

Growth Strategy for Japan's Airline and Rail Industries: Tokyo Olympics to Trigger a Leap

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Given Japan's shrinking population, in order for infrastructure businesses such as airlines and railways to attain sustainable growth, it is vital that they both uncover latent demand in the domestic market and tap into overseas markets with a particular emphasis on emerging markets.

Traditionally, transport service products have been designed for the working-age population as a major user base. However, in the future, increased attention must be paid to the senior market. Because people travel less as they age, transport companies must develop new services such as those that encourage senior citizens to travel as well as those related to nursing care.

A market that is set to grow is that of "foreign visitors to Japan." In 2013, the number of tourists to Japan exceeded 10 million. The Japanese government is aiming to double this figure over the next seven years. The airline and railway industries must take note of the current trend away from group travel to individual travel, where tourists design their own itineraries, because individual travel creates a greater demand for these industries.

As the population of Japan will decline to below 100 million in the medium to long term, it is necessary to develop strategies to quickly embrace the rapid economic growth of emerging markets. Specifically, with an eye to international open skies policies, the airline sector needs to establish a strategy to attract travelers within Asia as well as long-distance travelers transiting through Japan. The railway sector should develop railway operation and incidental businesses such as maintenance overseas. In addition, a business model adopted by railway companies for the development of areas along their lines can also be offered in emerging markets.

With the growth of the middle-income segments in emerging economies, there are now more areas in which Japan's services that were so far regarded as "excessive quality" can be accepted. The Tokyo 2020 Olympic Games will provide a great opportunity to present Japan's strengths to the rest of the world. The Japanese government and private-sector companies should work together to demonstrate urban infrastructure in an integrated manner. The Ministry of Land, Infrastructure, Transport and Tourism plans to set up an organization designed to help Japanese companies export infrastructure-related business overseas. The authors hope that through this organization, efforts to demonstrate Japan's infrastructure during this event can lead to success among the airline and railway sectors in exporting their infrastructure-related business.

I Vision for the Airline and Rail Markets as They Reach a Turning Point

Transportation is an important infrastructure that has supported the Japanese economy and has evolved along with the growth of the economy. However, with the country's prolonged low economic growth and the accelerating decline of Japan's population, the transport market is facing a major turning point. In the area of politics, while the "new growth strategy" of Prime Minister Shinzo Abe's government lists targets that include improving Tokyo's competitive strength and positioning Japan as a tourist destination, recent years have seen Tokyo's competitiveness fall in the field of "transportation/accessibility," calling for improvements in this field (Figure 1).

In this paper, the authors address the airline sector as a means of supporting long-haul travel and the railway sector as a means of supporting short- and medium-haul travel, as shown in Figures 2 and 3, and consider

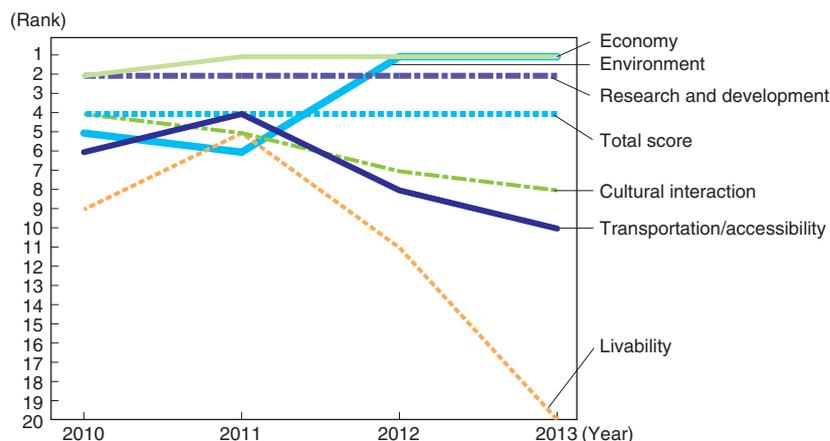
measures and growth strategies to enable both sectors to grow in the face of the declining population. In addition, given the opportunities presented by the Tokyo 2020 Olympic and Paralympic Games, the authors discuss the prospects for the development of business overseas by Japan's airline and railway industries.

II Japan's Stagnant and Shrinking Domestic Airline Market

Japan already faces population decline, and the working-age population is decreasing rapidly. The expansion of demand for post-retirement tourism, which arose because of the mass retirement of the baby boomer generation, was only temporary. Over the medium to long term, domestic demand for long-haul transport will continue to stagnate and may even shrink.

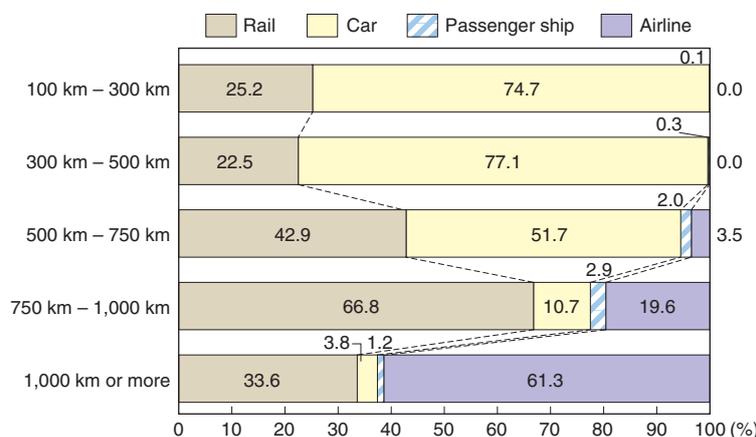
Over long distances, there is competition between airlines and the Shinkansen bullet train. Although it has been said that airlines gain the advantage once the travel

Figure 1. Tokyo's transportation/accessibility field faces a challenge for improving its international competitiveness



Note: The comprehensive power of the world's 40 major cities was analyzed and ranked for each function.
 Source: Compiled based on "Global Power City Index" published by the Mori Memorial Foundation.

Figure 2. Airline and rail supporting medium- and long-distance transport in Japan in FY 2007



Note: Percentages were calculated based on the number of passengers.
 Source: Compiled based on "Statistics of Cargo and Passenger Flow in Japan" published by the Ministry of Land, Infrastructure, Transport and Tourism.

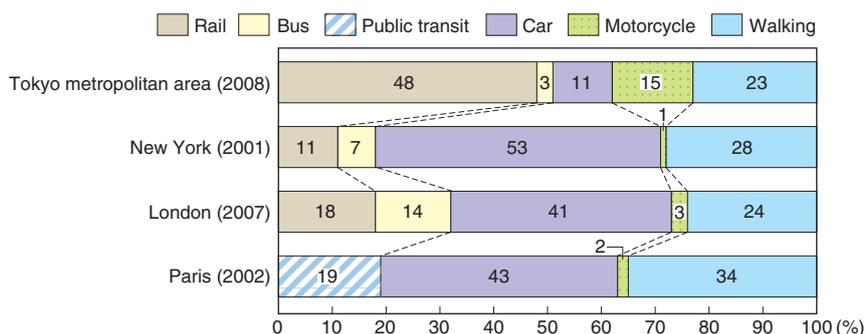
time exceeds four hours, the competitive environment has changed considerably with the introduction of faster Shinkansen trains and discount fares. For example, on the Tokyo to Hiroshima route, airlines used to carry more than half of the passenger load. However, this has recently reversed in favor of the Shinkansen. The reasons behind the reversal include the introduction of low cost fares by the West Japan Railway Company (JR West) with its “Nozomi early booking discount round-trip tickets” and an increase in the number of trains in service, not to mention shorter travel times with the launch of the N700 series of trains. In the future, plans call for the development of Shinkansen lines scheduled under the Nationwide Shinkansen Railway Development Act and the superconducting magnetic levitation railway (maglev lines), thus expanding the high-speed railway network. The Japanese government’s FY 2014 budget included plans to extend the Shinkansen lines from Shin Aomori to Sapporo, from Kanazawa to Tsuruga and from Shin Tosu to Nagasaki. In addition, the Central Japan Railway Company (JR Central) is planning the construction of a maglev line from Tokyo to

Nagoya and then on to Osaka. Given these developments, future expansion of the domestic airline market cannot be anticipated.

