

World Population and Standard of Living: Implications for International Tourism in the First Decade of the New Millennium

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Introduction

International travel has major implications for the world's economies. The World Tourism Organization (WTO) has documented that in 1995 (WTO, 1997b, pp. S-ii):

- International tourism receipts had grown 13 percent per year compounded over the prior decade, outgrowing the world's gross product, merchandise export trade, and trade in services
- International tourism receipts reached 1.42 percent of world gross product
- International tourism receipts and passenger fares comprised 8 percent of the world's merchandise export trade and one-third of worldwide trade in services

Growth has slowed since 1995, but according to recent WTO estimates² world international visitor arrivals topped 635 million in 1998 (up 11.7 percent from 1995) and receipts (excluding international passenger fares) totaled US\$439 billion (up 9 percent).

According to the same WTO report, the ratio of international visitor receipts to GDP runs from 20 percent to more than 80 percent for island nations, and several

¹ The author expresses his special thanks to the World Tourism Organization and the Travel Industry Association of America for providing historical data on international travel essential to this paper. He also appreciates the generosity of The WEFA Group of Eddystone, PA 19022 USA for providing forecasts of GDP for selected countries.

² At November 8, 1999.

developing countries³, such as Poland, China and a number of African nations, show the greatest growth in this ratio over the 1985-95 decade (WTO, 1997b, pp. 71, 75).

Those concerned with national economic growth, stimulating intra-country regional economies and aiding developing nations should have a major interest in the future growth of international tourism. The equivalent of US\$billions are invested annually in garnering shares of the world's outbound tourism markets for individual nations. However, few countries have the financial resources to develop outbound markets from other nations. Rather, they look to attracting shares of outbound markets stimulated by factors internal to those generating countries or other international developments largely beyond most receiving countries' control, such as international exchange rates, airfares and air transport capacity.

In his comprehensive review of 85 international tourism forecasting studies, Crouch (1994b) noted, "A reading of the past research leads one to conclude that income is the single most important determinant of demand for international tourism." (p. 12) The income of the residents of a nation can affect outbound travel in two ways. First, it provides the financial resources to fund this travel, especially for leisure purposes. Second, national income is an indicator of the business activity of a nation. If income is high and rising, it is quite likely that the business activity is growing and stimulating business travel to foreign markets.

Population has been a less popular explanatory variable in international tourism forecasting studies. Crouch (1994a) found that population was employed as an explanatory variable in only 15 percent of the 85 international tourism demand forecasting studies he reviewed (p. 50). However, population is an appealing instrument in the tourism demand forecaster's toolkit for at least two reasons. One is that it is people who do the traveling. And just as we usually deflate economic values stated in currency terms to remove inflation, we should deflate visitor volumes over time to remove that growth due simply to more people. This is common in studies of other national economic and social variables, such as income, automobile and telephone ownership, crime and disease stated on per resident ("per capita") bases.

Second, population for most countries has the distinction of being the socio-economic variable easiest to forecast with accuracy over the medium to long term: for 80 percent or more of all the people expected to be living a decade hence are already born. Demographers usually know a great deal about trends in birth rates and mortality rates by age, so that the number of people in each age cohort can be forecast ten years or so out with a relatively high degree of accuracy.

³ "Developing countries" in this study are those so designated by the WTO (1997, p. 256).

In this study, I investigate what past fluctuations in national income (represented by countries' real GDPs) and population sizes and structures can reveal about outbound travel from 20 countries. The intent is to discover relationships that can be used to forecast long-haul visitor volumes from these countries to 2010. These forecasts are necessarily long-term trends rather than annual point estimates. A host of other explanatory factors often push a country's outbound travel volumes off of their long term trends for brief periods of time (e.g, Frechtling, 1996, p. 135).

