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interdependent self-construal**

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Masafumi Fujino *

Professor, Nihon University, College of Economics
3-2 Kanda-Misakicho 1-chome, Chiyoda-ku, Tokyo 101-8360 Japan
e-mail: fujino.masafumi@nihon-u.ac.jp

Yan Li

Associate Professor, Takushoku University
Faculty of Commerce

Norio Sawabe

Professor, Kyoto University
Graduate Schools Management

*Corresponding author

The Melco Foundation

Nagoya, Japan

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Masafumi Fujino*
Professor, Nihon University

Yan Li
Associate Professor, Takushoku University

Norio Sawabe
Professor, Kyoto University

* Corresponding author: Phone: +81 3 3219 3453, E-mail: fujino.masafumi@nihon-u.ac.jp

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Abstract

The aim of this study is to explore the way in which relational role expectation is formed in the relationships between different managers with different performance measures. Drawing on the cross-cultural psychology literature, this study uses the concept of interdependent self-construal as a framework. Interdependent self-construal sees the self as part of an encompassing social relationship, which connotes Eastern collectivism. People with interdependent self-construal seek to put themselves in others' situation, show an empathetic attitude toward others, and internalize socially expected roles. The question that we are interested in here is how managers with the interdependent self-construal relate disaggregated performance measures to relational role expectation through interactions between the managers. To address this question, we select a Japanese manufacturing company as our case site. Our case findings indicate that disaggregated performance measures can lead to a situation in which managers have *oime*, the feeling of being psychologically indebted to others. *Oime* can trigger the process of managers' relational role development. Relational role development is associated with the fact that managers take on roles to try to improve not only their own performance measures but also other managers' ones.

Key words: disaggregated performance measure, role, interdependent self-construal, *oime*, functional manager, case study

1. Introduction

Performance measures may be used to convey to managers what role is expected of them in the organizational hierarchy (Collins, 1982). In parallel with the hierarchical and functional division of roles, performance measures are also disaggregated into departments and individuals (Kaplan & Norton, 2001). The management accounting literature examines how the disaggregation is related to individual managers' understanding of their own roles (Hall, 2008; Dambrin & Robson, 2011). However, little is known about how disaggregated performance measures imply managers' *relational role expectation*, that is, what roles are expected in the relationships between managers. The aim of this study is to explore the way in which relational role expectation is formed in the relationships between different managers with different performance measures.

Prior management accounting literature argues that disaggregated performance measures can give rise to managers' myopic understanding of roles (Lillis, 2002; Hansen, 2010). However, recent studies on the incompleteness of performance measurement systems (PMSs) demonstrate that the low representational quality of disaggregated performance measures is not of major concern for managers (Jordan & Messner, 2012). These studies also illustrate how managers can understand role expectation beyond what is desired by the measures (Ahrens, 1997; Dambrin & Robson, 2011). Ahrens (1997) shows how managers assume roles beyond formal functional boundaries based on their private views. Dambrin and Robson (2012) suggest how managers who face imperfect performance measures understand their roles as ambiguous. These studies focus on the process by which performance measures and individual managers' knowledge and identity influence their own role expectations. However, managers are informed about role expectation also through informal interactions with other managers (Preston, 1986).

Drawing on the cross-cultural psychology literature (Markus & Kitayama, 1991; Kitayama & Karasawa, 1995), this study uses the concept of interdependent self-construal as a framework to analyze the process of forming relational role expectation through interactions between managers. While independent self-construal views the self as independent and separate from the surrounding social context, which is consistent with individualism often observed in the Western society, inter-

dependent self-construal sees the self as part of an encompassing social relationship, which connotes Eastern collectivism (Markus & Kitayama, 1991, Triandis, 1995). People with interdependent self-construal seek to put themselves in others' situation, show an empathetic attitude toward others, and internalize socially expected roles (Kitayama & Karasawa, 1995). The question that we are interested in here is how managers with the interdependent self-construal relate disaggregated performance measures to relational role expectation through interactions between the managers.

The cultural psychological literature argues that the interdependent view of the self has been historically formed in Eastern culture (Markus & Kitayama, 1991). Similarly, the accounting literature suggests that the feature of the collectivism is identified in the historical tradition of manufacturing sites at Japanese firms (Daniel & Reitsperger, 1991; Okano & Suzuki, 2007). To address the research question in this study, we select a Japanese manufacturing company, which we call "Pack," as our case site. About 10 years before our study, Pack removed profit centers from its organization chart. At that time, financial and non-financial measures included in the profit centers were disaggregated into different functional departments and different levels of the departments. Disaggregated performance measures often gave rise to uneven performance results between functional managers (see Lillis, 2002). How did the managers, regardless of such trade-off, reach agreement in the planning meeting and engage in negotiations with other managers? Our findings suggest that managers have an empathetic attitude toward other managers and then take on cross-functional roles to improve other managers' performance. Furthermore, by seeking to fulfill the socially expected roles, managers' capability of playing wider roles beyond that represented by the disaggregated performance measures is developed (Oyabu, 2010).

Our analysis contributes to two strands of literature. First, we contribute to the literature on the role of performance measures in informal interactions (Preston, 1986; Ahrens, 1997; Hall, 2010) by highlighting managers' cooperative behavior from the interdependent view of the self. In particular, we show how taken-for-granted rules in informal interactions imply managers' relational roles. Second, our analysis contributes to prior literature on the effects of imperfect performance measures (Lillis, 2002; Andon, Baxter, & Chua, 2007; Dambrin & Robson,

2011; Chenhall, Hall, & Smith, 2013) by focusing on the process of developing relational roles beyond that represented by such performance measures. While prior research has already mentioned managers' acceptance of ambiguous roles (Dambrin & Robson, 2011), our analysis adds to this literature by showing how other managers' performance measures are associated with the developing process of roles and capabilities.

The remainder of the paper is structured as follows. In the next section, we provide our theoretical framework and literature review. Then, in the third section, we describe our research design regarding data collection and our case site. The fourth section presents findings from our field study. In the sixth section, we discuss the main insight that our study brings to the existing research. In the final section, we conclude.

2. Theoretical framework

The individualism–collectivism contrast has been discussed in diverse fields, such as anthropology, sociology, psychology, and management, in which most of the research focus on which people prioritize individual or group interest (Hofstede, 1980; Triandis, 1995). The accounting literature on national cultures also demonstrates what effects managers' emphasis on group interests has on the use of management control systems (Chow, Kato, & Merchant, 1996; Adler & Chen, 2011). However, some psychological studies argue that people's behavior, such as sacrificing self-interest for the benefit of the group, come from not personal propensity but cultural and historical features embedded in the social structure (Yamagishi, 1999). Based on the cross-cultural psychology literature, this study adopts cultural construal of the self as a theoretical framework.

2.1 Independent and interdependent construal of the self

Markus and Kitayama (1991) suggest that cultural construal of the self gives meaning to things and provides a frame for people's thinking, feeling, and acting. Self-construal can affect the way in which organizational members understand their relationships with superiors, peers, and subordinates. The literature on cross-cultural psychology distinguishes between independent and interdependent self-construals

(Markus & Kitayama, 1991; Triandis, 1995). The independent construal of the self views the person as “a bounded, unique, more or less integrated motivational and cognitive universe, a dynamic center of awareness, emotion, judgement, and action organized into a distinctive whole and set contrastively both against other such wholes and against a social natural background” (Geertz, 1975, p. 48). Thus, an individual is seen as a self-contained entity who comprises a unique configuration of internal attributes (e.g., abilities, opinions, judgments, and competencies). The normative imperative of the independent self-construal is to discover and express such unique internal attributes (Markus & Kitayama, 1991).

For managers with independent self-construal, performance measures can function as an instrument for highlighting the uniqueness of their internal attributes. Roberts (1991) suggests that accounting is an instrument for “a restless and endless comparison and differentiation of self from others” (p. 360). The motives of managers with independent self-construal are linked to self-esteem and self-enhancement. Some psychological studies show that independent self-construal involves a tendency to need to identify managers’ favorable attributes (Kitayama, Markus, Matsumoto, and Norasakkunkit, 1997; Hein et al., 2001). Achieving performance objectives helps managers express their favorable attributes, and therefore, is regarded as one of the best representative forms of self-enhancement.

Even people with independent self-construal should be responsive to the social environment (Fiske, 1991). This responsiveness is often derived from the need to strategically determine the best way to express their internal attributes (Markus & Kitayama, 1991). When the high degree of interdependency causes an individual’s performance to be subject to others’ performance, disaggregated performance measures are likely to provide inadequate representation of his/her favorable attributes (Lillis, 2002). To improve the representation, managers with independent self-construal may seek further information and engage in interactions with others.