For example, on the Tokyo to Komatsu route, airlines provide the dominant means of travel as of 2014. However, with the opening of the Hokuriku Shinkansen to Kanazawa in 2015, a majority of the passengers is expected to travel by train. In addition, with the introduction of maglev trains, travel time on the Tokaido and Sanyo Shinkansen lines will be shortened. About 10 percent of the flights arriving and departing from Haneda (Tokyo International Airport) serve the Kansai region including Itami (Osaka International Airport), Kansai (Kansai International Airport) and Kobe Airport, rising to about 20 percent if the areas covered by the Sanyo Shinkansen line (Okayama, Hiroshima, Iwakuni Kintaikyo and Yamaguchi Ube airports) are included (Figure 4). As such, expanded Shinkansen service will present very strong competition to such a proportion of flights using Haneda.

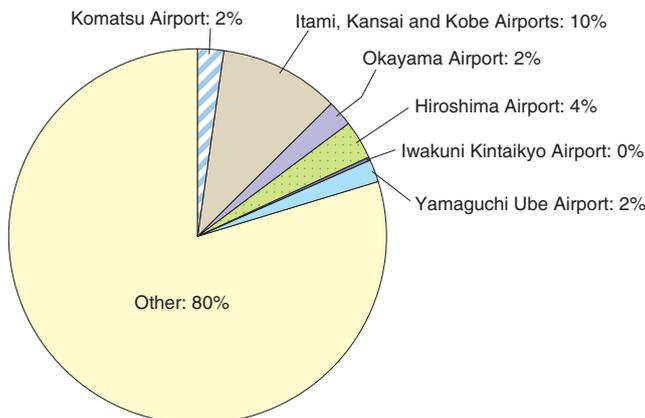
Nevertheless, long-distance travelers choose between the plane and the Sinkansen on the basis of factors such

Figure 3. Tokyo metropolitan area having greater dependence on rail than the capitals of other countries (percentage distribution of each transportation mode)



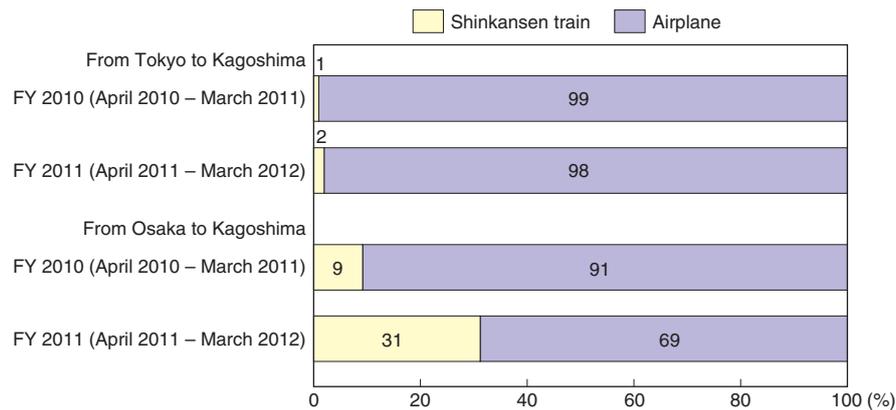
Sources: Tokyo: “Outline of the Results of the Tokyo Metropolitan Region Person Trip Survey” published by the Ministry of Land, Infrastructure, Transport and Tourism. New York: 2001 National Household Travel Survey, New York Add-On, New York Metro – NYMTC MPO. London: Travel in London, Key trends and developments, Report number 1 (Transport for London 2009). Paris: Les chiffres clés des enquêtes ménages déplacements, méthode standard Certu, principaux résultats des enquêtes réalisées entre 1996 et 2004.

Figure 4. Percentage distribution of regular flights (arrivals and departures) using Haneda that are predicted to be affected by expanded Shinkansen service



Note: Because Iwakuni Kintaikyo Airport was opened in December 2012, consideration must be given to the effect on a full-year basis. Source: Compiled based on “Annual Report on Air Transport Statistics 2012” published by the Ministry of Land, Infrastructure, Transport and Tourism.

Figure 5. Change in share of passengers traveling by Shinkansen train and airplane before and after the opening of Kyushu Shinkansen line (March 2011)



Note: Share was calculated by using the total number of passengers using airplanes and JR trains as parameters.

Source: Compiled based on "Statistics of Cargo and Passenger Flow in Japan" published by the Ministry of Land, Infrastructure, Transport and Tourism.

as fare, travel time, ease of access to the airport or station, frequency of departures and ease of dealing with cancellations. Therefore, for trips to regional cities that are far from major cities, the dominance of airlines will not change. For example, even after the opening of Kagoshima Chuo Station on the Kyushu Shinkansen line, the share of passengers traveling by plane and train between Tokyo and Kagoshima did not change significantly (Figure 5).

Given the current competitive environment and various macro indicators, however, it seems inevitable that the domestic airline market will stagnate and shrink over the medium to long term. On the other hand, with the appearance of low-cost carriers (LCCs) that offer new airline services, market expansion is expected. According to an analysis conducted by the Ministry of Land, Infrastructure, Transport and Tourism, the appearance of LCCs will not take the market share away from full service airlines (FSA) such as Japan Airlines (JAL) and All Nippon Airways (ANA). Rather, LCCs are expected to bring about the impact of creating and triggering completely new demand. However, currently, LCCs are flying the same routes as those served by the major airlines such as between Tokyo/Osaka and Sapporo, Fukuoka and Naha. In the future, they should seek to stimulate demand for air travel by developing new routes and offering new services.

III Higher Demand in West Japan and Lower Demand in East Japan for Low Cost Carriers (LCCs)

LCCs have appeared in countries all around the world; they began full-scale operations in Japan in 2012. These LCCs included Jetstar Japan and Vanilla Air, which operate out of Narita International Airport, and Peach

Aviation, which operates out of Kansai International Airport.

In terms of revenue, as of 2013, Peach was able to achieve a very favorable annual load factor in excess of 80 percent. On the other hand, the two LCCs based in Narita have continued to struggle, with Air Asia Japan, the predecessor of Vanilla, already having dissolved its capital tie-up between Air Asia (Malaysia) and ANA as a result of poor performance. Jetstar faces a similar situation. According to news reports, it has not been in the black for a single month since its inception.

The following five factors are considered to be contributing to Peach's strong performance.

- The company has reaped the promotional benefit of being Japan's first low cost carrier, with its name recognition in Kansai being higher than the two companies based in Tokyo (Narita).
- On-time performance rate is higher.
- Travelers from the Kansai region are relatively price sensitive.
- Given that Peach is the only LCC operating out of Kansai, there has been no competition.
- Although both Kansai and Narita Airports are located in far-out suburbs of their respective cities, the residents of Kansai do not have an impression of their airport being particularly distant.

However, the greatest single factor contributing to Peach's success is its integrated business development that targets young women in Northeast Asia, not the least with the company's name and corporate color. The factors leading to the success of an LCC vary depending on the country of operation. For example, in North America, many users of Greyhound long-distance highway bus services switched to LCCs. In Southeast Asia, LCCs first explored the tourism market of the population that was on the brink of joining the middle-income segment by offering low fares.

In Japan, there are various highway bus services such as those offering fares cheaper than those of the LCCs and those providing very comfortable seating at fares that are similar to those of the LCCs. Furthermore, the overall population enjoys a high income, and cheap domestic package tours are arranged by travel agencies, enabling many people to enjoy domestic trips effortlessly.

Given the current arrival/departure capacities of Haneda and Itami airports, the LCCs will have no choice but to continue to provide their services out of Narita and Kansai airports, well away from the centers of the cities they serve. In order for LCCs to continue to develop new domestic aviation markets, a simple promotional approach that relies mostly on cheap fares will be inadequate and will not lead to significant growth. Instead, the LCCs themselves should define new usage scenarios and lifestyles that are suitable for the Japanese market and are feasible by using their services, and propose such ideas to consumers. These proposal and suggestion activities such as those using campaigns will gain in importance. When they first entered the market, the LCCs insisted on direct sales. However, now, they also offer seats to travel agencies. In the future, travel service providers will use LCCs to create new travel products, which will lead to consumers becoming more familiar with LCCs.