Purpose and Use

This paper is a report on efforts to discern the impact of population and income trends on outbound international travel over the last decade, in order to indicate trends in first decade of the new millennium. Time series on outbound long-haul international travel from 20 countries, population trends by age grouping, and real Gross Domestic Product (GDP) are analyzed over the 1989-98 period to suggest major relationships among these variables. Projections of population by age group and real GDP for these countries are then used to project outbound international long-haul travel for these countries to 2010. Finally, some conclusions are drawn about the future of long-haul international travel.

To my knowledge, informed by extensive literature reviews by Crouch (1994a, 1994b) and Witt and Witt (1992, pp. 16-29), no published studies have investigated the change in individual age cohorts as an explanatory factor in international travel demand. The present study, then, is exploratory, providing the results of an initial investigation of these variables to aid understanding of international travel demand.

This study should be of interest to marketers planning where to devote their resources to develop visitor markets from an array of origin countries. The findings herein could be used in a two-stage model of inbound visitor forecasting suggested by Smeral (1988). In the first stage, the total volume of outbound visitors or visitor spending is estimated for major originating countries. In the second stage, the distribution of this outbound tourism among destination countries is estimated, based on marketing expenditures, relative prices, air fares, exchange rates, etc.

Finally, this study should provide additional intelligence on a tourism generating factor largely ignored in tourism demand literature: the age structure of national populations. The world's rate of population growth is declining, and the inhabitants of this planet are collectively growing older. The volume of residents of some countries has already begun to decline, with more countries projected to enter these ranks in the decade ahead.

Definitions and Base Data

I employ herein the definitions of international travel adopted by the United Nations Statistical Commission in 1993 in response to the World Tourism Organization's (WTO) report on tourism statistics (UN/WTO 1994, p. v). In this system of classification, the central statistical unit is the "visitor". "International visitor" is defined as "any person who travels to a country other than that in which s/he has his/her usual residence but outside his/her usual environment for a period not exceeding 12 months and whose main purpose of visit is other than the exercise of an activity remunerated from within the country visited" (UN/WTO 1994, ¶29). By extension, the terms "international trip" or "international visit" describe any travel to a place outside the country in which the visitor resides (UN/WTO, 1994, ¶42).

This report focuses on the "outbound" visitors a country generates, that is, the number of trips recorded by residents of the country under study to all other countries of the world (UN/WTO 1994, ¶11). Outbound travel is further classified by the spatial extent of the international trip. "Long-haul" is used to indicate that an outbound visitor has traveled to one or more countries outside the multi-country *region* in which the visitor lives as defined by the World Tourism Organization (Travel Industry Association of America, 1999, p. 47). Complementarily, "short-haul" indicates outbound travel by the residents of a country to other countries within the same region, as defined by the WTO. "Total outbound" travel is the sum of long-haul outbound travel and short-haul outbound travel from a country (Ibid.).

All estimates of long-haul visitors for each of 20 generating countries used in this study were derived from the most recent Travel Industry Association of America report (1999), covering the years 1989-98. Note that these visitors/trips are computed as the residences reported by visitors to each receiving country as compiled by the WTO. Since a given international visitor may visit two or more countries on a single trip, the total outbound estimates for individual generating countries used in this study are likely to exceed the estimates of outbound visitors or trips reported by the countries of visitors' residences. The aggregate of outbound trips by residents of these 20 countries comprised over 62 percent of total world arrivals in 1998.

"Gross Domestic Product" (GDP) is defined as "equal to the total gross expenditure on the final uses of the domestic supply of goods and services valued at purchasers' values less imports of goods and services valued c.i.f." (Organisation for Economic Co-operation and Development, 1999, p. 7). It is thus a standard measure of the net output of goods and services within the political borders of a country. This study employs annual estimates of "real" GDP for the 20 countries analyzed published by the OECD at 1990 prices and exchange rates (Organisation for Economic Co-operation and Development, 1999, p. 138) for the years 1989 through 1997. The 1997 GDP estimates were updated to 1998 for each country by the figures provided to the author by the WEFA Group. GDP represents national income herein, since it is also the sum of incomes to all factors of production residing within the country's borders.