The management accounting literature explains how performance measures can generate interactions among managers, for example, as follows: “managers depend on others to achieve their performance objectives, and spend much of their time coaxing other units to act on their behalf” (Dent, 1987, p. 137). Similarly, Frow, Marginson, and Ogden (2005) illustrate that it is essential for managers “to find a

way of influencing the behavior of others so as to enable achievement of their own individual targets” (p. 280). These explanations suggest that managers use interactions as a means of improvement by self-enhancing expression of their internal attributes. Hamaguchi (1988) argues that people with independent self-construal should dissolve interpersonal relations if the relations become useless for them. If managers secure better representation and are satisfied with it, then the interactions mentioned in the above management accounting literature might discontinue.

On the other hand, the interdependent construal of the self views the person as “part of an encompassing social relationship and recognizing that one’s best behavior is determined, contingent on, and, to a large extent, organized by what the actor perceives to be the thoughts, feelings, and actions of others in the relationship” (Geertz, 1975, p. 227). This view features the person not as separate from the social context but as more connected with and less differentiated from others. The normative imperative of interdependent self-construal is to maintain relationships among individuals (Markus & Kitayama, 1991).

People with the interdependent self-construal understand their internal attributes as relational. Internal attributes, such as abilities, judgements, and opinions, are assigned only secondary positions. While people with independent self-construal need interactions for the expression of their attributes, people with the interdependent self-construal control and regulate their attributes to accept the roles desired in the interactions. Managers with interdependent self-construal are motivated to find a way to blend in with relevant others and to gain and fulfill the roles expected in the relationship with others. Performance measures are linked not to the expression of managers’ internal attributes but to the role expectation in their relationship.

In the formation of the interdependent self, others become an integral part of the context to which the self is connected, fitted, and absorbed. The manner in which an individual perform the roles desired in the relationship depends on the nature of the context and the others present in the context. Therefore, managers with interdependent self-construal are constantly aware of others and focus on their needs and goals. This focus may bring the experience of seeing others’ goals as a part of personal goals. As well as managers’ own performance measures, others’ measures may allow managers to understand the goals of others. Caring about and fulfilling

others' performance objectives may be a necessary requirement for satisfying managers' own goals. However, this is premised on the reasonable expectation that interdependent others could attend to the goals of the managers. People with interdependent self-construal do not necessarily pay attention to the goals of all others.

2.2 Behavioral patterns of interdependent self-construal

Interdependent self-construal shows two dimensions of behavioral patterns: role orientation and empathetic attitude. Role orientation is seeking to internalize the roles expected in the relationship and to fulfill them (Kitayama & Karasawa, 1995). For an individual with interdependent self-construal, seeking to live up to the expectations of others around him/her is an indication of his/her intention to be actively involved with them. On the contrary, when an individual with interdependent self-construal is independent and separate from the role structure within the relationship, he/she experiences lack of stability and loss of identity (Lebra, 1976; Plath, 1980; Azuma, 1994).

Role orientation is related to striving toward what is socially desired, a part of which is represented as the performance objectives of both an individual's and others' measures. This behavior entails a self-criticizing tendency to identify some deviations from what is socially desired as drawbacks and shortcomings (Kitayama et al., 1997). While people with independent self-construal are motivated to evaluate their favorable attributes with a self-enhancing tendency, people with interdependent self-construal are encouraged to find their negative attributes with a self-criticizing tendency, and then to correct them through constant efforts. A feature of this self-criticizing tendency is that it suggests that an average feeling that one can do at least what is expected from others can provide a basis for the satisfaction of people with interdependent self-construal (Kitayama & Karasawa, 1995).

Role orientation may involve a receptive attitude in that people seek to fit themselves into what is socially expected. However, role orientation is not necessarily seen as passive and compulsory (Azuma, 1994). People are allowed to gain their roles in the relationship actively (Nakane, 1970; Azuma, 1994). Since what is socially desired is changeable in nature, the process of striving to minimize the deviation can continue endlessly. This process is positively perceived as

self-improving in terms of interdependent self-construal (Kitayama & Karasawa, 1995). People who can sense what is expected and act that way with no regard to initially assigned roles are often called “attentive.” Obtaining competence as an attentive person through the self-improving process is recognized as a part of the capability development process of future managers (Oyabu, 2009).

An empathetic attitude is related to interactions in which an individual places himself/herself in others’ positions and tries to understand their feelings (Kitayama & Karasawa, 1995). People with interdependent self-construal seek to project their actions and judgements onto others’ situations. Maintaining relationships and ensuring harmonious interactions require full understanding of others, that is, knowing how they are feeling, thinking, and likely to act in the context of the relationship (Markus & Kitayama, 1991). An empathetic attitude entails interpersonal skills that help people maintain emotional and personal relationships with others.

When an individual has an empathetic attitude toward others, there is often an element of reciprocity: he/she expects that others will show the same attitude toward him/her, too. The expectation of trust and gratitude from others is one of the elements that can bring a sense of relief for people with the interdependent self-construal. In the boss–subordinate relationship, the delegation of power to the subordinate is understood as a form of trust from the boss and raise the morale of the subordinate.

Role orientation and empathetic attitude can be paradoxical (Kitayama & Karasawa, 1995). In particular, if an individual excessively seeks role orientation, he/she cannot afford to show sensitivity to others. By contrast, if strong empathy is evident, favoritism may prevail. However, people with interdependent self-construal conceive these two dimensions as mutually complementary. The integration of role orientation and empathetic attitude is illustrated by Kitayama and Karasawa (1995) as follows: “since one places oneself in others’ positions and understands that the others should be in trouble and feel sadness if one fails to fulfill roles for the others, one is motivated to internalize the roles socially expected” (p. 141).

Role orientation and empathetic attitude can constitute morality for those with interdependent self-construal. When people fail to adopt role-oriented and empathetic behavior, they would have *oime*, the feeling of being psychologically indebted

to others (Markus & Kitayama, 1991; Kitayama & Karasawa, 1995). *Oime* involves the strong feeling of unpleasantness, which suggests the aversive nature of unmet obligations and the press of the need to fulfill one's obligations to others and to return favours. People with interdependent self-construal do not always have *oime* to all others. *Oime* tends to emerge only when, for example, an individual cannot meet the expectations of others who accept wider roles themselves and place a lot of trust in him/her. *Oime* also underscores the significance of balanced and harmonious relationships in the life of people with interdependent self-construal (Markus & Kitayama, 1991).

2.3 Performance measurement systems and roles

A PMS may be used to inform organizational members what is expected of them in their roles (Collins, 1982). Here, a role refers to a set of regular and enduring behavior pertaining to a particular task or social function (Katz & Kahn, 1967). The recent literature on PMS demonstrates that PMS affects the extent to which managers understand their role expectations (Franco-Santos, Lucianetti, & Bourne, 2012). Some studies examine to what extent the design characteristics of PMS, such as its comprehensiveness and the number of performance measures, affect managers' understanding of what role is expected of them (Burney & Widener, 2007; Hall, 2008). Others suggest the extent of the effect that individuals' experiences and their perceptions of goal difficulty have on the association between PMS and role expectation (Burney & Widener, 2007; Cheng, Luckett, & Mahama, 2007).

Research on role stress argues that, when performance indicators inform a focal person of two (or more) roles simultaneously, or the existence of the lack of agreement among roles, it may cause organizational stress, such as role conflict or ambiguity (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964; Lock et al., 1994; Cheng et al., 2007). Hierarchical organization disaggregates strategic performance indicators into operational indicators of its subordinate units (Kaplan & Norton, 2001). Thus, it is considered that disaggregated performance indicators could mitigate such organizational stress, because they may define a focal person's role narrowly.

Disaggregated performance measures have its own shortcomings. Prior research on PMS has long illustrated that disaggregated performance measures face

the problem of representational incompleteness, which means that disaggregated performance indicators cannot reflect the implications of the complex patterns of interrelated activities (Hopwood, 1973; Lillis, 2002). Lillis (2002) and Hansen (2010) address how such complex interrelations can be designed into individual performance measures.

To improve PMS's representational quality, some studies focus on the design characteristics of PMS. Hall (2008) suggests that comprehensive PMS can positively affect managers' understanding of their roles, as it provides information of cross-functional relationships and the role of a subunit within the whole organization. The richness of information quantity, information flow channel, and use of non-financial indicators as a part of interactive control process are also considered important factors in designing and using PMS to improve the clarity of organizational members' understanding of their roles (Marginson, 2006; Marginson, McAulay, Roush, & Van Zijl, 2014). These studies consider the perspective of top management and strategic business unit (SBU) managers rather than a functionally disaggregated viewpoint. It is still unclear how these sophisticated design characteristics reduce managers' role stress at the disaggregated functional level (see also Lillis, 2002).

