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Determinants of the Budget Levels in Incorporated Administrative Agencies*:

Verification of the Results of the Reorganisation and Rationalization Plan for Special Public Corporations

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1. Introduction

Japan's IAA system, which was modelled on the United Kingdom's executive agencies, was launched in April 2001 with 57 agencies. However, in October 2003, only a short time after the system was launched, the Koizumi cabinet implemented the Reorganisation and Rationalization Plan for Special Public Corporations; as a result, SPCs and ACs were transitioned to become IAAs, which was not envisaged when the system was designed (Iizuka 2012, 45–46, 49).

The objective of this study is to verify using quantitative methods whether or not incentives for management efforts are functioning in the SPCs that were transitioned to become IAAs (hereafter, "transitioned IAAs"), and to evaluate and analyse the SPC reforms.

For this analysis, the same as in previous research by Yamamoto

(2008), the focus is placed on the budgets of IAAs. Specifically, with the budget levels of the transitioned IAAs as the dependant variables, the extent to which incentives for management efforts and the results of the evaluation of operations explain the budget level as verified using multiple regression analysis.

Incrementalism is the most influential theory to explain budget changes in administrative organisations. In this paper, the same as in a paper by Yamamoto (2008), the amounts in the previous fiscal year are inputted as independent variables. After controlling for the effects of incrementalism, the extent to which financial performance and the results of the evaluation of operations influencing the budget level are the determinants of the budgets of IAAs.

2. Previous research

In exchange for a reduction in strict ex-ante controls and being given management freedom, IAAs are required to undergo ex-post evaluation of the results of their activities. The expectation is that they will utilize the discretion given to them for effective activities and management efforts. Against this backdrop, what the designers had in mind at the time that they designed the IAA system were institutions with a low political aspect that would be responsible for executing administrative services. In fact, IAAs that became these agencies at the time the system was launched (hereafter, "preceding IAAs") tended to be small-scale training centres, research institutions, inspection institutions, and museums (Inatsugu 2006, 42; Matsunami 2008, 45), and can be described as IAAs with the objective of improving efficiency.

Subsequently, as a result of the special public corporate reforms implemented by the Koizumi cabinet, in October 2003 some SPCs and ACs were transitioned to become IAAs. This group of corporations that became IAAs as part of the series of SPC reforms were larger in scale than the preceding IAAs, and included large-scale institutions and institutions that were highly political in nature. IAAs such as SPCs were

not envisaged at the time the system was designed (Iizuka 2012, 45–46, 49). Among these transitioned IAAs whose operations are different in nature to those of the preceding IAAs, whether or not incentives for management efforts are functioning is an important question in order to evaluate the results of the SPC reforms.

A number of previous studies have discussed incentives for management efforts in the IAA system. All of these studies were negative regarding the effects of the framework (Okamoto 2007, 147–151; Agata 2014, 8) and the feedback from the evaluation of operations (Nishiyama 2009, 57–58; Agata 2014, 7). However, each of these previous studies used a qualitative methodology, and there has been insufficient verification using a quantitative approach.

Yamamoto's (2008) work is an example of a study that used a quantitative approach to verify the effectiveness of the IAA system. The subjects of analysis in Yamamoto's (2008) study were the 57 preceding IAAs, and his findings supported the notion that financial performance such as the monetary difference between the budget and the financial statements and also the results of the evaluation of operations by IAA evaluation committees affects decisions on the budgetary level. From the results of his analysis, he concluded that the majority of the budget level could be explained by the budget amount in the previous fiscal year, and that the effects of incrementalism were strong.

However, Yamamoto (2008) showed that while its explanatory power is small compared to that of the budget in the previous fiscal year, the tendency was that the better the financial performance, the higher the budget level, so incentives were working. In contrast, he noted that the non-financial performance of the evaluation of operations did not affect the budget. Yamamoto (2008) is the most important previous study for this article in that his findings support notions regarding the effectiveness of the IAA system from a quantitative viewpoint.