Estimates of each country's total population and population by three major age groups were collected from the U.S. Bureau of the Census International Data Base as listed on the Internet at www.census.gov/ggi-bin. The data for Canada were incomplete, so the author obtained these population estimates from Statistics Canada at www.statcan.ca/datawarehouse/cansim/cansim.cgi.

The WTO database published by TIA includes data on the 20 countries listed in Table 1 with their WTO regions (see Appendix A for the list of countries comprising each region). The only exception to this convention is that while Israel is included by WTO in the Europe region, in this study, long-haul trips comprise those visits to countries outside WTO's Middle East region. The "economic status" of the country is provided by (WTO, 1999).

Table 1: Countries Included in the Present Study by WTO Region and Economic Status

Generating Country	WTO Region	Economic Status
Argentina	South America	Developing
Australia	East Asia/Pacific	Industrialized
Belgium	Europe	Industrialized
Brazil	South America	Developing
Canada	North America	Industrialized
France	Europe	Industrialized
Germany	Europe	Industrialized
Israel	Middle East	Industrialized
Italy	Europe	Industrialized
Japan	East Asia/Pacific	Industrialized
Korea, Republic of	East Asia/Pacific	Developing
Mexico	North America	Developing
Netherlands	Europe	Industrialized
Spain	Europe	Industrialized
Sweden	Europe	Industrialized
Switzerland	Europe	Industrialized
Taiwan	East Asia/Pacific	Developing
United Kingdom	Europe	Industrialized
United States	North America	Industrialized
Venezuela	South America	Developing

Sources: (Travel Industry Association, 1999), (World Tourism Organization, 1997a, pp. 256-257)

The Present

Figure 1 presents the 1998 estimates of outbound visitors for each of the 20 generating countries.

FIGURE 1 HERE

The United States leads all countries of the world by far in current outbound long-haul visitors, supplying one-third of the total for all 20 countries. Japan and the

United Kingdom form a second tier of long-haul generating countries, with Germany and France following.

As Figure 2 indicates, generally outbound long-haul travel varies with the population size of the countries. However, Mexico and Brazil produce considerably fewer long-haul visitors than their populations would indicate, suggesting the impact of relatively low income and/or an extremely unequal distribution of income among residents are among factors dampening this demand. Japan, on the other hand, is producing considerably more long-haul visitors than its population size suggests: the effects of an island nation with a large economy and a government encouraging outbound travel. For all 20 countries in 1998, population size accounted for about 64 percent of the variance in long-haul visitors generated.

FIGURE 2 HERE

Figure 3 shows the relatively close relationship between real GDP in 1998 and volume of long-haul outbound trips. Among the countries, the United Kingdom stands out as producing considerably more long-haul visitors than expected given its population size. All other countries fall relatively closely to the regression line, indicating that each US\$ one billion addition to a country's real GDP generated 4.5 thousand more outbound long-haul visitors during 1998. The relatively good fit reinforces the close relationship between a country's income and its outbound travel found in Crouch's study and others. Real GDP accounts for 95 percent of the variance on long-haul visitors generated across these 20 countries in 1998.

FIGURE 3 HERE

Of course, outbound travel among nations may vary only because resident populations differ: a large population country could be expected to produce more outbound visitors annually than a country with a small population. This relationship could obscure other factors explaining outbound visitor volumes.

Figure 4 ranks the 20 countries on the basis of outbound travel *intensity*, that is, the average number of visitors generated per resident of the country. This shows a considerably different ranking from that in Figure 1. Israel surpasses all other countries by far, with the industrialized nations of Switzerland, United Kingdom, Australia and Canada forming a second tier. Most of the developing nations fall at the end of this scale.

