THE IMPACT OF MIGRATION ON TOURISM FLOWS TO AND FROM AUSTRALIA

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1992

261 Blundell-Wignall, Adrian
   The Relevance of Macroeconomics in OECD Countries. A Special
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262 Pitchford, John
   Current Account Deficits, External Liabilities and Economic Policy.

263 Pitchford, John
   Macroeconomic Policy Issues of the 1990s. Paper prepared for the
   National Farmers Federation.

264 Wallis, Kenneth F.
   On Macroeconomic Policy and Macroeconometric Models (The 1992
   Edward Shann Memorial Lecture)

265 Dwyer, Larry and Peter Forsyth
   The Case for Tourism Promotion: An Economic Analysis
   Discussion Papers Nos. 266-269 contain the papers presented to the
   Consumption Tax Conference, Centre for Economic Policy Research,
   ANU, 24-25 February 1992,

266 Paper 1: Dwyer, Terence
   Consumption Tax: A Solution or New Problems?
   Paper 2: Freebairn, John
   Economic Arguments for a New Consumption Tax.

267 Paper 1: Quiggin, John
   Borrowing, Saving and Taxation
   Paper 2: Harding, Ann
   Consumption Tax, Compensation and the Distribution of Income

268 Paper 1: Bollard, Alan
   New Zealand's Experience with Consumption Tax
   Paper 2: Wood, Alan
   Lessons from New Zealand
Data for Visitors to Australia and Travellers from Australia were not available for all countries for both years. Data availability indicated by "x".

2. **Visitor and Traveller Flows**
   

3. **Migrants Resident**
   
   Total Persons resident by birthplace.
   

4. **GNP Per Capita**
   

5. **Population**
   

6. **Migrants' Period of Residence**
   
   Number of years to 1986 from peak of migrant flow, estimated from A.B.S. *Census of Population and Housing 1986*, Table CX 0041.

7. **Price Index**
   


8. **Air Fares**
   


9. **Exchange Rate**
   
Domestic travel

Historically, domestic tourism has been a significant component of the tourism industry in Australia. However, recent data indicates a decline in domestic travel, particularly to regional areas. This trend is attributed to several factors, including increased travel costs, changes in consumer behavior, and a general decrease in disposable income. The impact of these factors has led to a reduction in the number of domestic tourists visiting various destinations within the country.

The table below provides a summary of the data regarding domestic tourism in Australia.

<table>
<thead>
<tr>
<th>Year</th>
<th>Arrivals</th>
<th>Expenditure</th>
<th>Visitor Nights</th>
<th>Domestic Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>30 million</td>
<td>$50 billion</td>
<td>100 million</td>
<td>80%</td>
</tr>
<tr>
<td>2020</td>
<td>27 million</td>
<td>$45 billion</td>
<td>90 million</td>
<td>80%</td>
</tr>
<tr>
<td>2021</td>
<td>25 million</td>
<td>$40 billion</td>
<td>80 million</td>
<td>80%</td>
</tr>
<tr>
<td>2022</td>
<td>22 million</td>
<td>$35 billion</td>
<td>70 million</td>
<td>80%</td>
</tr>
</tbody>
</table>

Summary

According to the data, the decline in domestic travel is significant. Over the past three years, there has been a consistent decrease in the number of domestic tourists and their expenditure. This trend is expected to continue in the near future, with projections indicating a further decline in 2024.

To address this issue, various initiatives have been proposed, including the implementation of tax incentives for domestic tourism, the promotion of regional destinations, and the development of new travel products. These measures are aimed at stimulating domestic travel and recovering the industry.

The future of domestic tourism in Australia is uncertain, and it remains to be seen how effective these initiatives will be in reversing the current trend.
Interestingly, non VR outbound travel is related to migration; Australians tend to take more non-VR trips to countries which have contributed more immigrants than other countries. It may be that migration results in more non-VR trips in aggregate though it is more likely to influence the pattern of trips. The impact of migration on non-VR tourist flows was not very great in the 1980 study, so this relationship should not be regarded as very robust. Comparison of 1990 results with those of 1980, however, do not indicate any shifts in the key relationships.

The results overall indicate that caution should be exercised if VR travel is to be interpreted as 'migration related' travel. Only some of VR travel to Australia is migration related - a higher proportion of VR travel from Australia is migration related. In addition, the purpose of travel by migrants is typically not VR travel, and using VR travel would underestimate the additional travel from Australia generated by migrants.

The evidence suggests that migrants are keen travellers. Data from the Household Expenditure Survey indicate that migrants spend substantially more on overseas travel (and somewhat less on domestic travel) than Australian born persons. This is especially true of English speaking migrants and migrants who arrived in Australia after 1960. Migrants travel to visit relatives, but it appears that they also undertake a large amount of travel for other purposes, though it is difficult to be precise about this.

It does seem that immigration generates a larger outflow of tourism than an inflow, although both flows are of the same order of magnitude. The direction of flow does not appear to pose any policy questions since tourism services are priced close to cost (Forsyth & Dwyer 1991). When Australian tourists travel abroad there may be a slight net cost to Australia. Neither of these effects are considered to be of enough significance to warrant being addressed directly (except perhaps through tourism promotion); if they were it would be relatively easy to address them.
2. INFORMATION AND TOURISM FLOWS

The paper is structured as follows: first, we present common tourism information; then, a study of the impact of migration on tourism flows; and finally, the results of a study of the impact of migration on tourism flows. The second section discusses the results of several studies on the impact of migration on tourism flows.

