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SUPPLEMENT TO

ON THE MOVE:

MIGRATION AND POPULATION --TRENDS AND POLICIES

Population Monitoring Group
Technical Working Paper
for
Report No. 6

NEW ZEALAND
Planning Council

Te Kaunihera Whakakaupapa
Mo Aotearoa

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On the Move: Migration
and Population
-Trends and Policies
By: Population Monitoring Group,
Jeremy Lowe

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On the Move and the *Supplement to On the Move* show that there have been major shifts in the volume and sources of New Zealand international migration over the last four decades. The period since the mid-1970s stands out as one of net migration loss compared with the gains of the three preceding decades. The 1980s stands out as the first decade since European settlement when more people left than arrived.

A particularly significant development has been the increased role of international migration by New Zealanders themselves. For more than a decade now New Zealanders have formed around half or more of permanent and long-term arrivals, as well as continuing to constitute most of the departures.

The high net migration losses of New Zealanders during the late 1980s have had the effect of generally balancing out much or all of net gains of Non - New Zealanders that have been close to average by the standards of the last four decades. It was the net losses of New Zealanders that made the 1980s a decade of net migration loss. Total permanent and long-term arrivals throughout the 1970s and 1980s (including the returning New Zealanders) actually exceeded the pre-1970s levels in almost every year. Quite modest increases in net migration of Non - New Zealanders would be sufficient to meet Government immigration objectives were it not for the losses of New Zealanders.

The cycles of departures - principally of New Zealanders, and particularly to Australia - have been the most dynamic factor in determining the overall net migration outcomes during the last decade and a half.

A major shift in the origins of Non - New Zealand arrivals has occurred with the United Kingdom and Australia having become less significant and Asian and Pacific countries more so.

The *Supplement* shows that there are significant differences in the age and gender structure of different migration flows. For example, New Zealand nationals have the most highly concentrated migrant age structure, Pacific Island immigrants have the youngest migrant age structure, and immigrants from Asia have the most balanced age structure.

The differences between migration flows in the characteristics of the migrants imply that changes in the relative importance of different migration flows will mean changes in the age and gender composition of total migration. Comparison between the 1986-91 data and two earlier extreme migration years showed varying degrees of stability in patterns through time. There have been at least some instances of differential shifts in the propensity of age groups to migrate as the volume of migration has changed.

Migration will tend to become a more important factor in New Zealand's future population growth even if policies to increase immigration were not to proceed, because of the tapering off of natural increase that results from population ageing.

Useful migration monitoring can be carried out without necessarily modifying demographic projection methods. However, projection methods will need to be modified and extended if they are to be used directly to trace through in detail all the implications of migration changes identified in the monitoring process.

To incorporate fully into demographic projections the migration composition changes studied during the *On the Move* work programme, would require substantial modification of the migration component of current New Zealand methodology. At the extreme, a continuously updated modelling system of similar complexity to New Zealand's major economic models would be implied. However, much more modest intermediate stages would be likely to offer useful improvements. A comparatively inexpensive pilot study should be sufficient to explore feasibility and costs, demonstrate benefits and provide some useful indications of the medium and long-term implications of alternative migration scenarios.

The *On the Move* work programme was truncated by the abolition of the Planning Council. Further research is necessary on (amongst other things) "category jumping" between migration categories, and its effects on statistics relating to particular migration flows.

Statistical Conventions

All data relate to Permanent and Long-Term (PLT) migration unless specified otherwise.

All data relate to 12 month periods ended 31 March unless specified otherwise.

1990-91 means the 12 month period ended 31 March 1991 (ie commencing 1 April 1990). This period is sometimes referred to as the 1991 March year (even though three-quarters of it is within the 1990 calendar year).

1986-91 means the five years ended 31 March 1991 (ie commencing 1 April 1986). It closely corresponds to the period between the 1986 and 1991 censuses (held on 4 March 1986 and 5 March 1991). Note that the five year period ended 31 March 1991 is sometimes written elsewhere as 1987-91 (meaning the 1987 to 1991 March years).

Origin and destination refer to the country of (self-declared) last permanent residence of arrivals and next permanent residence of departures. For travellers on journeys of short duration this will generally be their country of usual residence. For some travellers intending journeys of more than 12 months, their country of departure may still be their country of next permanent residence.

PART A

1946-1991 Trends

Chapters 1 to 3 of *On the Move* discussed long-term trends in international migration, the role of New Zealanders within New Zealand's international migration flows and the changing composition of immigration to New Zealand. Only part of the material upon which this analysis was based could be included in *On the Move* itself, although some was incorporated in *Demographic Trends 1990* (Department of Statistics 1991a) by arrangement with the Planning Council.

Part A of the *Supplement* includes a number of graphs that were not included in *On the Move* but which provide useful extensions to those which were included, have relevance to possible extensions of the work, or were included in *Demographic Trends 1990* without the inclusion of the 1991 data. The principal themes covered are the changing role of New Zealanders and Non - New Zealanders in the migration flows and the changing origin of immigrants.

Sensitivity of Net Migration to Variations in Arrivals and Departures

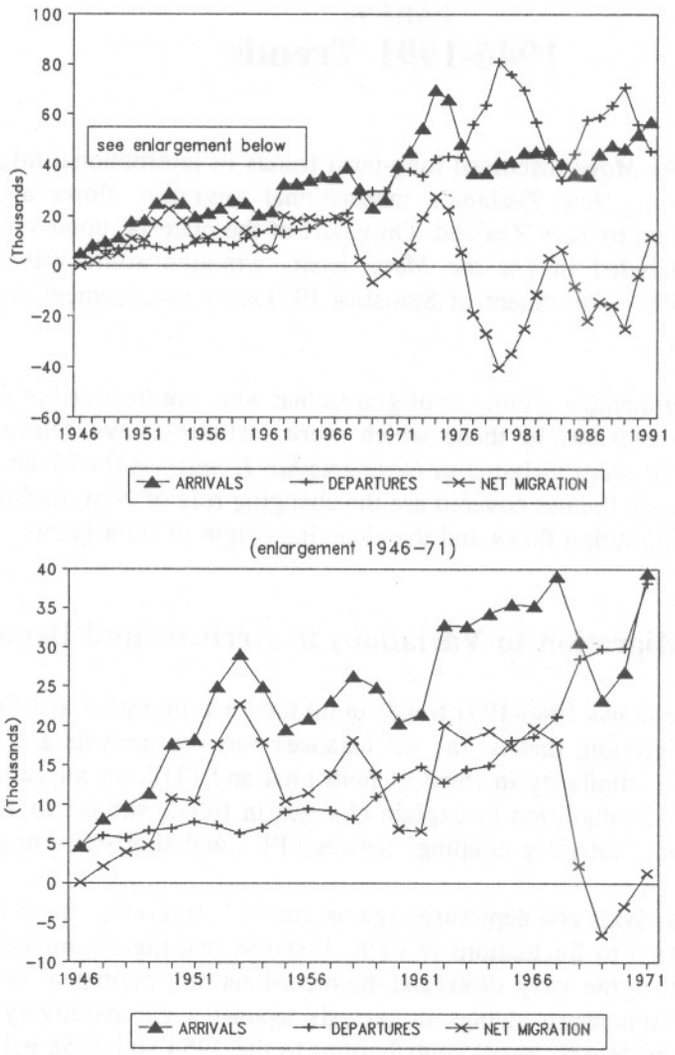
Figure 3 of *On the Move* shows 1946-1991 trends in (a) total net migration and (b) permanent and long-term (PLT) net migration; that is, the net balances between arrivals and departures. The figure indicates a general similarity in trend of both total and PLT net migration that warrants focusing attention on PLT migration to explain changes in trend, subject to allowance for the limitations that arise from "category-jumping" between PLT and short-term migration.