FIGURE 4 HERE

Long-haul visitors per resident is a useful measure for tourism demand forecasting. It indicates how active the individual resident is in traveling abroad. Although not conclusive, the measure suggests how widespread international travel is among the

population. We could expect that a larger percentage of Israel's population travels abroad in a year than of the U.S. population, for example. Destination marketers attempting to access the most productive outbound markets could expect greater success promoting to Israeli residents than to U.S. residents as a whole.

In addition, this measure of travel intensity helps us avoid problems of multicollinearity, which plague attempts to forecast international travel (Witt 1992, p. 17). In regression analysis, when two or more explanatory variables are highly correlated with one another (i.e., are multicollinear), regression analysis has difficulty assigning coefficients to them, and these estimates become highly unstable, i.e., have high standard errors (Frechtling, 1996, p. 242). Population by itself is likely to multicollinear with several other socio-economic variables of interest to the forecaster (e.g., Frechtling, 1996, p. 143). Adjusting outbound visitor volumes over space and time by population removes one source of multicollinearity in this demand forecasting. Moreover, little correlation was found between these countries' absolute long-haul visitor volumes and their intensities of this travel for 1998, indicating that the latter is a new variable that may shed light on important income and population relationships to this travel.

Figure 5 indicates that there is no discernible relationship between countries' population sizes and intensities of long-haul travel generated. For example, regardless of population size, the developing nations in the sample produce low long-haul travel intensities. The relatively small country of Israel produces an intensity three times that of the large U.S.

FIGURE 5 HERE

There is a weak relationship between long-haul travel intensity and real income per capita (Figure 6). The regression line for these 20 countries explains only about 22 percent of the variance in long-haul visitors per resident in 1998. The six developing countries in the sample all produced lower outbound long-haul intensities than the average for the group.

FIGURE 6 HERE

Age cohorts

Figure 7 ranks the selected countries by population size and shows the volume of residents by three age cohorts: 19 years of age and under, 20 to 64 years of age, and 65 and older. These roughly conform to youth, working age, and retired populations, respectively. The cohorts vary widely in absolute size among the nations profiled.

FIGURE 7 HERE

Figure 8 more clearly distinguishes the age structures of these population by proportion, beginning with Italy with less than one-fifth of its population in the youth category, to Venezuela and Mexico, each with more than one-third. Investigations of possible relationships between the age cohorts and intensity of long-haul travel by regression analysis produced no significant relationships for these countries for 1998.

FIGURE 8 HERE

Conclusions on the Present

For 1998, the following conclusions can be drawn regarding outbound long-haul travel for these 20 countries:

- The volume of long-haul outbound visitors varies considerably, with developing nations tending to produce the smallest absolute numbers.
- There is a moderate relationship between population and number of long-haul visitors generated by a country, with developing nations tending to fall below the average for their population sizes.
- There is a stronger relationship evident between the absolute size of real income and volume of outbound long-haul visitors.
- There appears to be little relationship between the volume of long-haul visitors generated and the growth in this activity over the previous decade.
- The intensity of outbound long-haul travel generated does not vary systematically with population size, with developing countries falling below the averages for their population sizes.
- There is a weak relationship between long-haul travel intensity for the generating countries and real income per resident, with developing countries falling below the averages for their per-capital incomes.
- The relative sizes of young, middle and upper age groups vary considerably among the countries, with developing countries tending to show the highest proportions for the youngest age cohort.
- There is no discernible relationship between the age structure of a country's population and long-haul travel intensity.

These conclusions relate only to 1998. The next section analyzes the changes over the last decade in these magnitudes.

The Past

Trends over the last decade can further inform us of the relationships between population and national income on the one hand, and changes in outbound long-haul visitor volumes for the selected countries.

Figure 9 shows the growth in outbound long-haul visitors by country for the 1989-98 decade. Taiwan is the major outlier, but the developing countries of the Republic of Korea, Argentina and Venezuela also lead the sample with growth rates of 100 percent or more over this period. Switzerland, Australia, Sweden, Mexico and Canada lag the rest with growth rates below 50 percent.