To date, the impression of LCCs, as reinforced by TV programs and so on, is definitely one of being aimed at tourism. However, the purposes of travel by users vary such as visiting relatives and nursing care centers. To expand the LCC market, the companies need to propose the methods of using their services to consumers. For example, day care centers for the elderly could inform caregivers or relatives about the availability of LCC services. Another case would be that upon the birth of a child, a hospital could recommend the use of an LCC to a grandparent living far away.

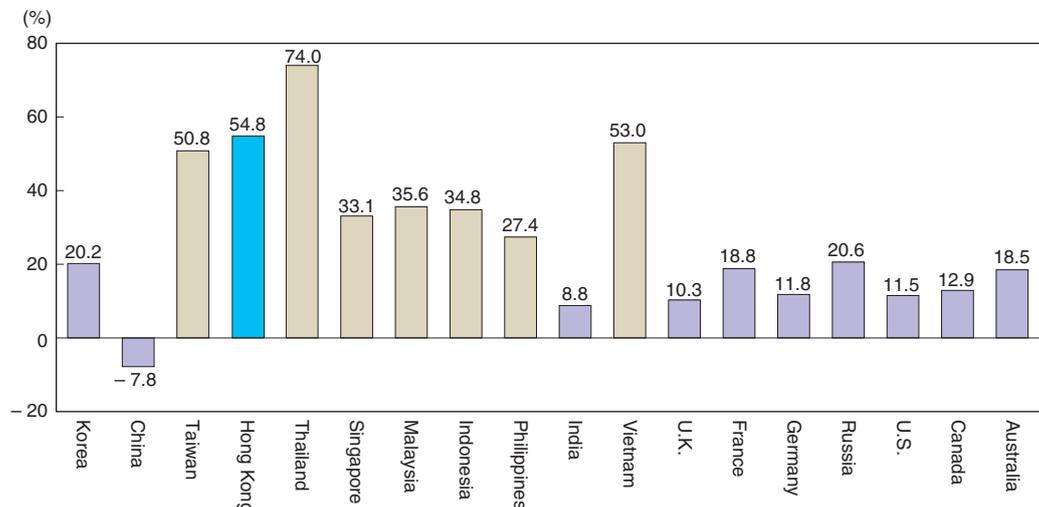
IV Success in the Market of Foreign Visitors to Japan is Key to Sustainable Growth

In contrast to the domestic airline market, which is predicted to stagnate and shrink, the international airline market is expected to grow. Because of increasing globalization, many Japanese companies have been entering overseas markets. While this trend has so far mostly been driven by manufacturing industries, they will soon be joined by companies in the service sector. Although many manufacturers regard overseas sites as production bases, for the service sector, overseas markets are those where they sell their services, thus continuously creating a large amount of traffic by more and more Japanese between Japan and abroad.

In addition, major growth is expected in the market for travel to Japan from overseas. In particular, the year 2013 was a year of celebration in that the number of foreign visitors to Japan exceeded 10 million. The Japanese government has been promoting the relaxation of its visa issuance requirements as well as the elimination of congestion at customs clearance, such that this market is expected to grow even further. Moreover, urban development has been proceeding at a rapid pace since it was announced that Tokyo would host the 2020 Olympic Games.

Despite these moves, the increasing number of foreign visitors to Japan has not translated into additional traffic for Japanese airlines. As shown in Figure 6, the year 2013 saw a rapid increase in the number of visitors from Southeast Asia. However, for example, on the Bangkok to Tokyo route, Japanese airlines carried only about 20 percent ^{Note 1} of the passenger load, with the remainder flying on non-Japanese carriers. These overseas

Figure 6. Southeast Asia regions driving the market of foreign visitors to Japan (year-on-year change in the number of foreign visitors to Japan by country, 2013)



Source: Japan National Tourism Organization (JNTO).

airlines enjoy a high level of name recognition in Southeast Asia and have established distribution channels there. This is supported by the fact that because cost of living in Southeast Asia is lower than Japan, operating costs such as labor costs are lower, so that tickets can be offered more cheaply than in Japan.

Every country has regulations that apply to the airline industry, with foreign-funded enterprises tending to be at a disadvantage. JALPAK, a subsidiary of JAL, creates travel products in Asia, and is attempting to attract travelers by enhancing its local distribution channels overseas. However, in order for a company to achieve a competitive advantage, a new airline must be created locally or an existing airline must be acquired.

Success in overseas air travel business requires growth in three areas, namely, “increasing the number of foreign visitors to Japan,” “increasing the number of people traveling within Asia” and “increasing the number of long-distance travelers transiting through Japan.”

1 Attracting foreign visitors to Japan by enhancing the networks in Asia

Increasing the number of foreign visitors to Japan involves many challenges such as a need to build a system to support foreign visitors and enable them to enjoy their trips, as well as to develop tourism resources and attractions. Among these challenges, in this paper, focus is put on “networks.”

In the emerging countries, in addition to the capital areas, a middle-income segment will also begin to appear in the provincial cities. In order to attract this new demographic, Japanese airlines will have to offer international flights to more cities of the emerging countries. However, in the short term, it is unlikely that the market will grow to a point where direct flights can be offered between Japan and the medium-sized cities of the emerging countries. One way of overcoming this difficulty has been implemented by the Chinese carrier,

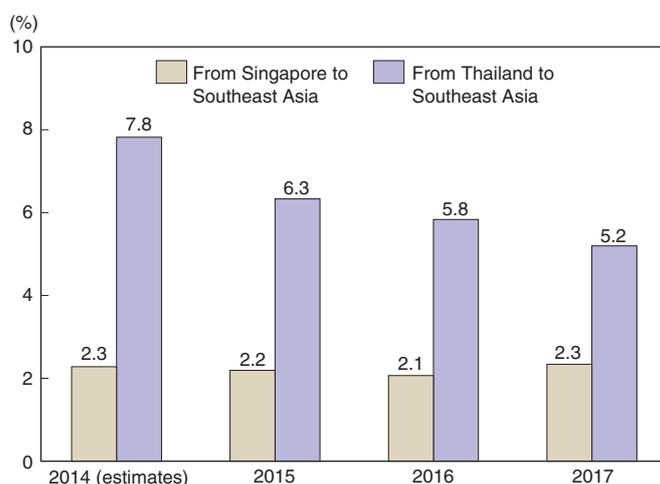
Spring Airlines. When the company entered the Japanese market, it set up gateway airports in both Japan and China, from which passengers can use the company’s domestic networks in both countries to travel to smaller cities.

The situation will change even more with the implementation of an open skies policy (the liberalization of the regulations of the international aviation industry) between Japan, China and Korea and between Japan and ASEAN (Association of Southeast Asian Nations) member countries. For example, by combining medium-haul flights such as those between Tokyo and Singapore with the short-haul flights arriving in and departing from Singapore within Asia, load factors can be increased by meeting the demand for travel within Asia as well as the demand for visiting Japan through Singapore. In addition, flight equipment can be operated around the clock without stand-by time, thus contributing to better utilization of flight equipment. In this way, the open skies policy presents opportunities to the international aviation industry including Japanese airlines in that it enables Japanese airlines to embrace ongoing growth in the entire Asian region without having to depend solely on demand for flights arriving in and departing from Japan.

2 Attracting travelers within Asia with an eye to post-deregulation trends

To attract travelers within Asia, the Southeast Asian markets including those of ASEAN countries, Taiwan and Hong Kong show the greatest promise (Figure 7). In particular, in the ASEAN region, studies on open skies policies have been made with focus on international flights including beyond rights. If these policies were to be implemented, it would become possible to carry passengers from the airline’s home country to a destination country, and even beyond to other international destinations within the region.

Figure 7. Travelers within Southeast Asia expected to continue to increase (year-on-year change)



Source: “Asia Pacific Visitor Forecasts 2013 – 2017” published by the Pacific Asia Travel Association.