Figure 18 graphs PLT arrivals and departures against net PLT migration in order to indicate the sensitivity of net migration to fluctuations in each. It shows that the net migration peaks of the early 1950s, the late 1950s, the early 1960s and the record net migration peak of the early 1970s, all resulted primarily from sharp swings in arrivals against a comparatively steady trend in departures. Departures made only small contributions to the 1953 and 1958 net migration peaks and had little effect on the 1955 trough. They did contribute significantly to the 1959-61 trough and also reduced the impact of the 1962-66 arrivals peak, but it is reasonable to describe net migration in the earlier part of the Postwar period as a whole, as being characterised more by the swings in arrivals than by the swings in departures.

The late 1960s saw the start of a new pattern with departures overtaking arrivals for the first time in more than 20 years. The 1972-75 peak saw a return to the earlier pattern of a net migration peak resulting primarily from an increase in arrivals.

Since the mid 1970s the pattern has been quite distinct. The cycles of net migration since this time have been very heavily determined by the cycles of departures that peaked in 1978-79 and 1988-89. The fluctuations in arrivals had a lesser, though still significant, impact. Increased departures in 1987-88 even produced a small increase in the net migration loss compared with 1986-87 despite there also being an increase in the number of arrivals.

FIGURE 18: Sensitivity of PLT Net Migration to Arrivals and Departures, 1971-1991



Source: Department of Statistics

It is noteworthy that PLT arrivals throughout the 1970s and 1980s actually exceeded the pre-1970s levels in almost every year. The lowest number of PLT arrivals during the 1980s (35,982 in 1985-86) was exceeded only once during the 1950s and 1960s. The reason for net migration having to struggle to stay above zero during the 1980s was not because arrivals were lower but because the level of departures was so much higher than arrivals in most years.

It follows that attempts to set or monitor (net) immigration targets need to pay as much attention to monitoring or forecasting the outflows from New Zealand as they do to the inflows, and possibly more, given that very few departures are *directly* controlled by Government actions, whereas a substantial proportion of arrivals (but recently less than half) is directly controlled by immigration procedures.

Alternative Measurements of Migration of New Zealanders

Chapter 2 of *On the Move* discusses the alternative measurements of New Zealanders used in migration statistics. These are

(a) New Zealand residents,
(b) New Zealand nationals/citizens and
(c) the New Zealand born,

in decreasing order of comprehensiveness of coverage.

On the Move was forced to work with data for New Zealand nationals (even though this is the least satisfactory of the three statistical concepts) because the collection of migrant birthplace details was interrupted in 1987 along with the collection of whether PLT migrants are New Zealand residents. Figures 2, 6, 11a and 12 therefore relate to nationality, while Figures 4, 5, 8, 9, and 10 use a combination of concepts.

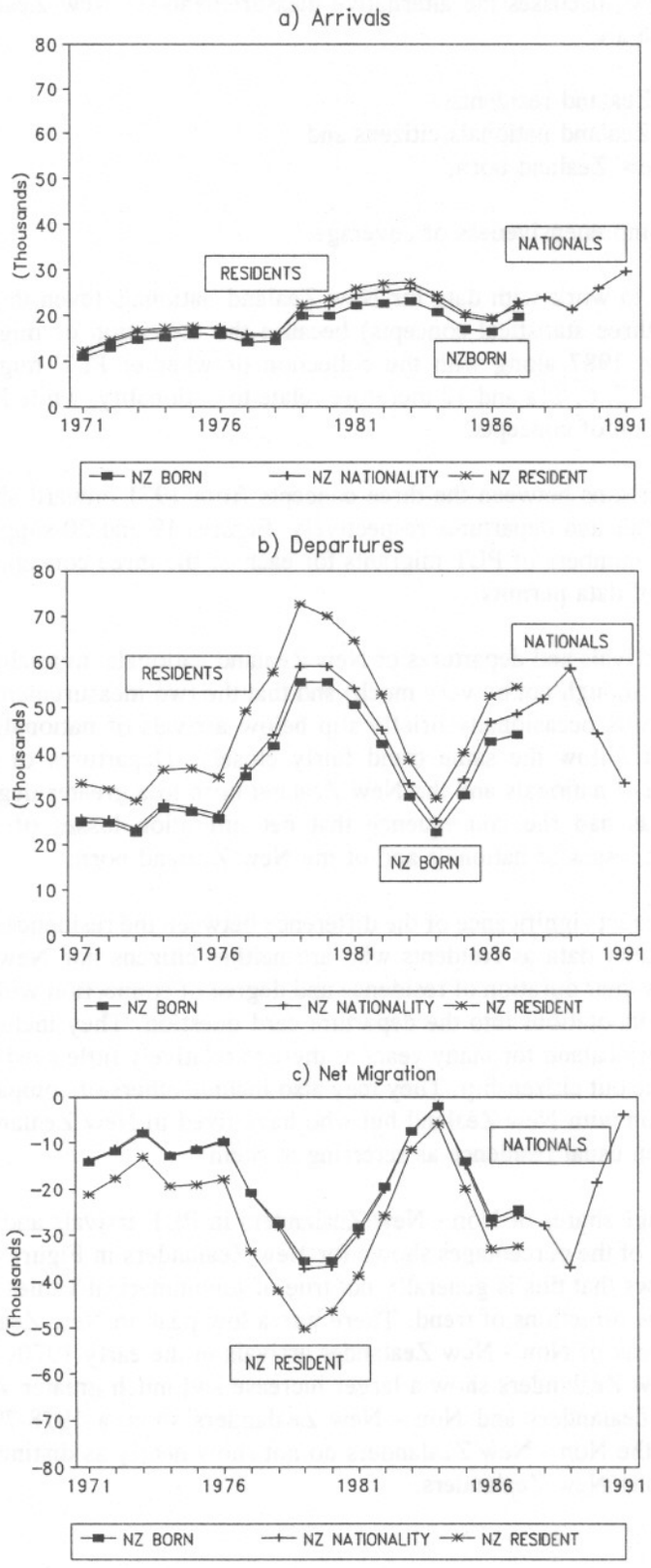
Figure 4 provides comparisons between the three concepts from 1971 onward showing each as a percentage of PLT arrivals and departures respectively. Figures 19 and 20 supplement Figures 4-6 by plotting the actual numbers of PLT migrants for each of the three concepts from 1971 in so far as the availability of data permits.

Figure 19 indicates that arrivals and departures of New Zealand nationals invariably exceed those of the New Zealand born (though not by very much) and that the two measurements closely track each other. Resident arrivals occasionally briefly slip below arrivals of nationals but generally slightly exceed them and follow the same trend fairly closely. Departures of residents have invariably exceeded those of nationals and the New Zealand born to a greater degree than in the case of arrivals. This has had the consequence that net migration losses of residents have significantly exceeded net losses of nationals and of the New Zealand born.

It is difficult to judge the exact significance of the difference between the residence-based data and the birthplace and nationality data as residents who are neither citizens nor New Zealand born may differ considerably in their duration of residence and degree of connection with New Zealand and have read different connotations into the departure card question. They include people who have been resident in New Zealand for many years as there is relatively little need for established permanent residents to take out citizenship. They may also include others of comparatively recent arrival and little connection with New Zealand but who have lived in New Zealand long enough to perceive the question on usual residence as referring to them.