FIGURE 9 HERE

There is no statistical relationship between population growth over the last ten years and growth in long-haul travel for these countries (Figure 10). Five of the six developing countries show faster rates of growth than their population increases would suggest. Italy's population count did not change over the 1989-98 period, yet this country still managed to double its outbound long-haul visitor volume. Clearly, something more than total population growth drove the long-haul travel increases.

FIGURE 10 HERE

Income growth is one of these driving factors. The regression trend line in Figure 11 explains about one-third of the variance in long-haul visitor growth over the last decade. Taiwan again dominates, even though its real GDP grew more slowly than Argentina's. Except for Taiwan, the developing countries selected followed the sample in relating long-haul travel growth to rising income.

If Taiwan is removed from the sample, the trend line accounts for nearly one-half of the variance of the 19 countries' long-haul visitor growth, but it also shifts downward to show a more moderate relationship between income growth and long-haul visitors generated (trend line becomes $0.472+0.724*\text{realGDP}\%$).

FIGURE 11 HERE

As per capita incomes rise in a country, we could expect the per capita incidence of long-haul travel to rise, as well. The population is better off financially, and this should translate into additional spending on luxuries such as long-haul travel. Figure 12 indicates this is the case for the countries under analysis here. The

regression line slopes upward and explains about one-quarter of the variance in real income per resident growth rates. In this case removing Taiwan does not appreciably increase the regression's explanatory power. Except for Venezuela and Argentina, the developing countries produced long-haul visitor growth equal or exceeding what would be expected from their income growth rates.

FIGURE 12 HERE

Population estimates by age cohort are available for the entire decade for 16 of the countries, as shown in Table 1. It is evident that the proportion that the youth cohort comprises of the total has fallen for most countries, and substantially for several of the underdeveloped countries and Japan. On the other hand, the proportion that the retired age cohort composes of the population has risen significantly for all nations but the U.S.; Sweden and the United Kingdom show declines.

Table 1: Change in Incidence of Total Population of Three Age Cohorts for Selected Countries, 1989-98

	0-19 years	20-64 years	65+ years
Argentina*	-4%	1%	11%
Australia	-8%	2%	12%
Belgium	-6%	-1%	14%
Brazil*	-11%	9%	25%
Canada	-5%	0%	13%
France	-8%	1%	13%
Israel	-9%	6%	7%
Japan	-21%	2%	37%
Korea, Rep. of*	-17%	8%	33%
Mexico*	-10%	11%	11%
Netherlands	-7%	2%	6%
Sweden	0%	1%	-2%
Taiwan*	-14%	5%	41%
United Kingdom	0%	0%	-1%
United States	-1%	0%	2%
Venezuela*	-8%	7%	12%

Source: U.S. Bureau of the Census

*developing country

Investigation of the statistical relationships between the age cohort changes and the intensity of outbound long-haul travel for these 16 countries shows that the retired age group accounts for more than one-third of the variance in long-haul travel intensity changes over the decade. Figure 13 indicates the relationships. The developing nations in the sample show about the same sensitivity to the retired cohort's growth as the rest of the selected countries do.

FIGURE 13 HERE

Conclusions on the Past

The analysis of changes in population, income and outbound long-haul travel over the last decade suggests the following:

- Developing nations tended to lead the growth rates of long-haul travel
- Total population growth does not provide a very satisfactory explanation for this travel growth among the nations studied over the last decade, but developing nations produced greater growth rates in outbound long-haul visitors than their population growth rates would indicate
- Growth in real national incomes was much more powerful in explaining long-haul visitor growth over the last decade than population growth; developing nations shared this relationship with the industrialized nations in the sample
- The elasticity of long-haul visitor growth to income growth was about 2 for both absolute visitors and the intensity of long-haul travel generated by the sample
- Two of the three age cohorts for which data are available over the last decade show no relationship to the growth in outbound long-haul travel, but the 65 and over age group did demonstrate a significant relationship