According to Collins (1982), social context should be considered in the process of the management accounting system informing organizational members about their role expectations. Jordan and Messner (2012) argue that disaggregated performance measures are problematic not because of their low representational quality but because of the context in which managers use the measures. Recent literature sheds more light on the context in which PMS is used by managers, and demonstrates that disaggregated incomplete performance measures might have influence on managers' understanding of their roles. Dambrin and Robson (2011) argue that incomplete performance measures are associated with the acceptance of ambivalent roles. Dambrin and Robson (2011) illustrate that, in a case study of the French pharmaceutical industry, pharmaceutical sales representatives can express their identity as both medical professionals and salespeople. Even though the two roles remain ambiguous, managers accept their co-existence in the process of their *enrolment* in the performative networks, which involves various actors, including in-

complete performance measures.

Instead of formal information systems, managers might be informed about their roles through informal channels (Preston, 1986; Hall, 2010). Preston (1986) argues that managers inform each other through the arrangement of informal social order. Managers place considerable value on the arrangements in order to perform their roles and to be seen well informed in the eyes of others. Taken-for-granted rules of reciprocity form the basis of the informing process. To be reliably and accurately informed, managers have to in turn reliably and accurately inform others. Preston (1986) illustrates how informal interactions help managers understand their roles in the reciprocal interactions.

Chenhall et al. (2013), drawing on a case study of a non-government organization, address how incomplete PMS can sustain continuous interactions between managers. Even when managers focus on competing strategic objectives, they can continue to be involved in “give-and-take” relationship, and the continuous interactions can create a fertile arena for productive debate. An important feature of this process that enable organized dissonance (Stark 2009) is what Chenhall et al. (2013) call “concurrent visibility.” Concurrent visibility refers to the process of organizational members making visible the attributes of accounts that are important to organizational actors with different evaluative principles (Chenhall et al, 2013, p.269). They argue that concurrent visibility can provide confirmation and reassurance that a particular mode of evaluation is recognized and respected.

As noted in the previous subsections, the nature of an individual’s relationship and attitude to others is fundamentally different between independent and interdependent self-construals. For people with independent self-construal, interactions with others are seen as a means of expressing their internal attributes. Although Preston (1986) argues that managers understand their roles in the interactions with others, he also suggests that the interactions are regarded as a means of obtaining valuable information from others. Chenhall et al. (2013) illustrate that concurrent visibility is created through the continuous relationship between managers with different principles. However, this process rests on the premise that individual managers seek to express the desired features of their own principles.

By contrast, interdependent self-construal characterises the individual not as

separate from the social context but more connected and less differentiated from others, and therefore, maintaining the relationships among individuals itself becomes the normative imperative.

From the perspective of interdependent self-construal, this study addresses how managers take not only their own performance goals but also other managers' performance goals into consideration and how role orientation and empathetic attitude are integrated in the design and use of PMS.

3. Research design

3.1 Case company

Data were collected from a case-based field study at "Pack," the packaging manufacturing company in our study. We adopted a case study approach because we focus on the detailed process by which managers with interdependent self-construal deal with disaggregated performance measures.

Pack manufactures and sells packaging products, such as paper cups, food containers, and plastic items. Its head office is located in Tokyo, and it has one R&D center, five factories, and four sales representative offices in different parts of Japan. As of 2012, Pack employed approximately 1200 people and generated about 60 billion yen (500 million euros) of sales revenue. Pack's sales revenue continued to increase slightly but steadily during our study.

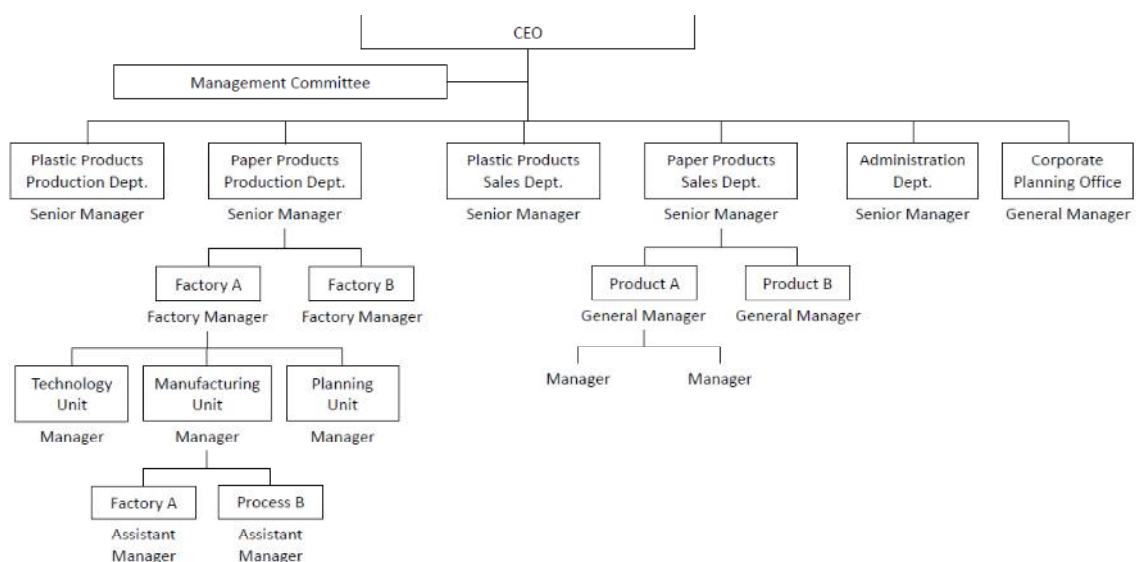
Pack is a packaging supplier with over 70 years of experience. Pack holds the largest share (about 55%) of the domestic paper packaging market, which gives it a dominant position (the second-place with 20% market share). Pack's competitive advantage is its large-scale production capacity of high-quality products and its relationship of trust with its customers developed over years.

Since it is well established that Japanese firms tend to have significant features of collectivism (Chow, Kato, & Merchant, 1996; Okano & Suzuki 2007), a Japanese manufacturing company, like our case company Pack, should be viewed as a suitable setting for exploring the significance of collectivism on the relationship between disaggregated performance measures and managers' role expectations. In particular, most managers and employees at Pack joined the company soon after graduating from universities and high schools and then worked for several decades until re-

irement age. Actually, some managers interviewed entered Pack in their early 20s and were supposed to reach retirement age within a few years. Young managers have such managers around them and take it for granted that they will follow suit. This work environment is likely to be appropriate for the purpose of our study to observe long-term relationships among managers and to investigate how they understand the relationships.

Figure 1 shows Pack’s functionally differentiated organizational structure. Under a president and management committee, departments for sales, production, development, and administration are differentiated. Two different sales departments sell products manufactured using different materials. Each sales department has several sections. There are also two production departments. Geographically dispersed factories are placed under each production department. Each factory has a factory manager. The factory manager supervise three sub-functional units: Technology Unit is responsible for infrastructure and equipment; Manufacturing Unit for production processes; and Planning Unit for production planning and material procurement. Furthermore, Manufacturing Unit has managerial hierarchy which consists of a manager, assistant managers, and chiefs.

Figure 1 Functional organization of Pack



Source: Compiled by the authors from internal documents of Pack

We discussed our research interest with business support staff and then selected as our main research site one sales section and one factory that are in charge of the same product category. In this product category, managers face day-to-day customer requests to change order quantity and make delivery dates sooner. To deal with the requests, close cooperation between the sales section and factory is needed. This factory is the oldest among Pack's factories. There are many operators with longevity at this factory. In our interview, a manager who was recently transferred from another factory said, "There are many masters here."

As shown in Figure 1, there are several organizational layers under both the sales and production departments. To show managers' hierarchical relationships, the figure depicts the layers and managers in each layer. The managers, however, are not included in the organizational chart originally provided by Pack. The original chart shows only boxes for each department and section and lines between the boxes. An organizational chart without managers is one of the characteristics of Japanese management (Yoshino, 1968). From the perspective of interdependent self-construal, this style of organizational chart, which shows only departmental relationships, may represent one of the features of role orientation in that managers should find their roles in the given relationships.

3.2 Data collection

Data collection was conducted over 3 years from June 2010 to June 2013. Our deadline was unspecified, and we kept in touch with the company throughout. The data for the study were collected from three primary sources (interviews, documentation, and archival documents) and two secondary sources (a published company history and in-house journals). The use of multiple sources of evidence enabled a comprehensive exploration of the organization's performance measurement procedures and practices.