Air Asia of Malaysia, which was mentioned in Chapter III, has opened subsidiaries in the major countries of Southeast Asia, while Lion Air of Indonesia has expanded into Malaysia and Thailand. Furthermore, Tiger Airways of Singapore is working to establish an LCC in Taiwan in an attempt to meet the travel demand of Chinese living overseas.

3 Attracting long-distance travelers by enhancing an airline hub function

Lastly, Japanese airlines could expect to see a synergistic effect from the use of overseas airports as hubs. For example, long-haul passengers traveling from Asia to North America, and those traveling from North America to Asia, can be routed through Tokyo.

Figure 8 shows the proportions of passengers passing through main hubs on journeys between Southeast Asia and North America. Tokyo has a 16-percent share of the traffic. There is already considerable competition to attract long-haul passengers traveling to and from Asia. In Northeast Asia, China Airlines and EVA Air, both based at Taoyuan International Airport in Taipei, and Korean Air and Asiana Airlines, based at Incheon International Airport in South Korea, are all attempting to capture long-haul passengers within the entire East Asia region. Other Asian airlines are already ahead of Japanese airlines. For example, Korean Air acquired a 44-percent stake in Czech Airlines, which is a member of the same alliance, in an attempt to capture some of the demand for travel between Asia and Europe. By establishing Prague as a hub airport within the European region and optimizing the airline timetables, an environment could be created in which it would be easy to transfer to medium-sized European airports.

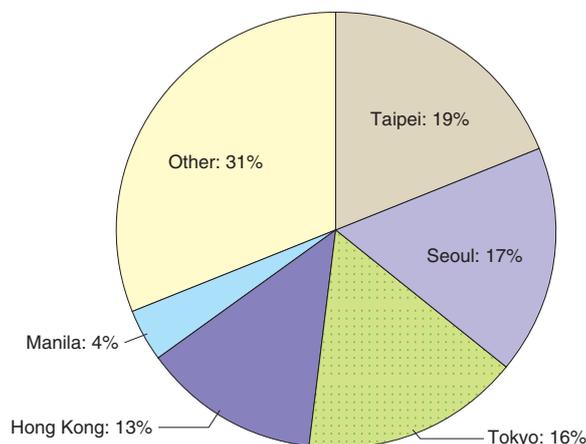
To increase the number of passengers traveling through Tokyo, the ideal approach would involve expanding the network of direct flights to and from Tokyo such that travel to many cities in North America and Asia would become possible simply by going through

Tokyo. However, according to “Global Power City Index” published by the Mori Memorial Foundation, as shown in Figure 1 in Chapter I, Tokyo ranked 10th in the area of “transportation/accessibility,” and was unable to gain an edge on either Hong Kong, Seoul or Singapore. To strengthen Tokyo’s role as an aviation hub, for example, those Asia-based airlines in which Japanese airlines have invested could expand their Tokyo to Asia networks, while the Japanese and overseas members of the same alliance could expand their North American networks.

Since 2011, Japan’s regulatory authorities approved antitrust immunity (ATI) for JAL and ANA on their North American and European routes. Because of this approval, issues such as adjusting timetables among airlines within the alliance, which might otherwise infringe the antimonopoly law, were resolved. On those routes covered by ATI, it became possible to establish joint ventures with other companies in the same alliance. Despite this relaxation, the opening of long-haul routes presents a major risk to the airlines. Since a relatively long time is required to complete a single flight, the creation of a timetable that is convenient for travelers would result in aircraft being parked on the ground for a long time, such that the revenue generated for each hour in the air actually becomes lower than that generated on short-haul routes. When international flights are launched to and from those cities that are not currently served by direct flights from Japan, one of the solutions would be to promote deregulation to allow foreign airlines to operate domestic flights using aircraft designed for international routes, thus reducing the amount of time parked on the tarmac and optimizing timetable efficiency.

Japanese airlines have traditionally catered to Japanese travelers and Japanese people living abroad. However, in the future, they will have to strive to capture more of the market of foreign travelers. Considering the indicators that are important within the airline industry, with a high level of on-time performance and a low

Figure 8. Major transit airports for passengers traveling between Southeast Asia and North America



Source: Official Airline Guide (OAG).

level of cancellations, Japanese airlines are among the best in the world, and have a good reputation for in-flight service, seating and so on. As mentioned in Section 1, the middle-income segment is currently expanding in Asia. Therefore, consumers will no longer be seeking the cheapest options, but rather will be looking for quality in addition to price. This trend will give rise to an environment in which Japanese companies are better able to compete.

To determine how best to capture this market, it would be useful to refer to how manufacturers have expanded into these overseas markets. Major manufacturers such as Panasonic, Toshiba and Ricoh have moved away from the conventional market entry approach of exporting products having Japanese specifications as is. Instead, they opened research and development centers in emerging markets, where they can develop products that are well suited to the level of income and needs of local consumers. A well-known example is that of the air-conditioners offered by Panasonic in the Indian market. In competition with the low-priced products offered by its rivals, Panasonic developed products with only those features needed by local consumers and marketed these products at a price that was within their reach. By adopting this approach, Panasonic has expanded its market share. In a similar manner, Japanese airlines should not attempt to penetrate overseas markets by relying simply on a “made in Japan” style of service. Rather, they should aim for “glocalization” (globalization by means of localization) by placing an emphasis on consumer preferences and the sensibilities of each country.

V Approaching a Time Where Railway Company’s Business Model May No Longer Be Relevant

1 Two businesses of railway companies

The business of the railway companies can be divided into two main parts. The first is the core business of railway operations. Over the course of their history, railways have leveraged their most distinctive characteristic of being able to transport large numbers of people and large quantities of freight over long distances, relative to other means of transport, and have played an important part in domestic long-distance transportation between major cities. In addition, because the wide-reaching networks of urban areas enable people to commute to work and school, as well as to go shopping, railways are essential in the daily life of most citizens.

The second area of business is identified as the related businesses that include development along the routes of the rail lines. To increase the revenue of the capital-intensive railway business, it is essential to improve the

utilization of train capacity, that is, to increase ridership. To this end, many railway companies have been working to improve the convenience and appeal of the areas along their routes through related businesses such as real estate development, commercial development and tourism.

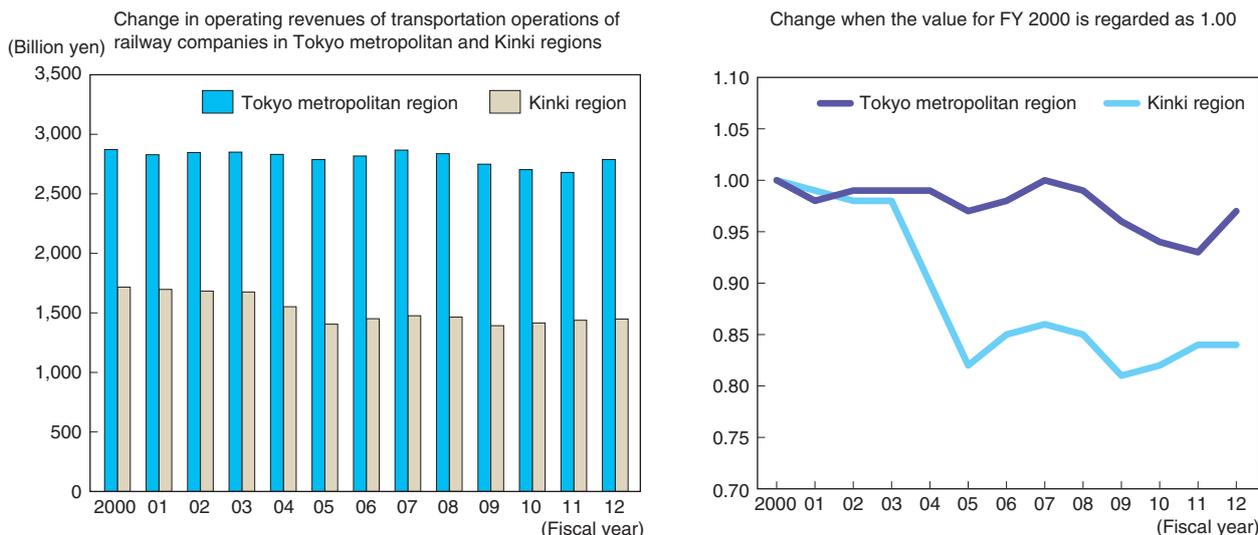
2 Railway business rapidly enters an era of lower revenues

Figure 9 shows the change in the operating revenues of the transportation operations of the railway companies operating in the Tokyo metropolitan and Kinki regions. As is clear from these graphs, since FY 2000, operating revenues have decreased in both regions. In particular, the Kinki region has been hit harder than has Tokyo, with FY 2012 revenues being only 83 percent of their level in FY 2000.

