

# Empirical Analysis of Interactive Control's Effectiveness: A Parent-Subsidiary Company's Interdependence Perspective

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## ABSTRACT

Due to the increasingly complex business environment and the principal-agent relationship, the enterprise group should establish a control system to prevent agency risk. Besides traditional system control, the parent company tends to adopt an interactive control including decentralized decision making, process communication and target incentive to guide and govern the subsidiaries. As an elastic control mechanism, the interactive control's effectiveness could be influenced by the resources dependence relationship which is objective existence between the parent and subsidiary company. Based on the classical literature review, this study analyzes the effects of interaction control to the performance ("interactive control → performance") and the interdependence's regulating role by a total sample and a multiple-group structural equation analysis based on Chinese groups' data, the results show that the interactive control could improve the subsidiaries' performance, but different control process has its particular applicable interdependence situation. In the conclusions, we proposed some suggestions to promote the interactive control's effectiveness in the enterprise group's management practices.

**Keywords:** Enterprise Group; Interdependence; Interactive Control; Performance

## 1. Introduction

An enterprise group and its subsidiaries can be regarded as a "community of interests" based on a common strategic targets and interests, as the management organizations of a enterprise group, the parent company has two basic functions—"loss prevention" and "value creation", on the one hand, the parent company must keep each subsidiary in control for the possible loss which is brought by the subsidiary managers' self-interested behaviors under the principal-agent risk [1], on the other hand, the parent company should achieve the value appreciation through coordination and integration of the group's advantage resources [2]. However, there must be a management control system to support these functions' realization, the system control is often used in a bureaucracy, but now, the subsidiary's position has had a change, for example, many subsidiaries have become the group's strategic leaders, so as to there also need an interactive control mechanism which takes the interaction between headquarter-subsidiary company's managers as carrier. As the essential approach for information transfer and collaborative management, interactive control deeply

affects resource synergy efficiency and effectiveness [3]. Therefore, it's a very meaningful research subject to explore how to proper use and dynamic adjustment the interactive control mechanisms.

In fact, many scholars have recognized the importance of interactive control, but different scholars have different focus on the question about how to improve its effectiveness. There are two main research directions, first, focus only on the effectiveness of different interaction control channels, such as different carriers (electronic or face-to-face interaction) have different results [4]; second, concerns the matching between some interpersonal characteristics and interactive control, such as the influence of trust [5]. But it is a pity that the directions both about the subjective relationships among the participants, and the objective relationships between the parent and subsidiary company is ignored, that is resource dependency between the parent and subsidiary company ("interdependence" for short) [6]. The interdependence is a demanding relations due to the knowledge, brands, equipment and other tangible or intangible advantage resources [7]. Indeed, it usually determines the synergetic needs of internal resources, while these needs will affect

the parent company's interactive enthusiasm. Meanwhile, the interdependence could determine the position of a certain subsidiary with which as a key reference for the subsidiary managers to take actions or choose a starting point [6], and then will make different responses to the interactive control initiated by the parent company. Thus, the adaption of interactive control must be subject to the regulation of the interdependence, only when the two objective factors are matched each other can the subsidiary reach its maximum performance.

More recently, the increasing international competition speeds up the diversification process of the enterprise group, the development of information technology leads the inter-organizational boundary obscurity [8], the enterprise group's internal relationships become so complex and dynamic, this means that what's the matching rules between interdependence and interaction control must be put forward to research schedule, and this study is a result of trying to build a match mode between interdependence and interactive control.