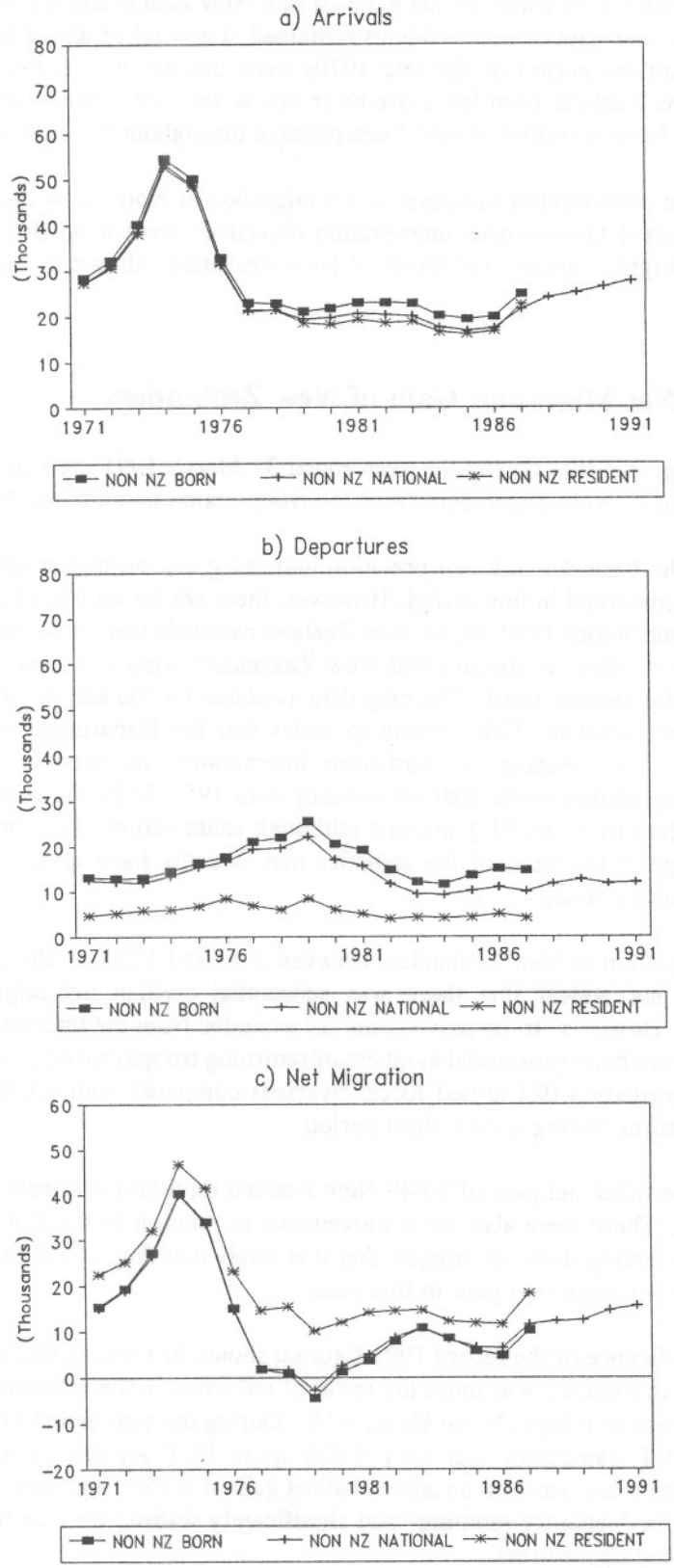
By definition the percentage shares of Non - New Zealanders in PLT arrivals and departures are necessarily mirror images of the percentages shown for New Zealanders in Figure 4. Comparison of Figures 19 and 20 shows that this is generally not true of the numerical values although there are some similarities in the directions of trend. There was a low peak in New Zealander arrivals at the time of the major peak of Non - New Zealander arrivals in the early 1970s. However, the subsequent arrivals of New Zealanders show a larger increase and much greater variability. The departures of both New Zealanders and Non - New Zealanders show a 1978-79 peak but the subsequent departures of the Non - New Zealanders do not show nearly as distinct a peak as the late 1980s peak of departing New Zealanders.

FIGURE 19: Arrivals, Departures and Net Migration of New Zealanders, 1971-1991



Source: Department of Statistics

FIGURE 20: Arrivals, Departures and Net Migration of Non - New Zealanders, 1971-1991



Source: Department of Statistics

The net migration figures are virtually interchangeable as far as birthplace and nationality are concerned but the resident/non-resident figures differ more significantly from the other two measurement concepts. It can be seen that the net losses of New Zealanders are more significant on a residence basis (Figure 19c) while the net gains of non-New Zealanders are correspondingly larger (Figure 20c). The net gain of non-residents remained at around or above 10,000 per year throughout the peak outflow period of the late 1970s even though the net migration of non-nationals and non - New Zealand born fell close to or below zero for some years. Net gains of Non - New Zealanders have therefore always been positive throughout the Post-war period.

Figure 20c suggests that quite modest increases in net migration of Non - New Zealanders would be sufficient to meet stated Government immigration objectives were it not for the "spoiling" effect of the large and highly variable net losses of New Zealanders shown in Figure 19c.

The 1991 Record Net Migration Gain of New Zealanders

On the Move (p 15) reported that during the year ended 31 March 1991 there appeared to have been the largest net gain of New Zealanders since the troops came home from World War II.

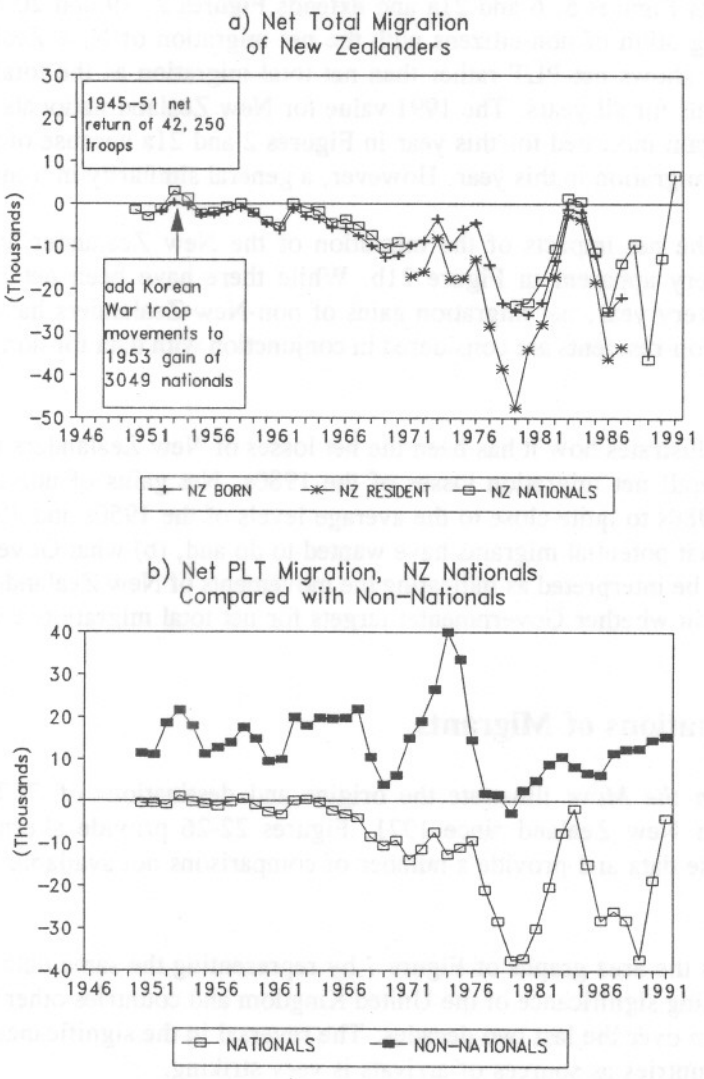
Figure 21a illustrates the basis for this interpretation indicating that no higher net gains of New Zealand nationals were recorded in this period. However, there are no statistics for the migration of New Zealand nationals before 1949-50, as New Zealand nationals were not distinguished from other British citizens until then. It appears that New Zealanders were recorded as migrating in both citizen categories for several years. The only data available for the earlier part of the period relating to New Zealand residents link directly to series that the Department of Statistics has subsequently categorised as relating to short-term international movements only. Data by birthplace are slightly compromised in their consistency until 1951-52 by the stated exclusion of returning New Zealanders from the PLT arrivals (although examination of the numerical values suggests that the change in the basis of the statistics may actually have taken place two years earlier than the publications state).

