Journal of Air Transport Management 25 (2012) 40–43

Contents lists available at SciVerse ScienceDirect

Journal of Air Transport Management

journal homepage: www.elsevier.com/locate/jairtraman

Note

Financial performance of airport terminal companies in Japan – Harmful effects of government participation

Munekatsu Usami*, Nobuo Akai

Osaka University, 1-31 Machikaneyama-cho, Toyonaka, Osaka 560-0043, Japan

Keywords:
Japanese airport efficiency
Airport terminals

A B S T R A C T

This paper analyzes the managerial performance of domestic airport terminal buildings in Japan. Japanese airports have been constructed all over the country under the Special Account for Airport Development but few are profitable. Public-private partnership third party companies manage most terminal buildings. We show that government participation in the capitalization and governance of terminal building companies has fostered practices that impair their performance. In particular we find that airport terminal companies whose executive boards include larger fractions of retired government bureaucrats, and whose staffs include larger fractions of government workers on temporary assignment, have lower profit. We also show that terminal building companies that are audited tend to be more profitable than ones that are not.

1. Introduction

There have been concerns that the Special Account for Airport Development[1] has accelerated the construction of new airports in the country despite limited growth in demand. As a result, airlines were obliged to open and maintain routes to the new local airports in response to petitions by the local governments and local stakeholders, and incurred losses in doing so thus contributing to airline industry's financial distress.

The bankruptcy of Japan Airlines in January 2010, Japan Airlines and the subsequent bailout by the government's Industrial Revitalization Corporation drew public attention to local airports and spurred debate about whether government should continue to subsidize them. The soft economy and competition with other modes of transportation, mainly the *shinkansen* high speed rail system, has put many local airports in a serious financial situation, now exacerbated by reductions in flights.

In Japan, the administration of airside facilities is separate from that of airport buildings. The central or local government administers airside facilities, but, typically, local government or a joint-venture of local government and a private company – a third-sector company – run terminal buildings. Here we examine the managerial performance of terminal building companies in Japan, looking at factors that promote autonomous management and efficient operation. In particular we look at the role of government participation in the capitalization and governance of terminal building companies on their managerial performance. In Japan, there is the widespread use of *amakudari*, service by retired government bureaucrats on the executive boards of companies over which they once exercised regulatory oversight,[2] and *shukko*, the temporary assignment of active government employees as workers in private companies for periods of two or three years.[3] We consider the implications of this in particular on efficiency. We look at the effects of auditing of terminal building companies on their profitability.

2. Influences the financial performance of terminal building companies

We make use of data on the financial performance of airport terminal building companies in Japan available in the survey of third-sector companies for the financial years 2003–2009 by the

* Corresponding author. Tel.: +81 6 6949 9388.
E-mail addresses: munekatsu.usami@gmail.com, m-usami@osipp.osaka-u.ac.jp (M. Usami).

[1] It was absorbed to the Special Account for Social Capital Improvement in financial year 2009, and re-defined as Airport Development Account within it.

[2] *Amakudari* means that a retired government official is welcomed to an enterprise as a member of the executive board with attractive benefits. It is a way that private companies in Japan keep strong ties with the government bodies charged with overseeing them. The number of *amakudari* executives in the private sector in Japan is sizeable. In terminal building companies, such *amakudari* executives are generally posted from local governments.

[3] *Shukko* means that an employee in one organization is dispatched to another for a finite period while continuing to be an employee of the original organization. Such *shukko* staff members of terminal building companies are mostly posted from local government offices and their terms are generally for only a few years.

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http://dx.doi.org/10.1016/j.jairtraman.2012.07.001

Table 1
Sampled airports.

Hokkaido Area			
Shin-Cbitose (Sapporo)	Memambetsu	Okadama (Sapporo)	Hakodate
Asahikawa	Kushiro	Obihiro	Wakkanai
Mombetsu	Nemuro-Nakashibetsu		
Tohoku Kail to Area			
Misawa	Aomori	Hanamaki	Sendai
Akita	Odate-Noshiro	Yamagata	Shonai
Fukushima	Hachjjojima	Niigata	
Chubu/Kinki Area			
Toyama	Komatsu	Noto	Matsumoto
Komaki (Nagoya)	Itami (Osaka)	Tajima	Nanki-Shirahama
Chugoku Shikoku Area			
Yonago	Tottori	Izumo	Oki
Iwami	Okayama	Hiroshima	Yamaguchi-Ube
Tokushima	Takamatsu	Matsuyama	Kochi
Kyushu/Okinawa Area			
Fukuoka	Kita-Kyushu	Saga	Fukue
Tsushima	Nagasaki	Iki	Kumamoto
Oita	Miyazaki	Amami-Oshima	Kagoshima
Tokunoshima	Yoron	Naha	Kumejima
Miyako			

Japanese Government Ministry of Internal Affairs and Communications. We focus on 58 terminal building companies (Table 1) to form a seven-year panel data set. To reflect that airport terminal buildings are operated separately from airside facilities, we exclude the four airports that operated by single authorities, Narita (Tokyo) Haneda (Tokyo) Kansai (Osaka) and Chubu (Nagoya). The definitions of the various data elements are seen in Table 2.