## 2. Theories and Hypothesis

### 2.1. Interactive Control and Its Influences on the Performance

Interactive control generally come from a certain conversation, in which human being is regarded as the subject [9]. Hallahan (2007) divided interactive control process into three parts: decision-making decentralization, process communication and target incentive according to the strategic management process (strategic formulation, strategic implementation and strategic assessment & feedback) [10]. As shown in **Figure 1**, decision-making decentralization indicates the subsidiary manager's discourse right granted by the parent company in the strategic formulation stage. Process communication is a sharing information or auditing plan procedure [11], including the parent company's managers participate in the formal and informal activities in the process of subsidiary's strategic implementation stage, such as meetings, training or to visit, etc. [12]. Target incentive refers to the reward given by the parent company on the basis of the completion situation of subsidiary's strategic targets, which is a mirror of the interactions in evaluation system-design and performance appraisal [13]. In addition, the incentive-satisfaction of the manager who is motivated will directly affect his effort level in the next strategic cycle. Therefore, target incentive can be regarded as interactive control of the strategic assessment & feedback stage.

Decision-making decentralization, process communication and target incentive achieve the purpose of "loss prevention" and "value creation" from different ways.

First, decision-making decentralization responses the

degree of being controlled by the parent company through assigns decision rights. Subsidiary managers could participate in the management of enterprise group more actively with a resource scheduling permissions [14]. Furthermore, this participation enhance the managers' initiative and creativity, this could facilitate innovation activities, and then they would like be easier to accept the group's strategic plan [15]. If lack of the right to participate in, the subsidiary managers may reduce the response speed to the market or technological change [16], then inter-organization's synergistic efficiency will decrease.

Second, process communication realizes the purpose of supervision and constraints on the subsidiary managers' behaviors by auditing the plan's implementation [16]. Communication could promote information transfer and knowledge sharing [17], make the subsidiary managers recognize the position of both their own subsidiary and other subsidiaries in the group more clearly, and then will improve the understanding and identification of the strategic targets [18], more likely to have cooperative behavior, the inter-organization transaction costs reduced [19]. Process communication is an essential condition of effective cooperation (Minbaeva, 2005) [20], that is to say, it is the basic guarantee of the effective coordination.

Third, target incentive is a reward mechanism oriented by strategic targets; its final purpose is to encourage the subsidiary managers to turn external stimuli into internal conscious behavior. Actually, target incentive affects the agents' risk-taking spirit, coordination and organizational commitment by establishing a common interest (Allen and Kilmann, 2001) [21], so as to limit self-interested behavior, but to promote cooperation and collaboration.

Hypothesis 1: Interactive control from parent to subsidiary company could increase subsidiary's performance;

Hypothesis 1a: Decision-making decentralization could increase subsidiary's performance;

Hypothesis 1b: Process communication could increase subsidiary's performance;

Hypothesis 1c: Target incentive could increase subsidiary's performance.

### 2.2. Interactive Control Effectiveness of Different Interdependence Situations

On a broad scale, dependence means "a factor's dependence degree on another factor in order to perform its own tasks or outputs effectively", Vegt and Vilient (2002) divided dependence into tasks-dependence (tasks) and output-dependence (outcomes) [22]. O'Donnell (2002) extended this conceptualization to the interdependence of multinational organization, and was described as "the state in which the outcomes of a foreign subsidiary of a

MNC influence or are influenced by the actions of another unit within the firm operating" [18], that is degree can be decided by the important resources and knowledge. This study defined the interdependence between parent and subsidiary company ("parent-subsidiary interdependence" for short) as "the state in which the tasks and outcomes of a subsidiary influence or are influenced by the parent company". The basic properties of interdependence are intensity and asymmetry, in which the interdependence intensity is the sum of dependence of both sides, while the interdependence asymmetry is the difference [23,24]. Preliminary studies have shown that the interdependence intensity and interdependence asymmetry would have a differential impact on the interactive control's effectiveness.

### 2.2.1. Interactive Control Effectiveness of Different Interdependence Intensity

As the interconnections increases, the interdependence intensity will increase. Different intensity can have different resources synergetic ability, and need different interactive control to support their synergy. In this part, a comparative analysis of different intensity will be presented to explore the interactive control effectiveness in different situations (that is, "interdependence intensity is high" and "interdependence intensity is low").

