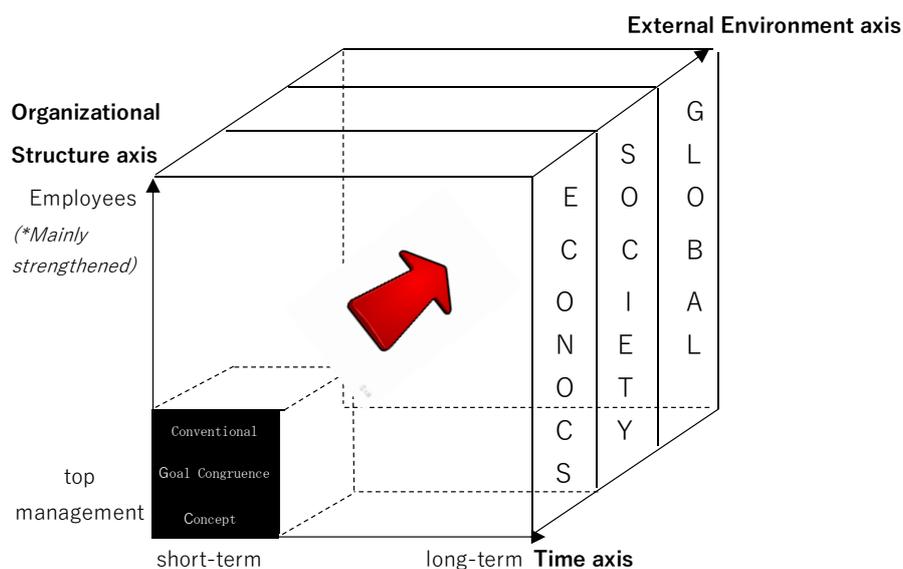
As Drucker (1954) said, the ultimate goal of goal congruence is the "integration of partial and total optimization". There are three major directions for the partial and total here (Reference Fig. 3). These are (1) time axis (long-term, medium-term, short-term level), (2) external environment axis (global environment, social environment, social environment, economic environment and corporate system), and (3) internal environment axis (top, middle, lower and individual members: includes the mindset at the individual member level in the hierarchical relationship within the company according to the conventional concept). Environmental goal congruence extended to the time axis is the integration of partial (short-term) and total (long-term) goals aimed at the realization of the management philosophy. Environmental goal congruence that has been extended to the dimension of the external environment axis has the characteristic of expanding the scope of the corporate environment to social or environmental systems and deepening this value to the (3) mindset of departments and individuals in the internal environment axis. Ultimately, this causes individuals, departments, and organisations to reconsider the way corporate entities should be in society, and try to reflect values that are suitable for the environment and society in the behavioural principles of organisations and individuals. For example, with regards to environmental problems, efforts are made to re-affirm the importance of those issues, which every human being understands as self-evident. In other words, emphasizing the process for value creation on the time axis organically integrates the external environmental system and internal environmental system, and the structure becomes such that the quality of communication between conventional layers is enhanced (i.e., becomes meaningful).

Environmental goal congruence refers to the state of harmony between values and goals between all systems, from the global environmental system of the most expanded external environmental system to the deepest structure of the individual mindset. In other words, environmental goal congruence can be defined as the "tendency to instil the logic, norms, and culture of sustainability (of systems on earth, including corporate entities) into the mindset of individuals working at the company and encourage each member to independently act toward the objective and goal of the higher system".[19] Here, "culture" is a broad concept that includes

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[19] To begin with, a company is an entity that operates with various dilemmas. They aim for growth while balancing between different dimensions and the opposite principles of activities. The essence of environmental management control is environmental goal congruence, but the premise of the situation within the organisation is sectionalism and competition. The Japanese term for environment (環境), has the meaning of "enclosing" (環) the "border" (境), and the objective of environmental management control is to make all systems except that border consistent with the principles of sustainability. The reason why this needs to be consistent is because corporate organisations are essentially oriented toward survival and growth, which leads to much sub-organisational level competition within the organisation, with each entity tending to operate with different principles. The system that controls the management of the principles of

context and social background. For example, the scandals of Toshiba Corporation have been discussed from various aspects, but Ogasawara (2016) stated that the actual goal congruence being reduced to a mere formality and the systematic concealment activities that violate the law and ethics had been ongoing for multiple years. In this way, environmental goal congruence is not just about the pursuit of aggregation; it is also important to harmonize the context inside and outside the organisation.[20]

In essence, environmental goal congruence can be said to have the following three characteristics. The first is the characteristic of expanding and deepening the scope of conventional corporate systems. The scope was conventionally limited to the economic subsystem of a company, but the scope is now expanded to outside the company (economic systems such as industry groups and markets,[21] social systems, global environmental systems). It also has the characteristic of sharing within the company the information and findings obtained through interactions with entities outside the company, and further deepening these to the individual or department mindset level.