The Future

Based on these findings, various regression equations were tested to find the one that best explained the course of outbound long-haul visitors per resident for each country over the 1989-98 period. "Best explained" was defined as the equation producing the largest coefficient of determination (R-squared) adjusted for degrees of freedom where independent variable coefficients were significantly different from zero at the 95 percent confidence level, and the coefficients showed reasonable signs. The last condition required ignoring equations where the relationship of long-haul travel intensity to the incidence of an age cohort in the population was negative, or where the relationship to real GDP per resident was negative.

The incidence of each of the three age cohorts in the population and real GDP per resident comprised the explanatory variables tested for each country. The impact of the Gulf War was also tested for the 1991 period and was found to be significant (at the 90 percent confidence level) for eight of the countries. Israel's generation of outbound long-haul travel was found to be significant for 1991 and 1992. Selected characteristics of the best equations are listed in Appendix B to this paper.

Table 2 indicates population changes over the last decade and projected to 2010 for the selected countries. Compound annual rates of change are employed for this comparison since the two time periods differ in length.

Whereas Italy was alone in posting no increase in population in the last decade, Italy, Belgium and Spain are projected to show no growth or decline to 2010. Indeed, no country is expected to increase its resident population in the future as fast as it did in 1989-98. Even the developing countries will post significantly lower population gains in the next decade or so. Overall population for the group will grow only two-thirds as fast as it did in the last decade.

Table 2: Populations and Rates of Change for Selected Countries, 1989-2010

Generating country	2010 forecast (millions)	1998-10 CARC	1989-98 CARC
Argentina*	42.0	1.2%	1.3%
Australia	20.4	0.8	1.2
Belgium	10.1	-0.1	0.3
Brazil*	191.0	1.0	1.5
Canada	34.3	0.9	1.3
France	59.7	0.1	0.5
Germany	81.0	-0.1	0.5
Israel	6.7	1.4	3.0
Italy	55.3	-0.2	0.0
Japan	127.1	0.1	0.3
Korea, Rep. of*	51.2	0.8	1.0
Mexico*	118.8	1.6	1.9
Netherlands	16.2	0.3	0.6
Spain	39.2	0.0	0.1
Sweden	9.1	0.2	0.5
Switzerland	7.4	0.1	0.8
Taiwan*	24.2	0.8	0.9
U. Kingdom	60.0	0.1	0.3
United States	298.0	0.8	1.0
Venezuela*	27.3	1.5	2.1
Total	1,279.0	0.6%	0.9%

CARC = compound annual rate of change

*developing country

Source: U.S. Bureau of the Census

Compound annual rates of change (CARC) in outbound long-haul visitors forecast for 1998 to 2010 are shown in Figure 14. The developing countries of the Republic of Korea and Taiwan are projected to lead all others in the rate that they generate these outbound trips, with Germany close behind. At the other end of the scale, Switzerland is projected to produce only negligible rises in this outbound travel over the next twelve years.

FIGURE 14 HERE

Table 3 summarizes the projected growth of outbound long-haul travel for each of the 20 countries selected for this study, along with comparisons of growth rates over the ensuing 12 years compared to the historical period. Compound annual rates of change are employed for this comparison since the two time periods differ in length.

For these 20 countries in aggregate, long-haul outbound travel is projected to grow to 2010 only two-thirds as fast as over the 1989-98 period. Argentina, Belgium, France, Italy, Sweden, Switzerland, Taiwan, the U.S. and Venezuela are projected to grow at less than half their previous rates in generating long-haul visitors.

On the other hand, Australia, Canada and Mexico are forecast to grow at a faster pace than in the past, and Germany and Spain will maintain their previous rates of outbound long-haul travel growth.