Based on the accumulation of previous research described above, in this study the transitioned IAAs that became IAAs due to the SPC reforms are analysed. The subjects of the analysis in Yamamoto (2008)

were the preceding IAAs, but he did not analyse transitioned IAAs. Therefore, in this paper, upon refining one part of Yamamoto's (2008) analytical method, the same analysis is carried out for the transitioned IAAs. Yamamoto showed that for preceding IAAs, the previous fiscal year's budget and financial performance affect the following fiscal year's budget. In this study, whether the same results will be observed for transitioned IAAs is verified.

3. Analytical method

Incentives for management efforts are important to promote the pursuit of efficiency in IAAs. There are various methods of providing incentives, but a performance-based budget can be cited as a typical method. A performance-based budget is a method of reflecting the results of the measurements of the performance of organisations and policies in either an increase or decrease in the budget in the following fiscal year. Even if IAAs are granted a lot of discretion, if the results of management efforts are not linked to the budget, the incentives will be weak.

The management of performance-based budget incentives must be based on an evaluation of the management efforts in IAAs. Yamamoto (2008) incorporated into his analysis two indicators to serve as the basis for judging the management efforts of IAAs.

The first was an accounting system indicator of the monetary difference between the planned input in the budget and the actual output on the financial statements. In general, the concept of efficiency is understood in terms of the output/outcome relative to the input. With regard to this, in the IAAs' accounting standards, the monetary difference between the planned input in the budget and the actual output of the results on the financial statements are understood to be the "profit or loss" item, which becomes the standard for evaluating efficiency (Shirayama 2015, 19, 33). When employing this way of thinking for the accounting standards, if the amount of actual expenditure on the financial statements is lower than the amount in the planned budget, then it can be understood

that the operations were efficient. In the same way, if the amount of actual revenue in the financial statements is greater than the amount in the planned budget, it can be considered that management's efforts have increased revenue.

As an expert in public accounting and through IAAs' accounting practices, Shirayama (2015) said as follows with regard to reflecting the above-described profit or loss indicator in the evaluation of the performance of the presidents of IAAs: "In actuality, it is hardly ever used when evaluating IAAs, and a specific and quantitative evaluation methodology has not been established" (Shirayama 2015, 33).[4] While evaluating the performance of presidents is different from the interest of this paper (which is the budgets of IAAs), it is still an extremely interesting point. On the other hand, the results of the analysis of Yamamoto (2008) showed that while it is less influential than incrementalism, it does lead to incentives, so the opinions expressed in the previous research are divided.

Second is an evaluation-system indicator of the results of an evaluation of the achievement of IAAs' operational targets. IAAs are evaluated using a two-level system:[5] the results of the evaluations in each fiscal year by the IAA evaluation committees established in each government ministries, and the evaluation by the Commission on Policy Evaluation and Evaluation of Incorporated Administrative Agencies in the Ministry of Internal Affairs and Communications. Unlike the indicator based on financial information, evaluations by evaluation committees also include targets related to the quality of services. In the analysis of Yamamoto (2008), the results showed that this sort of non-financial performance information was not fed back into the budget.

If the extent of the management efforts measured by these two evaluation indicators is observed to affect the budget level of IAAs, it can be considered that incentives for management efforts are functioning effectively in SPCs and other IAAs.

Yamamoto (2008) used the evaluation indicators described above and conducted a two-stage analysis. In order to improve the comparability

with the results of the analysis of Yamamoto (2008) on preceding IAAs, in principle, the analysis in this paper is carried out in accordance with the analytical method of Yamamoto (2008).

As the first stage of the analysis, in order to verify if there are incentives for management efforts in IAAs, each agencies' actual / planned budget ratio were analysed. Specifically, data was prepared for each fiscal year on the actual / planned ratio for all of the agencies for four items: total expenditures, operating expenditures, earned income, and total revenue.[6] If the "actual / planned" ratio for total expenditures and operating expenditures was below one, it indicated that efficiency improved compared to the planned budget, and that there were incentives for management efforts. Also, if the "actual / planned" ratio was above 1 for earned income and total revenue, it signified that there had been management efforts to increase revenue compared to the planned budget.