First, the parent-subsidiary interdependence intensity could affect the subsidiary's strategic position. As the parent-subsidiary interdependence intensity increase, the subsidiary's strategic decisions will have a greater effect on the group, and even affect the enterprise group's strategic formulation, Ghemawat and Levinthal (2008) called such subsidiary strategy as a tactical choices [25], the parent company would like to coordination overall strategy through relatively centralized in the face of such subsidiaries. when the parent-subsidiary interdependence intensity is low, the subsidiary managers are often more familiar to the subsidiary than the parent company managers, at this point, the subsidiary managers' participation in the subsidiary's decision-making are more important. For example, when multinational companies form a global integrated business networks, compared with local subsidiaries, foreign subsidiaries often have lower interdependence intensity degree, these subsidiaries should be "encouraged" to developing innovative activities or new strategy, so as to looking for new ways to enhance the overall value [26].

Hypothesis 2a: Decision-making decentralization's effectiveness must be higher when the parent-subsidiary interdependence intensity is low.

Second, the parent-subsidiary interdependence intensity could affect the needs of resource sharing, Roth and Nigh (1992) confirmed that there is a positive correlation

between interdependence intensity and coordination work [27], that is to say, as the interdependence intensity increase, the parent company's coordination work will increase. Similarly, Ambos and Mahnke (2010) put forward the Parenting Advantage Theory to explain the parent company should increase process communication when the parent company has a better understanding and an enough ability to support the subsidiary's operations [28]. On the contrary, when the parent-subsidiary interdependence is low, the parent company managers' active communication behaviors may lead to the subsidiary managers' "defense" [29], and then bringing to the market risk or loss risk.

Hypothesis 2b: Process communication's effectiveness must be higher when the parent-subsidiary interdependence intensity is high.

Third, the parent-subsidiary interdependence intensity could affect the level of moral risk and the difficulty of individual performance evaluation. When the parent-subsidiary interdependence intensity is high, the subsidiary may obtain a stable supply or customer channels within the enterprise group, it will be difficult to find out the subsidiary managers' true performance information, encourage rationality become distinguish [30]. Further more, as above, subsidiary's high strategic position and its available resources will indirectly reduce the level of the subsidiary manager's moral hazard, yet the opposite when the intensity is low, the subsidiary managers' self-interested will be more easily achieved due to a high information asymmetry [31], target incentive's direction function become more important.

Hypothesis 2c: Target incentive's effectiveness must be higher when the parent-subsidiary interdependence intensity is low.

### 2.2.2. Interactive Control Effectiveness of Different Interdependence Asymmetry

Interdependence asymmetry reflects the resource capacity gaps of both sides. Based on the resource dependence theory, the resource advantage side will form an external control to the resource disadvantage side, so there will be a voluntary compliance of the disadvantage side to the advantage, which may reduce or increase the demand for a certain interactive control process. In this part, a comparative analysis of different asymmetry will be proposed to explore the interactive control effectiveness in different asymmetry circumstances (that is, "the subsidiary is more dependent on the parent company" and "the parent company is more dependent on the subsidiary").

First, the parent-subsidiary interdependence asymmetry could affect the subsidiary managers' agency risk. When the subsidiary is more dependent on the parent company, it will obtain the necessary resources from the

parent company, even some resource disadvantage subsidiaries must be supported by the parent company in order to survive and make profits [32,33]. The external control determines the subsidiary managers tend to obey the parent company while itself is in a resource disadvantage, decision-making decentralization can give full play to their individual wisdom, simultaneously enhances their work enthusiasm by enhance the subsidiary manager's involvement. On the contrary, once the parent company is more dependent on the subsidiary, the external control will be very weak or disappear, high level of decision-making decentralization may bring more "performance manipulation" space to the subsidiary managers [26], the parent company managers must be difficult to implement top-down decision-making plan, and even part of the subsidiary may feel be restricted by the parent company [34].

Hypothesis 3a: Decision-making decentralization's effectiveness must be higher when the subsidiary is more dependent on the parent company.

