DIVERSIFICATION STRATEGY AND URBAN TRANSPORTATION THE CASE OF JAPAN

Killeen, Bruce J. and Shoji, Kenichi
Kobe University, Japan

INTRODUCTION

Debates in most industrialized countries pertaining to the provision of urban transportation revolve around what quantity and/or quality of transportation the government should supply. Public ownership, subsidies, and operating deficits are generally taken as a given. In Japan, however, numerous privately owned enterprises provide adequate urban transportation and operate profitably without subsidization.

While factors such as a favorable urban structure (densely populated cities with concentrated urban cores), the regulated fare system (full cost pricing principle), and cooperative management-union relations have improved the profitability of rail activities, it is and has been the innovative use of diversification strategies that has allowed the firms in Japan to build a stable ridership necessary to not only survive but to thrive. The privatization of the government owned and operated Japan National Railway in 1987 was initiated in large part due to the role model provided by the private railway companies.

The benefits accrued to a diversification strategy include:

1) the potential to lower subsidies provided by the government and tax payers.
2) greater profit potential for operators which may increase the likelihood of private initiative in the provision of urban transportation and may lead to improved quality and quantity of service for users.
3) help with the development of under-developed geographic areas.
4) the enhanced use of a mode of transport that is energy efficient, occupies limited space and causes less pollution.

The main argument against the utilization of a diversification strategy is the possibility that the benefits to society accrued through diversification strategy may outweigh the costs due to restricted competition. However, In Japan both rail and bus fares are regulated and consequently transit providers can not take advantage of any monopoly power that they may possess. Diversified businesses, on the other hand, generally, operate in highly competitive markets. Thus, regulatory and consumer choice checks are in place to ensure that monopolistic behavior is avoided or at least controlled. Accounting regulations assure that cross-subsidization of rail operations by diversified businesses does not take place.

This paper considers the so-called "major" private railway operators of which there are fifteen in Japan. Rumelt's (1974) methodology for classifying strategic behavior is adapted and utilized to analyze the in-house diversification strategy of the majors. This is followed by a discussion of group level activity and by a section which looks at some possible ideas that the urban transit providers could implement, followed by a consideration of some possible concerns a diversification strategy might entail including cross-subsidization and monopoly. The paper concludes that the Japanese model exemplifies a scenario under which railway systems can be privately operated without subsidization.

IN-HOUSE DIVERSIFICATION STRATEGY

Of the approximately 150 private railway companies in Japan, fifteen are referred to as "majors". Classification is conducted on a revenue basis by the Ministry of Transportation and at present includes firms with revenues of over US. $700 million.[1] Even though it was privatized in 1987 Japan Railway is treated separately because of the nature of its operations.

The rail boom which occurred in numerous industrialized countries in the early 20th century was also a phenomenon in Japan. Most of the firms began operations in the late 19th or the early 20th century and thus have long histories. However, unlike the bankruptcies that plagued rail operators in other countries, the Japanese majors are still in operation today. Table 1 (following) compares the majors according to revenues, employees and passengers.

Table 1: Comparison of the major urban transit providers in Japan (1995)