Information and tourism

Information and tourism flows are related to the flow of people and goods, which influence the demand for and flow of tourists. The results of these studies indicate that migration has a significant impact on tourism flows, with an increase in the number of tourists visiting countries with a high proportion of migrants. The results of these studies are based on data from various countries and provide insights into the impact of migration on tourism flows.

INTRODUCTION

After L.A.V. and Oui, the book is dedicated to the L.K./L.K. and Commercial Empire to understand the increased demand for tourism and the Middle East to a lesser extent for tourism.

The book describes how the two pupils, the empire of which, the Mediterranean, was the pivot of the world's trade, have settled in Australia.

The book describes how the world's other information, in this case, the Mediterranean, was the pivot of the world's trade, has settled in Australia.

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Table 1 - Migrant Arrivals to Australia by Region 1947-1990

<table>
<thead>
<tr>
<th>Region</th>
<th>Total Arrivals 1947-1990</th>
<th>%</th>
<th>Arrivals 1971-1990</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK/Ireland</td>
<td>1,414,420</td>
<td>32.5</td>
<td>561,403</td>
<td>25.5</td>
</tr>
<tr>
<td>Continental Europe</td>
<td>1,638,895</td>
<td>37.7</td>
<td>380,382</td>
<td>17.3</td>
</tr>
<tr>
<td>Africa</td>
<td>151,483</td>
<td>3.5</td>
<td>93,803</td>
<td>4.2</td>
</tr>
<tr>
<td>America</td>
<td>181,880</td>
<td>4.2</td>
<td>136,416</td>
<td>6.2</td>
</tr>
<tr>
<td>Asia &amp; Middle East</td>
<td>684,263</td>
<td>15.7</td>
<td>547,058</td>
<td>24.9</td>
</tr>
<tr>
<td>Oceania</td>
<td>278,377</td>
<td>6.4</td>
<td>239,437</td>
<td>10.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4,349,318</strong></td>
<td>100.0</td>
<td><strong>2,197,936</strong></td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Source: Compiled from data in Bureau of Immigration Research (1991)*

The introduction of a points system of selection in 1973 (using criteria such as age, occupational skills, education, as well as close kinship and ability of kin to support relatives) has resulted in a progressively changing ethnic and regional composition of the immigrant intake. Since that time, the intake from Southeast and Northeast Asia has increased proportionately while the intake from Europe has decreased. Improved living standards in Eastern Europe have diminished incentives for workers to migrate to Australia, or have high unemployment levels in this country. Chain migration (a process whereby persons in the country of migration sponsor or otherwise assist relatives or other close associates to immigrate, either directly through financial assistance or indirectly by providing information about settlement, work requirements and living conditions in the country) has been the vehicle whereby most Southern Europeans, some Eastern Europeans, most Middle Eastern, South and South East Asian settlers have come to Australia.

The changing composition of immigration arrivals is reflected in the changing composition of tourism flows into and out of Australia. Table 2 sets down total numbers of

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The H.E.S. does not tell us the nature of the travel undertaken by migrants. However, it is possible, with further information, to make some inferences. In Table 10, various types of travel are related to the number of Australian born and overseas born persons. Suppose, initially, that all migrant travel is VR travel, and that only migrants are VR travellers. If this were true, we would expect the ratio of VR travellers to overseas born to be significantly higher than the ratio of holiday and non-VR travel to Australian born. In fact, it is lower than the total non-VR ratio, and a little higher than the holiday travel ratio. If migrants were only making VR trips, this would be inconsistent with the H.E.S. data on expenditure on overseas holidays and airfares. In fact, a significant proportion of VR trips are likely to be made by non migrant Australians. The implication of this is that a substantial proportion of overseas travel made by migrants is non-VR travel. Migrants take holidays in Bali and make business trips to Japan, just like Australian born.

Table 10

<table>
<thead>
<tr>
<th>Country of Birth and Purpose of Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Country of Birth - 1986</td>
</tr>
<tr>
<td>Australia</td>
</tr>
<tr>
<td>Total Numbers</td>
</tr>
<tr>
<td>2. Purpose of Travel - 1990</td>
</tr>
<tr>
<td>Non-Visiting</td>
</tr>
<tr>
<td>Visiting Relaties</td>
</tr>
<tr>
<td>Short Term Departures</td>
</tr>
<tr>
<td>Ratio 2/1</td>
</tr>
</tbody>
</table>

*Sources: ABS Census of Populations and Housing, 1986*  
*Table CX00-03 and ABS Arrivals & Departures*
Yearly amounts for the 1980-1982 period are also shown in the table. The table shows that there was a decrease in the amount spent on housing and other consumer goods during this period. The decrease is more pronounced in the 1981-1982 period. The table also shows that the percentage of the population that spent more than $500 on housing increased during this period. The table also shows that the percentage of the population that spent more than $500 on other consumer goods decreased during this period. The table also shows that the percentage of the population that spent more than $500 on both housing and other consumer goods decreased during this period. The table also shows that the percentage of the population that spent more than $500 on both housing and other consumer goods decreased during this period. The table also shows that the percentage of the population that spent more than $500 on both housing and other consumer goods decreased during this period. 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Credible forecasts of the number of overseas visitors to Australia in the year 2000 range between 5 million and 7 million, implying average annual growth rates of between 7 and 11 per cent (Australian Tourist Commission 1991). There is agreement among forecasters that Japan will remain the largest single source of visitors, followed by other Asia, the U.S.A., Europe and New Zealand. The highest rate of inbound tourist growth will come from Japan and other Asian markets such as Singapore, Malaysia, Hong Kong, Thailand, Taiwan and South Korea. The Asia-Pacific region is the fastest growing economic region in the world. Given increasing living standard within the region and the nature of Australia’s tourism product, tourism to Australia is well placed to continue its growth phase to the year 2000 and beyond.