The data used for the analysis was on 20 transitioned IAAs[7] over a 10 year period from fiscal 2003 to fiscal 2012. Budget data was used for each of the items of total expenditures, operating expenditures, earned income, and total revenue.[8]

As the second stage of the analysis, in order to verify the determinants of the budget levels of IAAs, Yamamoto's (2008) multiple regression analysis using three models was carried out. The dependant variables were the total expenditure budget in model 1, the operating expenditures budget in model 2, and the operating grants budget in model 3.

The data used for the multiple regression analysis was the same data on the 20 agencies that was used in the first analysis. However, while in the previous analysis the budget values in the first fiscal year (t) were the dependant variables, for this analysis, data going back a maximum of two fiscal years (t−2) was used as the independent variable, and therefore the data used for the analysis was for eight fiscal years from fiscal 2005 to fiscal 2012.

For the number of samples that could be used for the analysis, there was a total of 160 fiscal years' worth of data, but from the reorganisation of operations and the various political backgrounds, in many cases the

scale of the budget increased or decreased enormously compared to the previous fiscal year, and therefore the fiscal years in which there were major effects unrelated to management efforts were excluded from the scope of the analysis.

As there were large differences between the sizes of the budgets of the various agencies, different from Yamamoto (2008), logarithms of each variable were made excluding the results of the evaluation.[9] In addition, the analysis was carried out after standardizing all of the independent variables to an average of zero and a distribution of one.

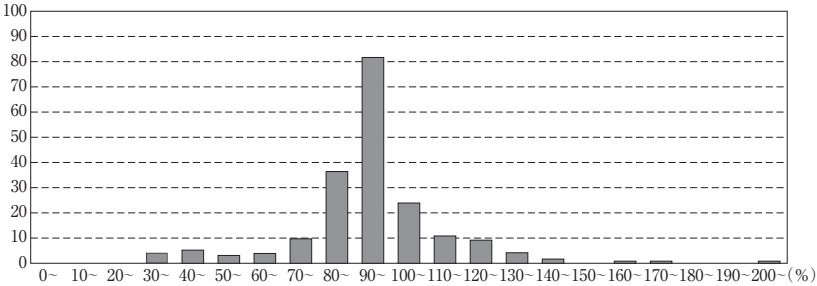
4. Analysis of the actual / planned ratios

In Graph 1, 2, 3, and 4 for the four items of total expenditures, operating expenditures, earned income, and total revenue for all of the agencies, the actual / planned ratios for each fiscal year were expressed as histograms. The X axis is the actual / planned ratios, while the Y axis expresses the number of corresponding fiscal years. A plot on the X axis to the right side of "100%~" shows the number of fiscal years in which the monetary amount on the actual budget was higher than the planned budget, while those on the left side from "90%~" show the number of fiscal years in which the amount on the actual budget was less than the planned budget.

A point in common among all the graphs is the presence of many fiscal years in which there is a large divergence between the planned budget and the actual budget.[10] The financial statements published by the IAAs describe the reasons for this divergence. Limited to what could be confirmed from these reports, the fiscal years in which there was an extreme divergence was not due to a lack of management efforts or negligence, but rather to various external factors.

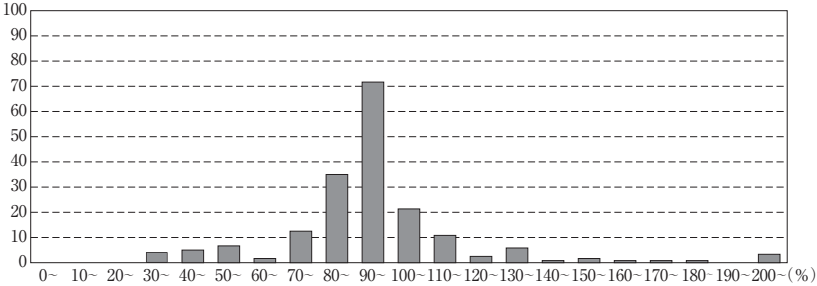
The results of Graph 1 and 2 on total expenditures and operating expenditures are inclined to the left side of 90%~, and looking at the overall picture, we can see that there were many fiscal years in which there was an unused part of the budget. In other words, incentives for