		YEAR STARTED OPERATIONS	NETWORK SIZE (KM)	NUMBER OF EMPLOYEE	NUMBER OF RAIL EMPLOYEE	ANNUAL PASSENGER xMILLION	AVERAGE PASSENGERS PER KM A DA xTHOUSAND	REVENUE FROM RAIL OPERATIONS	REVENUE FROM DIVERSIFIED BUSINESSES
1	HANKYU	1910	146.0	5,042	3,881	729	1,856	52 %	48 %
2	HANSHIN	1905	45.1	2,404	1,194	206	1,579	41 %	59 %
3	KEIHAN	1910	91.7	3,559	2,814	401	1,840	55 %	45 %
4	KINTETSU	1914	594.2	12,267	10,639	789	879	81 %	19 %
5	NANKAI	1885	172.0	4,829	3,350	302	1,063	68 %	32 %
6	KEIHIN	1899	83.8	4,942	2,652	430	2,024	45 %	55 %
7	KEIO	1913	84.8	4,399	2,462	587	2,282	62 %	38 %
8	KEISEI	1912	91.5	4,579	2,194	281	1,485	61 %	39 %
9	ODAKYU	1927	122.0	4,187	3,620	704	2,185	65 %	35 %
10	SAGAMI	1921	35.0	2,419	1,096	251	2,405	25 %	75 %
11	SEIBU	1915	177.0	5,195	3,462	657	1,317	40 %	60 %
12	TOBU	1899	464.1	10,546	7,350	946	808	61 %	39 %
13	TOKYU	1922	101.0	4,936	3,181	956	2,730	40 %	60 %
14	MEITETSU	1898	539.0	8,297	4,404	390	420	58 %	42 %
15	NISHITETSU	1911	121.0	7,007	1,012	139	533	22 %	78 %

*Firms 1-5 operate in the Keihanshin area, 6-13 in the Tokyo area, 14 in Nagoya and 15 in Fukuoka

Source: Ministry of Transport, *Annual Rail Statistics (Tesudo Tokei Nenpo)*

It is generally taken for granted that a large ridership must exist before infrastructure necessary for urban transportation will even be contemplated. This is because the government, not the private sector funds the project and there must be a visible need before a project is even considered to be "politically viable". However, after the Japan National Railway was founded in 1906, private firms were restricted to the use of or creation of lines which didn't interfere with government lines and thus travelled through areas with relatively limited populations. While firms obviously expected that rail operations could be self supporting, numerous bankruptcies and limited population bases forced firms to generate a steady ridership for rail operations. This led to

the utilization of a business diversification strategy. The Japanese approach counters classical theory which argues that diversification should only be considered when a firm's product or service reaches the latter stages of its life cycle.

In simplistic terms the flow of development proceeded in the following way. Initially, residential development helped to build up the markets in the vicinity of the rail lines. Access routes between rail lines and housing developments located at a distance from the rail infrastructure were created to vertically support rail operations as well as to operate as independent entities. Stations along the rail infrastructure were developed to meet the needs of riders who pass daily through the stations. Station development included the construction of department stores, office buildings and the development of other retail space. While most passenger traffic flowed into cities, the development of leisure facilities helped induce reverse traffic.

Only an aggressive and visionary private firm is capable of following such a flow which enables firms to internalize at least some of the externalities that were created by the development of their infrastructure and to attract passengers to rail operations. In addition, as a firm moves along the experience curve, valuable knowledge and experience can be utilized to expand or to enter new markets.

Today, the 'Majors' generally divide their operations into four divisions including the rail division, a transportation division, a real estate division and an "other business division". The rail division in general provides commuter services but some firms provide inter-city, airport access and freight service as well. The transportation division provides such services as bus and taxi feeder links to rail lines, inter-city express bus service and tour bus operations. The real estate division mainly develops commercial and residential properties. The other business division's operations vary between each firm and include various retail establishments and leisure facilities such as amusements parks, stadiums and museums - to name a few.

The research utilized Rumelt's (1974) pioneering methodology for classifying firms based upon the extent of their diversification. In addition to simplifying Rumelt's nine categories into five, including a firm which is specialized (single business), a vertically integrated firm (vertically integrated), a firm whose business is dominated by its main business but diversified to some extent (dominant business), a firm that has diversified into businesses that are related to the main business (related business) and a firm that ventures out into unrelated businesses (unrelated business), it was necessary to adapt the model to make it applicable to the transportation industry because Rumelt's model was created for comparing firms conducting business in the manufacturing sector. Due to the complexity of businesses within the individual divisions in each firm it was necessary to determine the share of vertically integrated businesses, related businesses and unrelated businesses within each division to sufficiently quantify the specialization ratio, related ratio and the vertical integration ratio.[2] While individual differences between firms were noticeable, averages were taken to standardize the classification technique. The Tetsudo Tokei Nenpo (Annual Report of Rail Statistics) published by the Ministry of Transportation was primarily used because it provided standardized data for all the firms in the study.