The most notable factor affecting the operating revenues of railway companies in Kinki is the change in population. Figure 10 illustrates how the overall population and the working-age population have changed both in the Tokyo metropolitan and Kinki regions. Partly because of the increasing shift back to urban areas ^{Note 2} in the same way as is seen in the Tokyo metropolitan region, the overall population of the Kinki region has been continuing to either increase or remain flat. However, within the overall population, the Kinki region has seen the working-age population decrease at a pace that is more than twice that in Tokyo. Since they have to commute to work or school, people of working age go out much more frequently than do the elderly. Furthermore, they have to make many more trips when they go out and so form the main customer base of the railway companies. Therefore, any reduction in the working-age population will be manifested as a drop in the operating revenues of the railway companies.

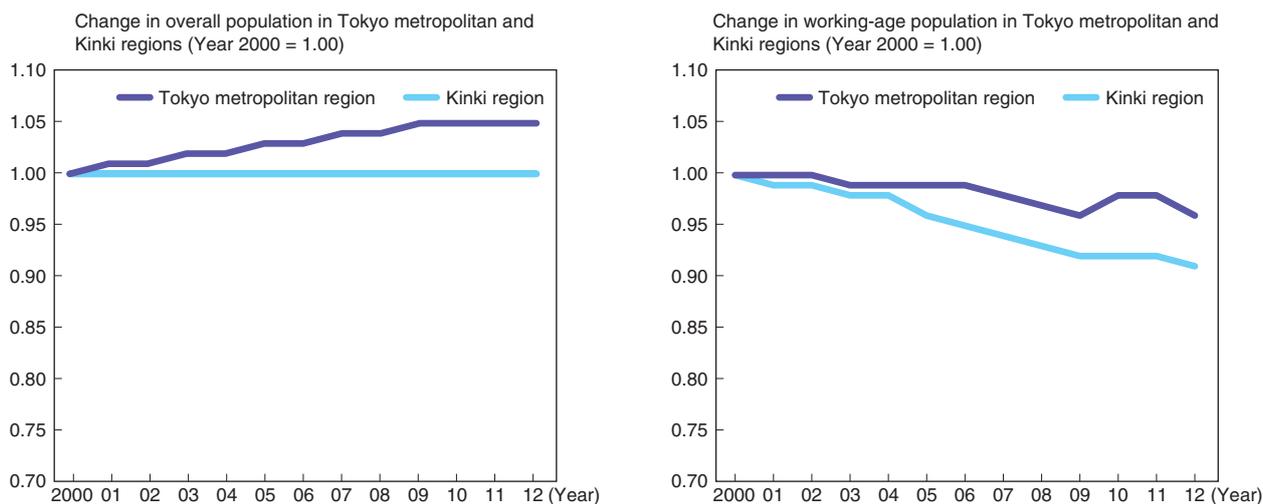
Moreover, from the medium- to long-term perspective related to population trends, it is likely that the use of passenger cars and buses will increase in major cities even though the scale of such motorization is not as large as in rural areas. As for the use of cars and buses in urban areas, in order to alleviate traffic congestion, efforts have long been underway to enhance the road network and to separate the levels of road and track and rail crossings, while introducing new technologies such as electronic toll collection (ETC). Combined with these efforts, population decline will lead to reduced traffic volume, that is, a natural reduction in traffic congestion. Given that people can get closer to their destinations by car or bus than by train, traveling by car or bus will become more attractive. Recent years have seen the appearance of car sharing, as well as improved services such as the introduction of 24-hour bus services between Tokyo’s Shibuya and Roppongi. Therefore, there is a need to carefully monitor future trends related to bus and car travel.

Figure 9. Change in operating revenues of transportation operations of railway companies in Tokyo metropolitan and Kinki regions



Notes: Railway companies in the Tokyo metropolitan region consist of Odakyu Electric Railway Co., Ltd.; East Japan Railway Company; Tobu Railway Co., Ltd.; Keisei Electric Railway Co., Ltd.; Keiiky Corporation; Tokyu Corporation and Keio Corporation. Those in the Kinki region consist of Hankyu Hanshin Holdings, Inc.; Kintetsu Corporation; Nankai Electric Railway Co., Ltd.; West Japan Railway Company and Keihan Electric Railway Co., Ltd.
Source: Compiled based on SPEEDA information service provided by UZABASE, Inc.

Figure 10. Change in overall population and working-age population in Tokyo metropolitan and Kinki regions



Notes: Tokyo metropolitan region: Ibaraki, Tochigi, Gunma, Saitama, Chiba, Tokyo, Kanagawa and Yamanashi. Kinki region: Shiga, Kyoto, Osaka, Hyogo, Nara and Wakayama.
Source: Compiled based on "Population Estimates" published by the Statistics Bureau of the Ministry of Internal Affairs and Communications (as of October 1 of each year).

In addition to population change, other factors that can result in the reduced use of railways include improved services for enhancing life at home. One example is increased use of the Internet. The number of people relying on online shopping is increasing year after year, with more than half of those in their 20s and 30s buying goods via this method ^{Note 3}. Although relating this trend to a reduction in the use of the railways would require further analysis of the frequency of use of online shopping and the characteristics of the products being purchased, there is no doubt that fewer and fewer people are using trains to make shopping trips. In addition, the policy of the Japanese government is to encourage telecommuting. As such, there are elements that cause people to have fewer chances to go out.

Table 1 summarizes the elements that contribute to reducing railway revenues.

3 Intensified competition within related businesses

Railway companies have developed related businesses in a wide range of industries with the aim of developing the areas along the railway lines. Each of the JR (Japan Railway) companies, which were formerly Japanese National Railways (JNR), has made major investments in its mainline stations, such as in the form of the "Sunflower Plan," with the lifting of regulations that prevented advances into other areas of business in the JNR era. While these related businesses have made major contributions

to the economic growth of the areas along the railway lines and have also contributed to the income of the railway company, they are now exposed to competition from companies located away from the routes of the tracks. Among these related businesses, in the following paragraphs, the authors will examine the retail businesses (in particular, department stores and supermarkets) pursued by many of the railway companies.

As described above, because the railway companies have developed their retail businesses in order to promote the development of the areas along their lines, the focus has usually been placed on the development of department stores located at their terminal stations and supermarkets located along the lines, so as to increase their ridership and thus grow their businesses. In addition, the companies also own nearby real estate with convenient access to their stations.

Figure 11 shows the trends in the revenues of the retailing arms of the railway companies of the Tokyo metropolitan and Kinki regions. As is clear from these graphs, since FY 2008, in particular, the operating revenues of these companies have fallen significantly in

both regions. The main reason for this decline is that there have been major changes in the environment in which retail businesses operate. However, many of the railway companies have been slow to respond to these changes, thus adversely affecting their competitiveness.