The figures for net migration of New Zealanders between 1945 and 1950 are therefore somewhat uncertain but it does not appear that there was substantial civilian net migration of New Zealanders at this time. However, troop movements are excluded from the international migration statistics. There must have been substantial numbers of returning troops during a very short period as the 1945 census recorded 44,081 armed forces overseas compared with 1,830 in 1951. This indicates substantial returns during a very short period.

The data show an earlier peak net gain of 3,049 New Zealand (civilian) nationals during the year ended 31 March 1953. There were also troop movements in relation to the Korean War at this time but available information does not suggest that it is likely that they could have significantly augmented the civilian net migration gain in this year.

In interpreting the significance of the record 1991 figure it should be recalled that the change from 1990 to 1991 recorded in Figure 2 was more the result of reduction in the numbers departing than of increase in the numbers arriving (*On the Move*, p 15). During the year ended March 1991 there were 10,874 fewer PLT departures and only 3,829 more PLT arrivals compared with the preceding year, although there was also an additional net gain of 4,850 from short-term migration (presumably mostly from "category jumping" and significantly shifting the true balance between the effects of arrivals and departures).

FIGURE 21: Net Total and PLT Migration of New Zealanders and Non - New Zealanders, 1946-1991



Source: Department of Statistics

PLT departures of New Zealanders could only decrease at the same rate for three years before reducing to zero so that reductions in departures cannot for long be decisive in sustaining continuing net migration gains of New Zealanders. However, even a lower level of arrivals could maintain equal or higher net gains for a long time if departures of New Zealanders stabilised at a low average level (as in the 1950s and early 1960s).

Any sustained net immigration of New Zealanders will have to come from sustaining or increasing the numbers of arrivals relative to departures. Given the upwards of 300,000 former New Zealanders resident overseas this is not impossible, but it has to be recognised that many of these people have now lived overseas for substantial periods and acquired strong ties to their new homes. At the same time quite a few of those New Zealanders who do return bring overseas-born dependants with them, significantly augmenting the impact of the return migration that does occur.

Long Time Series of Net Migration of New Zealanders and Non - New Zealanders

Figure 21b complements Figures 5, 6 and 21a and extends Figures 2, 19 and 20 by contrasting the net international migration of non-citizens with the net migration of New Zealand nationals since 1950. Figure 21b shows net PLT rather than net total migration as the total figures were not available for nationals for all years. The 1991 value for New Zealand nationals in Figure 21c does not show the net gain indicated for this year in Figures 2 and 21a because of the difference between total and PLT migration in this year. However, a general similarity in trend is apparent.

The contrast between the net impacts of the migration of the New Zealander and non-citizen migration streams is very apparent in Figure 21b. While there have been net losses of New Zealanders in almost every year, net migration gains of non-New Zealanders have always been positive when data for non-residents are considered in conjunction with data for non-nationals (see also Figure 20c).

Figure 21b strikingly illustrates how it has been the net losses of New Zealanders that have been responsible for the overall net migration losses of the 1980s. Net gains of non-nationals have recovered during the 1980s to quite close to the average levels of the 1950s and 1960s under the dual influence of (a) what potential migrants have wanted to do and, (b) what Government policy has permitted. This can be interpreted as indicating the movements of New Zealanders themselves as the key determinant in whether Governmental targets for net total migration are met.

Origins and Destinations of Migrants

Figures 7 to 10 of *On the Move* illustrate the origins and destinations of PLT arrivals and departures to and from New Zealand since 1971. Figures 22-26 provide alternative ways of presenting some of these data and provide a number of comparisons not available in the original report.

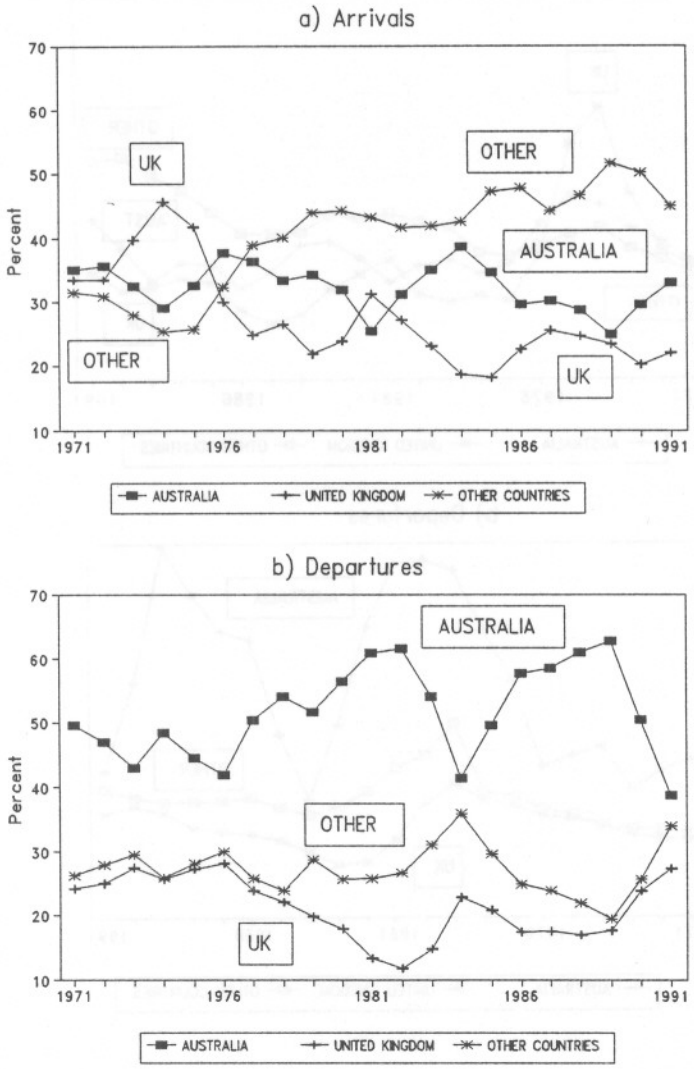
Figure 22 complements the area graphs of Figure 7 by representing the same data in line graphs that highlight the changing significance of the United Kingdom and countries other than Australia and the United Kingdom over the last two decades. The reversal in the significance of the United Kingdom and Other countries as sources of arrivals is very striking.

Figure 23 directly compares the numbers of arrivals and departures from each country and the resulting net migration.

Figure 23a indicates that the reduction in PLT arrivals from the United Kingdom and the increase in arrivals from Other countries have been absolute as well as relative. Figure 23b illustrates how the cycles of departures to Australia during the period have been much more marked than those to the United Kingdom and to Other countries. Indeed, there was no significant peak at all in departures to Other countries in the latter part of the 1980s, at which time departures to Australia matched their late 1970s peak.

Figure 23c compares the net migration gains/losses from each country. It points very clearly to the net migration from the United Kingdom and Other countries having been positive or only slightly negative throughout the period, and to the decisive role of the cycles of migration to Australia since the early 1970s. The large net losses to Australia in the 1970s and 1980s are the more striking given that for almost all of the period from the late 1940s until the early 1970s, New Zealand had net migration gains from Australia.