Second, the parent-subsidiary interdependence asymmetry could affect the cooperative relationship. When the subsidiary at a disadvantage, the process communication could contribute to the knowledge sharing, and promote the parent company and subsidiary to learn from each other [17], thus supporting the subsidiary operation and enhancing the ability of subsidiary managers [35]. However, if the parent company is at a disadvantage, the subsidiaries' dominant position could cause the parent company's "attention". Harzing's research showed that "in order to avoid a loss risk, the parent company will adopt a strict control mechanism to ensure the subsidiary managers' compliance with their companies' status improve" [36], that is to say, communication at this time tends to care for the parent company rather than the subsidiaries, making it be seen as "interference" by the subsidiary managers, which directly lead to intensify the conflict, then has a adverse effects to the overall benefits.

Hypothesis 3b: Process communication's effectiveness must be higher when the subsidiary is more dependent on the parent company.

Third, difference parent-subsidiary interdependence asymmetry could have different requirements on the be-

havior of subsidiary managers. The subsidiaries which have the advantage resources will retain a dominant position in the parent-subsidiary company negotiation, and these companies' managers tend to be more positive. However, to some subsidiaries which have the disadvantage resources, subsidiary managers' initiative tend to be lower but to be a key factor to enhance the performance, so the parent company must take several ways to enhance the managers' initiative and enthusiasm [37]. In term of the Expectancy Theory, when the importance of a behavior increases, the superior organization must increase the incentive.

Hypothesis 3c: Target incentive's effectiveness must be higher when the subsidiary is more dependent on the parent company.

According to the above assumptions, this paper constructs a conceptual model that shown in **Figure 2** following.

### 3. Method

#### 3.1. Sample

In order to obtain the real interdependence and performance information, a mail or a printed questionnaire was sent to the subsidiaries' managers, who can more properly identify the subsidiary's industry and competitive environment, as well as the interactive control degree. The samples came from the alumni network of the University of Science & Technology of China, including the graduate and on learning EMBA students or their groups' subsidiaries' managers, and some other alumni who are suitable for the questionnaire. The samples have covered manufacturing processing, electronic communication and commerce services, pharmaceutical and chemical and some other industries. The total of 430 questionnaires was issued (including 300 copies and 130 invitation mail), and 147 questionnaires were returned in which 140 were valid, the effective rate is 32.56%.

#### 3.2. Measures

The measured variables of the latent variables have been main reference from the original questionnaire of earlier

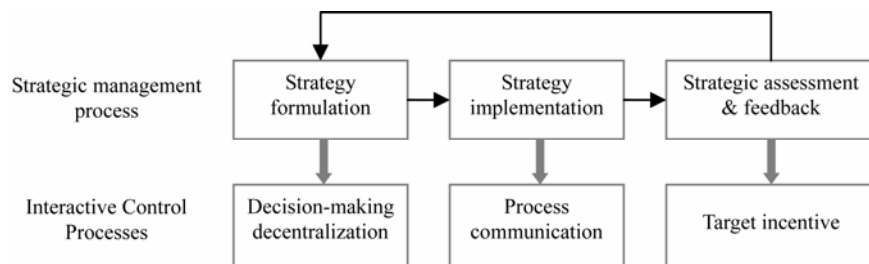


Figure 1. Strategic management process and interactive control.

studies. In order to make it easier to answer, we make some local corrections to the original questions by several face-to-face interviews with some respondents. All questions were described as a five-point Likert scale, and the latent variables were measured as follows.

1) *Interdependence* was measured with a four-item index based on O'Donnell's research, including: a) Result dependence; b) Task dependence. Both were questioned from two different directions, *i.e.* "parent company's dependence on subsidiary" ("parent → subsidiary dependence" for short) and "subsidiary's dependence on parent company" ("subsidiary → parent dependence" for short). The following statement is an example: "my company (*i.e.* the subsidiary which you are working for, similarly hereinafter) depends on the parent company to effectively perform its task in order to continue performing its own tasks effectively" [18], the marking schemes are from "strongly disagree" to "strongly agree".