Graph 1: Actual / Planned Ratios of Total Expenditures



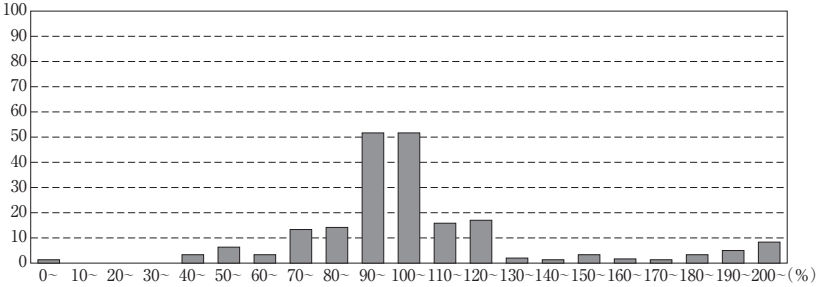
Source: Original.

Graph 2: Actual / Planned Ratios of Operating Expenditures



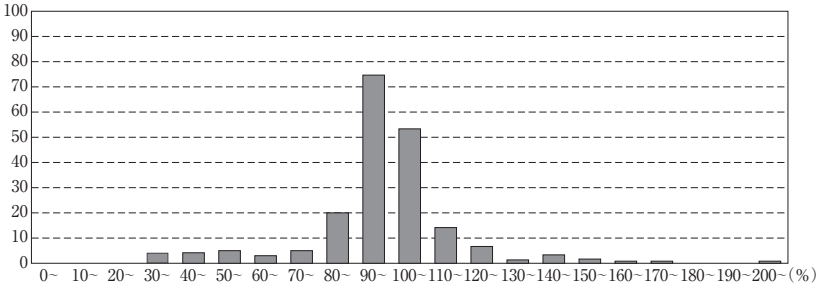
Source: Original.

Graph 3: Actual / Planned Ratios of Earned Income



Source: Original.

Graph 4: Actual / Planned Ratios of Total Revenue



Source: Original.

management efforts for expenditure were working.

On the other hand, it is necessary to separately interpret the respective results for earned income and total revenue. First, in Graph 3 for earned income, compared to the other items the data is widely distributed and there are many outliers. Maybe this is due to the fact that the predictability of earned income is low compared to the other items.[11] Looking at the picture as whole, we see that there is an inclination toward the right side, but among the outliers on the right side of 160%~, seven fiscal years' worth of data was from the New Energy and Industrial Technology Development Organisation. According to this agency's financial statements report, the reasons given in each fiscal year for the divergences were that "there were many revenue payments" and that "asset sales income was higher than expected," and this organisation seems to have the tendency of constantly underestimating its earned income budget.

In addition, nine fiscal years' worth of outliers on the left side of 50%~ were from the Agriculture, Forestry and Fisheries Credit Foundations. The budget of the Agriculture, Forestry and Fisheries Credit Foundations is formed of compensation for damages for the agriculture and fishing industries due to large-scale disasters, so in the event that such a disaster does not occur, the budget and financial statements will diverge. Due to this nature of its operations, among the outliers to the left side of 50%~ in

Graph 1, 2, and 4, nine fiscal years' worth of data from the Agriculture, Forestry and Fisheries Credit Foundations is displayed.

Based on the fact that the outliers to the left and right were mainly due to factors unrelated to management efforts, it is difficult to find a consistent trend between management efforts and changes to revenue.