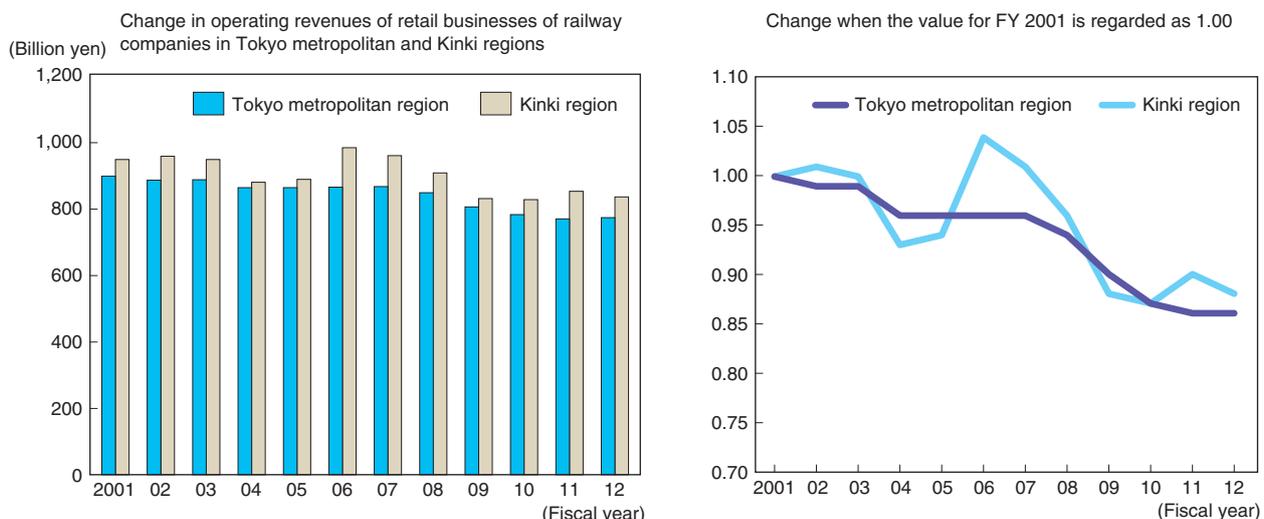
In the past, the retailing industry grew by changing the types of retail formats. After the war, Japanese retailing was characterized by department stores that sold a wide variety of goods as well as high-quality goods, and supermarkets that offered groceries and daily essentials. Later, the appearance of general merchandise stores (GMS) such as Daiei and Ito Yokado led to further growth in the retail sector by offering one-stop shopping and through competition based on low prices. Currently, in response to consumer demand for convenience and a wide variety of selection, convenience stores and specialty stores such as drug stores are expanding their operations. Together with shopping malls where multiple retailers have opened their outlets, these stores are contributing to the further growth of the retailing industry.

On the other hand, railway companies have traditionally opened their stores in the Tokyo metropolitan and

Table 1. Elements contributing to reducing railway revenues

Decrease in ridership	<ul style="list-style-type: none"> • Because of the decline in the working-age population, the number of passengers who commute to work or school will decrease. • From the medium- to long-term perspective, because of population decline, the number of overall passengers will decrease. • As a result of the efforts to alleviate traffic congestion, it is likely that people will shift to cars or buses. 	Decrease in distance traveled by train	<ul style="list-style-type: none"> • The increasing shift back to urban areas will shorten the distance traveled by passengers who commute to work or school or for other purposes. • Because of the increase in the number of elderly people, the proportion of short-distance trips to the total travel volume will increase.
		Decrease in frequency of use	<ul style="list-style-type: none"> • Improved services that enhance life at home will lead to fewer chances to go out. • Because of the increase in the number of elderly people who make fewer trips relative to the people of working age, the proportion of people making trips to the total population will decrease.

Figure 11. Change in operating revenues of retail businesses of railway companies in Tokyo metropolitan and Kinki regions



Notes: Railway companies in the Tokyo metropolitan region consist of Odakyu Electric Railway Co., Ltd.; Tobu Railway Co., Ltd.; Keisei Electric Railway Co., Ltd.; Keiiky Corporation and Keio Corporation (East Japan Railway Company and Tokyu Corporation are not included because their retail operations are not segmented as retail businesses). Those in the Kinki region consist of Hankyu Hanshin Holdings, Inc.; Kintetsu Corporation; Nankai Electric Railway Co., Ltd.; West Japan Railway Company and Keihan Electric Railway Co., Ltd.
Source: Compiled based on SPEEDA information service provided by UZABASE, Inc.

Kinki regions, where the population density is high, and only along the routes of their lines where many people travel. Therefore, the business environment of railway companies was originally different from that of GMS. However, as we enter the era of convenience stores, specialty stores and shopping malls, as described above, these operators have instantly set themselves up as competitors. For example, while railway companies have used the tactic of opening a supermarket in front of a station, convenience stores have fought back by opening outlets close to where consumers live. The department stores that offer a wide variety of selection have been pressured by the shopping malls housing outlets of multiple retailers.

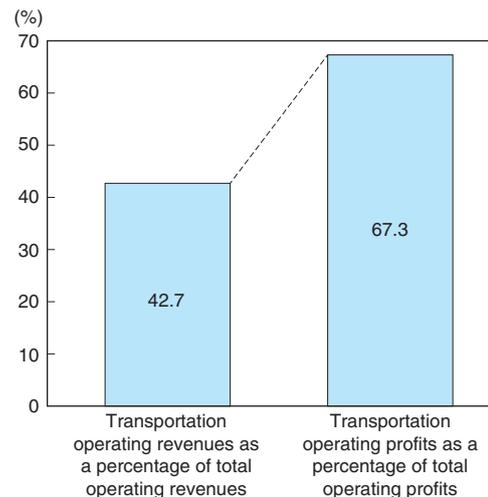
It is assumed that the competition will become more intense. In the past, in the retailing industry, powerful distributors were developed in each region with the support of wholesalers. These distributors went on to establish a strong foothold in their respective regions. However, now that we have entered the era of shopping malls that are capable of making large-scale investments and attracting many stores, thus attaining a competitive advantage, there will be more and more consolidations and alliances of retailers that cannot alone compete with such levels of investment. The result will be that strong surviving retailers in the provincial areas will be able to enter the urban areas where real estate was previously beyond their financial means, and thus potentially present the retail businesses of railway companies with new competition.

VI Strengthening Cooperation between Companies to Spur Growth of Railway Business

1 Profit structure of railway companies

Figure 12 shows the operating revenues and operating profits of the transportation business of the major Japanese railway companies as a percentage of their overall operating revenues and operating profits. Although transportation accounts for 42.7 percent of the companies' overall operating revenues, it accounts for 67.3 percent of their overall operating profits, clearly showing that transportation operations are an essential part of their business. However, the railway business is an industry that requires huge amounts of capital investment, and is burdened with enormous fixed costs. As a result, marginal costs are small, and any increase or decrease in ridership will lead to a corresponding rise or fall in the company's profit. As described in Chapter V, as we enter a phase in which ridership falls, this decline will very easily translate into a drop in profits. Therefore, the greatest concern facing railway companies will be how best to reduce their fixed costs.

Figure 12. Share of transportation operating revenues and profits in major railway companies in FY2012



Note: Calculations were made by combining the operating revenues and profits of the following railway companies: Odakyu Electric Railway Co., Ltd.; East Japan Railway Company; Tobu Railway Co., Ltd.; Keisei Electric Railway Co., Ltd.; Keikyū Corporation; Tokyu Corporation and Keio Corporation; Hankyu Hanshin Holdings, Inc.; Kintetsu Corporation; Nankai Electric Railway Co., Ltd.; West Japan Railway Company and Keihan Electric Railway Co., Ltd.

Source: Compiled based on SPEEDA information service provided by UZABASE, Inc.

2 Cooperation between companies within the industry to reduce costs in the transportation business

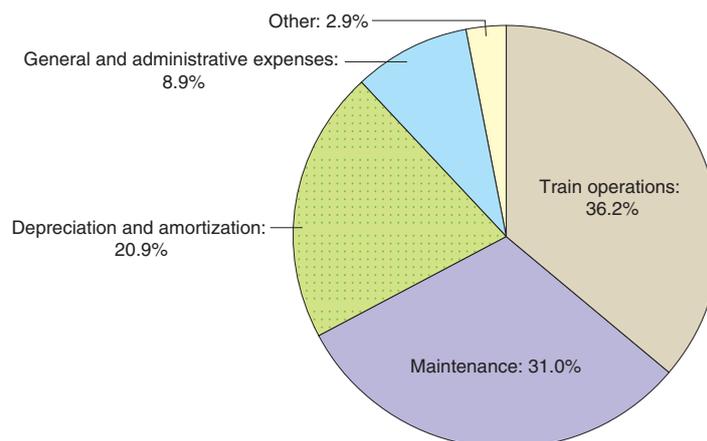
The main costs in the transportation business of a railway company are:

- Train operations
- Maintenance
- Depreciation and amortization
- General and administrative expenses

A breakdown of these expenses is shown in Figure 13. “Train operations” costs, which are variable, constitute about 36 percent of the total, while “maintenance” and “depreciation,” both of which contain many fixed-cost elements, account for more than 50 percent of the total.