2) *Decision-making decentralization* was measured with a five-item index from Persaud (2005), including: a) Management staff recruitment/dismissal (human resources) or organizational structure change ("HR or organizational change" for short); b) Budget allocation or profits expenditure; c) Production and operation process; d) Market distribution; e) Product pricing strategy, the coefficient alpha for the scale was 0.89 in Persaud's research [38].

3) *Process communication* was measured with a three-item index based on Subramaniam's research, including: a) Formal electronic communication; b) Formal face-to-face communication; c) Informal communication in other ways [6].

4) *Target incentive* was measured with a three-item index from Armstrong and Murlis (2005), including: a) Personal financial incentives; b) Personal non-financial incentives; c) Subsidiary incentives (the incentive object is subsidiary as a whole but not the individual) [39].

5) *Subsidiary performance* as measured with a three-item index based on Ndofor's (2011) research, including: a) Market growth; b) Profit margin; c) Return on investment [40].

### 3.3. Data Validations

Due to the questions was local corrected, we examined the reliability and validity test of our questionnaire results. The data processing tools are SPSS17.0 and AMOS17.0, and the analysis methods was Structural Equation Modeling (SEM). The exploratory analysis showed that the maximum partial coefficient was 0.968; the maximum kurtosis coefficient was 1.346, so we could think of the sample to approximate as a normal distribution.

As shown in the **Table 1**, 1) Reliability test: the minimal reliability of these scale (assessed with Cronbach's alpha) equaled 0.653 (others are higher than 0.7), with reaches the lower limits of acceptability. 2) Validity test: on the one hand, all questions were based on early studies, so we can agree that the questionnaire have a good content validity. On the other hand, the KMO values of each latent variable are higher than 0.6, with reach the acceptability. But the loading values of "management staff recruitment/dismissal or organizational structure change" and "budget allocation or profits expenditure" are lower than 0.5 (others are higher than 0.5 and reach significant level), so we removed these two measured variables in order to improve the questionnaire construct validity.

### 3.4. Analysis and Results

#### 3.4.1. Step 1: SEM Analysis of the Whole Sample

A "interactive control → performance" model is designed and analyzed to prove the effects of three interactive control processes on the subsidiary performance, the path analysis results are shown in **Figure 3**. The fit indices including absolute fit indices ( $P > 0.05$  and  $RMSEA < 0.08$ ), incremental fit indices ( $IFI > 0.9$ ,  $CFI > 0.9$ ) and parsimonious fit indices ( $\chi^2/df < 2$ ) are all reach the fitting degree, this means the model agrees well with the practice.

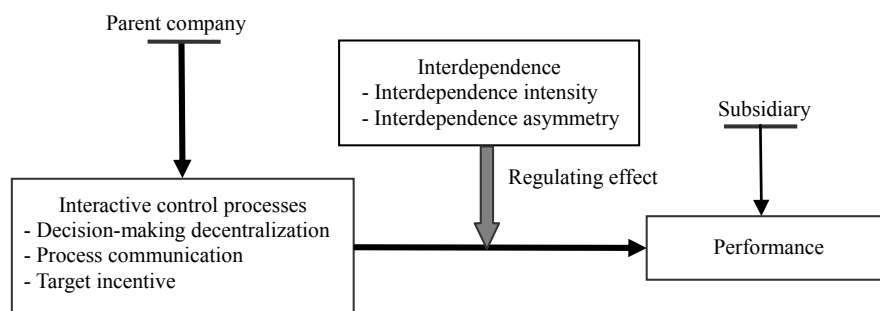
**Figure 3** shows that the interactive control can enhance the subsidiary performance in a whole. The path coefficient of the "decision-making decentralization → subsidiary performance" is 0.21 ( $P = 0.049$ ), and reaches the level of significance, so do the other two processes ("process communication → subsidiary performance" is 0.19 ( $P = 0.095$ ); "target incentive → subsidiary" is 0.26 ( $P = 0.028$ )), the conclusion is consistent with Hypothesis 1a, 1b and 1c. Again, the conclusion shows that the interactive control process are effective in Chinese enterprise groups' practice, as we can see in the theories before, this result can infer that decision-making decentralization has enhanced the strategic satisfaction and strategic execution of subsidiary managers, so they can play their personal wisdom more effectively. Similarly, process communication has promoted the resource-sharing and formed a common strategic perception, so as to enhance the corporate efficiency, and target incentive has established a common interest between the subsidiary managers and the group.