With respect to outbound travel from Australia, key determinants appear to be household disposable incomes and movements in the value of the Australian dollar (Bureau of Tourism Research 1991). Overall, outbound tourism has experienced a moderate 6.2 per cent average annual growth rate between 1980 and 1990. During this period Asia’s share of outbound tourism has increased while shares for UK/Ireland, other Europe and New Zealand have fallen. It is estimated that 2.8 millions Australian residents will travel overseas in 1995, rising to 3.5 million by the year 2000. The compound average annual growth rate is estimated at 5.8 per cent up to 1995 and 5.4 per cent between 1995 and the year 2000 (Federal Airports Corporation 1991). The share of Asia in outbound travel is expected to rise slightly to 36 per cent by the end of the century with shares for other regions remaining close to their 1990 values.

Some significant changes have taken place in Australian inbound and outbound tourism by main purpose of visit over the last decade. Table 3 sets down some interesting data relating to ‘visiting relatives’ tourism - the category of tourism most closely associated with migration.

### Table 8
**Expenditure on Holidays and Airfares, 1988-89**

<table>
<thead>
<tr>
<th>Country of Birth</th>
<th>No of House-holds</th>
<th>Holidays (Australia)</th>
<th>Holidays Overseas</th>
<th>Airfares Overseas</th>
<th>Total Expenditure</th>
<th>Total Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>5201</td>
<td>10.42</td>
<td>4.92</td>
<td>1.37</td>
<td>663.98</td>
<td>635.74</td>
</tr>
<tr>
<td>UK and Ireland</td>
<td>826</td>
<td>8.81</td>
<td>19.86</td>
<td>6.98</td>
<td>688.89</td>
<td>619.96</td>
</tr>
<tr>
<td>Italy</td>
<td>183</td>
<td>6.26</td>
<td>8.91</td>
<td>6.77</td>
<td>635.11</td>
<td>638.74</td>
</tr>
<tr>
<td>Greece</td>
<td>86</td>
<td>13.79</td>
<td>7.37</td>
<td>5.72</td>
<td>681.97</td>
<td>675.46</td>
</tr>
<tr>
<td>Yugoslavia</td>
<td>83</td>
<td>2.85</td>
<td>14.69</td>
<td>6.63</td>
<td>747.36</td>
<td>702.28</td>
</tr>
<tr>
<td>Holland</td>
<td>73</td>
<td>9.77</td>
<td>4.50</td>
<td>3.50</td>
<td>636.02</td>
<td>373.39</td>
</tr>
<tr>
<td>Germany</td>
<td>85</td>
<td>3.94</td>
<td>4.29</td>
<td>4.00</td>
<td>729.84</td>
<td>622.88</td>
</tr>
<tr>
<td>New Zealand</td>
<td>112</td>
<td>14.06</td>
<td>11.13</td>
<td>6.84</td>
<td>571.62</td>
<td>818.69</td>
</tr>
<tr>
<td>ASIAN (Excl. Brunei)</td>
<td>68</td>
<td>2.77</td>
<td>11.58</td>
<td>9.91</td>
<td>620.11</td>
<td>712.61</td>
</tr>
<tr>
<td>Vietnam</td>
<td>35</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>754.22</td>
<td>586.19</td>
</tr>
<tr>
<td>Other Asia</td>
<td>199</td>
<td>3.78</td>
<td>9.88</td>
<td>6.41</td>
<td>684.66</td>
<td>607.27</td>
</tr>
<tr>
<td>USA &amp; Canada</td>
<td>27</td>
<td>12.84</td>
<td>64.13</td>
<td>54.19</td>
<td>1141.36</td>
<td>832.24</td>
</tr>
<tr>
<td>Other countries</td>
<td>346</td>
<td>6.00</td>
<td>9.16</td>
<td>7.23</td>
<td>672.85</td>
<td>597.23</td>
</tr>
<tr>
<td>English speaking</td>
<td>1001</td>
<td>9.49</td>
<td>12.20</td>
<td>8.07</td>
<td>724.10</td>
<td>650.60</td>
</tr>
<tr>
<td>All Others</td>
<td>1123</td>
<td>7.73</td>
<td>8.72</td>
<td>6.26</td>
<td>675.67</td>
<td>625.68</td>
</tr>
<tr>
<td>Total</td>
<td>7405</td>
<td>9.56</td>
<td>6.45</td>
<td>3.00</td>
<td>673.52</td>
<td>636.05</td>
</tr>
</tbody>
</table>

**Source:** ABS, Tables Especially Requested. Household Expenditure Survey, 1988-89.
The share of Japan and other Asia in total nondurable import increased substantially between 1980 and 1990, while the share of USA and Canada declined. In fact, the total import of Asia increased from 22.5% to 30.0% in 1990 compared to 19.0% in 1980. The main countries contributing to the increase of Asian import were Japan, South Korea, and China.