In the same way, the plots on Graph 4 tended to be on the left side of 90%~, and we saw many examples of the forecast for total revenue in the planned budget falling below the actual budget. However, here also the outliers on the left side were nearly all data from a specific agency. Nine fiscal years' worth of outliers on the left side of 70%~ were from the Organisation for Environment Improvements around Airports. Even if this organisation plans its operations, such as operations for relocation and compensation due to noise around airports, there are many operations that it cannot implement due to difficulties in the compensation negotiations, and therefore a situation in which the amounts on the actual budget are less than on the planned budget has become the norm.

From the results of Graph 3 and 4, a consistent trend cannot be seen for the revenue-related items. In contrast to expenditures that can be controlled by management within the organisation, revenue is affected by factors external to the organisation, and therefore at the stage of preparing the budget, the possibility of predicting it is low and incentives for management efforts do not clearly appear.

5. Multiple regression analysis of the budget levels

Based on Yamamoto (2008), three models were set for each dependant variable and a multiple regression analysis was carried out. The dependant variables were the total expenditures budget in model 1, the operating expenditures budget in model 2, and the operating grants budget in model 3. With regard to the dependant variables in the relevant fiscal year (t) of the total expenditures budget, the operating expenditures budget, and the operating grants budget, data from the previous fiscal year (t−1) and two fiscal years ago (t−2) were used as the independent

variables. Different from Yamamoto (2008), for each variable related to the difference between the actual budget and the planned budget from two fiscal years ago (t−2), the actual / planned ratio obtained by dividing each item in the actual budget by the planned budget was used, the same as in the analysis described in the previous section. In order to improve the comparability of the variables input into each model, the same items as in Yamamoto (2008) were input.

For the evaluation-results variables, each of the evaluation results items from the IAA evaluation committees established in the various government ministries were used. As there were differences between the evaluation standards and the number of evaluation stages between each of the agencies with three being an evaluation corresponding to "Satisfactory, overall," they were converted into five stages from one to five according to the written expressions of the evaluation standards for the other evaluations. After doing this and calculating the average value for each evaluation item, a composite indicator was created that took the average for the following three items: "Efficiency of operations management," "Improvements to the quality of services and other operations," and "Other operations management,"[12] which became the evaluation result for each agency. The average was around four, and the majority of the items were an A evaluation, or evaluated as being "Satisfactory."

Table 1 shows the descriptive statistics for each variable. As there were agencies for which the monetary amounts for operating expenditures, operating grants, and the operating grants liabilities was zero, the minimum value was set as zero.[13]

The hypotheses of Yamamoto (2008) and the conclusions envisaged from the hypotheses are as follows:

Hypothesis 1: verification of the incentives system
Liabilities of operating grants in two fiscal years ago (t−2) do not result in a reduction in the operating grants budget (t).
(Directly proportional or unrelated)

Table 1: Descriptive Statistics [14)]

	N	Average	Standard Deviation	Min	Max
Planned Total Expenditures (t)	160	245680.8	466544.6	938	3341961
Planned Operating Expenditures (t)	160	109600.8	196299.9	0	1153655
Planned Operating Grants (t)	160	22408.9	44115.7	0	190299
Planned Total Expenditures (t−1)	160	246086.8	474078.5	938	3341961
Planned Operating Expenditures (t−1)	160	108422.8	195350.0	0	1153655
Planned Operating Grants (t−1)	160	22634.7	45145.6	0	190299
Actual / Planned Ratio of Total Expenditures (t−2)	160	.995	.673	.348	9.084
Actual / Planned Ratio of Operating Expenditures (t−2)	160	.921	.325	0	2.360
Actual / Planned Ratio of Earned Income (t−2)	160	1.162	.706	.468	7.320
Actual / Planned Ratio of Total Revenues (t−2)	160	.994	.311	.372	3.970
Liabilities of Operating Grants (t−2)	160	2878.4	8548.1	0	59619
Evaluation Results (t−2)	160	3.937	.197	3.176	4.312

Source: Original.

Hypothesis 2: verification of incrementalism

The majority of the total expenditures budget (t), operating expenditures budget (t), and operating grants budget (t) of IAAs is determined by the budget in the previous fiscal year (t−1).