Interviews were held at Pack's head office and factories and consisted of three parts, between which there was some overlap. The dates and times of the interviews and the identities of the interviewees are listed in Appendix A. First, a series of pilot interviews was held with corporate planning staff at the head office. These interviews explored issues regarding company strategy and PMSs, providing the basis

for the later, more focused research agenda. Second, we conducted interviews with an executive director who helped to develop Pack's management systems over decades. His experience, along with the internal documentation and archival documents, deepened our understanding of the background to and current problems with the PMSs. The third and main part consisted of interviews with functional managers. We conducted interviews with sales managers at the head office and with production managers and assistant managers at three factories. The sales department and one of the three factories (Factory C) engage in the business of the abovementioned product category. We focused on the middle and middle-lower managers, because they directly interact with each other on a day-to-day basis to respond quickly to customer requests. Interview data quoted were all obtained during the interviews held at the sales department and Factory C. All interviews were recorded. Interview summaries were prepared after each interview in Part 1. All interviews in Parts 2 and 3 were transcribed later.

We also used documentation, such as organizational charts (for the entire company and the factories), strategic analyses, and the former management accounting system implementation. We also obtained copies of archival documents, such as the former and current middle-range plans, departmental performance reports, the annual factory policy, and the factories' monthly performance reports. Appendix B presents a list of these documents.

Data analysis was carried out in an abductive way, that is, by going back and forth between empirical data and theoretical concepts until we reached the development of a theorized story (Lukka & Modell, 2010). First, we sought to understand the whole picture of the case company. In particular, by having a series of discussions with corporate planning staff as well as the Part 1 interviews, we realized that, in some cases, disaggregated performance measures could bring about various problems in relation to coordination between functional managers, but in other cases, could facilitate coordination. To understand the logic of practice (Czarniawska, 2001) associated with disaggregated performance measures, we conducted interviews with the executive director in Part 2 and with middle and middle-lower managers from sales and production departments in Part 3. As shown in Appendix A, Parts 1, 2, and 3 include partly overlapped processes, in which managers and re-

searchers had a series of discussion on Pack's performance measurement. The discussion process can help us seek reflexivity in this interpretive case study and make sense of our empirical data in an abductive manner. Through taking these steps, we realized that some elements of Japanese collectivistic values are plausible for explaining the surprising theoretical empirics regarding disaggregated performance measures. We also sought to enhance authenticity by asking iterative questions of several interviewees about the same topic (Lukka & Modell, 2010).

4. Case findings

4.1 Disaggregated performance measures

Pack used to have a divisional structure in which each division had sales and production departments up until the early 2000s. Under the divisional structure, sales and production managers of a division shared same performance targets set in their divisional income statement.

The divisional structure was taken over by a functional divided structure illustrated in the figure 1 in 2004. According to an internal document, "in order to make clear departmental performance accountability," the division structure was abolished. Since the introduction of new functionally divided organizational structure, the sales and production departments report directly to the top management. Revenue and cost items that used to be included in the former divisional income statements are now disaggregated and attributed to each department.

Sales revenues and contribution margins are made accountable for the sales departments. Sales managers perceive that they are required to get as many orders as possible without taking the effects on production fixed costs into consideration.

Our performance, in the performance sheets we regularly make, is measured, in terms of numbers, by sales revenues, and marginal profits. Our profits are calculated by subtracting standard [variable] costs from sales revenues, so they are [in practice] never negative. (Senior Sales Manager)

Probably I should put profits the first, but actually, I make sales the first. (Sales Manager)

Cost metrics, such as variable and fixed manufacturing costs, are made accountable for production departments. Pack categorizes labor costs as well as depreciation costs into fixed costs. Production managers recognize that factory per-

formance reports, which do not include sales revenues, convey the message that they are not accountable for revenues. They understand that the new performance measures, i.e., various cost metrics, urges them to focus on cost reduction and production efficiency.

We increase productivity as one of our metrics. For example, as a mission, we have to reduce fixed costs and then make profits.

Non-financial measures are also disaggregated and made accountable for sales and production departments. For example, sales departments became accountable for product stock turnover rates, while production departments are for capacity utilization rates and defect rates. In the production departments, performance measures are further disaggregated hierarchically: labor costs and depreciation costs to production managers and capacity utilization rates and defect rates to production assistant managers.

The new functionally divided structure which replaced the old divisional structure draw a boundary between sales and production departments. In parallel with the organizational structural change, financial and non-financial performance measures are disaggregated and made accountable for each department. With these arrangements, both sales and production managers understands that their performances are evaluated on the basis of the disaggregated measures.

Stretched performance targets are set by Pack in the middle range plan. Those targets are cascaded down to lower management level in annual budgets. The stretched targets in the annual budget remains unchanged during the year. The demand of packages for dairy products, which is the main market for the departments that we study, changes unpredictably. Both sales and production managers should achieve stretched and fixed targets in changing market demands. They believe that they do not have time to wait for top management's commands to keep up with changing market demands. Instead of waiting for top management commands, functional managers take initiatives to fine-tune operational parameters, such as production schedules, labor hours, and delivery dates.

Adjusting to changing market demands means to Pack that it should meet sudden increase in order size with a tight delivery schedule, which often results in exceeding the planned production capacity. Producing greater volumes of orders than

planned within a short delivery period would generate a positive impact on the performance of sales departments and, by contrast, a negative impact on that of production departments with the disaggregated performance measures set at Pack. Sales managers enjoy the improved sales revenues and marginal profits from the acceptance of such orders. By contrast, production managers often need to accept lower production efficiency and increased fixed costs because, for example, quicker delivery orders cause extra work and thereby increase labor costs that is a part of fixed production costs. Functional managers understand that these demanding orders would bring uneven performance results to sales and production managers.

In summary, functional managers understand that disaggregated performance measures require sales managers to increase the quantity of orders and sales revenues, and production managers to improve production efficiency. However, responding to market changes can cause uneven performance results between sales and production managers, which could give rise to myopic role understandings by functional managers (Lillis 2002, Hansen 2010). If managers at the Pack understood their role myopically, it could have become difficult for them to coordinate their activities to meet with the changing market demands. It turns out at Pack that the myopic role understanding that is consistent with what is represented by the disaggregated performance measures does not take place. On the contrary, disaggregated performance measures activate social interactions that facilitate managers to conceive wider role perceptions than what is represented by the disaggregated performance measures.

4.2 Role orientation, empathy and *Oime* (indebtedness to others)

While production managers should face low performance due to their responses to demanding requests, they showed an empathetic attitude toward sales managers (Kitayama & Karasawa, 1995). Production managers understand how sales managers think in the context of changing market demands, and thus, in combination with their role orientation, they assume roles expected in the relationship with sales managers that resulted in the lower production efficiency.

Production managers understand that stretched targets are imposed on sales managers and show their sensitivity to sales managers' tough situation. In the inter-

views, several production managers mentioned such consideration for sales managers' position as follows:

I know, salespeople work hard because they are told to sell as many products as possible. (Production manager)

The demanded quantity very often changes a lot. We talk with salespeople about that, but, in their shoes, the sales quotas are raised and they are also struggling to deal with them ... (Production manager)

Production managers place themselves in sales managers' positions and understand that sales managers should be in trouble if production managers fail to fulfil their roles. Based on this sensitivity, production managers internalise the roles expected in the relationship with sales managers. A production manager explains his expected roles as follows:

Sales told us they are getting this kind of orders, which would increase labour costs and require holiday work. If we meet deadline as we were told, it might be good this month. But next month, if they failed to receive the orders, we might have idle capacity. [...] Budget was made. But it is a given fact that actual production would deviate from the budget. "A given fact" might be an overstatement. At the factory, the deviation is an unspoken agreement. We all know that. We respond to changes. We feel responding to changes is our job. (Production manager)

As this quote shows, while production managers understand the decrease in their performance, they perceive the response to market changes required by sales managers as one of their roles. However, because of the limitation of production capacity, production managers sometimes fail to meet the expected roles. Production managers have a self-criticizing tendency to identify this deviation from what is expected by sales managers as their shortcomings.

Thanks to explosive sales power, we can make business sense. Nowadays everyone is devoted to sales. But within the company, production capacity is strictly limited. Even if we want to respond, we cannot do sometimes. It's painful. (Production manager)

On the other hand, some sales managers take an empathetic attitude and understand production managers' situation. Sales managers have *oime*, the feeling of indebtedness (Markus & Kitayama, 1991), in that production managers show sensitivity to sales managers and their role orientation made them assume a socially expected role in spite of the decrease in production efficiency. The uneven improve-

ment of performance favorable only to sales managers further strengthens sales managers' *oime*. In an interview, one sales manager explained the uneven performance results in the changing market demands. He emphasizes the importance of understanding production managers' position:

We exceed sales targets and profit targets. We are happy to receive a good evaluation. But on the production side, when sales increases, it becomes more costly for them. Their evaluation becomes lower. [...] When I talk with, for example, a production manager, what I actually hear him saying is that "I envy salespeople. If something good happens, they can enjoy it." [...] We can't do our job if we don't understand manufacturing. (Sales Manager)

This sales manager believes that his performance improvement was derived not only from his own efforts to obtain more orders but also from production managers' acceptance of the changes of production schedules and of the decrease in production efficiency. In addition, another sales manager expresses *oime* because he proposed inaccurate sales forecasts in the process of making the middle-range plan.