Total number of countries reporting the import of electronic equipment increased from 15 in 1980 to 27 in 1990. In 1980, the share of Japan and other Asian countries in total electronic import was 15.6%, while in 1990 it increased to 28.1%. The increase in import from Japan and other Asian countries was also visible in the import ofphotographic equipment, where the share of Japan and other Asian countries increased from 15.1% in 1980 to 23.9% in 1990.

The table below shows the total number and share of electronic import from Asia, Europe, and the USA.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Number</th>
<th>Share of Asian Import</th>
<th>Share of European Import</th>
<th>Share of USA Import</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>15</td>
<td>15.6%</td>
<td>33.4%</td>
<td>51.0%</td>
</tr>
<tr>
<td>1990</td>
<td>27</td>
<td>28.1%</td>
<td>25.3%</td>
<td>46.6%</td>
</tr>
</tbody>
</table>

Several patterns are evident from the table. Migrating from Europe to Asia, there was a shift in import patterns.
annual rate of growth of tourism for purposes of visiting relatives in Asia was 13.0 per cent, double the growth rate of total outbound visiting relatives tourism.

3. **MIGRATION AS A DETERMINANT OF TOURISM FLOWS; RESULTS OF PREVIOUS STUDIES**

A priori, one can expect the number of permanent migration resident to influence numbers of persons who travel to Australia for purposes of holiday, visiting friends and relatives, business and study. This can occur in several ways:

i. The greater the number of permanent migrants resident in Australia, the larger is the pool of friends and relatives in the home country who have an incentive to visit Australia. The link may be forged when permanent residents communicate with kin, friends or associates, mentioning perhaps the attractions of Australia. This can generate leisure visits, with visitors staying with friends and relatives part of the time and perhaps using tourist facilities for the rest of the time. This may result in potential tourists being attracted to Australia rather than another tourist destination.

ii. Permanent migrants who visit friends and relatives in their former homeland may explicitly and implicitly 'promote' Australia thereby generating increased short term visits to this country.

iii. An increasing number of migrants to Australia means that there is an increasing stock of private accommodation for friends and relatives who visit from overseas. The lower overall cost of an overseas trip for those friends and relatives provides a price incentive to travel to Australia. Some visits by foreigners may be subsidised by friends and relatives in Australia, again generating more inbound tourism than would otherwise take place.

iv. Permanent migrants enrich Australian culture and render Australia a more interesting and diverse tourist destination. One obvious example (the 'Chinatown' example) is where various restaurants and shops locate in a particular area to sell a

---

**TABLE 7**

**TOURISM FLOWS, DETERMINANTS, 1990**

<table>
<thead>
<tr>
<th>Equation</th>
<th>Dependent Variable</th>
<th>Coefficient</th>
<th>Migrants Resident</th>
<th>GNP/ Capita</th>
<th>Air Fare</th>
<th>Population</th>
<th>Real GNP/ Capita</th>
<th>R²</th>
<th>1990 Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>R(a)</td>
<td>VR Visitors</td>
<td>6.70</td>
<td>0.64</td>
<td>0.41</td>
<td>0.88</td>
<td>-0.02</td>
<td>0.05</td>
<td>0.70</td>
<td>2(b)</td>
</tr>
<tr>
<td>R(b)</td>
<td>VR Visitors</td>
<td>7.25</td>
<td>0.33</td>
<td>0.47</td>
<td>0.52</td>
<td>-0.04</td>
<td>0.09</td>
<td>0.69</td>
<td>2(c)</td>
</tr>
<tr>
<td>R(c)</td>
<td>Non-VR ST</td>
<td>0.01</td>
<td>0.08</td>
<td>0.05</td>
<td>0.12</td>
<td>0.04</td>
<td>0.01</td>
<td>0.438</td>
<td>3(b)</td>
</tr>
<tr>
<td>R(d)</td>
<td>VR Travellers</td>
<td>0.07</td>
<td>0.06</td>
<td>0.07</td>
<td>0.08</td>
<td>0.03</td>
<td>0.03</td>
<td>0.63</td>
<td>3(b)</td>
</tr>
<tr>
<td>R(e)</td>
<td>Non VR Travellers</td>
<td>0.03</td>
<td>0.01</td>
<td>0.04</td>
<td>0.05</td>
<td>0.02</td>
<td>0.02</td>
<td>0.43</td>
<td>3(b)</td>
</tr>
<tr>
<td>R(f)</td>
<td>Total VR Flow</td>
<td>0.004</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.77</td>
<td>7(b)</td>
</tr>
<tr>
<td>R(g)</td>
<td>Total VR Flow</td>
<td>0.004</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.77</td>
<td>7(c)</td>
</tr>
</tbody>
</table>

Figures in brackets are t statistics.

Source: Own calculations, as described in text.

though it is lower than in 1980. Again, price and income elasticities are lower. The 1980 equations are a strong confirmation of the impact of past immigration on current VR tourism flows. It is possible that the impact on Australian VR travellers has been increased somewhat, though it would not be appropriate to read very much into this.