(Directly proportional)

Hypothesis 3: verification of feedback

The performance indicators (actual / planned ratio, performance evaluation) in two fiscal years ago (t−2) are fed back into the current budget (t).

(The total expenditures' and operating expenditures' actual / planned ratios are inversely proportional, and the earned incomes' and total revenues' actual / planned ratios are directly proportional)

Table 2 shows a summary of the results of the analysis. The multicollinearity of input variables was confirmed by calculating the Variance Inflation Factor (VIF). All of the models and variables were four or less, and it was determined that there were no problems.

For the analysis, the levels of the total expenditures budget, the operating expenditures budget, and the operating grants budget were compared to those in the previous fiscal year; in fiscal years in which they fluctuated by ±20% or more, it was judged that the changes were unrelated to management efforts and they were excluded from the data. This is because extremely large changes to the budget amounts are caused by changes to the organisational structure, to the operations' content, and to policy. As the verification attempted in this paper is from the viewpoint of the performance-based budget, steps were taken to remove data with large changes in order to control as much as possible for undesirable data.

For the actual / planned ratio, fiscal years had changes relative to the budget of ±20% or more for total expenditures, operating expenditures, and total revenue; those of ±30% or more for earned income were excluded from the data for the same reason. There is no logical basis for a 20% level,[15] and this level was set simply to have a uniform standard for excluding data. Compared to the other variables, the possibility of forecasting earned income is low, so its level was set at 30%. In each of model 1, 2, and 3, the most influential item was the previous fiscal year's budget, which is the same as the result obtained by Yamamoto (2008), and it shows the strength of incrementalism. The other item for which a significant difference was observed was the total expenditures actual / planned ratio for two fiscal years ago in model 1. Contrary to the hypothesis, the results obtained were that the actual budget exceeded the planned budget (with no management efforts) and the planned budget increases. However, as indicated by the size of the standardised partial regression coefficient, the effects were negligible.

Table 2: Results of Regression Analysis

	Model 1 Planned Total Expenditures (t)			*Model 2* Planned Operating Expenditures (t)			*Model 3* Planned Operating Grants (t)		
Independent Variables	Beta	Std. Err.		Beta	Std. Err.		Beta	Std. Err.	
Planned Total Expenditures (t−1)	.999	(.004)	***						
Planned Operating Expenditures (t−1)				.997	(.004)	***			
Planned Operating Grants (t−1)							.979	(.020)	***
Actual / Planned Ratio of Total Expenditures (t−2)	.009	(.005)	*				.004	(.009)	
Actual / Planned Ratio of Operating Expenditures (t−2)				−.002	(.051)				
Actual / Planned Ratio of Earned Income (t−2)	.002	(.038)		.003	(.031)		−.020	(.064)	
Actual / Planned Ratio of Total Revenues (t−2)	.006	(.063)		−.005	(.056)		.002	(.106)	
Liabilities of Operating Grants (t−2)							.023	(.016)	
Evaluation Results (t−2)	−.001	(.019)		.000	(.017)		.003	(.037)	
(Constant)	−.067	(.095)		.075	(.095)		.017	(.185)	
R^2	.998			.999			.990		
N		97			81			82	

***: $p < 0.001$ **: $0.001 \leqq p < 0.01$ *: $0.01 \leqq p < 0.05$ +: $0.05 \leqq p < 0.1$
Source: Original.

Table 3 shows a comparison of the results of the verifications in Yamamoto (2008) and in this study. A point in common between the two studies is that the most influential item was the previous fiscal year's budget. In terms of their differences, the effects of the difference between the planned budget and actual budget that were observed in Yamamoto (2008) were not observed in this study. The following two hypotheses can be considered as the reasons.