The rail division was taken as the main business (largest single business). In the transportation division, obviously, bus and taxi feeder lines which link residential developments and other facilities to the rail lines can be classified as being vertically integrated businesses because of the complementary nature of their operations. However, long distance bus service and tourist buses which have duplicate functions are more likely to be related in nature. Some firm's have unrelated

businesses in their respective transportation divisions including toll roads, trams, etc.. The real estate division also has a wide variety of businesses. Vertical businesses would include those which are built primarily to increase ridership. Utilization of acquired "core competencies" obtained from developments located close to rail infrastructure to develop land in other markets is better classified as a related business. The location of the business in question was used as a primary indication of relatedness. The other business division is made up of a variety of businesses some of which are related, some are unrelated and some are vertically integrated.

Using the adapted model the firms were classified according to strategic type for the period 1955 to 1993. The five majors operating in the Keihanshin area (including the cities of Osaka, Nara, Kyoto and Kobe) Hankyu, Kintetsu, Nankai, Keihan and Hanshin were compared. The results support the conclusion (Rumelt 1974) that firms tend to become more diversified over time. During the period 1955 to 1964 a majority of the firms were of the dominant type. However, from 1970 to 1993, firms increased their diversification activity and related type-firms become most common (see Table 2).

Table 2:Diversification Strategy of the Keihanshin Firms (1955-1993)

	HANKYU	KINTETSU	NANKAI	KEIHAN	HANSHIN
1955	D	D	D	S	D
1960	D	D	D	S	D
1964	D	R	D	D	D
1970	D	R	R	R	D
1975	R	D	VI	R	R
1980	R	D	R	R	R
1985	R	D	R	R	R
1990	R	D	R	R	R
1993	R	D	R	R	R

where S = Single Business Type VI = Vertically Integrated Type
D = Dominant Business Type R = Related Business Type

However, the consistency of strategic choice during the last twenty years of the data was apparent. The firms seem to have settled into a relatively static strategic position. While Kintetsu followed a dominant business strategy, the remaining firms all followed a related business strategy since 1975 with the exception of Nankai which used a vertically integrated strategy in 1975.

Numerous studies have indicated that firms which diversify into fields relating to their main business tend to be more profitable than firms which expand into unrelated activities (Rumelt (1982), Lecraw (1984), Itami (1982)). The results from this research are consistent with the aforementioned studies. For the firms operating in the Keihanshin area, the results are consistent. Related firms were found to be more profitable where profitability is defined as operating revenue divided by operating cost. However, it must be noted that no firms followed an unrelated strategy so comparison between related and unrelated firms was not possible. Among the firms following a related business strategy, the firm with the highest diversification index - which represents numerically the level of diversification activity - was found to be the most profitable.

A cross section of the data for 1993 was taken and Tokyo area firms were included to test the

hypothesis that firms following a related business strategy were more profitable than firms which followed an unrelated strategy. There were four firms in the Tokyo area which followed an unrelated business strategy. In 1993, the results support the conclusion that firms following a related business strategy tended to be more profitable (see Table 3).

Table 3: Relationship between diversification strategy and profitability (1993)

BUSINESS STRATEGY	DI INDEX AVERAGE	PROFITABILITY AVERAGE	NO. OF FIRMS	
			TOKYO	KEIHANSHIN
DOMINANT	21.72	116	0	1
VERTICALLY INTEGRATED	32.33	117	2	0
RELATED	36.50	119	2	4
UNRELATED	41.80	115	4	0

One intriguing finding was the differences between firms operating in the Keihanshin area as opposed to firms operating in the Tokyo area. Four Tokyo firms were found to have been following an unrelated strategy whereas there were none in the Keihanshin region. Rail firms operating in the Keihanshin area face competition from other private firms as well as from JR and automobiles. This may force the firms to focus their efforts on businesses related to the main business or the provision of transportation itself.