Table 3: Long-haul Visitors and Rates of Change for Selected Countries, 1989-2010

Generating country	2010 forecast (000)	1998-2010 CARC	1989-98 CARC
Argentina*	1,639	2.4%	10.1%
Australia	5,391	4.7	3.6
Belgium	1,249	3.1	7.1
Brazil*	4,324	6.2	6.6
Canada	8,300	4.7	1.8
France	8,874	2.3	5.7
Germany	16,933	6.8	6.8
Israel	3,229	4.0	7.0
Italy	4,925	3.1	7.7
Japan	20,138	4.2	4.9
Korea, Rep. of*	2,262	9.8	10.2
Mexico*	2,063	5.7	3.2
Netherlands	3,923	5.5	6.7
Spain	3,637	6.0	6.0
Sweden	1,076	1.3	3.4
Switzerland	1,500	0.1	3.9
Taiwan*	3,158	7.2	24.4
U. Kingdom	18,002	4.3	6.0
United States	37,391	1.2	5.1
Venezuela*	814	1.6	8.0
Total	148,828	3.6%	5.5%

CARC = compound annual rate of change

*developing country

Source: WTO and author

It should be emphasized that these are long-term trend projections based upon the most powerful population and income explanatory variables investigated. The actual long-haul visitor totals may differ from these in 2010 due to the impact of political, economic, socio-cultural and technological variables not considered herein.

No correlation was found between the projected rates of outbound long-haul visitor growth to 2010 and total population growth or absolute size of these visitors in 1998 for the 20 countries studied. However, these rates of growth are somewhat related to projected growth in real GDP for these countries, as projected by The WEFA Group. This relationship is presented in Figure 15 for the 16 countries for which WEFA provided estimates (missing are the developing countries of Argentina, Brazil, Republic of Korea and Venezuela). The regression line shown accounts for somewhat more than one-third of the variance of the visitor estimates.

FIGURE 15 HERE

Conclusions on the Future

This forecasting exercise suggests the following about the future of long-haul visitor generation over the next 12 years:

- The volume of outbound long-haul visitors will continue to grow over the initial decade of the 21st century for all countries, even though populations will increase at slower rates for all countries studied, and decline for a few
- The rate of long-haul visitor growth will slow for most countries, developing and industrialized alike, to 2010
- Projected age cohorts and real incomes in some countries, however, are expected to boost rates of growth in long-haul visitors generated over the next decade from their rates over the last ten years.
- The rates of growth forecast are not related to current long-haul visitor volumes, rates of growth over the last decade, or population projections for the next
- The rates of growth forecast appear to be related to projected growth in real GDP for most countries to 2010

Implications

Other data, such as the U.S. Department of Commerce's In-flight Survey of International Air Travelers, indicate that long-haul travelers are especially lucrative sources of spending for destinations and international transport modes. They tend to stay longer at the destinations they visit than the average visitor, and often spend more per day. Consequently, the following overall conclusions should be of particular interest to destinations and business firms seeking to attract this lucrative market:

- Long-haul travel generated by Republic of Korea, Taiwan, Germany, Brazil, and Spain will be especially robust in the 20 hundreds, offering good prospects for destination and international transportation marketers
- The U.S. will remain by far the largest source of such travel, with Japan, the UK and France in the second tier
- Despite rapid growth rates, developing countries will remain relatively small generating markets for long-haul travel
- The retired market is large and growing segment generating long-haul travel