In addition, there is a highly relevant between target incentive satisfaction and decision-making decentralization/process communication degree. As decision-making decentralization degree increase, the target incentive-satisfaction decrease (correlation coefficient is  $-0.2$ ,  $P =$

**Table 1. Reliability and validity test results.**

Measures	Cronbach's $\alpha$	Loadings	KMO
Parent → subsidiary dependence	0.653		0.641
➤ Result dependence (RD)		0.555	
➤ Task dependence (TD)		0.756	
Subsidiary → parent dependence	0.737		0.677
➤ Result dependence (RD)		0.623	
➤ Task dependence (TD)		0.777	
Decision-making decentralization (DM)	0.704		0.713
➤ HR or organizational change (DM1)		0.312•	
➤ Budget allocation or profits expenditure (DM2)		0.374•	
➤ Production and operation process (DM3)		0.735	
➤ Market distribution (DM4)		0.702	
➤ Product pricing strategy (DM5)		0.675	
Process communication (PC)	0.711		0.614
➤ Formal electronic communication (PC1)		0.509	
➤ Formal face-to-face communication (PC2)		0.849	
➤ Informal communication in other ways (PC3)		0.766	
Target incentive (TI)	0.768		0.685
➤ Personal financial incentives (TI1)		0.664	
➤ Personal non-financial incentives (TI2)		0.706	
➤ Subsidiary's incentives (TI3)		0.810	
Subsidiary performance (SP)	0.845		0.689
➤ Market growth (SP1)		0.644	
➤ Profit margin (SP2)		0.889	
➤ Return on investment (SP3)		0.892	

Note: “•” are the measured variables been deleted in follow analysis.



**Figure 2. Conceptual model.**

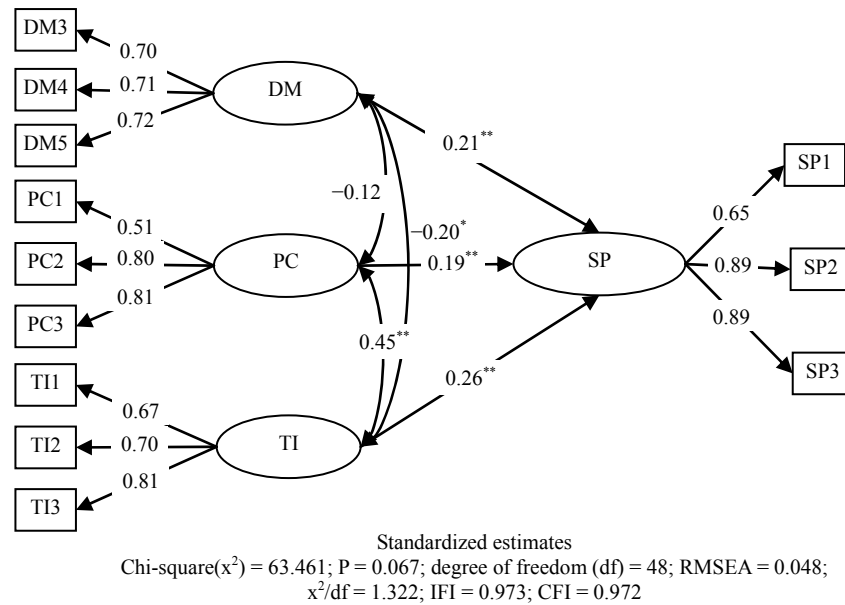


Figure 3. Path analysis results. Note:  $N = 140$ . \*\*\* $P < 0.01$ ; \*\* $P < 0.05$ ; \* $P < 0.1$  (two-detail), the same below.