In summary, the results indicated that the majors have fallen into a relatively static business strategy position although within the strategic framework it is apparent that dynamic behavior continues. Firms following a related business strategy were found to be more profitable. This conclusion exemplified the need for further research to determine whether diversification should only be considered when a firm's product or service reaches the later stage of its life cycle. The majors have shown that in some cases diversification can be a rational strategy from the early stages of a firm's operations. Further research is also necessary to determine which aspects of the Japanese example can be implemented effectively in other country's transit systems.

GROUP LEVEL DIVERSIFICATION STRATEGY

All fifteen of the so-called major private railway companies are part of huge umbrella "groups" with the rail firm occupying the parental role. While in-house diversification focuses on activities that are near the rail infrastructure and tend to be complementary in nature, group level diversification expands its geographic sphere to areas away from the rail infrastructure. Reasons for the initiation of such a strategy include the opportunity to make use of idle financial resources, to effectively use personnel, to take advantage of markets created by the parent firm, to utilize the name, image and reliability of the parent and to attract passengers or customers to other group level or in-house level concerns. In addition, as the enterprise grows in shape and momentum it becomes necessary to separate some businesses as independent entities in order to streamline and create a more efficient management structure. In addition, it is possible to realize economies of scope by making use of tangible and intangible assets. In many instances, it is impossible to put a

market price on these particular assets so it is worthwhile for a firm to allocate these resources into suitable outlets such as in other markets or even other business domains.

Group level firms are involved in virtually all domains of the service sector. Unlike the similarities between the in-house diversification strategy, the groups vary extensively in terms of size and scope. For example, according to the company handbook, Kintetsu is made up of 86 subsidiaries, 52 affiliated companies totaling 138 companies which employ over 90,000 people . Table 4 exemplifies the scope of enterprises the groups are involved in.

Table 4:Representative examples of group level businesses

TRANSPORTATION	REAL ESTATE DEVELOPM AND CONSTRUCTION	RETAIL SALES	LEISURE AND SERVICE	OTHER
				MANUFACTURING
RAIL	MEDIATION	DEPARTMENT STORES	TRAVEL AGENCY	RAIL PASSENGER CARS
BUS	SALES	SUPERMARKETS	AMUSEMENT PARKS	PLANT CONSTRUCTION
TAXI	DEVELOPMENT	SPECIALTY SHOPS	MOVIE THEATERS	INFORMATION
TRAM	RENTAL PROPERTIES	CONCESSION STANDS	THEATRES	CABLE TV
OCEAN SHIPPING	PROPERTY MANAGEMENT		PROMOTION	INFORMATION PROCESSING
RENTAL CAR	CONSTRUCTION		SPORTS CLUBS	ADVERTISING
FREIGHT TRANSPOR	CONTRACTING		FACILITY MANAGEM	FINANCE
FREIGHT HANDLING	LANDSCAPING		FOOD AND BEVERAGI	INSURANCE
AIR TRANSPORT			HOTELS	CULTURAL
				MUSEUMS
				SCHOOLS

Data for comparing group level concerns of the majors was taken from annual reports. A ministerial ordinance in 1990 made it obligatory for private rail firms to disclose group level activity. However, it should be kept in mind that the data does not give a full picture of the nature of the operations of the groups. A firm was considered to be part of the group and was to be included in the segment information section of annual stock reports if the parent company directly or indirectly owned a majority of voting shares. However, if the profits of the firm under question did not exceed 10% of the parent firm's revenues, the firm was not included. While the data from annual stock reports likely under-estimates group activity, it was the only source that provided standardized data.