FIGURE 22: Permanent and Long-Term Arrivals and Departures by Country, 1971-1991 - Percent

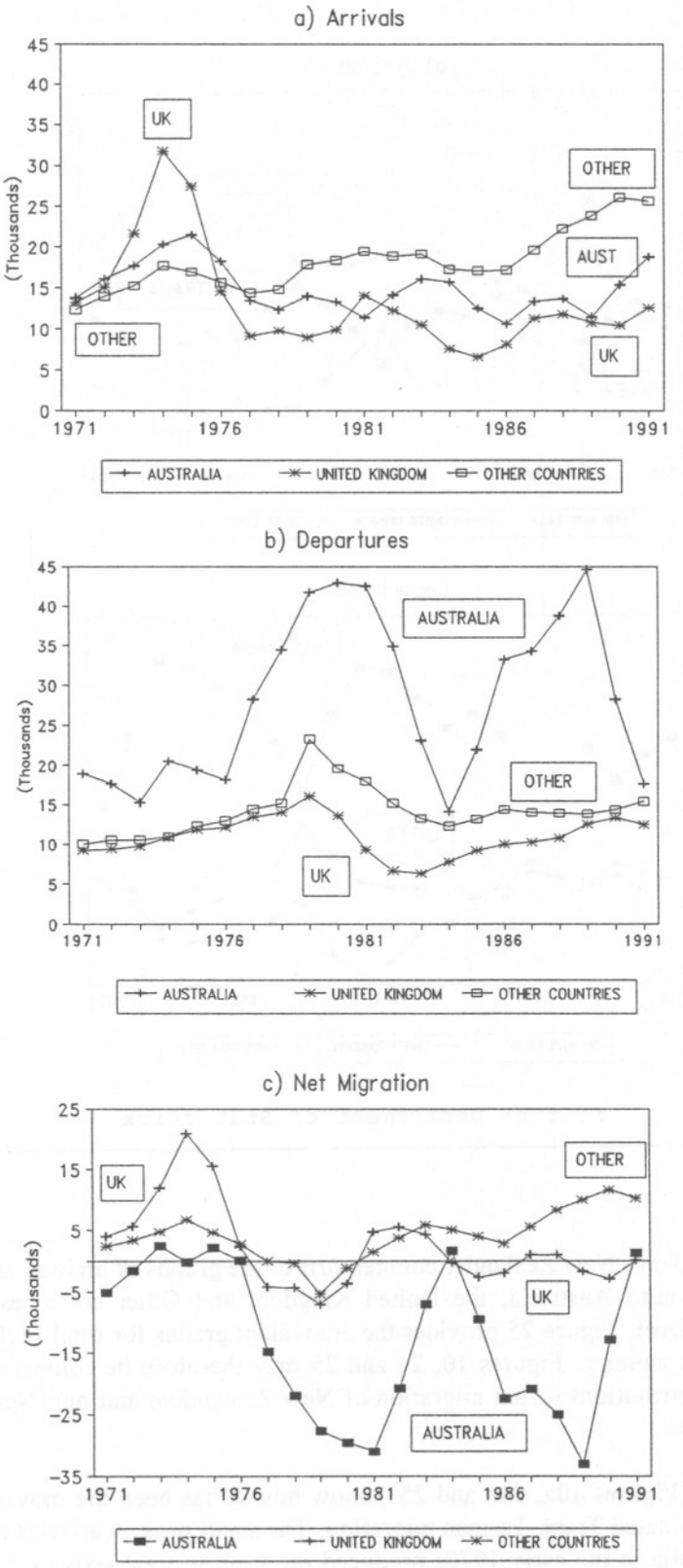


Source: Department of Statistics

Figure 24 provides the Non - New Zealander counterparts to the graphs of arrivals and departures of New Zealanders from/to Australia, the United Kingdom and Other countries respectively (Figure 10 in *On the Move*). Figure 25 provides the equivalent graphs for total PLT arrivals and departures from/to each country. Figures 10, 24 and 25 may therefore be compared in order to indicate the relative contributions of the migration of New Zealanders and non-New Zealanders to and from each country.

The Australian graphs (Figures 10a, 24a and 25a) show how it has been the movement of New Zealanders that has dominated Trans-Tasman migration. The small peak in arrivals of Non - New Zealanders from Australia in the early 1970s produced the peak in total arrivals from Australia at this time but this was very small in comparison with the peaks in the cycles of departures to Australia.

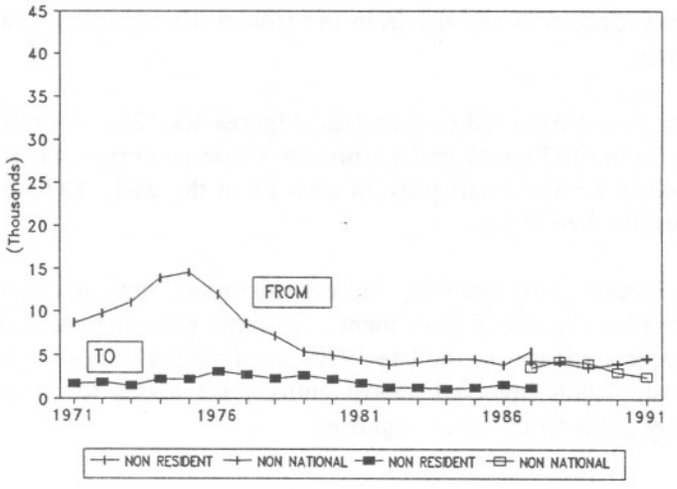
FIGURE 23: Permanent and Long-Term Migration By Country, 1971-1991 - Number



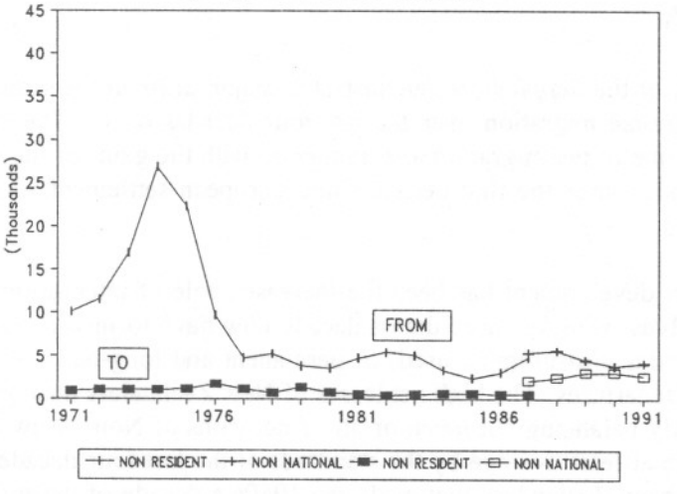
Source: Department of Statistics

FIGURE 24: PLT Migration of Non - New Zealanders to and from Selected Countries, 1971-1991

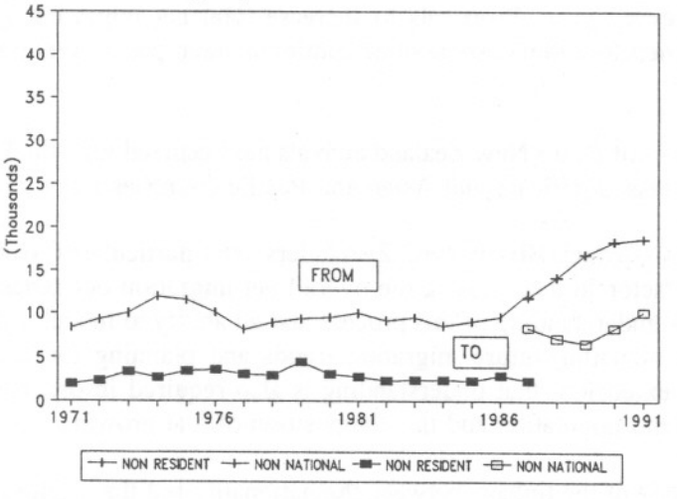
a) to/from Australia



b) to/from United Kingdom



c) to/from Other Countries



Source: Department of Statistics

It is apparent from Figures 10b, 24b and 25b that the main inflow from the United Kingdom in the early 1970s consisted largely of Non - New Zealanders, but that movements of both New Zealanders and Non - New Zealanders to and from the United Kingdom have each fluctuated at fairly low levels since then.