This is partly our fault. Sales dropped last year. That's why it's true that we prepared a sales budget in a weak attitude. (Sales General Manager)

This manager understands that the reason production managers are reluctant to accept urgent orders is that they were requested to reduce their production capacity. The request was based on the forecasts prepared by sales managers in which estimated sales revenues was lower than it should have been. At the time of the middle range planning where the forecasts were used, it should have been difficult to anticipate the subsequent demand surge. One sales manager explains a factor that could influence the change of demands as follows:

Early this year, [Dairy Product A] was covered by a TV program on NHK¹ because of its immune function. After that, there was a boom in demand, which continued until late June. But then, temperatures went up, and so consumers are not eating such sugary and gooey foods. (Sales Manager)

As this quotation shows, because of such unforeseen events at the planning stage as television broadcasts and weather, it is very difficult to accurately forecast market demands in this product category. At Pack, it is a norm that inaccurate sales forecast should not be blamed on sales managers. Sales managers are not regarded

¹ NHK is the only public broadcast station in Japan.

responsible nor formally accused for this kind of inaccurate sales forecast. Nevertheless, as the above quotation shows, the sales general manager tells us that the inaccurate forecasts are “our fault.”

At Pack, sales managers express that it is their fault to inaccurately forecast market demands, which resulted in deteriorating production managers’ performance, rather than their own. The expression of responsibility “our fault” is associated with the feeling of *oime*. The feeling of *oime* comes from sales managers’ sensitivity to the situation in which production managers suffer from deteriorating production efficiency. The deterioration of the production efficiency does not occur if sales forecast was accurate. It does not take place if production managers refused to cope with the increased market demands. In reality, sales managers prepared inaccurate forecast which resulted in smaller planned production capacity in the mid-range plan, nevertheless role orientation of production manager made them assume socially expected role to increase production volume to cope with the sudden surge of market demand, which resulted in uneven performance favorable only to sales managers. Sales managers understood in this situation that they were given the gift of production managers’ sensitivity. According to Markus and Kitayama (1991), people with interdependent self-construal have *oime* when they do not fulfill the roles associated with being interdependent with relevant others. Sales managers understand that it is a part of their role in the relationship with the production managers to prepare accurate forecast. They felt *oime* to production managers for the failure to get it right.

4.3 Empathetic managers take on cross-functional roles

Sales managers have *oime*, a feeling of indebtedness, to production managers and, through formal and informal interactions, try to show sensitivity to production managers’ lower performance. One example of their sensitivity at Pack is observed in the process of monthly production planning. Production managers prepare a draft of production plans in which they select a particular product groups, which they call “*Priority Specs*”. *Priority Specs* are these product groups whose market demands are expected to be very high for the immediate months so that they are likely to cause shortage of production capacity. Between 5 to 10% of product groups are selected as *Priority Specs*. In order to meet with the increased production volume which ex-

ceeds the originally planned production capacity, *Priority Spec* requires specially arranged operation such as “*break-time operation*”. would not stop production.

Specifying *Priority Specs* in the monthly production plans help production managers to arrange production schedules so they increase production volume while controlling the labour costs as low as possible.

Production managers bring up the monthly production plan proposal at the sales–production meeting. Both sales and production managers participate in the meeting and reach agreement on the production plan with *Priority Specs*. In most cases, the proposal was adopted with only minor changes. The selection of *Priority Specs* is beneficial also for sales managers in that the factory ensures the increase of production outputs in line with market demand.

However, production scheduling for *Priority Specs* causes the increase in product stocks, which is likely to generate a negative effect on sales managers’ non-financial measures, such as stock turnover rates. Sales managers understand that they have to accept the increase in product stocks due to the abovementioned production scheduling. Knowledge about production scheduling for *Priority Specs* operations is needed. In an interview, one sales manager explained as follows:

To produce a *Priority Specs*, lot change and reassignment of molding machines and operators entails sacrifice. Other products may be not able to be manufactured in this time. To deal with *Priority Specs* for 3 months, other products cannot be produced for 3 months. So, a stock for the 3 months is needed. This gives rise to the increase of stock turnover rates (Sales Manager).

The same sales manager further described the necessity of rapid cooperation with production managers to manage stock levels. Then, he stated that the sensitivity to the production side beyond the functional border is a part of sales managers’ role.

There doesn’t seem to be a clear division of roles. Hearing from other companies in the same industry, they actually have clearly specified division of roles. But in our company, unless we act with good tact, things don’t go well. (Sales Manager)

Sales managers’ sensitivity is also observed in the way they engage in direct communication with managers of Manufacturing Unit at a factory of a production department (manufacturing manager hereafter, see Figure 1) when sales managers encounter sudden market demand that is not incorporated in the monthly production plan. Planning Unit at the factory is in charge of daily coordination between sales

and production departments. The planning manager receives order information from sales managers daily and makes production schedules.

When sales managers need to accept orders that is likely to adversely affect production performance, sales managers, without waiting for the planning manager's initiative to coordinate two departments, communicate directly with the manufacturing manager at the factory shop floor. Sales managers seek what options they have to alleviate adverse effects on the side of production department. This is because the manufacturing manager and his subordinates actually accept negative effects on their performance.

In the communication, sales managers understand that a part of their role expected by the manufacturing manager is to alleviate the adverse effects on the performance of Manufacturing Unit. In an interview, a sales manager mentioned that he informs the manufacturing manager about changes in client demands directly to the manufacturing manager as soon as he gets the information. He understand that earlier the information, easier it should for the manufacturing manager to rearrange production schedules without damaging production efficiency.

Our clients have a monthly production planning meeting around this day every month. [...] We get into their planning process and then obtain the information. We bring the information back to our office and in turn inform our production planning meeting. (Sales manager)

If sales managers offer something helpful to prevent deteriorating production efficiency, the manufacturing manager might as well accept sales managers' requests, even though they involve changes of production schedules. The manufacturing manager told us as follows:

I know salespeople have to think about customer delivery, but there is an excessively wide variety of products. So, if they allow us to produce only a certain set of products continuously in the same lot size and thereby a number of lot changes decreases, we ensure the (required) production output volume. I want them to make such arrangements. (Manufacturing Manager)

As this quote shows, the manufacturing manager hope sales managers to rearrange customer deliveries in exchange for the acceptance of sales managers' requests. The rearrangement allows for serial production without changes in the number of production lots, which helps the manufacturing manager to improve capacity utilization rates and avoid labor cost overruns.

The rearrangement can disturb sales managers' efforts to seek higher customer responsiveness. However, sales managers know that the manufacturing manager is prepared to risk production efficiency to meet urgent orders. Therefore, sales managers also take risk to deteriorate responsiveness performance.

This compensation offered by the sales manager is usually not large enough to offset the damage borne by the production managers' side. This is not regarded as an even exchange when measured by their disaggregated performance measures. Some sales managers show expressions of gratitude toward production managers. Besides regular meetings between sales and production managers held at the headquarters, sales managers often visit the factory for direct contact with production managers, particularly when a sales manager's request is hard on production scheduling. In an interview, one sales manager explained his visits as follows:

We are salespeople in a manufacturing company. So we can't do our job if we don't understand manufacturing. As a salesperson, we try and stand in the manufacturer's shoes; we go and ask them what they're thinking, and go on our own into factories to see what is going on. (Sales Manager)

In a reciprocal manner, one production manager mentioned his appreciation of sales managers' visits as a sign of an "attentive person" (Oyabu, 2009):

An attentive salesperson asks us to have a preparatory meeting. Fortunately, this factory is near to the main sales place. Because it's near and salespeople have good mobility, they often call on us to have a meeting (Production Manager).

Managers' interpersonal skills required to show an empathetic attitude (Kitayama & Karasawa, 1995) are observed in this interaction between managers who understand others' position and act as an attentive person. Managers with a high level of interpersonal skills try to understand what role is expected from other managers' position and to actively fulfill the role. Sales managers do not simply visit the factory but step onto the manufacturing floors, where they take on a seemingly a role of production managers, such as motivating machine operators. Attentive sales managers take on a cross-functional role.

In an interview, one sales manager explained that he randomly visited the manufacturing floors to communicate with managers and operators to tell reasons why they need increased production volume and how customers appreciate their re-

sponsiveness. He explained this direct communication as a part of his role as a sales manager at Pack.