5. **MIGRANT TRAVEL: EVIDENCE FROM THE HOUSEHOLD EXPENDITURE SURVEY**

The evidence that has been examined so far has relied on relating various tourism flows to the numbers, and period of residence, of migrants. It is not directly about migrants' travel, though undoubtedly travel by migrants contributes to the relationships demonstrated. With the Household Expenditure Survey (HES) for 1988-89, it is possible to gain information about migrants' expenditures on travel. This information is provided in Table 8.
and application for permanent resident status can vary significantly. For another, digger
satisfaction, the per cent of digger's satisfaction is not a
statistically reliable measure. For one thing, the longer period the cogs are 
cut (at 1,712) and diggers of the following cut's numbers on happiness is a
lower, 

The diggers' proportion cut's satisfaction and happiness are reduced for a greater complexity.

Would reduce formal happiness.

The possibility of doing the

If may reduce an attempt for interaction. Higher when more property is

In interaction to happiness. Digger's also cuts attempts for happiness. Others

An attempt for poorer quality, helping businesses or other, and sometimes form

Some factors for digger's satisfaction to happiness. Others may their

If must be occurred that longer numbers in their may influence the number of

Another and other conclusions.

Proportional interaction is also reduced to formal interaction. An interaction's

Encourage trials to Australia from home over and to explore business service.

Number of interaction's interaction can be influence's according to

The relationship between Australia and the rest of the world

Encourage migration into opening to business service. Their longer may come

To a visit to the country.

The number of diggers who opted in Australia may be a contributing

For some factors, the diggers who have jobs of diggers in Australia, knowledge

And diggers of produce feeling are clear, and leaves from other lands. This factor hast
tourism flows to Australia have occurred only over the last decade and there is no longer
term pattern of tourism with which to relate immigration. Even if there were, immigration is
tightly controlled and actual and desired immigration are quite different. For these sorts of
reasons, empirical work has focussed on migration numbers as a determinant of tourism
flows.

Two Australian studies of the factors affecting demand for international air travel
suggest that migrant numbers are a determinant of both inbound and outbound leisure (i.e.
holiday plus visiting relatives) travel. The Bureau of Transport Economics (Smith & Toms
1978) constructed econometric demand models using pooled time-series and cross-sectional
data for the period March 1974-1977. Separate regression equations were estimated for
Australians travelling overseas and overseas visitors travelling to Australia. In each case
variations in demand per capita across origin/destination pairs over time were explained in a
single equation. Overseas countries included in the regressions were the United Kingdom,
New Zealand, the United States of America, Germany, Italy, Japan and Malaysia/Singapore.
Real income, equivalent real air fares, an index of the exchange rate and numbers of
migrants all proved to be significant determinants of demand for leisure travel in the pooled
time-series/cross-section regressions. In particular, the study found that while not generally
as important as real income or equivalent real fares, the proportion of the Australian
population born in a relevant overseas country is a significant determinant of demand for
inbound leisure travel both for the countries sampled as a group and for the United
Kingdom and New Zealand in particular, and also for outbound leisure travel both in
aggregate and for Italy, the United Kingdom and Germany.

In a follow-up study by the Bureau of Industry Economics (Holland 1982) for both
inbound and outbound pleasure travel, the explanatory variables employed were personal
incomes, real air fares, a ratio of exchange rate adjusted prices in Australia and selected
alternative destinations, and the number of migrants living in Australia, born in a particular

Total VR tourism flows are examined in equations 7(a) to 7(c), in terms of the same
independent variables as were used to explain the one-way flows. What is noticeable about
these equations is that the coefficient on Migrants Resident is high, (nearly as high as for the
Australian VR travellers), the level of significance is higher, and the R^2 is higher than for the
other equations. It may well be that trips to Australia by VR tourists, and VR trips to
Australians, are substitutes, and that if one is lower than predicted, the other is higher. We
may be able to (slightly) more reliably predict the overall flow of VR tourism than its
direction.

In equations 8(a) to 8(c), the question of direction is examined. These equations
perform poorly. The income variables have the right sign (travellers are more likely to come
to Australia the higher the income abroad) and the coefficients are nearly significant. This
result is consistent with those of Jackson (1990). The relative airfare coefficient is
significant, but of the wrong sign. This could have come about because the variable is the
ratio of two variables which are very closely correlated with one another, and which
themselves are subject to a fair margin of error. Thus, it would be inappropriate to read too
much into this result. Indeed, the direction of flow equations cannot be regarded as telling
us very much.

Results for 1980

The analysis reported in this chapter was duplicated for 1980. Greater weight is to
be put on the 1990 results because the data base was more extensive and some of the
variables (especially the airfares) were more reliable. The most striking feature of these two
analyses is their similarity, particularly in the estimation of the impact of migrant numbers
on tourism flows.

Results are summarised in Table 7. The monetary variables (GNP per capita and Air
Fares) were adjusted to 1989 prices by the application of price indexes. The GNP per capita
Information is provided in Table 6.

<table>
<thead>
<tr>
<th>Country</th>
<th>Total VR Tourism Flows and Directions, 1996</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>Liquid VR tourism in both directions.</td>
</tr>
<tr>
<td>Austria</td>
<td>Equal VR tourism in both directions.</td>
</tr>
<tr>
<td>England</td>
<td>VR tourism on the right side.</td>
</tr>
<tr>
<td>France</td>
<td>VR tourism on the left side.</td>
</tr>
<tr>
<td>Italy</td>
<td>VR tourism on the left side.</td>
</tr>
<tr>
<td>Japan</td>
<td>VR tourism on the left side.</td>
</tr>
<tr>
<td>China</td>
<td>VR tourism on the left side.</td>
</tr>
<tr>
<td>Russia</td>
<td>VR tourism on the left side.</td>
</tr>
<tr>
<td>India</td>
<td>VR tourism on the left side.</td>
</tr>
<tr>
<td>Brazil</td>
<td>VR tourism on the left side.</td>
</tr>
<tr>
<td>Mexico</td>
<td>VR tourism on the left side.</td>
</tr>
<tr>
<td>Canada</td>
<td>VR tourism on the left side.</td>
</tr>
<tr>
<td>Australia</td>
<td>VR tourism on the left side.</td>
</tr>
</tbody>
</table>

Further the total flows and directions of Table 6 are shown in Table 6.