Under Rumelt's methodology all groups would be classified as following an unrelated business strategy. Saito (1993) differentiated between three types of group level strategy. Groups which focused their efforts on the market near the rail infrastructure, firms which penetrated markets outside the domain of their rail network and firms that attempted to remove themselves from their image as a rail firm. Saito found three of the groups to be following the third strategy. The present research indicated that almost half of the firms are attempting to redefine their image. The percentage of revenues which were attributable to transportation activities had fallen below 25% for these firms and thus inclusion into the third group seemed appropriate. All but two of these seven such firms operate in the Tokyo market.

Table 5: Percentage of group revenue/profits attributable to parent company

	REVENUE %			PROFIT %		
	92-93	93-94	94-95	92-93	93-94	94-95
TOBU	74	73	74	90	91	91
SAGAMI	68	67	70	102	98	110
NANKAI	72	67	68	99	102	101
TOKYU	57	53	55	95	83	92
KEIHIN	52	51	51	75	77	83
HANKYU	49	47	49	81	93	113
KEIHAN	46	47	48	87	89	93
NISHITETSU	48	46	47	55	63	70
KEISEI	42	43	43	77	92	91
SEIBU	38	38	39	76	67	87
MEITETSU	36	38	38	52	74	77
KINTETSU	26	27	27	75	90	101
ODAKYU	24	25	26	73	79	90
HANSHIN	21	24	25	60	64	68
KEIO	22	23	24	56	72	80
AVERAGE	45	45	46	77	82	90
KANSAI AVE	43	42	43	80	88	95
TOKYO AVE	47	47	48	81	82	91

Note: The authors made this table based on the Annual Corporate Report of each company.

Unlike the four in-house divisions, group concerns are generally divided into five divisions including the transportation division, the real estate and construction division, the retail sales division, the leisure and service division and the other business division because of the wide range of activities that the firms are involved in. The groups and their respective parents overwhelmingly earn a majority of their profits from the transportation and real estate divisions. In the case of the groups in the fiscal year 1994-1995, 94% of total profits were accrued by these two respective divisions. On average, the retail/distribution division accounted for only 3% of profits, the other business division 5% of profits and the leisure and service division accounted for a loss of 2%.

In addition, most of the profits were accrued to the parent firm. While the parent firm was responsible for, on average, 45% of total group revenues earned in 1992-1993, it earned an astonishing 77% of total profits. The collapse of the so-called bubble economy saw profits accrued by the parent firm rise to 90% in 1994-1995.

The research concluded that at a group level, transportation focused groups with a proportionately large parent firm are more profitable. Groups which earned 40% or more of total revenues from the transportation division were profitable at 1.09 while groups which earned less than 40% were profitable at only 1.07. Groups with 50% or more revenue obtained from the parent firm were profitable at 1.11 while groups with less than 50% of revenue were profitable at 1.06.

In summary, the results indicated that the transportation and real estate divisions of the groups are responsible for almost all of the profits and that the transportation focused groups with a proportionately large parent firm are more profitable. It appears that instead of attempting to redefine their image, firms should refocus their efforts. However, it would be misleading to conclude that all group level activity should be abandoned. Whether or not the money-losing operations are adding any synergistic benefits is an important point for further research.

Table 6: Profit percentage accrued per division (group level concerns)