0.074), conversely, as process communication increase, the target incentive-satisfaction increase (correlation coefficient is 0.45,  $P = 0.000$ ). Indeed, higher decision-making decentralization degree may increase the information asymmetry, and then make a negative impact on the establishment of a common perception. However, process communication just plays a role of passing strategic information, and improves the subsidiary managers' understanding of target incentive indirectly. Thus, although decision-making decentralization can improve subsidiary performance, but only a moderate decentralization can improve the group strategy related-performance (*i.e.* the performance matches with the group strategy).

### 3.4.2. Step 2: Multiple-Group Analysis

In order to verify the interactive control effectiveness of different interdependence situations, this part will make the interdependence as a regulating variable, with a multiple-group analysis to test the "interactive control  $\rightarrow$  performance" model. Based on Gundlach and Cadotte's study, begin by figuring out the standardized value of the original data, then the interdependence intensity value is "parent  $\rightarrow$  subsidiary dependence" add "subsidiary  $\rightarrow$  parent dependence". We divide the group to "high-intensity" and "low-intensity" by K-mean cluster analysis, there are 87 cases in the "high-intensity" group and 53 cases in the "low-intensity" group. Differently, the interdependence asymmetry value is "subsidiary  $\rightarrow$  parent dependence" minus "parent  $\rightarrow$  subsidiary dependence". We divide the interdependence asymmetry groups by the "+" or "-", that is, "+" is the "subsidiary is more depend

on parent company" group ("subsidiary  $\rightarrow$  parent" group for short), and "-" is the "parent company is more depend on subsidiary" group ("parent  $\rightarrow$  subsidiary" group for short), there are 84 cases in the "subsidiary  $\rightarrow$  parent" group and 56 cases in the "parent  $\rightarrow$  subsidiary" group.

The interdependence intensity and asymmetry groups both have a higher significant in default model by comparing with parallel model, equal intercept model, this indicates that different interdependence will lead to different effectiveness of interactive control, we choose the default model as the comparative analytical object. **Table 2** following shows the results of the path coefficients and critical ratio for differences between two parameters (C.R. for differences) of different groups in standardized estimates.

According to **Table 2**, we can draw the following conclusions: 1) Process communication's effectiveness is significantly higher when the parent-subsidiary interdependence intensity is high, Hypothesis 2b is supported. The path coefficient of "PC  $\rightarrow$  PI" is 0.33 ( $P = 0.016$ ) in "high-intensity" while it is below the significant level in "low-intensity", moreover, the C.R. for differences is 1.741 which reaches the significant level ( $P < 0.1$ ). This result can infer that the connection established by the knowledge or information between the parent and subsidiary company could support a better implementation of the group strategy, process communicate set up a bridge of the resource sharing effectively; 2) Target incentive's effectiveness is significantly higher when the subsidiary is more dependent on the parent company, Hypothesis 3c is supported. The path coefficient of "TI  $\rightarrow$  PI" is 0.43 ( $P = 0.002$ ) in "subsidiary  $\rightarrow$  parent" while