<table>
<thead>
<tr>
<th>Country</th>
<th>Total VR Tourism Flows and Directions, 1996</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
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</tr>
<tr>
<td>Italy</td>
<td>VR tourism on the left side.</td>
</tr>
<tr>
<td>Japan</td>
<td>VR tourism on the left side.</td>
</tr>
<tr>
<td>China</td>
<td>VR tourism on the left side.</td>
</tr>
<tr>
<td>Russia</td>
<td>VR tourism on the left side.</td>
</tr>
<tr>
<td>India</td>
<td>VR tourism on the left side.</td>
</tr>
<tr>
<td>Brazil</td>
<td>VR tourism on the left side.</td>
</tr>
<tr>
<td>Mexico</td>
<td>VR tourism on the left side.</td>
</tr>
<tr>
<td>Canada</td>
<td>VR tourism on the left side.</td>
</tr>
<tr>
<td>Australia</td>
<td>VR tourism on the left side.</td>
</tr>
</tbody>
</table>
data for 16 overseas countries-of-birth he concludes that the total flow of VFR's (inbound plus outbound) is reasonably closely and significantly associated with the size of different migrant groups in Australia and to the proportion of recent migrants; defined as those residing here four years or less. Jackson also finds some evidence for an inverse relationship between the ratio of outbound to inbound VFR flows and per capita GDP of the migrants' country-of-birth, although the weak association revealed may be a consequence of the fact that VFR generation reflects not so much per capita GDP of the origin country but industrial wealth of migrants living in Australia.

Several questions emerge from research into tourism-migration links which are deserving of further study. For example, is 'visiting relatives' tourism the only category of inbound or outbound tourism which is associated with migration numbers? How important in explaining 'visiting relatives' flows are determinants other than migration numbers? Does 'visiting relatives' tourism grow in proportion to migrant numbers? What is the relationship between tourism flows and length of migrants residence in Australia? What proportion of 'visiting relatives' travel is unrelated to migrant numbers? To answer these sorts of questions a simple econometric analysis of the determinants of tourism flows was undertaken. The purpose of the study was to examine, in greater detail, the impact of immigration on tourism flows. The scope of the study included aggregate tourism flows both to and from Australia as well as the more specific 'visiting relatives' flows. The study also included an examination of the direction of flows whether to or from Australia and to or from particular countries. We now describe the nature of the study and the results.

4. IMPACT OF MIGRATION ON TOURISM FLOWS

The Tourism Flow Study: Structure and Data

Tourism flows were explained in terms of a number of determinants. The primary interest is focussed upon past migration, and a stock variable of migration was used. The hypothesis was that past migration would lead to tourism flows both to and from the origin

impact of Europe and the US. The population variable has a small, significant impact - it would capture the fact that large, populous countries are likely to have more to attract tourists than small countries.

Patterns become clearer when outbound traveller flows are disaggregated. The VR traveller equation performs very much as expected. The coefficient on Migrants Resident is quite high (0.79 - 0.80) and distinctly significant. Population, as expected, has little impact, and the price elasticity is lower than for non-VR travellers, as is plausible. The length of residence has a small, but significant impact.

While the coefficient on Migrants Resident is large, it still does not indicate proportionality. This can be explained in the same terms as used in the discussion of VR visitors to Australia. Some outbound VR travellers are not migrants, and there is also a tendency for nations which contribute small numbers of migrants to generate disproportionate numbers of VR travellers.

Equations 6(a) and 6(b) are especially interesting, as they point to an effect which was not expected. The moderately large and significant Coefficients on the Migrants Resident variable indicates that non VR tourism is affected by the migrants' country of origin. There could be several reasons for this. There may be under-reporting of VR travel. It is possible that many migrants revisit their homeland for a holiday, not to visit relatives (visiting the relatives they have escaped from may be the last thing on their mind). It is also possible that the presence of migrants in the community creates an awareness of a country, and an interest in visiting it. Australians may be more interested in visiting Italy, which has contributed many migrants, rather than Spain, which has contributed relatively few.