	92-93 TRAN	93-94 TRAN	94-95 TRAN	92-93 REAL	93-94 REAL	94-95 REAL	92-93 DIST	93-94 DIST	94-95 DIST	92-93 LE/SE	93-94 LE/SE	94-95 LE/SE	92-93 OTH	93-94 OTH	94-95 OTH
TOBU	52	61	46	45	36	41	0	0	0	1	-1	7	2	3	5
MEITETSU	40	55	44	51	38	48	0	0	0	2	2	1	7	6	7
NANKAI	40	45	37	50	48	59	12	11	8	0	0	-4	-2	-4	0
KEISEI	59	74	74	21	12	16	12	7	1	0	0	10	8	7	1
HANKYU	18	33	41	65	66	73	0	0	0	9	-7	-22	7	8	7
NISHITETSU	17	27	30	51	48	50	7	4	4	14	9	5	11	12	11
SEIBU	51	54	64	66	69	67	0	0	-2	-19	-26	-32	2	3	4
KEIHIN	33	51	47	40	27	41	1	1	1	19	13	4	6	8	7
KEIHAN	41	48	46	49	47	52	4	3	4	4	0	-4	2	2	2
KINTETSU	35	45	42	45	41	54	14	8	0	5	0	-2	2	7	6
TOKYU	36	53	57	67	57	57	2	1	1	-7	-13	-18	3	3	3
KEIO	34	44	49	24	27	31	20	11	9	17	14	6	5	4	5
ODAKYU	38	58	55	35	24	37	18	16	9	0	0	0	9	1	-1
SAGAMI	10	21	20	84	72	72	5	3	1	0	0	0	2	5	6
HANSHIN	19	22	20	44	37	37	10	9	10	0	0	16	28	3	17
AVERAGE	35	46	45	49	43	49	7	5	3	3	-1	-2	6	5	5
KANSAI	31	39	37	51	48	55	8	6	4	4	-1	-3	7	3	6
TOKYO	39	52	52	48	41	45	7	5	3	1	-2	-3	5	4	4

where tran=transportation division, real=real estate and construction division, dist=retail sales division
le/se=leisure and service division, other=other business division

IMPLICATIONS

The Japanese example or at least parts of it indeed are a viable solution to eliminating or at least reducing subsidization necessary for providers of urban transportation. The Japanese solution is generally considered to be in holistic terms an idiosyncratic case that can not be followed. However, the point is moot. The object of this exercise is to show the possibilities available to urban transportation providers through the utilization of innovative ideas. The ideas above are the example set by the major private railway companies in Japan and go a long way towards overturning the view which perceives the privatization of urban railways as having low priority and the chances of a system being profitable whether publicly or privately owned as even more remote.

The main benefit of adapting some ideas from the Japanese example would be the potential to lower taxes either by having the public provider involved in some sort of diversification strategy or to entice private providers through the profit motive.

One strategy would be to have the public transportation provider involved in some sort of diversification strategy. The income earned from the diversified operations could be used to cross-subsidize the money-losing rail operations. If diversified operations take place in a competitive environment and taxes necessary to subsidize the rail operations are reduced, this solution could indeed be viable. Some examples could be the leasing of or direct operation of convenience stores, video rental shops or coffee shops in stations. A larger scale example would see lines extended into undeveloped areas and office buildings developed at such locations for

lease or developed residentially. If rents or prices are not competitive, potential customers will not choose to enter as tenants. However, the dismal record of public corporations diversifying into competitive markets may negate any possible benefits.

The most economically agreeable solution would be for private firms to operate the rail lines and be able to diversify. Private firms are more capable of improving the quality and quantity of services for users as well as better competing in competitive environments.

A major concern of the Japanese example is that firms may be able to exploit their monopoly power obtained through a natural monopoly. However, unlike electricity, gas and water provision, urban transit in Japan involves choice. In the Keihanshin area, private firms must not only compete with the automobile but also face competition from other private operators as well as from JR, the former government owned railway. For example, the stretch between Kobe and Osaka has three parallel lines operated by different firms competing for traffic. There are also numerous road links between the two cities, as well as bus service. In this environment monopolist pricing is unlikely. In areas that have only a single firm providing service, rail providers still face competition from the automobile and bus service. In addition, in both settings, fares are regulated to prevent any sort of anti-competitive behavior. Fares in the past have tended to be held in check by the government as a means of controlling inflation.

As far as diversified operations are concerned, these take place in highly competitive markets. For firms operating in less dense areas this may not be the case. Unlike airport operations which have been privatized in some cases and whose commercial operations take place in relatively isolated areas, rail firms face considerably greater competition in their diversified operations as their operations are in densely populated areas.