To examine whether various governance and monitoring systems influence the financial performance of terminal building companies, we use the following:

$$y_{it} = \alpha_i + \beta\, Governance_{it} + \gamma\, Monitoring_{it} + \lambda\, Z_{it} + \varepsilon_{it}$$

The dependent variable is the amount of recurring profit net of subsidies, after depreciation and before taxes. The independent variables are our proxies for governance factors (*Governance*) measured as the number of local governments that capitalize the same terminal building company, private sector capital participation ratio fraction of the workforce that are active government employees, the fraction of the board members that are retired government employees and an index measure of financial leverage.

The proxy variables for monitoring factors (*Monitoring*) are a dummy variable equal to one if the company is audited either by certified public accountant or an auditing firm (*Finstate*) and another dummy variable equal to one if the company voluntarily discloses its financial information.

Our control variables (Z) includes the population of the prefecture as information of the scale of hinterland market of each airport, the current account balance ratio of the prefecture (i.e. the ratio of prefectural government current revenue to current expenditure) to indicate the financial soundness of each prefecture as sponsor, and the amount of subsidy to reflect the degree of direct financial influence by sponsors. We also include the passenger load factor for the major routes as information to reflect the degree of utilization of each airport[4] and a dummy variable equal to one if there is competition with the *shinkansen*.

We allow for the possibility that *the amakudari* effect may be an endogenous by using the instrumental variables. It is generally said that *amakudari* is more prevalent for companies in Japan with high and stable profits; if true, then *amakudari* not only influences profitability but is also is affected by profitability. To address this potential problem we adopt take the fraction of the board members that are retired government employees as an endogenous variable that is instrumented by four other variables based on the Sargan–Hansen test of over-identification: capital participation share of the largest public sector stakeholder, current account balance ratio of that stakeholder, a dummy variable equal to one if there are multiple airports in the same prefecture, and amount of revenue in the previous year ($t-1$). The logic of this that the capital participation share of the largest public stakeholder may positively affect its ability to impose its will on the terminal building company. Additionally, the current account balance ratio of the local government is an indicator of its fiscal discipline, another positive correlate with political power. Multiple airports in the same prefecture presumably mean that there are more possible posts and more opportunities for *amakudari*. The amount of revenue in the previous period ($t-1$) reflects for financial strength of a company to absorb *amakudari*. A summary of the variables used in analysis are shown on Table 2 and the descriptive statistics in Table 3.

3. Results

The results of the estimations are seen in Table 4. A Hausman test favors the random effect over the fixed effect model at the 10% level of statistical significance. Further, the Sargan–Hansen test of over-identification supports the null hypothesis that the instrumental variables were exogenous (i.e. uncorrelated with the disturbances) at the 5% level of statistical significance. The results of these two tests are also shown in Table 4.

In Model-1, is estimated using all variables while in Model-2 we adopt the financial leverage index instead of the private sector capital participation ratio, as the proxy for governance factors. The result remains essentially the same. Both models show that information disclosure (the proxy for monitoring) and the amount of subsidy are not statistically significant and, therefore, in Model-3 and -4, we remove them. The results for the other variables remain similar.

3.1. Governance factors

The fraction of the board members that are retired government employees has a statistically significant negative effect at the 5% confidence level in all models, i.e. This means that *amakudari* has a negative effect on the financial performance of terminal building companies. This contradict those of Akai et al. (2007) who found that a higher ratio of *amakudari* executives brought higher recurring profit, suggesting they might improve the efficiency of airport company management. But Akai did hedge this by mentioning the possibility of endogeneity bias, which the data did not allow him to address. Our analysis, based on seven-year panel data using instrumental variables to deal with the problem of endogeneity, supports endogeneity bias may indeed account for the results of Akai. Why this is so can only be reflected on *amakudari*, by promoting cohesion between the public and private sector may lead to waste and inefficiency by stymying initiative or the existence to make decisions.

The effect of the number of local governments that capitalize the same terminal building company is statistically significantly negative at the 1% or 5% level in all models. A larger number of local governments may create conflicts of interest and coordination failure and negatively influence the consistency, smoothness of decision-making and unification on management. At the same time, there is a risk that management responsibility can become

[4] Although the number of airlines including overseas airlines for international flights may be considered an important factor, we could not obtain significant results using it.