The second is the concept that reflects that value of time. Changes in the market environment have accelerated compared to the past, but what is even more important here is not the speed of the change but its quality. As argued by Simons (1995), even if today's companies achieved their goals set at the beginning of the term, they are more likely to be unable to achieve their ideal situation. Here, it is important for each department or individual to independently and flexibly judge and act in order to achieve the ideal situation. Here, one guideline for this ideal

competition and cooperation is environmental management control (*environmental goal congruence is based on the principle of "cooperation"). More specifically, just because it is "environmental" does not necessarily mean that everything is based on principles of cooperation. This is because environmental efforts are also subject to performance evaluation among departments within a company. However, considering the nature of the issues in the first place, it can be said that the global environmental issue itself has a relatively strong cooperative element because this is a common issue for all living things on earth. Meanwhile, there are some cooperative elements in recent economic activities (e.g., open innovation or the formation of industrial clusters). However, if economic growth is constant and constituents want to obtain more economic results, then they will take a share of other entities. Therefore, it can be said that the economic principle has strong competitive principles.

[20] As a result, the cohesiveness of society as a whole will increase.

[21] The most important feature of this axis is the company's environmental goals that are required by society. Given the influence of the SDGs and Japan's carbon-neutral strategy, large companies today are required to formulate and implement long-term environmental plans. It can be said that goals that were set in the higher-level system of the company (i.e., global level, national level, industry level) directly and indirectly affect the company, and that the case study company was required to share the goals that were broken down from society within its own company. In other words, it can be said that this is a congruence of common goals of society as a whole regarding the environment, and corporate goals.

situation is the management philosophy that depicts the purpose of the corporate activities in the first place. However, this is overly abstract, so this needs to be embodied as a medium- to long-term and short-term level (performance evaluation goals) in order to realize this.

The third characteristic is that when members of the company work toward goal congruence with the above-mentioned two characteristics, the quality of communication between members will improve. This is because each individual or department will be able to reposition (reflect on) themselves within the upper-level system that goes beyond the corporate organisation; and through this, they will develop company-wide (highly harmonious) activities in order to create common values for companies and society / global environment[22].

What kind of competitive advantages can an organisation gain by realizing such environmental goal congruence? Konosuke Matsushita, who is the first president of Panasonic Corporation and who has been called the god of management, said that this "enables management where your feet are on the ground, without slipping upwards". Given his position, he was often asked how he could lead his business to success. He said, "We just do the obvious things in an obvious way. Then the business will be in harmony with the principles of nature and be successful" (author's interpretation / translation). Even children are aware of the importance of protecting the environment, even if adults do not loudly proclaim it. However, if people are blinded only by the success of the business, then there is a higher possibility of deviating from the principles of nature.[23] Konosuke Matsushita's words suggest that it is important to work diligently on various issues without bias.

【**Figure 4: Essence of Environmental Goal Congruence**】

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<**Partial (sub-system)**>		<**Total (total system)**>
(1) Corporate System	⟷	Global Environmental System (social system)
(2) Performance Evaluation System	⟷	Management Purpose (management plan)
(3) Individual member's Mindset Structure	⟷	Corporate System (business divisions, departments)
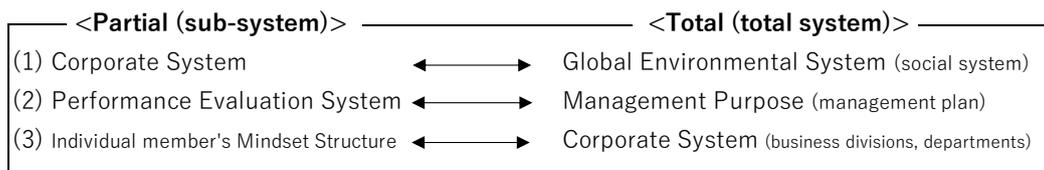
◎**Integration of "Partial Optimization" and "Total Optimization" in Three Dimensions**

Note: The parentheses in each dimension represent the sub-system of the term on the left.

In other words, the essence of environmental goal congruence is in the integration of partial optimization and total optimization in three dimensions (Reference Fig. 4). The first

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[22]A similar argument is made by Müller and Rothermund (2017), who point out the importance of setting goals that are compatible with the characteristics of each employee. They also say congruence between individual implicit motives and goal properties boosts implicit self-regulation.