We sell products, get revenues, and make customers happy. But they [factory people] don't know anything about that. Telling them these facts is part of our job as sales, too. (Sales Manager)

Not only do sales managers show empathetic understanding. People with an interdependent view could care about others' positions only if they could reasonably expect that the others could attend to their position (Markus & Kitayama, 1991). As described in the previous subsection, production managers have empathetic understanding that, unless they act in a sensitive way, sales managers should struggle to fend off the pressure of achieving stretched sales targets. Based on this understanding, production managers sometimes assume wider roles than those necessary to improve production efficiency. The roles expected in the relationship with sales managers go beyond what is represented in the disaggregated performance measures. For example, one production manager explained his ability to arrange detailed production schedules based on his own anticipation of customers' situation before receiving information from sales managers.

We all know our customers well. For example, if we're told a customer needs something today, and that the customer is a yogurt manufacturer, we know they don't fill containers until tomorrow morning, and that piece of knowledge alone buys us 24 hours. (Production manager)

Their understanding of cross-functional roles is reflected in ways that they interpret their own performance measures. For example, capacity utilization rates and defect rates are assigned to production assistant managers on the manufacturing floor. The assistant managers recognize that these measures are related to production efficiency. While *Priority Specs* operations have a positive effect on capacity utilization rates, they have little effect on defect rates if not adversely. Since sales managers frequently visit the manufacturing floor to check the progress of *Priority Specs* operations, production assistant managers are explicitly and implicitly informed about customers' situation. One assistant manager told us about capacity utilization rates in the *Priority Specs* operations as follows:

I feel that the purpose of improving capacity utilization rates is to produce an adequate amount of outputs in a way that doesn't cause trouble for the customer. As for defect rates, if we waste

something, it will affect costs. That's why the decrease of waste will generate factory profits.
(Production assistant manager)

This quotation suggests that the assistant manager understands that the improvement of capacity utilization rates, unlike defect rates, is all the more reason for helping customers who are struggling to deal with market demand. This understanding shows that the manager recognizes that he plays a wider role than that desired from capacity utilization rates as an efficiency indicator.

Performance measures assigned to functional managers encourage them to meet role expectation represented by those measures, such as fixed-cost reduction for production managers with fixed-cost accountability (Collins, 1982). In the interactions between the sales and production managers at Pack, managers sought to go beyond the role represented by the measures that they are accountable for. To be sensitive to others' performance, they develop wider role understandings in their interdependent relationship.

In summary, interdependent relations among functional managers at Pack involve the process of internalizing cross-functional roles through informal interactions as well as roles suggested by formal functional boundaries and disaggregated performance measures. As suggested by Preston (1986), this process tends to be subject to social order, such as reciprocity. Based on reciprocal order, in exchange for receiving beneficial information for performance improvement from others, one has to return information of equivalent value to the others. Interactions for obtaining information to express performance better is relevant to people with the independent view. Our case suggests the existence of interactions premised on the interdependent view. In the interactions, managers put themselves in others' position, show empathetic attitude, have *oime* owing to uneven performance results, and play roles expected in the relationship with other managers. Managers with the interdependent view actively take on wider roles desired by others in their relationship than those represented by performance measures. We refer to this process as relational role development.

4.4 Role-driven capability development

People with interdependent self-construal not merely accept but also gain roles

in the relationship. Role expectation is changeable. The process of seeking to minimize deviation from the role expectation in a self-improving way can continue endlessly. To fulfill roles expected in the relationship, learning through experience is needed. Whether managers have adequate experience or not can lead to differences in capability to fulfill the role expectation (Oyabu 2009).

Experienced managers daily engage in direct negotiations, in which they seek to resolve *oime* derived from disaggregated performance measures. For example, when experienced sales managers have an increase only in their own performance and at the same time, there is a drop in their counterparts' performance, they leverage informal communication to provide helpful information for production scheduling which allows for efficient machine utilization and operators' shifts. To do so, a certain amount of experience is needed. One sales manager explained the difference in managers' capability as follows:

It varies from salesperson to salesperson. Attentive ones are aware of [what effects order changes would have on inventory and production], and then start negotiating, saying "Stop" or "Keep going." Others often say "There are finished goods. But they're no use. What should I do?" Quite honestly, it's not standardized. (Sales Manager)

The manufacturing manager, one of the negotiating partners in the relationship, rarely tell sales managers the details of what kind of order information is needed at the factory shop floor and how delivery dates should be rearranged to make the production smooth. From the viewpoint of interdependent self-construal, roles expected by others have to be found by themselves, not told by the others. The norm is to wait until others find by themselves what is expected in the relationship. People with interdependent self-construal rarely express their individual wants and interests. In the same vein, the manufacturing manager does not tell the sales managers about the details of what they want. In the negotiation, he only asked "Okay, we do our best to increase production outputs. How much effort will you make?" He suggested that sales managers should be able to read between the lines and thereby consider what production managers want. One sales manager used the metaphor of backdoor internal marketing to describe this kind of negotiation as follows:

To remove factory people's discomfort, what we can do is to provide information. Their efforts should be fruitful, we told them. We say, this is internal marketing, not external marketing. [...] This kind of backdoor task is included as a part of our job. (Sales Manager)

In an interview, another sales manager said that it would be difficult to share such experience among young salespeople.

In our section, there are relatively large number of young salespeople. They have little experience. So, for example, if they are asked [by customers] to produce this kind of product, they are very puzzled. They have no idea. (Sales Manager)

This quotation suggests that the sales manager is concerned that, in the face of production managers' hesitation, inexperienced sales staffs are not able to take initiatives to engage in the negotiation and then miss market opportunities. To deal with this lack of experience, this sales manager host a new monthly meeting with young salespeople. Young salespeople from branches in Tokyo and other regions participated in the meeting. Those located away from Tokyo joined the meeting via teleconference system. Typical agenda of the meetings in the beginning is how to develop new products and to obtain orders of such new products. These agenda seems foreign to young participants. In the beginning of the meetings, they do not talk much and remained silent unless they are asked to answer questions. Eventually, the hosting sales manager changed the style of the meeting. Young salespeople makes a short speech about their immediate challenges, and then discussions follow. The host sale manager explains the outcome of the meeting as follows:

At first, few voiced their opinions. But I changed the arrangements in which everyone could give some advice about what truly troubled someone. Try this, or try that. It looks like things have changed a lot. (Sales Manager)

In this meeting, young salespeople share their struggles with others and experienced as well as young offer advice to each other. Attending of this kind of meeting provides an opportunity for young salespeople to develop capabilities necessary to respond to what is expected in the relationship.

4.5 Vertical role development

From the perspective of interdependent self-construal, another opportunity to develop capability by assuming wider roles is observed in the case of the relationship between production managers and his subordinates, assistant managers. In the previous subsection, our findings show how role expectation is developed in the horizontal relationship. In this case, it is suggested that disaggregated performance

measures would have an effect on developing role expectations in the vertical relationship between superiors and subordinates.

As mentioned in the section 4.1, production efficiency performance are disaggregated into several measures such as defect rates, capacity utilization rates, and variable and fixed costs. Production assistant managers are accountable only for non-financial measures, particularly capacity utilization rates. They perceive that the target of capacity utilization rates is set at a high level and it is not easy to achieve that. When we ask an assistant manager in an interview about the recent performance of capacity utilization rates, he mention that he achieve capacity utilization rates well above the monthly target level. He quiet modestly explains about his performance. He comments: "I don't think this [good performance] was on our own merits." According to his explanation, the reason why he commented like this is that he had a relatively large number of *Priority Specs* in the previous month and thus it should be natural that *Priority Specs* accompanied by break-time operation raise capacity utilization rates. This is physically right but difficult in practice. To undertake break-time operation, assistant managers are not allowed to increase the number of operators and then have to carefully arrange operators' shifts and motivate operators to pay more attention to capacity utilization than usual. Actually, under the same conditions, other assistant managers fail to achieve the targets. Nevertheless, the abovementioned assistant manager does not express his competence in a self-enhancing way but seeks to find his shortcomings in a self-criticizing way.

Thinking about what happens in two or three years, the improvement of subordinates' ability is needed. At the moment, it is not enough. I'm happy if each of them gets a challenging task and then the rates increase as a result. When I was a chief operator, I was unaware of numbers. That's why now I tell my chief operators to be aware of numbers. (Production assistant manager)

This quote suggests that what role this assistant manager understands is expected of him is not just to achieve the target numbers by himself but also to encourage his subordinates by showing understanding of their situation with an empathetic attitude. This kind of relationship between a superior and subordinates can be often seen at Pack.