The first hypothesis is the difference in the subjects of the analysis. Yamamoto (2008) analysed preceding IAAs that became agencies at the same time as the system was launched. Originally, the IAA system was designed envisaging institutions with a low political aspect that were responsible for executing administrative services such as the preceding

Table 3: Comparison of the Results

		Model 1 Planned Total Expenditures (t)		*Model 2* Planned Operating Expenditures (t)		*Model 3* Planned Operating Grants (t)	
Independent Variables	Hypothesis	Yamamoto	This study	Yamamoto	This study	Yamamoto	This study
Planned Total Expenditures (t−1)	+	+ **	+ ***				
Planned Operating Expenditures (t−1)	+			+ **	+ ***		
Planned Operating Grants (t−1)	+					+ **	+ ***
Actual / Planned Ratio of Total Expenditures (t−2)	−	− **	+ *				
Actual / Planned Ratio of Operating Expenditures (t−2)	−			− **			
Actual / Planned Ratio of Earned Income (t−2)	+	− **		+ **		+ *	
Actual / Planned Ratio of Total Revenues (t−2)	+	+ **				+ **	
Liabilities of Operating Grants (t−2)	Decorrelation or +						
Evaluation Results (t−2)	+						
R^2		.967	.998	.997	.999	.999	.990

***: $p < 0.001$ **: $0.001 \leqq p < 0.01$ *: $0.01 \leqq p < 0.05$ +: $0.05 \leqq p < 0.1$
Source: Original.

IAAs. In contrast, the subjects of the analysis in this study were transitioned IAAs that became agencies from a political background, and in terms of the nature of their operations, it might be difficult for incentives from the IAA system to function for them.

The second hypothesis pertains to the difference in analytical method. For the subjects of analysis in Yamamoto (2008) of the preceding IAAs, data from all of the fiscal years was used. In contrast in this study, data was excluded from the scope of the analysis if it was considered to include changes unrelated to management efforts when the rate of change of the budget scale compared to the previous fiscal year or the divergence between the planned budget and the actual budget within the same fiscal year was unusually large. It is considered that to a certain extent, the subjects of analysis in Yamamoto (2008) included data in which the budget and financial statements diverged due to factors unrelated to management efforts.[16)]

6. Conclusion

In this study, based on the analysis of preceding IAAs by Yamamoto (2008), an analysis was carried out on transitioned IAAs that became agencies due to SPC reforms. Among these transitioned IAAs, while to a certain extent incentives to keep down expenditures within the scope of the budget were observed, no incentives for management efforts were observed relating to revenue.

In the results of the analysis of the determinants of budget level, the same as with the preceding IAAs, most of the budget level could be explained by the previous fiscal year's budget. It was clarified that the financial performance and the results of the evaluation of non-financial aspects are not taken into consideration when determining the budget, and that incentives from a performance-based budget are not functioning.[17)]

The analysis of Yamamoto (2008) that dealt with the preceding IAAs showed that financial performance is reflected slightly in the budget.

However, this effect was not observed in this study, which dealt with transitioned IAAs. A point made in previous research that in practice, financial information is hardly ever utilized for the evaluations of managing directors (Shirayama 2015, 33) and would also seem to apply to the budgets of agencies.

Much of the previous qualitative research up to the present time expressed a negative opinion on the IAAs' incentives and evaluation feedback (Okamoto 2007; Agata 2014; Shirayama, 2015). The results of the analysis in this study quantitatively supports these opinions. The same as with the preceding IAAs handled by Yamamoto (2008), it can be said that the budget levels of transitioned IAAs are determined by incrementalism.

The analysis in this study also revealed the limits of performance measures that focus on the differences between the planned budget and the actual budget. When carrying out the regression analysis in this study, for convenience a line was drawn at 20% to 30%; although insufficient, an attempt was made to exclude the effects of factors unrelated to management efforts. The accounting system in the IAA system deems the difference between planned input and the output of the actual results to be the profit or loss item. However, as was revealed by the histograms, in actuality divergences frequently occur between the budget and financial statements due to factors that are unrelated to management efforts, so there are limits to the method of using the differences between planned inputs and actual results as outputs in order to ascertain performance.