[23] In this regard, cases of scandals that emphasize only the survival of the corporate entity are suggested.

dimension is the integration of corporate systems and (economic systems, social systems) global environmental systems. The second dimension is the integration of (environmental) performance evaluation systems and (short-term management plan, medium / long-term management plan) management objective systems. The final dimension is the integration of the individual member-level mindset structure and (department, division) corporate systems. It is desirable that the partial contributes to the total, and there is a need for the former to be appropriately positioned, utilized, and developed in the latter. In particular, the third dimension of the integration of the member and company (top management) has been the conventional meaning of goal congruence; however, characteristics in this dimension are the (1) deepening to the mindset structure and (2) expansion of the communication content to corporate activities with the theme of medium- / long-term society and environment.[24] Essentially, environmental goal congruence is characterized with the aim of expanding and strengthening relationships in these three dimensions.

4-2. Potential effects of Environmental Goal Congruence

Meanwhile, the ultimate aim of the management accounting system is to improve the motivation of the members, but what kind of impact can the development of goal congruence have?

Based on Herzberg (1976), "job enrichment" can be expected to improve the motivation (both in terms of quality and amount) of all company members, including managers. The argument made by Herzberg (1976) was originally that motivation for work is increased through an improvement in one's own sense of competence and sense of accomplishment, which is achieved by making members aware of the position of their duties ("partial") in the collaboration system ("total") through the vertical and qualitative expansion of duties. Similarly, Maslow (1970; 1971), who advocated the theory of the hierarchy of needs, can provide evidence to support this

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[24] In axes (1) and (3) in the figure, the total system of (3) is the sub-system of (1), so there is a substantial connection, and (1) is positioned as a higher-level system of (3). The discussion in this paper centered on how foal congruence is suited to changes in the external environment. However, its content is also considered to be suitable for changes in the "internal environment" . Employees are now being treated as equals to companies in terms of their position. In this context, companies are beginning to clarify the purpose of their activities, share values with their employees and try to further evolve the company through the development of their employees. A concrete example of this is the increasing demand for disclosure of human capital information in accordance with ISO 30414 and the introduction of tools and systems for visualizing such resources in companies. This has encouraged companies to put the right people in the right places and made it easier for employees to develop their careers based on labor-management agreements. These are the implication of this third dimension.

claim.[25] Maslow (1970) stated that human needs are mainly composed of five stages, and that when lower-order needs are satisfies, humans act to satisfy higher-order needs. The final level of self-actualization can be further broken down between two levels, consisting of nontranscending self-actualization and transcending self-actualization, the latter of which has greater emphasis on contributing to others (Maslow, 1971).[26] The motivation for members to engage in social and environmental management is not always limited to a need for contributing to others, but these factors are also present to a relative degree. Therefore, for a company to grow sustainably, it is desirable to aim for environmental goal congruence as the members grow.

It can be confirmed that these theories are also applicable to corporate practice. For example, Ando (2021) is a case study of Daiwa House Industry, which showed that the company sought to foster a "pride in work" and cohesiveness (feeling of "being glad to be working at the company") of its members in its process of creating and publishing integrated reports.[27] In either case, the concept of environmental goal congruence shown in this paper is just an ideal type. However, when considering the cases examined in Section 3 of this paper and the cases published in Ando (2020), it can be understood that the latest corporate trends are oriented in this direction.

4-3.   Conventional Goal Congruence concept and contributions to Management Accounting Research

In that case, does this concept of environmental goal congruence merely provide a theoretical basis for the practice of social and environmental management of companies in recent years? It is the author's belief that the following contributions will also be made to the practice of management accounting.

The first contribution that can be indicated is that the development of problem-solving human resources can be promoted. All members of the organisation sharing the *raison d'etre* (management objective) of the corporate entity makes it easier for organisational members to (1) prioritize and (2) act flexibly in an environment with high uncertainty and rapid changes. Specifically, members will be able to make independent decisions and act based on the sharing of values without asking their bosses individually or frequently hold unproductive meetings.

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[25] Although this theory is just a hypothesis and has faced much criticism, its impact on many subsequent studies and the business world is immeasurable.

[26] More specifically, Maslow (1971) states that this state of self-transcendence is a state often seen in very creative and talented people, intelligent people, strong personalities, leading and responsible leaders and managers, virtuous people, etc., who nevertheless did not reach self-actualization. Here, Maslow (1971) also describes the self-actualized as "non-peakers", and the self-transcendent as "peakers".

[27] However, there needs to be continued surveys to see how much of these feelings are actually held by members in the field, even if the company is trying to foster such feelings.

The second contribution is that goal congruence will be easier even in external environments where changes are drastic and directions / prospects are difficult to establish. As stated by Simons (1995), diagnostic control systems are premised on a stable external environment, so it is not necessarily the case that the realization of goals set by each department at the beginning of the term will lead to an ideal situation for the overall company at the end of the term. In seeking environmental goal congruence, each member is encouraged to act while being aware of the long-term goals of the entire company and society and thinking about its implication, and its potential will be even higher. This can be done through the development of problem-solving human resources in the first contribution. If members could independently participate in management activities, then they will be able to find meaning and value in their work, and it may lead to improvements in the decline in the organisational retention rate of young people, which has often been regarded as a problem in recent years.