Care must be taken in interpreting these results. A pool of migrants from a country may encourage VR flows to and from Australia - it may contribute to the total travel. For non-VR travel, it may influence where travellers go, but not whether they go. It is impossible to tell whether migration generates additional non VR travel overall. In addition, it is not
The total number of short term residents in 1990 (census 1-2).

\[ N' = N + \frac{R}{1 + \frac{p}{1 + \frac{A}{1 + \frac{B}{1 + \frac{C}{1 + \frac{D}{1 + \frac{E}{1 + \frac{F}{1 + \frac{G}{1 + \frac{H}{1 + \frac{I}{1 + \frac{J}{1 + \frac{K}{1 + \frac{L}{1 + \frac{M}{1 + \frac{N}{1 + \frac{O}{1 + \frac{P}{1 + \frac{Q}{1 + \frac{R}{1 + \frac{S}{1 + \frac{T}{1 + \frac{U}{1 + \frac{V}{1 + \frac{W}{1 + \frac{X}{1 + \frac{Y}{1 + \frac{Z}{1}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}\]

1979 was included in a determination made by the Office of Program Loans, for Australia and employed in the determination of the GNP for the fiscal year. For the determination of the GNP for the fiscal year, for 1979, the 1980 cross section and the 1981 cross section, and from the 1981 cross section, were not made a measure of the base level in the determination of the GNP for the fiscal year. For the determination of the GNP for the fiscal year, for 1981, the 1982 cross section, and the 1983 cross section, were not made a measure of the base level in the determination of the GNP for the fiscal year.

<table>
<thead>
<tr>
<th>Particulars of Location</th>
<th>September 30th</th>
<th>Year Ended December 31st</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>1980-81</td>
<td>1981-82</td>
</tr>
<tr>
<td>Takeover</td>
<td>10%</td>
<td>12%</td>
</tr>
<tr>
<td>Australian</td>
<td>15%</td>
<td>18%</td>
</tr>
<tr>
<td>Total</td>
<td>30%</td>
<td>30%</td>
</tr>
</tbody>
</table>

Source: Over calculation of debt for export

**TABLE 5**

**FOREST FLOWS FROM AUSTRALIA 1991**

Impression is that tourism from Australia is more closely related to the Region than

Tourism from Australia was analyzed and results are reported in the 5

Tourism from Australia was analyzed and results are reported in the 5
total number of Visiting Relatives visitors in 1990 (equations 2a-2c)
total number of Non Visiting Relatives visitors in 1990 (equations 3a-3c)

M - is Migrants Resident in Australia in 1986
Y - is GNP per capita, converted at market exchange rates, in 1989.
(in equations 1a, 1b, 2a, 2b, 3a, 3c)
- is GNP per capita, converted at market exchange rates, in 1989, deflated by the country price index (in equations 1c, 2c, 3c).
F - is the minimum return fare to Australia in 1989, converted at market exchange rates.
P - is the Price Index of Consumption for each country, in 1988, Base USA = 100.0
R - is the number of years to 1986 since the peak of the immigration flow.
N - is the population of the origin country.

For the tourists from Australia (see Table 5)

\[ \ln T = a + \ln M + F + \ln P + \ln R + \ln N \tag{2} \]

where T - is the total number of short term travellers overseas in 1990
(Equations 4a - 4b)
- is the total number of short term Visiting Relatives travellers overseas in 1990 (Equations 6a-6b)
M - is migrants resident in Australia 1986
F - is the minimum return fare from Australia in 1989
P - is the Price Index of Consumption for each country, in 1988, Base USA = 100.0
R - is the number of years to 1986 since the peak of the immigration flow
N - is the population of the destination country.

For the total Visiting Relatives Flow (see Table 6)

The first reason is that no all VR tourism involves visiting migrants. Indeed, most of the people in Australia who have relatives overseas, who might visit them in Australia, are not migrants. Many or most of the VR tourists may be visiting non-migrants. Even if there were no migrants resident, there might be a substantial VR tourist flow. Granted the ethnic background of Australians, most of the non migrants who have relatives abroad would have relatives in the UK and Ireland. If so, one would expect that the equations would underpredict the flows of VR tourists from the UK and Ireland - and this is exactly what occurs.

A second reason emerges from the observation that several countries which have contributed very little to the pool of migrants nevertheless contribute large VR flows. The US sent 34,800 VR tourists to Australia in 1990 - more than Germany, Greece, Italy and the Netherlands combined. However, only 42,382 US born migrants were resident in Australia in 1986, compared to 261,000 for Italy, 138,000 for Greece, 115,000 for Germany and 95,000 for the Netherlands. Other countries like Japan and Singapore contribute VR tourists in numbers far above those that might be expected from the (very few) Migrants Resident that they contribute.

This suggests that VR tourists grow less than in proportion to migration. There could be good reasons for this. If there are few migrants from a country, there will not be a large community of them. They will thus wish to encourage their compatriots to visit them (and, as will be seen, they will be more inclined to make VR trips themselves). When the community grows, the need to be visited, and to visit, declines.

As a result, care must be taken in predicting the implications of increased Migrants Resident on visitor numbers. If the Migrants are increasing existing sizeable communities (more Greeks, for example) the impact may be small, but if the Migrants come from countries which have not contributed many migrants in the past (more Brazilians, for example) the impact could be large.
The study took the form of a cross-sectional analysis of a number of countries in 1999. The results show a significant increase in the number of countries that have been affected by the crisis. Further details of the variables and coefficients in the sample are given in the data appendix.

For the regression of flow (areal traffic)

\[ N = a + p + p' + P + A + M + + + + + + P/1 + F + F/2 \]

Where

- \( N \) = total of traffic regulated
- \( P \) = total of traffic
- \( A \) = total of traffic from area A
- \( M \) = total of traffic from area M
- \( p \) = total of traffic regulated
- \( p' \) = total of traffic regulated
- \( P/1 \) = total of traffic from area A
- \( F \) = total of traffic from area F
- \( F/2 \) = total of traffic from area F/2
- \( a \) = constant

The results indicate that the flow of traffic regulated is lower than the flow of traffic not regulated. This is significant, especially in the context of international trade and commerce. The increase in the number of countries that have been affected by the crisis is significant, and further analysis is required to understand the underlying causes.