The PLT migration flows to and from Other countries (Figures 10c, 24c, 25c) indicate that New Zealanders were decisive in the 1979 peak in departures to Other countries, whereas Non - New Zealanders were responsible for the small peak in arrivals in the early 1970s and the marked increase in arrivals during the late 1980s.

Figure 26 complements Figure 25 by graphing the net migration gains and losses to and from each country (compare Figure 23c which plots them in a single graph). Figure 26 highlights the point that whereas the major net losses of the late 1970s involved net losses for all countries, the large net losses of the late 1980s involved almost entirely net losses to Australia, that were counterbalanced in part by gains from Other countries.

Summary of Part A

On the Move and Part A of the *Supplement* demonstrated major shifts in the volume and sources of New Zealand international migration over the last four decades or so. The period since the mid-1970s stands out as one of net migration loss compared with the gains of the three preceding decades. The 1980s stands out as the first decade since European settlement when more people left than arrived.

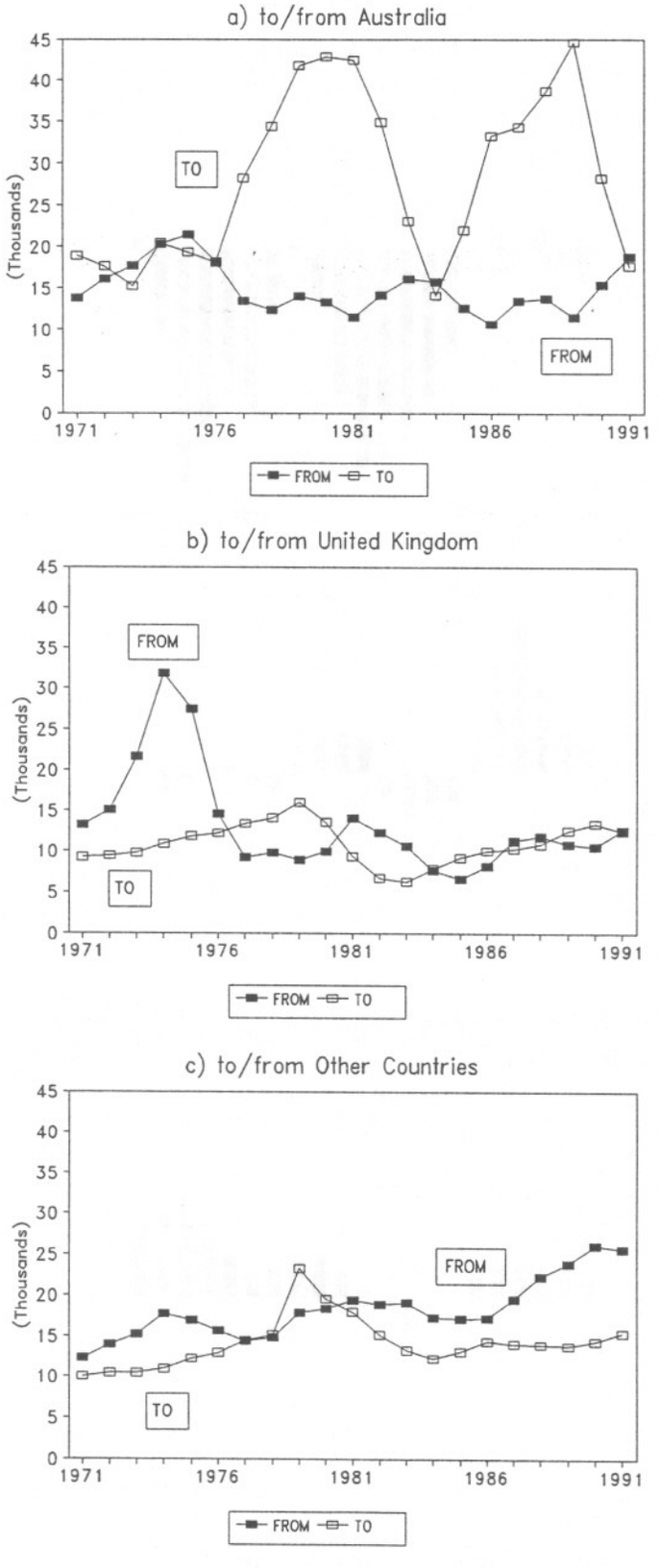
A particularly significant development has been the increased role of international migration by New Zealanders themselves, who for more than a decade now have formed around half or more (depending on the particular measurement used) of permanent and long-term arrivals as well as constituting most of the departures. The high net losses of New Zealanders during the 1980s have had the effect of generally balancing out much or all of net gains of Non - New Zealanders that in recent years have been at least average by the standards of the last four decades (Figure 21b). It was the net losses of New Zealanders that made the 1980s a decade of net migration loss, as total permanent and long-term arrivals throughout the 1970s and 1980s actually exceeded the pre-1970s levels in almost every year. Proposals to increase total net migration gains by further expanding immigration therefore implicitly assume continuing (and possibly expanding) losses of New Zealanders.

A major shift in the origins of Non - New Zealand arrivals has occurred with the United Kingdom and Australia becoming less significant and Asian and Pacific countries more so.

The cycles of departures - principally of New Zealanders, and particularly to Australia - have been the most dynamic factor in determining the overall net migration outcomes during the last decade and a half. Better understanding of this process and an ability to model it therefore appear to be fundamental to anticipating future migration trends and planning for and implementing immigration policy. By extension, that understanding is also required in order to anticipate the growth of the New Zealand population and the composition of that growth.

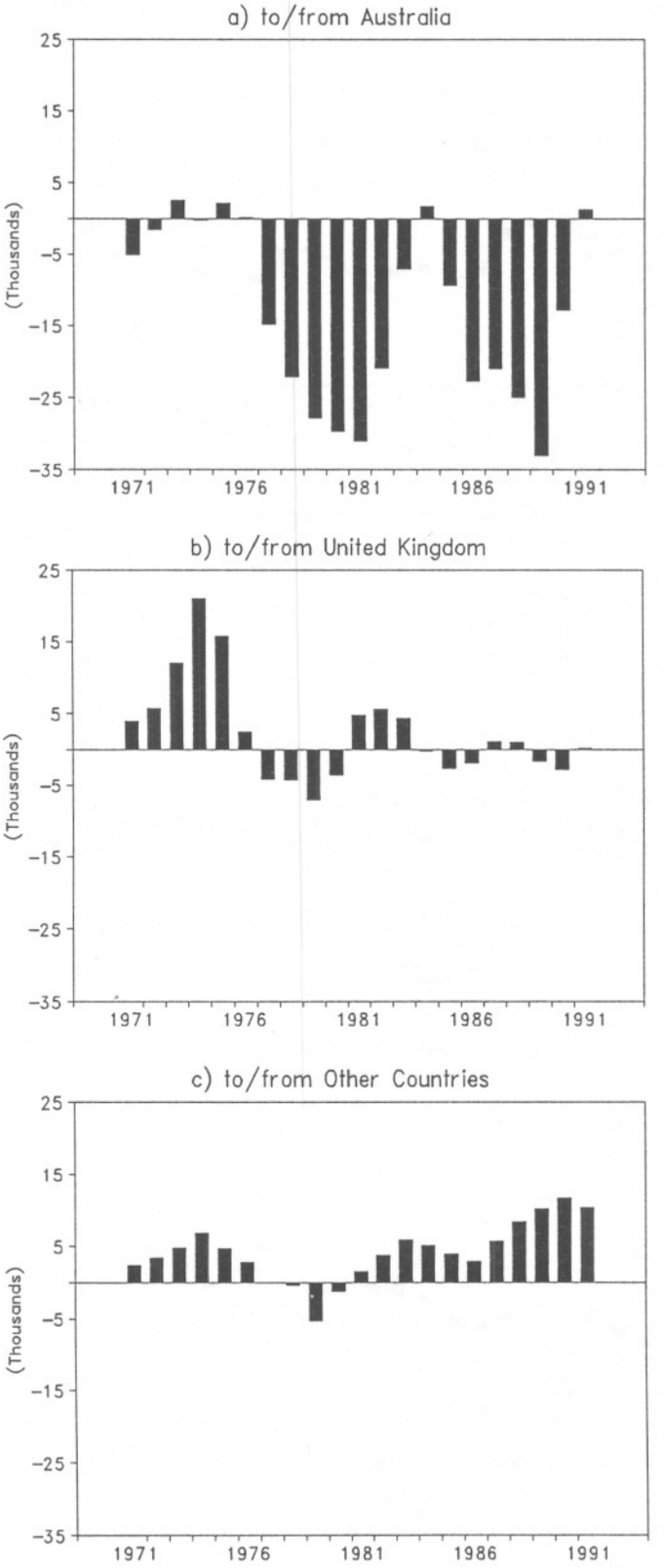
Part B moves to an analysis of the linkage between the nationality and the origins and destinations of migrants in greater detail.