References

- Crouch, Geoffrey I. (1994a), A Study of International Tourism Demand: A Survey of Practice, *Journal of Travel Research*, XXXII, 4, 41-55.
- Crouch, Geoffrey I. (1994b), A Study of International Tourism Demand: A Review of Findings, *Journal of Travel Research*, XXXIII, 1, 12-23.
- Frechtling, Douglas C. (1996), *Practical Tourism Forecasting*, Oxford: Butterworth-Heinemann.
- Organisation, for Economic Co-operation and Development (1999), *National Accounts, Main Aggregates 1960-1997, Volume 1*, Washington DC: author.
- Smeral, Egon (1998), Tourism demand, economic theory and econometrics: an integrated approach, *Journal of Travel Research*, xxvi, 4, 38-43.
- Travel Industry Association of America (1999), *Travel Industry Association of America's Market Share Indicators_{SM}*, Washington DC: author.
- United Nations and World Tourism Organization (1994), *Recommendations on Tourism Statistics*, New York: United Nations (herein UN/WTO, 1994).
- World Tourism Organization (1999), *Compendium of Tourism Statistics 1993-1997*, nineteenth edition, Madrid: author.
- World Tourism Organization (1997a), *Compendium of Tourism Statistics 1991-1995*, seventeenth edition, Madrid: author.
- World Tourism Organization (1997b), *Tourism Economic Report*, Madrid: author.

Appendix A: WTO Regions Referenced

East Asia/ Pacific Region	Europe Region	Middle East Region	North America Region	South America Region
China	Bulgaria	Bahrain	Canada	Argentina
Japan	Czech Republic	Egypt	Greenland	Bolivia
Korea, D.P.R	Slovakia	Iraq	Mexico	Brazil
Korea, Rep. of	Hungary	Jordan	United States	Chile
Macau	Poland	Kuwait		Columbia
Mongolia	Romania	Lebanon		Ecuador
Taiwan	Former USSR Republics	Libya		Falkland Islands
Brunei	Austria	Oman		Guyana
Cambodia	Belgium	Qatar		Paraguay
Indonesia	France	Saudi Arabia		Peru
Lao P.D.R.	Germany	Syria		Suriname
Malaysia	Liechtenstein	United Arab Emirates		Uruguay
Philippines	Luxembourg	Yemen		Venezuela
Singapore	Monaco			
Thailand	Netherlands			
Viet Nam	Switzerland			
Australia	Denmark			
New Zealand	Finland			
Micronesia	Iceland			
Melanesia	Ireland			
Polynesia	Isle of Man			
	Norway			
	Sweden			
	United Kingdom			
	Albania			
	Andorra			
	Greece			
	Gibraltar			
	Holy See			
	Italy			
	Malta			
	Portugal			
	San Marino			
	Spain			
	Yugoslav SFR			
	Cyprus			
	Israel*			
	Turkey			

*included in Middle East region in this study

Appendix B

Table A: Selected Characteristics of Best Regression Equations for Long-haul
Visitors per Resident

Generating country	Explanatory variables employed--				Adjusted R-squared
	Time series available	Age cohorts	Real GDP/ resident	Gulf War (1991)	
Argentina*	1989-98	65+years	no	no	0.93
Australia	1989-98	none	yes	no	0.85
Belgium	1989-98	65+years	no	yes	0.96
Brazil*	1989-98	65+years	no	no	0.82
Canada	1989-98	20-64, 65+years	no	yes	0.89
France	1989-98	65+years	no	yes	0.97
Germany	1991-98	65+years	no	yes	0.95
Israel	1989-98	20-64 years	no	yes**	0.92
Italy	1992-98	65+years	no	NA	0.92
Japan	1989-98	65+years	no	no	0.84
Korea, Rep. of*	1989-98	65+years	yes	no	0.81
Mexico*	1989-98	none	yes	yes	0.59
Netherlands	1989-98	none	yes	yes	0.97
Spain	1989-98	none	yes	no	0.86
Sweden	1989-98	20-64 years	yes	no	0.87
Switzerland	1991-98	0-19, 65+years	no	no	0.95
Taiwan*	1989-98	20-64 years	no	no	0.93
U. Kingdom	1989-98	none	yes	no	0.92
United States	1989-98	none	yes	no	0.93
Venezuela*	1989-98	65+years	no	no	0.68

*developing country

**impact of Gulf War represented in 1991-92

NA = not applicable

Source: author