The table below shows the coefficients and standard errors for the regression.

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>0.013</td>
</tr>
<tr>
<td>p</td>
<td>0.008</td>
</tr>
<tr>
<td>p'</td>
<td>0.005</td>
</tr>
<tr>
<td>P/1</td>
<td>0.003</td>
</tr>
<tr>
<td>F</td>
<td>0.002</td>
</tr>
<tr>
<td>F/2</td>
<td>0.001</td>
</tr>
<tr>
<td>a</td>
<td>1.000</td>
</tr>
</tbody>
</table>

The coefficients are significant at the 0.05 level, indicating a strong relationship between the variables. Further research is required to explore the underlying causes of the crisis and to develop effective policies to mitigate its impact.
tourism to Australia, and the inability to explain these shifts would make interpretation of coefficients difficult.

A double log form was used for the study. This tends to be the form preferred for demand studies of this type, and choosing it enables comparison of results (e.g., with Smith and Toms, 1979). The independent variables are likely to interact multiplicatively rather than additively. Finally, the coefficients can be interpreted easily, as they are elasticities.

In the study, the total flows of short term visitors to and from Australia were analysed, and in addition, these were disaggregated into two categories, Visiting Relatives (VR) and not Visiting Relatives (non-VR). There is likely to be a close relationship between migration and VR flows, though not all VR flows need be migration related, and migration may affect non-VR flows. These possibilities were allowed for in the study.

Data were collected for a total of 33 countries in 1990, though because of missing observations, some countries had to be deleted from some equations. For 1990, for travel to Australia, there were 26, and from Australia, 29 observations (countries) used. For 1980, data limitations resulted in fewer observations - both to and from Australia (See Appendix).

Because more data were available for 1990, and it is more recent, greater weight is given to the 1990 than the 1980 results. Nevertheless, the later are also examined, to check for any shifts taking place in the relationships. Neither year is free from extraneous influences, since 1990 was affected by the domestic pilots’ dispute and 1979/80 was a period in which air fares were changing rapidly, and the air fare data used cannot be regarded as entirely reliable or applicable. These apart, the years chosen are reasonably typical.

Tourism to Australia

The results of the analysis of tourism to Australia are summarised in Table 4.

---

**Table 4**

<table>
<thead>
<tr>
<th>Equation</th>
<th>Dependent Variable</th>
<th>Constant</th>
<th>Migrants Resident</th>
<th>GNP/Capita</th>
<th>Air Fare</th>
<th>Price Index</th>
<th>Length of Residence</th>
<th>Population</th>
<th>Real GNP/Capita</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a</td>
<td>Total Short Term Visitors</td>
<td>13.79</td>
<td>0.18</td>
<td>0.66</td>
<td>-1.44</td>
<td>0.10</td>
<td>-0.21</td>
<td>0.43</td>
<td>0.49</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.97)</td>
<td>(0.68)</td>
<td>(2.84)</td>
<td>(1.65)</td>
<td>(0.12)</td>
<td>(1.54)</td>
<td>(2.87)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1b</td>
<td>VR Visitors *</td>
<td>10.34</td>
<td>0.43</td>
<td>0.53</td>
<td>-1.54</td>
<td>0.22</td>
<td>0.15</td>
<td>0.30</td>
<td>0.73</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3.74)</td>
<td>(4.20)</td>
<td>(4.02)</td>
<td>(4.80)</td>
<td>(2.10)</td>
<td>(1.73)</td>
<td>(2.20)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1c</td>
<td>Non VR Short Term Visitors *</td>
<td>10.65</td>
<td>0.45</td>
<td>-1.44</td>
<td>0.19</td>
<td>0.79</td>
<td>0.71</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2a</td>
<td>VR Visitors *</td>
<td>12.84</td>
<td>0.04</td>
<td>0.73</td>
<td>-1.58</td>
<td>0.16</td>
<td>-0.22</td>
<td>0.50</td>
<td>0.42</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.76)</td>
<td>(1.74)</td>
<td>(1.74)</td>
<td>(1.65)</td>
<td>(1.05)</td>
<td>(-1.36)</td>
<td>(2.85)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2b</td>
<td>Non VR Short Term Visitors *</td>
<td>14.88</td>
<td>-1.11</td>
<td>0.86</td>
<td>-1.77</td>
<td>0.53</td>
<td>0.45</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>(3.44)</td>
<td>(4.69)</td>
<td>(4.67)</td>
<td>(4.04)</td>
<td>(3.20)</td>
<td></td>
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</tr>
<tr>
<td>2c</td>
<td></td>
<td>25.23</td>
<td>-0.05</td>
<td>-1.56</td>
<td>0.47</td>
<td>1.25</td>
<td>0.39</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

*Figures in brackets are t statistics.
Source: Own calculations, as described in text.

Total tourism flow is the dependent variable in equations 1a - 1c. In none of these equations is the variable of primary interest, Migrants Resident, significant, and the coefficient, while of the right sign, is not very large (and it is sensitive to the variables included). In equation 1a, the length of residence variable is nearly significant, and negative (indicating a smaller impact the longer the migrants have been resident). Granted the insignificance of the Migrants Resident variable, there is little that can be read into this.