FIGURE 25: PLT Migration to and from Selected Countries, 1971-1991



Source: Department of Statistics

FIGURE 26: Net PLT Migration, Selected Countries, 1971-1991



Source: Department of Statistics

PART B

Relating Nationality to Country of Origin or Destination

The earlier chapters of *On the Move* and Part A of the Supplement focus on the changing origins and destinations of New Zealand international migration and the changing role of New Zealanders within these flows. Much information is available about the nationality of migrants or the origin and destination of migrants, but little is available about the national composition of the migrant flows to and from various countries or the demographic characteristics of the different migrant flows. Special tabulations were commissioned by the Population Monitoring Group from the Department of Statistics to attempt to fill this gap. Parts B and C are almost entirely based on these special tabulations.

The special tabulations provide more detailed information than is otherwise available about the age, sex, and nationality by origin or destination of migrants for each of the five March years in the period ended 31 March 1991. This period approximates to the period between the 1986 and 1991 censuses of population.

These special tabulations distinguish

New Zealand, Australian, United Kingdom/Irish, Samoan, Tongan and Fijian nationals

arriving from living in, and departing to reside permanently in

Australia, the United Kingdom and Ireland, the Pacific and Asia.

"Other nationals" and "Other countries" were calculated as residuals from the totals.

Figures 11, 12 and 13 of *On the Move* were derived from this source to illustrate differences in the age-sex composition of arrivals and departures, migration to and from Australia and the United Kingdom and Ireland, and profiles of New Zealand citizens migrating to and from a number of destinations. The 1991 data were unable to be combined with the earlier data within the constraints of the publication timetable, so that Figures 11-13 relate only to the four years ended March 1990.

Part B presents a selection of the nationality and origin/destination data in the Population Monitoring Group's international migration database. Tables 9-14 cover the size and composition of different migration flows but without considering the age and sex composition of the separate flows identified. The composition of these flows is examined in Part C.

The tables in Part B are so arranged as to start by summarising the key generally available international migration statistics and then to progressively decompose them by nationality *or* origin/destination, and then by nationality *by* origin/destination.

Principal Statistical Aggregates

Table 9 sets out the principal highly aggregated statistics relating to migration in the five year period; that is, arrivals, departures and net migration for total, permanent and long-term (PLT), and short-term migration, and the annual changes in these. This table provides a link to the standard regularly available migration data. The following tables and figures constitute disaggregations of various of the values in Table 9.

It is noteworthy that total net migration for the late 1980s was negative. Together with the negative value for the early 1980s this makes the 1980s the first complete decade since European settlement began during which New Zealand lost more people than it gained from migration (*On the Move*, p 11).

Table 9 shows that net short-term movements may significantly augment or diminish the impact of net PLT migration, but that the latter is the more reliable indicator of change in trend. Particularly apparent is the strong effect of changes in the numbers of PLT departures on changes in PLT net migration.

The fact that the total net migration for the period consists of the balance between a large net loss from PLT migration and an almost equal net gain from short-term migration suggests a substantial degree of "category jumping" - that is, people declaring to the authorities that they intend to return or depart within a longer or shorter period than they actually did (not necessarily with any intent to deceive). Even though not all the net gain from short-term migration necessarily results from category jumping, it indicates the need for caution in focusing on the PLT data as an indication of net total migration (Figure 3).

However, it is still necessary to take PLT arrivals and departures as the starting point for analysis of total net migration impacts on the population, as they do cover the majority of arriving and departing migrants. It is not a practical proposition simply to deal with total arrivals and departures instead of permanent and long-term migration as to do so would be to deal almost entirely with short-term movements that constitute 97 percent of all international movement to and from New Zealand (*On the Move*, Table 2, p 16). To deal principally with total arrivals and departures would therefore be to study tourism rather than migration. While total net migration remains the best indication of actual migration gains to the New Zealand de facto population, it is therefore necessary to take PLT arrivals and departures as the starting point for analysis of migration. At the same time the problem of category jumping cannot be ignored, and evidently requires more thorough treatment than it has yet received in New Zealand (*On the Move* and the *Supplement* itself included). This problem is discussed more fully in Part D.

Origins and Destinations

Table 10 presents the summary totals for arrivals by origin and departures by destination for each of the three migration categories (ie total, PLT and short-term) for the data in the special tabulations. The rows for "all countries" correspond to the totals shown in Table 9. "Pacific countries" consist of the Department of Statistics category of "Oceania", less Australia and New Zealand. "Asian countries" are as defined by the Department of Statistics for its standard migration tables output. Ireland was grouped with the United Kingdom partly for consistency with other studies of Australasian immigration and partly because it is believed that some respondents do not clearly indicate whether Northern Ireland or the Republic of Ireland is intended, but in practice the numbers are so small as to have little effect for most purposes.

TABLE 9: Summary of International Arrivals and Departures, Five Years Ended 31 March 1991

	(Year ended 31 March)					Sum of
	1987	1988	1989	1990	1991	5 years
NUMBER IN YEAR						
a) Total Movements						
Arrivals	1321729	1554992	1669637	1701056	1772524	8019938
Departures	1317372	1555949	1687935	1702689	1757948	8021893
Net	4357	-957	-18298	-1633	14576	-1955
b) PLT Migration						
Arrivals	44360	47844	46233	52001	57088	247526
Departures	58629	63469	70941	56019	45472	294530
Net	-14269	-15625	-24708	-4018	11616	-47004
c) Short-Term Movements						
Arrivals	1277369	1507148	1623404	1649055	1715436	7772412
Departures	1258743	1492480	1616994	1646670	1712476	7727363
Net	18626	14668	6410	2385	2960	45049
ANNUAL CHANGE						
a) Total Movements						
Arrivals	209803	233263	114645	31419	71468	
Departures	186928	238577	131986	14754	55259	
Net	22875	-5314	-17341	16665	16209	
b) PLT Migration						
Arrivals	8378	3484	-1611	5768	5087	
Departures	1034	4840	7472	-14922	-10547	
Net	7344	-1356	-9083	20690	15634	
c) Short-Term Movements						
Arrivals	201425	229779	116256	25651	66381	
Departures	185894	233737	124514	29676	65806	
Net	15531	-3958	-8258	-4025	575	

Source: Department of Statistics

Note that the basis of the origin/destination data is the respondents' declarations concerning their country of last, or intended next permanent residence. Even though one year is deemed to be the dividing line between PLT and short-term migration, persons departing from New Zealand for more than a year for visits to a number of countries may still have New Zealand itself as their place of next permanent residence.