In terms of the issues to be addressed in the future, it will be necessary to carry out a multifaceted evaluation not only from the aspect of the budget at the organisational level, but also from other viewpoints such as the human-resources aspect. Thus, in order to evaluate the improvements to efficiency and the adverse effects from IAAs, it would seem necessary to conduct a multifaceted analysis that is not limited to the budget aspect, but that also includes changes to the number of employees, personnel costs, and the non-regular employment rate that results from being an IAA.

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3) This paper is based on the International Symposium on Security Management and Public Enterprise Reform by the Seoul Association for Public Administration (SAPA) and Keio Program for Security Initiative Research Projects held in the East Building, Keio University in July 2, 2016. We appreciate Prof. Sintaek Kang (Seoul National University) for moderator, Prof. Jong-Won Lee (Catholic University) and Prof. Kyunsub Kum (Seoul National University) for useful comments as discussants.

4) The sources of the information in this paper are not specified, but the author is an accountant and has experience auditing, including the auditing of IAAs, public university corporations, and public interest corporations. The author is also of member of the Research Committee for Local Incorporated Administrative Agency Accounting Standards in the Ministry of Internal Affairs and Communications. Thus, the information can be considered to be based on the practical experience of the author himself.

5) Agata (2014) cites the two-level evaluation in the IAA system by the various government ministries and the Ministry of Internal Affairs and Communications as being characteristic of Japan (Agata 2014, 7). But, the evaluation system was changed in 2015. The current evaluation system became one-level evaluation by the Incorporated Administrative Agency System Evaluation Committee in the Ministry of Internal Affairs and Communications.

6) Yamamoto (2008) used the monetary difference between the actual budget and the planned budget to carry out the analysis, but when using a monetary difference for the analysis, there will be differences in size depending on the budget scale of each agency. Therefore, in this paper the "actual / planned" ratio, which was obtained by dividing the planned budget by the actual budget, was used.

7) In order to use common data with the multiple regression analysis, among the agencies that became IAAs in October 2003 due to the Reorganization

and Rationalization Plan for Special Public Corporations, 20 IAAs that have survived up to fiscal 2012 were set as the subjects of the analysis.

8) The data is published on the homepages of each agency and was collected based on financial statements. In the event of a revised budget, the values included in the revised budget were used for both the budget and the financial statements.

9) As there was one institution with an operations expenses budget of zero, the analysis was carried out with the corresponding value as zero.

10) Yamamoto (2008) judged the presence or absence of management efforts based on overall average values, but in this paper the judgments were not made based on average values. Through showing the histograms, it was apparent that there were many outliers in the data on transitioned IAAs, so it was more appropriate to make a visual judgment from the histograms.

11) For example, the high dividends of soccer lottery totoBIG became a topic of conversation, and this is the case such as when sales rise significantly (Japan Sport Council, fiscal 2007 and 2008).

12) In addition, targets according to item such as for short-term debt and retained earnings are set, but as the presence or absence of targets differ according to each agency and are not the evaluation indicators used for the main operations, they were not used for the composite index. Also, there were cases where the delineation of the items on the evaluation reports differed according to the agency, so they were classified into three categories according to their content and then aggregated.

13) Fiscal years in which the operations expenses, operating grant, and operating grant liabilities were zero were excluded from the analysis, as were the outliers.

14) All analyses are estimated by Stata 12.

15) Generally, when excluding outliers, the methods used are considered to be the average values and the standard deviation. However, the objective of the analysis in this paper was to observe variations within the scope of day-to-day organisational management, so rather than using standard criteria, it was judged that it was more appropriate to use data in a narrower range, and 20% was set as the standard. However, as a result, R^2 in each model in table 2 becomes too high, almost 1.00.

16) However, since histograms were not shown in Yamamoto (2008), there is no room for speculation.

17) This problem may be caused by sectionalism; when the finance ministry makes next year's governmental budget, it seems not refer to the non-financial evaluation results of each IAA which other ministries evaluated.

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