**Table 2. Results of the multiple-group analysis.**

	Different interdependence intensity groups			Different interdependence asymmetry groups		
	High-intensity	Low-intensity	C.R. for differences	Subsidiary → parent	Parent → subsidiary	C.R. for differences
DM → PI	0.13	0.28*	-0.789	0.16	0.15	0.011
PC → PI	0.33**	0.06	1.741*	0.17	0.11	0.488
TI → PI	0.17	0.29*	-0.09	0.43***	0.02	1.961**

it is below the significant level in “parent → subsidiary”, the C.R. for differences is 1.961 which reaches the significant level ( $P < 0.05$ ). this result can infer that target incentive can less the subsidiary managers’ self-interest and improve their work effort much better when the parent company is in the resource advantage position; 3) Decision-making decentralization and process communication’s effectiveness are slightly higher when the parent-subsidiary interdependence intensity is low, the conclusion general agree with Hypothesis 2a and 2b. Despite the C.R. for differences are not reach the significant level, the path coefficient of “DM → PI” is 0.28 ( $P = 0.096$ ) in “low-intensity” reaches the significant level ( $P < 0.1$ ) while it is below the significant level in low-intensity, so do the path coefficient of “TI → PI”. The result can partially demonstrate that low levels of strategic correlation may need the subsidiary’s managers to play their individual wisdom but not only to accept the parent company’s limited support. Similarly, high levels of strategic correlation can lessen the moral hazard degree, but add the difficulty to identify individual performance, which may lead target incentive to be more important when the correlation is low.

#### 4. Conclusions

Nowadays, internal interdependence has become an increasingly important tool with which the enterprise groups can achieve and maintain a competitive, and how to manage these subsidiaries within a differentiated interdependence effectively is an important research topic. This paper took the influences of interactive control on subsidiary performance as a main line, and future analysis the interdependence’s regulating role. The results show that the interactive control can improve the subsidiary performance while the interdependence has a regulating effect on the positive effects. For the business practice, we can reveal the following reference meanings.

On the one hand, only if rational identify the advantage resource of the parent company, and have a clear understanding of the interactive control at the same time, can the parent company’s managers take effective interactive control. In the enterprise groups’ practice, the in-

teractive control’s formulation and later adjust always not completely rational [41], the parent company may have an excessive control but neglect resource coordination, or excessive coordination but increase the costs. Indeed, the parent company should identify interdependence between parent and subsidiary company, in a short term, the interdependence is often in a steady state, the parent company should take interactive control from a match perspective, while in a long term, the relationship is quite complex and dynamic, the parent company should keep a dynamic and timely adjust to the interactive control. As indicated in the results of this study, we can see that the basic rules include: when the interdependence intensity is low (or become lower), the parent company should adopt a higher (or increase) the degree of decision-making decentralization and target incentive, while adopt a higher (or increase) the degree of process communication under the opposite condition; when a subsidiary is more depend on the parent company (or dependence increases), the parent company should adopt a higher (or increase) the degree of target incentive.

On the other hand, the enterprise groups should increase competitive and managerial abilities of their parent companies to ensure that the parent-subsidiary relationship controllability and interactive control feasibility. The subsidiaries in a enterprise group often have different ability level, and the parent company must properly handle relations among its own, resource advantage subsidiaries and resource disadvantage subsidiaries in good balance, as an important lever, once the parent company lost the controlling power to the subsidiaries, it will lose the regulating ability to ensure the interactive control efficient at the same time, for instance, target incentive effectiveness must be lower while which is face to a resource advantage subsidiary. In addition, the enterprise groups should improve the matching extent between interactive control and strategic targets. If the matching degree is identified or effective matching, it will be easier to avoid excessive centralization or decentralization, and to take a more effective process communication. In the design process of target incentive, the parent company’s managers should have an objective assessment to the subsidiary managers’ individual performance, which



then can set up an incentive system based on both efficiency and fairness.

However, the study is not without limitations, with which require future research. First, the research sample possibly has a certain regional characteristic, as most sources are from Beijing, Anhui, Jiangsu or surrounding cities, this may reduce the universality of our conclusions, but a good fitting result reflects the certain research value. Second, this research lacks to analysis of the groups' basic properties, such as there may exist a different influence on interactive control between the state-owned enterprise and the private enterprise. Thus, there should be some further research on this subject, for example, to increase the survey sample range and size to enhance the applicability of conclusions in the empirical study, or use other research methods (e.g. case study) to verify the reliability of the findings.

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