The superior of this assistant manager, a manufacturing manager, also shares his experiences with his subordinates. The manufacturing manager is reaching his

retirement age in a few years' time. He expects his subordinates, especially, his assistant managers, to take over his position. In an interview, he explains the reason as follows:

I'm telling [assistant managers] to look at what I do. I'll reach retirement age in a few years. [...] In [this] factory, someone should be internally promoted to take the manufacturing manager position. If a new manager comes from another factory, probably he would have a lot of trouble. I worked here long before I transferred to this factory as a manager. Nevertheless, I had a lot of trouble. [...] I'm openly teaching everything I know. (Manufacturing manager)

The manufacturing manager understands with empathetic attitude that an incoming manager who will promote from current assistant managers should be in trouble if he do not tell them of his experiences. His empathetic attitude bring his subordinates a sense of obligation to show similar empathy to their subordinates. If people with interdependence self-construal fail to fulfill obligations, they have *oime*. As shown in the quote above the previous one, to avoid having *oime*, the assistant manager perceives that his role is to encourage chief operators not to experience troubles which they had.

In the production department, labor costs are relevant to overall factory performance, and as such, are assigned to a manufacturing manager. A manufacturing manager teach assistant managers skills of managing labour costs beyond his responsibility of non-financial measures so that assistant managers will not have troubles when they become a manager. He holds the workshops about labour cost budget-making skills. He also developed budgeting manuals by himself and told assistant managers to actually make labor cost budgets based on the manuals.

I made a manual of how to make [labour cost] budgets and gave it to all of assistant managers. First, do this. Next, do this. I have a kind of workshop. They may not understand if they don't do it by themselves. Unless they learn the skills until my retirement so that everything goes well without me, an incoming manager will have trouble. (Manufacturing manager)

As this quote suggests, the manufacturing manager teach labour cost budget-making skills to assistant managers so that they would not be in trouble in the future. By learning through the manual and workshop, assistant managers understand that their superior is most concerned about labour costs.

I think Manufacturing Manager most seriously considers labour costs. I was given some materials when I was taught budget making. They mentioned details about how to estimate over-

time work and reduce workforce. (Production assistant manager)

This assistant manager also states that he would like to learn more about cost budgets, and the relationship with assigning tasks to operators and coordinating their shifts, even though he is not in a position to be accountable for.

The budgets of the production area are determined at first. Then, the budgets are cascaded down to the factory, and operators' arrangements. We did these now. [...] I need more details. What items are there in the budgets? I was taught how to make the budgets. But I've never made them by myself. It is difficult because there is something like a format. I don't know until I try. (Production assistant manager)

The production assistant manager also shows his empathetic attitude toward his subordinates, that is, chief operators, who are not responsible for capacity utilization rates and defect rates. The production assistant manager himself had been promoted from chief operator a few years before our interview. In an interview, he explains that he told chief operators to account for the performance results of capacity utilization rates and to defect rates in the monthly shop floor meeting.

I've never been taught performance numbers like [capacity utilization rates]. I recommend making some materials for accounting for these performances (to chief operators). I've never done this (before becoming an assistant manager), so I had a lot of difficulties when I became an assistant manager. Actually, I want them (chief operators) to prepare such materials by themselves but it's a bit difficult. Rather, they should utilize such materials. They should keep it in mind. (Production assistant manager)

He was worried that, without teaching his subordinates how to handle performance numbers, they would have trouble when they became assistant managers. The production assistant manager, who was taught budget-making by his superior, also showed an empathetic attitude toward his subordinates. These episodes tell us that roles are being developed in vertical interactions among managers and staff with interdependent self-construal at pack.

Prior literature argues that making managers take wider accountability than their controllability can direct their attention to their superior's performance measures (Frow et al., 2005). We find in this subsection that, although assistant managers do not take wide accountability, they become aware of their superior's measures. Their superior, a manufacturing manager, teaches with an empathetic attitude his/her measures to assistant managers so that they would not be in trouble

when they take over the managerial position. Assistant managers in turn seek to meet what is expected from their superior but they cannot return a favor to their superior on equal footing. Assistant managers fulfill their roles by teaching their measures to chief operators with an attitude similar to their superior's one.

5. Discussion

This study illustrates how disaggregated performance measures affect the way in which functional managers with interdependent self-construal develop their role understandings. Functional managers at our case site does recognize the roles represented by the disaggregated performance measures that are specific to functions and organizational levels. With the disaggregated performance measures, responding to changing clients' demands often bring to the fore the tensions between different functions and levels (Lillis, 2002). Nevertheless, functional managers at our case site develop their own role understandings beyond what is represented by the disaggregated measures.

Drawing on the cross-cultural psychology literature, this study mobilizes the concept of the interdependent construal of the self to analyze the way in which disaggregated performance measures are associated with two types of manager's behavioral pattern: role orientation and empathetic attitude. Based on this framework, we find that, since managers understand other managers' position and show sensitivity to them, the role orientation of managers lets them seek what is expected of them in their relationship. In our case, good performance results do not equate with manager's expression of their internal attributes in a self-enhancing way, as is usually the case with those with independent self-construal. Our case illustrates the way in which managers with interdependent self-construal have *oime*, the feeling of being psychologically indebted to others (Markus & Kitayama, 1991), when they find that they enjoy good results because the same causes that benefits them actually adversely affects the performance results of other managers. With *oime*, they feel that they are not sensitive enough to others and are not fulfilling their roles expected in the relationship. Even though role expectation is often not clearly expressed by others, *oime* drives managers to seek and develop their roles in the relationship.

Disaggregated performance measures made it visible that one party enjoys

good results because other party suffer bad results, thus activating the processes for those managers with good results to seek roles expected by others in a way that they could alleviate other managers' low performance. This process activated by *Oime*, which could be felt because of the disaggregated performance measures, bring managers to develop wider role understandings than those represented by disaggregated measures. We refer to this as relational role development.

Assuming that the roles expected in the relationship are likely to give rise to the decrease in managers' performance. However, when managers have empathetic understanding for other managers, they can accept the decrease in their performance, which might arise from their understanding that the performance drops should be temporary and that they should receive long-term benefits from their acceptance. In other words, managers might recognize that the performance measures formally assigned to them should be seen as lagging measures and that, if the measures temporarily show negative results, potential leading factors would lead to performance improvement of the measures in the long run. Actually, in our field study, one manager told us that he had experienced such lagging improvement of his performance.

According to Hall (2008), comprehensive PMSs, including the linkages between leading and lagging measures, can improve managers' understanding of departmental interdependencies and clarify managers' role expectations. However, in our case, the causal relationships among measures are not exhibited in Pack's PMSs.

Instead of formal information systems, managers might be informed about such causal linkages through informal channels (Preston, 1986; Hall, 2010). In effect, some functional managers mentioned the importance of their informal visits to the factory and direct negotiations with managers concerned. However, we did not find that any managers tried to approach other managers for the assurance of the long-term benefit in exchange for the short-term performance drops. Since managers took the long-term benefit for granted, it seems unnecessary for them to negotiate for it. Managers can accept a certain level of negative performance not simply because they want to express their efforts toward long-term performance improvement in a self-enhancing way, but also because they try to show an attentive attitude toward others, that is, think of others who would be in trouble without their attentive-

ness.

Why do functional managers engage in such informal negotiations? In informal interactions, managers have to follow the taken-for-granted rules under which managers have to give others valuable information if they need valuable information from the others (Preston, 1986). These interactions to obtain information are premised on those with independent self-construal, who would use the interactions as a means to better express their internal attributes as good performance results (Markus & Kitayama, 1991). In our case, sales managers actually offer helpful information to improve production managers' performance. However, in exchange for their offerings, sales managers do not seek to obtain useful information to increase their own performance. Managers engage in interactions because they have *oime* arising from uneven performance results. *Oime* can stem from their perception that they fail to fulfill roles expected in the relationship and adopt an attentive attitude toward others (Markus & Kitayama, 1991). Sales managers recognize inaccurate sales forecast as their failure, not because they did not fulfill roles desired by their measures but rather, because sales managers put themselves in production managers' position and understood it as their role to provide helpful information for production efficiency. Since the sales managers did not fulfill the roles expected in the relationship, they perceived their efforts as failure.

The taken-for-granted rule of equivalent exchange between parties is enforced in the informal interactions. However, in our case, managers recognized that sales managers' offerings were not an adequate offset against the decline in production performance. Managers do not leverage meetings and negotiations to better express their attributes as a good performance result, as is the case with those who have independent self-construal. Rather, managers with the interdependent self-construal seek to show an attentive attitude toward other managers and thereby to maintain the relationship. To convey their attentiveness, interpersonal skills, rather than equivalent offerings, are needed (Kitayama & Karasawa, 1995). For example, having meeting at other managers' workplaces is perceived as one of the interpersonal skills to express, if only marginally, the feeling of thanks and to launch smooth negotiations.