These “maintenance” and “depreciation” costs could be reduced by going beyond the limitations of individual companies and taking an industry-wide approach, with possible steps consisting of (1) standardization of equipment and rolling stock and (2) common use of maintenance and inspection personnel.

Regarding Step (1), standardizing equipment and rolling stock, efforts have already been made in some areas. For example, Japan's largest supplier of train air-conditioning systems, Mitsubishi Electric Corporation, has been promoting the modularization of various components. In addition, the Japan Transport Engineering Company (J-TREC) is promoting the introduction of common platform rolling stock with its “Sustina” next-generation stainless steel rail cars.

Figure 13. Cost structure of major railway companies

Notes: 1) Calculations were made by combining the values of the following six railway companies: Hokkaido Railway Company; East Japan Railway Company; Central Japan Railway Company; West Japan Railway Company; Shikoku Railway Company and Kyushu Railway Company. 2) "Train operations" costs include transportation costs, train operating costs and traffic control costs. "Maintenance" costs include costs for maintaining rails, rolling stock and electric circuits as well as maintenance management.

Source: Compiled based on "Annual Report on Railway Statistics 2010" published by the Ministry of Land, Infrastructure, Transport and Tourism.

Unfortunately, in comparison with other transportation companies such as airlines and buses, there are still huge differences among the rolling stock of Japanese rail operators. However, with expansion overseas, this issue can be sidestepped. In fact, both Mitsubishi Electric and J-TREC have been making efforts to be more competitive with the aim of overseas expansion. Given the leveling off of the domestic market for rolling stock and rail components, manufacturers have no choice but to make forays into overseas markets. However, if they follow their way of doing business in the domestic market in which their products are designed differently depending on the customer, it would be difficult for them to compete in overseas markets in terms of price and response speed. With the Japanese government policy of promoting "packaged infrastructure export," it is quite likely that railway companies will expand overseas. To this end, the authors hope that all companies in the railway industry will work together and accelerate their moves towards "(1) standardization of equipment and rolling stock."

Once the above step has been achieved, the next step, Step (2), is to aim for the common use of the technical personnel involved in engineering work, electrical engineering, the rolling stock and construction. Currently, because the different railway companies each have their own specifications, each company has its own technical staff members that are responsible for the installation of rails and so on, as well as maintenance and inspection. The total number of these personnel in Japan reaches around 40,000 to 50,000. If an organization of technical staff members who support railway operations were created and if the third-sector railway companies (that are usually plagued with deficits) were able to use such human resources, deficit-ridden railway companies could reduce their costs. At the same time, these organized technical staff members would contribute to resolving the issues associated with transferring

technology and knowledge to the next generation of technical personnel.

However, it is difficult to achieve such standardization employing only the efforts of the private sector. The replacement of peripheral equipment as necessitated by standardization, laid down in Steps (1) and (2), will incur a vast amount of costs, while the time equipment reaches the end of its life varies among companies. In addition, the standardization of the technologies that are critical to railway operations to ensure safety and security will not be easy. For these reasons, these projects must be promoted through the initiative of the government. In recent years, the policies of the Japanese government towards the railway business have included the promotion of the above-mentioned packaged infrastructure export, the installation of platform doors and mutual direct operations among different railway companies. The more that mutual direct operations expand, the greater will be the need for standardized rolling stock. Therefore, the standardization of rolling stock and other equipment can be regarded as an extension of current measures of the Japanese government.

3 Cooperation with companies in different industries in related businesses

As mentioned in Chapter V, which described the retail business, the environment in which related businesses operate is currently presenting a much greater degree of competition. Given this situation, what is needed to promote related businesses is, again, cooperation among companies.

Since the railway companies have already developed the areas along their lines as much as they can, the only way in which they can pursue growth is to move outside the areas along their lines to develop retail, construction, real estate and travel agency businesses, all of which are the traditional related businesses of railway companies.

For example, in the retail business, Hankyu Hanshin Department Stores, Inc., which is headquartered in Osaka, opened its Hankyu Men's Tokyo store in Tokyo. In real estate, Tokyu Land Corporation, which is a subsidiary of Tokyu Corporation based in Tokyo, has been selling its BRANZ-branded line of condominium buildings in Kansai, while Keihan Dentetsu Real Estate Co., Ltd., which is a subsidiary of Keihan Electric Railway Co., Ltd. based in Osaka, has made advances into the Tokyo market. As such, expanding in areas away from their own lines means that the entire country is their potential marketplace and that the railway companies must compete with and beat other companies in the field in which they participate, including the market leaders in the chosen field.

However, with the slowdown in the domestic market, competition has intensified, leading to the formation of alliances among companies even including top players in various industries. The main aim of these alliances is to increase business efficiency through economies of scale. It seems likely that the related businesses of the railway companies will also be involved in this trend toward forming alliances. For a railway company that operates many different related businesses, aiming to become the leader in every field is a difficult goal to attain. In the future, each railway company should select the areas where it can have a competitive advantage or in which there is future potential, and should concentrate on those selected areas. Then, in order to attain a leading position in the relevant industries, efforts must be made to outdo the others including those for mergers and acquisitions (M&A).

VII The Challenge of New Ways to Increase Revenues

Up to this point, the authors have described how the railway companies have taken a relatively “defensive”

approach to their business development. However, at the same time, business opportunities that present new means of earning revenue are also appearing. Such opportunities include catering to the elderly and foreign visitors as well as overseas development as discussed in Chapter IV.

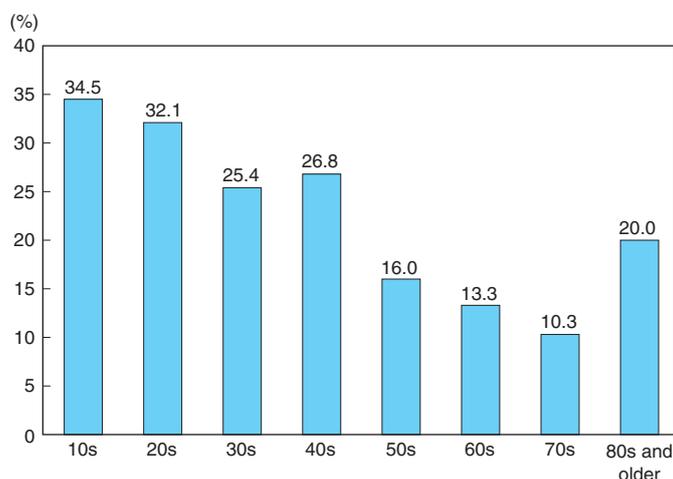
1 Creating and catering to demand for tourism among seniors

As the population ages, the railway industry has also come to recognize that they need to develop services that target senior citizens. Because of their available time and resources, senior citizens have long been an important customer base for travel and tourism. With the retirement of active seniors (baby boomer generation), this market is becoming increasingly important.

However, currently, the majority of senior citizens travel as couples. Unfortunately, the opportunity to travel as a couple may be lost as people get older because aging inevitably leads to the ill health or passing of a partner. Furthermore, given the increasing tendency for people to either marry later or even not marry at all, it is expected that the number of couples who travel will decrease. For this reason, providing senior citizens with a means of creating travel partners will become important in marketing efforts.