Cross subsidization is a second area of concern. Under this scenario, diversified operations are utilized to subsidize money losing rail operations which leads to economic inefficiencies and thus welfare losses. Costs caused by the provision of the unregulated service (diversified operations) would be charged to the books of the regulated rail operations. Governments may choose to ignore the disadvantages of cross-subsidization in order to benefit politically from decreased subsidization. In Japan, however, Section 20 of the Rail Business Act specifically prevents such cross subsidization. The act prescribes the allocation of common costs, fixed revenues and assets.

It must be kept in mind that cross traffic and cross subsidization are not one and the same. Cross subsidization allows inefficient businesses to be subsidized. Cross traffic on the other hand turns inefficient enterprises into profitable operations. In the case of urban transportation the main concern is that there will not be enough riders to support even the operating cost of the activity. What is needed is a method of increasing ridership. Cross traffic attracted through a strategy of diversification is one such method.

CONCLUSION

The Japanese example provides us with a role model that may lead to increased private initiative into the provision of rail infrastructure and/or operation. The idea is not new. Metropolitan in England and Canadian Pacific in Canada followed similar flows of development. While Canadian Pacific originally received huge subsidies and land grants to complete its network, the Japanese counterparts were not so fortunate and had to contrive imaginative methods of attracting ridership

and internalizing the benefits accrued by their infrastructure development.

The privates in Japan have been successful for three main reasons. One has to be the huge population base of the large urban centres in Japan. However, many of the large privates were not blessed with high density markets. Initially, they were restricted to creating infrastructure through relatively under-developed areas that didn't interfere with government lines. In addition, density alone does not guarantee success. The provision of capacity necessary to cover peak periods leads to huge over-capacity problems during off-peak periods. Numerous publicly operated subways, even in Japan, have operating deficits.

The second reason has to do with the competitive environment in which the majors operate. Facing competition from the automobile, buses and other government and private railway firms, the majors were forced to become more efficient. Also, diversified operations face competition as consumer choice is present in all domains into which the privates have diversified.

The final reason has to do with the fact that private firms are providing the service. The firms have benefited in Japan because that have been allowed to thrive on competitive principles. Private firms are also better able to diversify. Private initiative allows the development of long term strategies that are not possible under political cycles. The in-house level diversification strategy has been the main reason behind the success of the majors. The diversification here is not to randomly diversify but to diversify with the strict goal of increasing rail ridership. The focused, methodical, long-term strategy has given the transport providers a reliable base of ridership.

It appears that diversification can be considered a rational strategic choice from early in a firm's operations as long as the diversified operations are related. This counters the classic argument that diversification should only be considered when a firm's product or service reaches the later stages of its life cycle. Group level activity, on the other hand, perhaps should reorganize to concentrate more on transportation activities and business directly relating to those operations.

Because of the potential to reduce subsidies necessary to operate urban transit services and because the greater profit potential of a diversified transit provider may increase private initiative, the Japanese example is a viable means of dealing with the urban transportation problem. Whether or not and in what way the Japanese example can be applied to other countries is an important point for further research.

FOOTNOTES

1. Five of these firms operate in the Keihanshin area which includes Osaka, Kobe, Nara and Kyoto. Tokyo including the capital city and the surrounding areas has eight majors providing urban transportation. Nagoya which is located between Tokyo and Osaka and Fukuoka which is on the island of Kyushu in western Japan each have one major respectively.

2. The specialization ratio (SR) is the proportion of a firm's revenues that can be attributed to its largest single business in a year. The related ratio (RR) is the proportion of a firm's revenues that can be attributed to its largest group of related businesses. Businesses are considered to be related when a common skill, resource, market or purpose is applicable to each business. The vertical integration ratio (VR) is the proportion of a firm's revenue that arises from all by-products, intermediate products and end products of a vertically integrated sequence of processing activities.

3. The profitability also indicated that most profits come from the transportation division and real estate division and the other divisions are money losing propositions. In the year. 1994-1995. the real estate division was profitable at 1.44 followed by the rail division at 1.09.

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