Prior literature on the effects of incomplete performance measures argues that incompleteness causes various efforts to make do with limited resources available to make the measures work (Andon et al., 2007; Dambrin & Robson, 2011; Jordan & Messner, 2012). Feeling *oime* and assuming wider roles, which we refer to as relational role development, show another example of making do from the perspective of interdependent self-construal. Chenhall et al. (2013) argue that the imperfect nature of performance measures can provide a forum for continuous interactions between individuals and groups with different values, as well as the effort to make do with limited resources. Their case illustrates that imperfect measures create a form of organized dissonance in the interaction. The dissonance seems to stem from distinctive values of self-contained individuals and is premised on independent self-construal. However, in this study, we find that empathetic understanding and *oime*, the feeling of indebtedness to others, form continuous interactions between managers.

Dambrin and Robson (2011) illustrate that imperfect performance measures are related to ambiguous understanding of roles. This illustration seems to relate to relational role development. In their study, performance measures, which represent only a part of the roles, provide “a loose coupling” (p. 446), in which a role desired by performance measures can coexist with another role that comes from educational background. Their study demonstrates that sales performance measures are assigned to sales representatives who have a role as medical professionals, and that the sales representatives see “their role as ambiguous” (p. 439). Similarly, in our study, sales managers recognized their role as not only to obtain as many customer orders as possible but also to provide helpful information for production managers to improve production efficiency. However, this extension of their role is influenced not by the performance measures assigned to sales managers but rather by other managers’ measures. These disaggregated measures bring uneven performance results, which generate the process of relational role development in which managers have *oime* and attentiveness to others and assume wider roles. People with interdependent self-construal understand that the loss of roles in the relationship means the elimination from the relationship, namely, a situation of nightmare (Plath, 1980). To maintain the relationship, people are motivated to find some expected roles. In the con-

text of interdependent self-construal, others' performance measures as well as those assigned to an individual relate to the conditions that create *oime*.

Although prior management accounting literature argues that disaggregated performance measures can foster managers' myopic and suboptimal behavior (Lillis, 2002; Hansen, 2010), this study illustrates that, for those with interdependent self-construal, disaggregated measures can form interactions involving empathetic understanding of others' measures. In this regard, however, it should be noted that not everyone who has an interdependent view of the self can attend to others' performance measures. In this study, we mainly focus on managers who have been members of the same organization for a few decades and have long experienced the internalization of roles expected in the relationship (since they were ordinary employees). A long and continuous relationship is needed for the foundation of role-driven capability development, that is, seeking to fulfill the role expected in the relationship and thereby fosters capability development. As mentioned in our case, some managers expressed concern that young and inexperienced managers might not take action in consideration of the effects on other departments. While one of these managers they started some initiatives to share experiences with young managers, the efforts do not seem adequate.

Our findings suggest that the relationship could be maintained only if some degree of reciprocity could be reasonably expected. Therefore, attentive managers might keep relationships only with managers who are expected to be attentive. This relationship tends to have a strong bond but be closed (c.f., Chenhall, Hall, & Smith, 2010). In organizations that need a number of managers recruited from the outside, cross-functional negotiations and educational consideration between superiors and subordinates seems to be inefficient (Preston, 1986; Dent, 1987; Lillis, 2002).

6. Conclusion

Prior literature on the design of PMSs argues that disaggregated performance measures can foster managers' myopic and suboptimal behavior without consideration of the implications for other managers and the whole organization (Lillis, 2002; Hansen, 2010). However, recent studies on the imperfection of performance

measures do not make an issue of the representational quality of the measures but instead illustrate how organizational members make do with limited available resources and try to make the measures work (Andon et al., 2007; Dambrin & Roboson, 2011; Jordan & Messner, 2012). We consider our findings as having parallels with these studies on the effects of imperfect performance measures. The main feature of our study is its focus on micro processes in the unique field of non-Western organizations and use of interdependent self-construal (c.f., Adler & Chen, 2011) as a framework to analyze field data. Our findings indicate that disaggregated performance measures can lead to a situation in which managers have *oime*, the feeling of indebtedness, to other managers. *Oime* can trigger the process of managers' relational role development and role-driven capability development. Relational role development is associated with the fact that managers take on roles to try to improve not only their own performance measures but also other managers' ones. Role-driven capability development represents the process of building managers' capabilities to play wider roles beyond formal accountability by seeking to fulfill what is socially expected.

The findings are subject to several limitations. Our use of the interdependent view as an analytical framework rests on the premise that functional managers homogeneously have the interdependent view. In reality, there should be some managers with a more independent view and others with a more interdependent view, even in Japanese companies like Pack. This may be sometimes the case also in Western companies. However, this framework cannot be applicable to more complicated organizations in which there are various people, from those with a purely independent view to those with a purely interdependent view. We are aware that our use of this framework is prone to falling into a simple stereotyped perspective. However, drawing on this simple framework, we can provide a new insight on the effects of imperfect performance measures in a non-Western organization, which prior studies cannot adequately appreciate. This suggests there is potential for future research on the effect of PMSs on managers' behavior in the context of comparing different self-construal and transformation from one form of self-construal to another.

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APPENDIX A

Date	Time	Interviewees
Part 1		
12 July 2010	270	Senior Manager, Manager, Assistant Manager of Corporate Planning Office (CPCPO) Manager of Paper Products Production Department
3 Aug 2010	180	Senior Manager, Manager, Assistant Manager of CPO
30 Sep 2010	90	Manager, Assistant Manager of CPO
29 Dec 2010	270	Manager, Assistant Manager of CPO
Part 2		
8 Feb 2012	300	Executive Director Senior Manager, Manager, Assistant Manager of CPO
14 May 2012	90	Executive Director, Manager of CPO
6 Sep 2012	120	Executive Director, Manager, Assistant Manager of CPO
10 Sep 2012	120	Executive Director, Manager, Assistant Manager of CPO
Part 3		
17 Jan 2011	180	Factory A Factory Manager
19 May 2011	40	Factory B Factory Manager
	50	Factory Manufacturing manager
	50	Assistant Manager A
	50	Assistant Manager B
	50	Assistant Manager C
22 Jun 2012	50	Factory C Factory Manager
	40	Factory Operating Manager
	40	Factory Manufacturing Manager
	40	Assistant Manager A
	60	Assistant Manager B
	30	Assistant Manager C
20 Jul 2012	40	Senior Sales Manager
	50	Sales Manager A
	40	Sales Manager B
	30	Sales Manager C
	90	Manager of CPO
28 Jun 2013	60	Factory C Factory Operating Manager
	50	Factory Manufacturing Manager
	70	Assistant Manager A
Discussion Part		
27 Dec 2010	270	Senior Manager, Manager, Assistant Manager of CPO

4 Feb 2011	280	Senior Manager, Manager, Assistant Manager of CPO
18 Apr 2011	180	Senior Manager, Manager, Assistant Manager of CPO
28 Apr 2011	270	Senior Manager, Manager, Assistant Manager of CPO
30 Jun 2011	75	Manager, Assistant Manager of CPO
30 Sep 2011	240	Manager, Assistant Manager of CPO
7 Oct 2011	120	Senior Manager, Manager, Assistant Manager of CPO
15 Nov 2011	150	Manager, Assistant Manager of CPO
23 Jan 2012	120	Manager, Assistant Manager of CPO
8 Mar 2012	210	Senior Manager, Manager, Assistant Manager of CPO
26 Apr 2012	120	Manager, Assistant Manager of CPO
30 Aug 2012	210	Manager of CPO
16 Nov 2012	240	Manager, Assistant Manager of CPO
6 Dec 2012	120	Manager, Assistant Manager of CPO
21 Jan 2013	120	Manager of CPO
24 May 2013	360	Manager of CPO

APPENDIX B

	Contents
Internal documentation	Organizational charts Factory organizational charts Strategic analysis of sales department Strategic analysis Consultant's reports Business analysis Balanced scorecard 2012 Brief strategic analysis (2012)
Internal archival documents	2006–2008 Middle range plans Administration department plans Sales department plans Sales expense reduction initiatives Production department plans Actual sales results (2006, 2007, 2008) 2009–2011 Middle range plans Body text (including strategic goals of each functional departments) Planned income statements Production plans Actual results 2010 (first half) Operating reports 2010 (first half) Cost reports 2010 (first half) Sales ranking 2010 (first half) Marginal profit rankings 2011 Annual sales reports 2012 CEO New Year greetings Factory 2012 Annual goals May 2012 Performance reports May 2013 Performance reports