There is still room for new ideas in the process of product design. Figure 14 shows the degree of satisfaction with domestic tourism and recreational travel by age group. This bar graph shows a tendency for the percentage of people claiming to be “very satisfied” to fall as their age increases. It is often said that travel by senior citizens is increasing. However, as people get older, their physical strength deteriorates. The hurdles faced by senior citizens in traveling are higher than are those of young people. Furthermore, senior citizens will likely have much more travel experience than young people, so

Figure 14. Degree of satisfaction with domestic tourism and recreational travel by age group (percentage of only “very satisfied” answers)



Source: Compiled based on “Japan National Tourism Survey (April to June, 2013),” published by the Japan Tourism Agency.

will tend to seek out travel products with added value that differ from the experiences they have had in the past. In addition to designing travel products that can meet the demand of senior citizens by considering the range of “getting out of the house, enjoying travel and then returning home” as travel, it will be necessary to devise new types of travel content that will appeal to senior citizens.

Some of the efforts to address this need have already created popular products. For example, in 2005, East Japan Railway Company (JR East) launched its “Otona no Kyujitsu (Holidays for Adults) Club,” a membership club aimed at senior citizens. For members of this club, reduced rates are offered, and social events are held based on hobbies and so on. In the first two years, club membership grew to 500,000, rising to more than a million in 2009, only four years after its launch. In 2013, Kyushu Railway Company (JR Kyushu) launched “Seven Stars in Kyushu,” Japan’s first luxury cruise train, which has since gained popularity mainly among senior citizens.

2 Attracting foreign visitors to Japan

Figure 15 shows that there is a slight positive correlation between the “percentage of those traveling as individuals” and the “percentage of those traveling by rail” for each nationality of visitors to Japan. That is, among foreign visitors to Japan, as the number of people traveling as individuals increases, the number of those traveling by train also increases. Therefore, each railway company should implement measures to ensure that an increasing number of foreign visitors to Japan as a result of deregulation such as the relaxation of visa requirements will make use of their services.

Specific measures to this end could include making it easier for those tourists to use the Shinkansen network that connects major Japanese cities most frequently

visited by foreign tourists such as Tokyo, Osaka and Kyoto, as well as improving the links between the centers of major cities and their suburbs.

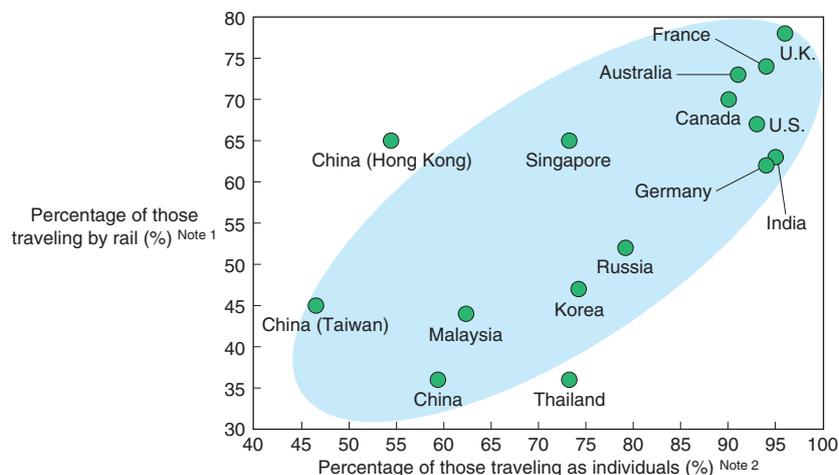
3 Overseas expansion

As one means of achieving growth in the railway industry, the development of the railway networks in emerging countries would constitute a very appealing future market for railway companies. In the same way as in Japan in the middle of the Showa era, the emerging countries are currently facing the issue of developing their infrastructure in order to boost their economic growth.

When moving into overseas markets, Japanese railway companies could target two main areas. The first area concerns “railway operations technology.” Japan is one of the world’s most densely populated countries. Nevertheless, its railways operate efficiently without any major disorder. The reason for such stable operations is that Japanese railway companies have developed most of their operations technologies in-house. Furthermore, these operations are supported by many different departments within the company that work together organically as well as by individual employees within such departments who have the necessary skills.

However, in Europe and other countries, the concept of “separating railway infrastructure from train operations” has been widely adopted. Specifically, this concept aims to operate railway business based on the division of labor and standardization (the creation of manuals) by dividing overall railway operations into “one or more entities that manage and operate train operations” and “one or more entities that own and manage rail infrastructure.” Therefore, in order for Japanese railway companies to expand into emerging markets, they first need to separate a wide range of expertise for operations for each type of work, for which manuals must

Figure 15. Correlation between the percentage of visitors to Japan traveling as individuals and the percentage of those traveling by rail by nationality



Notes: 1) The percentage of those traveling by rail refers to foreign visitors who purchased tickets for railway, monorail and ski lifts. 2) The percentage of those traveling as individuals refers to foreign visitors who did not purchase tour packages.
 Source: Compiled based on “Consumption Trend Survey for Foreigners Visiting Japan (April to June, 2012),” published by the Japan Tourism Agency.

be created. By doing so, they must establish a system that enables them to offer products that meet the needs of a given country in the form of a “combined product,” which consists of only required functions.

The second area involves the export of the “railway company’s business model.” The term “business model” discussed here refers to business development by combining railway operations and related businesses. This business model is identical to the Japanese concept of “community development” in which a rail line is brought to an area; a bus-based transportation network radiating away from a train station is established, and then residential and commercial facilities are developed in the area.

One of the greatest strengths of Japanese railway companies is their expertise in developing community-based business (including related businesses). Traditionally, a railway company has provided a common means of transport within an area, and has built a relationship with the residents of that area. Based on this relationship, the company has developed and expanded related businesses, which has increased the overall strength of the company’s group. This way of developing business has always contributed to the development of transport links and commerce in the regions throughout Japan. In the future, in the cities of Asia, the Middle East and Africa, where growth is likely, companies that can drive the growth of the economy as well as regional development will be required. In this context, Japanese railway companies could step in to demonstrate their strengths in the same way as they have done in their home country. These activities would correspond with the policy of the Japanese government to promote packaged infrastructure export. Based on this policy, the Ministry of Land, Infrastructure, Transport and Tourism plans to establish an organization designed to help Japanese companies export infrastructure-related business. While Japan was the first country to see rapid economic development in Asia, the authors look forward to a future in which the Japanese government and railway companies work together to contribute to the growth of many cities in the world including Asia, the Middle East and Africa.

VIII The 2020 Tokyo Olympics Would Be an Ideal Showcase for Introducing Japan

In 2020, the Olympic Games will be held in Tokyo, and this event will bring many foreign tourists to Tokyo. In addition to Asian visitors, there will be large numbers of

visitors from the U.S. and Europe, who would not normally consider traveling to Japan given the distances involved. While many of these visitors will be spectators to the Games, there will also be many persons with stakes in the various sports as well as government officials from the participating countries. In order to use the Tokyo Olympics as a showcase for Japan’s strengths, efforts should be made to introduce Japan’s top-notch level of individual services by having visitors actually experience such services. In addition, multiple services should be linked together so as to present an integrated system offering both convenience and comfort.

For example, with a single smartphone, it is possible to navigate “door to door.” Simply by waving a smartphone over a ticket gate, a visitor can pass through the gate of Japan’s nationwide transport system, and at the same time, can pay for the ticket. Another example is the function provided by linking car navigation systems to the road infrastructure in which a vehicle is routed in a way to avoid congestion and receive information about obstacles.

In order to create the mechanisms to enable foreign tourists whose stay in Japan will be relatively short to experience such services, which involve many different companies, all parties concerned will have to bear a considerable burden such as prior coordination and negotiation regarding cost-sharing. Therefore, the Japanese government will have to play a bridging role for private-sector companies such as airlines and railway companies. In preparation for hosting the Olympic Games, a system must be established whereby the public and private sectors work together to offer the kind of “hospitality” that is possible only in Japan.

Notes:

- 1 Using the Official Airline Guide (OAG) database, the share of airlines was calculated with respect to direct flight passengers who bought tickets in Thailand for flights from Bangkok to Tokyo (October 2013).
 - 2 The back-to-the city migration itself also causes a decline in the revenues from fares because of the decreased distance traveled by train.
 - 3 “Questionnaire Survey on 10,000 Consumers” conducted by Nomura Research Institute in 2012.
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