The third contribution is that environmental goal congruence is a concept that connects a company with the external / internal environment, so scandals will be less likely to occur if this concept can be developed in a concrete manner. This is because this reflects the social culture in the external environment of the company into the consciousness and behaviour of each member. This will increase the continuity and sustainability of the company.

Essentially, "sustainability and survival" (Mizoguchi, 1987), which is the aim of management accounting in today's environment, make contributions to environmental congruence. However, there is no need to orient toward environmental goal congruence (i.e., expanding the goal congruence concept to date) by all companies at all times. In particular, it would be desirable to emphasize environmental goal congruence and develop them specifically in cases of a multinational company with a large scale and world-class activities, or if a strategy for further growth and sustainability of the organisation is needed.

5. Conclusions

In this paper, the essence of the concept of goal congruence was examined, and discussions were provided of how this can be reconstructed in today's corporate environment. The concept of environmental goal congruence was then presented. It can be said that today's corporate environment is characterized by the speed of change and the diversity of quality relative to that in the past. Under these circumstances, it is difficult to demonstrate the original meaning of the concept of goal congruence, which is also the aim of management accounting systems, unless it is expanded and understood. This is because goal congruence is a means of contributing to management objectives. The central function of the management purpose is to enhance the internal control of the company and to bring about the sustainability and development of the entire

organisation through harmony with the external environment. The needs demanded from companies have also diversified, and not all stakeholders are satisfied with achieving economic goals as in the past. First, it is important for the top management of the company to be aware of the diverse needs demanded of from the company through repeated dialogue with various entities outside of the company. Furthermore, organisation members will also be required to understand the company-wide objectives of the company, play a part in this, and act in a flexible manner in response to environmental changes.

Therefore, it is desirable to expand and strengthen the concept of goal congruence in three dimensions. The first is the axis of the external environment dimension. It is not always necessary for every company to tackle all aspects of the economy, society, and global environment at every stage of corporate growth. However, the company can further improve the sustainability and survival of the corporate system by working in a well-balanced manner in the long-term. The second is the time axis. There is a need to reflect the long-term vision of the management objectives, which usually includes a large amount of social and environmental content, into medium-term plans and specifically develop them as short-term management control systems (performance evaluation systems). This means that social and environmental indicators should be introduced into performance evaluation systems in order to strengthen relationships on the time axis. As a result, the specific meaning of the abstract long-term vision can be effectively conveyed to the members. The third axis is the verticality of the organisational structure (from top management to members). It is desirable that all members not only develop performance evaluation systems (formal systems) but also share the context in order to share a long-term vision in an even more substantial manner. To that end, there is a need for higher quality communication (e.g., dialogues themed on the *raison d'etre* of the entire company and the significance of duties at the individual member level). In other words, emphasizing the process for value creation on the time axis results in the organic integration of the external environmental system and internal environmental system, thereby improving the quality (i.e., deepening the significance) of communication between layers. This environmental goal congruence concept, which has this new scope of meaning, was then defined as "tendency to instil the logic, norms, and culture of sustainability into the mindset of individuals working at the organisation; and encourage each member to independently act based on this". In proposing this concept, it was claimed that the "sustainability and survival" (Mizoguchi, 1987) of the organisation, which is the aim of management accounting, was achieved.

The contribution of this study is that it was able to form the theoretical foundation of environmental management accounting. Research on environmental management accounting has been consistent with the logic that designing and utilizing methods and systems contributes to cost reduction in the short-term. This study emphasized the importance of formally and informally

developing long-term perspectives and corporate objectives in the first place. It was argued that companies could acquire new sustainable and competitive advantages, not just cost reductions, through these efforts. At the same time, the main idea of the "importance of the part contributing to the whole" was repeatedly indicated.

This study may also imply the convergence of environmental accounting and management accounting, which were developed almost entirely separately. Management accounting has also evolved from the traditional standard cost accounting to strategic management accounting, and it has turned its attention to outside the company. Similarly, environmental accounting is also shifting its focus to improving long-term corporate competitiveness. To date, environmental accounting has focused on CSR (ad-hoc and special activities by the company) as a theoretical foundation, but today, this is developing into something that is rooted in the logic of ordinary management activities, which is called CSV. In this way, this study suggests that the boundaries between the areas of environmental accounting and management accounting are gradually lowering.

A limitation of the present study is that the results of the practice are unconfirmed due to it being a new practice. Interview surveys showed that (1) improving the quality of communication between members and (2) bringing about the creativity of the organisation beyond that are the aims of CSV practice. It certainly seems that the ideas of CSV have taken root at the individual level in the case study company, and the interviewee stated that a future issue is how to shift that consciousness to practice in the future. Further investigation of the process of such practice, including similar cases, will be a future research subject.

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