The high proportion of total and short-term movements to and from "Other" countries is apparent, which in this instance includes New Zealand and therefore most international travel by New Zealand residents. New Zealand residents constitute a high proportion of all international movements (Table 2b). New Zealand was not separately identified in the special tabulations in most years.

TABLE 10A: Summary of Total International Arrivals and Departures, by Country of Last/Next Permanent Residence

Last/Next Permanent Residence	1987	1988	(Year ended 31 March) 1989	1990	1991	Sum of 5 years
NUMBER IN YEAR						
a) Total Arrivals						
All countries	1321729	1554992	1669637	1701056	1772524	8019938
Australia	286534	307332	281013	342876	362134	1579889
UK + Ireland	65924	80100	84609	90486	102263	423382
Pacific countries	48588	50709	47191	44420	42872	233780
Asian countries	119296	142081	171673	192299	196727	822076
Other Countries	801387	974770	1085151	1030975	1068528	4960811
b) Total Departures						
All countries	1317372	1555949	1687935	1702689	1757948	8021893
Australia	313325	340113	332541	372242	371635	1729856
UK + Ireland	63758	76819	86194	93711	104902	425384
Pacific countries	34899	39852	38480	40344	38755	192330
Asian countries	109637	129831	157412	179500	187943	764323
Other Countries	795753	969334	1073308	1016892	1054713	4910000
c) Total Net Migration						
All countries	4357	-957	-18298	-1633	14576	-1955
Australia	-26791	-32781	-51528	-29366	-9501	-149967
UK + Ireland	2166	3281	-1585	-3225	-2639	-2002
Pacific countries	13689	10857	8711	4076	4117	41450
Asian countries	9659	12250	14261	12799	8784	57753
Other Countries	5634	5436	11843	14083	13815	50811
ANNUAL CHANGE						
a) Total Arrivals						
All countries	209803	233263	114645	31419	71468	
Australia	-16417	20798	-26319	61863	19258	
UK + Ireland	10682	14176	4509	5877	11777	
Pacific countries	12782	2121	-3518	-2771	-1548	
Asian countries	34147	22785	29592	20626	4428	
Other Countries	168609	173383	110381	-54176	37553	
b) Total Departures						
All countries	186928	238577	131986	14754	55259	
Australia	-16519	26788	-7572	39701	-607	
UK + Ireland	7845	13061	9375	7517	11191	
Pacific countries	5010	4953	-1372	1864	-1589	
Asian countries	54489	20194	27581	22088	8443	
Other Countries	136103	173581	103974	-56416	37821	
c) Total Net Migration						
All countries	22875	-5314	-17341	16665	16209	
Australia	102	-5990	-18747	22162	19865	
UK + Ireland	2837	1115	-4866	-1640	586	
Pacific countries	7772	-2832	-2146	-4635	41	
Asian countries	-20342	2591	2011	-1462	-4015	
Other Countries	32506	-198	6407	2240	-268	

Source: Department of Statistics

TABLE 10B: Summary of PLT International Arrivals and Departures, by Country of Last/Next Permanent Residence

Last/Next Permanent Residence	(Year ended 31 March) 1987	1988	1989	1990	1991	Sum of 5 years
NUMBER IN YEAR						
a) PLT Arrivals						
All countries	44360	47844	46233	52001	57088	247526
Australia	13388	13723	11517	15417	18835	72880
UK + Ireland	11465	11960	10974	10557	12676	57632
Pacific countries	4991	6155	5898	4644	4299	25987
Asian countries	5024	6705	8154	12038	11474	43395
Other Countries	9492	9301	9690	9345	9804	47632
b) PLT Departures						
All countries	58629	63469	70941	56019	45472	294530
Australia	34320	38718	44592	28253	17619	163502
UK + Ireland	10353	10860	12620	13463	12601	59897
Pacific countries	2854	2859	2998	3155	3146	15012
Asian countries	2389	2486	2333	2661	3508	13377
Other Countries	8713	8546	8398	8487	8598	42742
c) PLT Net Migration						
All countries	-14269	-15625	-24708	-4018	11616	-47004
Australia	-20932	-24995	-33075	-12836	1216	-90622
UK + Ireland	1112	1100	-1646	-2906	75	-2265
Pacific countries	2137	3296	2900	1489	1153	10975
Asian countries	2635	4219	5821	9377	7966	30018
Other Countries	779	755	1292	858	1206	4890
ANNUAL CHANGE						
a) PLT Arrivals						
All countries	8378	3484	-1611	5768	5087	
Australia	2731	335	-2206	3900	3418	
UK + Ireland	3242	495	-986	-417	2119	
Pacific countries	909	1164	-257	-1254	-345	
Asian countries	1256	1681	1449	3884	-564	
Other Countries	240	-191	389	-345	459	
b) PLT Departures						
All countries	1034	4840	7472	-14922	-10547	
Australia	1085	4398	5874	-16339	-10634	
UK + Ireland	292	507	1760	843	-862	
Pacific countries	-158	5	139	157	-9	
Asian countries	258	97	-153	328	847	
Other Countries	-443	-167	-148	89	111	
c) PLT Net Migration						
All countries	7344	-1356	-9083	20690	15634	
Australia	1646	-4063	-8080	20239	14052	
UK + Ireland	2950	-12	-2746	-1260	2981	
Pacific countries	1067	1159	-396	-1411	-336	
Asian countries	998	1584	1602	3556	-1411	
Other Countries	683	-24	537	-434	348	

Source: Department of Statistics

TABLE 10C: Summary of Short-Term International Arrivals and Departures, by Country of Last/Next Permanent Residence

Last/Next Permanent Residence	(Year ended 31 March) 1987	1988	1989	1990	1991	Sum of 5 years
NUMBER IN YEAR						
a) Short-term Arrivals						
All countries	1277369	1507148	1623404	1649055	1715436	7772412
Australia	273146	293609	269496	327459	343299	1507009
UK + Ireland	54459	68140	73635	79929	89587	365750
Pacific countries	43597	44554	41293	39776	38573	207793
Asian countries	114272	135376	163519	180261	185253	778681
Other Countries	791895	965469	1075461	1021630	1058724	4913179
b) Short-Term Departures						
All countries	1258743	1492480	1616994	1646670	1712476	7727363
Australia	279005	301395	287949	343989	354016	1566354
UK + Ireland	53405	65959	73574	80248	92301	365487
Pacific countries	32045	36993	35482	37189	35609	177318
Asian countries	107248	127345	155079	176839	184435	750946
Other Countries	787040	960788	1064910	1008405	1046115	4867258
c) Short-Term Net Migration						
All countries	18626	14668	6410	2385	2960	45049
Australia	-5859	-7786	-18453	-16530	-10717	-59345
UK + Ireland	1054	2181	61	-319	-2714	263
Pacific countries	11552	7561	5811	2587	2964	30475
Asian countries	7024	8031	8440	3422	818	27735
Other Countries	4855	4681	10551	13225	12609	45921
ANNUAL CHANGE						
a) Short-Term Arrivals						
All countries	201425	229779	116256	25651	66381	
Australia	-19148	20463	-24113	57963	15840	
UK + Ireland	7440	13681	5495	6294	9658	
Pacific countries	11873	957	-3261	-1517	-1203	
Asian countries	32891	21104	28143	16742	4992	
Other Countries	168369	173574	109992	-53831	37094	
b) Short-Term Departures						
All countries	185894	233737	124514	29676	65806	
Australia	-17604	22390	-13446	56040	10027	
UK + Ireland	7553	12554	7615	6674	12053	
Pacific countries	5168	4948	-1511	1707	-1580	
Asian countries	54231	20097	27734	21760	7596	
Other Countries	136546	173748	104122	-56505	37710	
c) Short-Term Net Migration						
All countries	15531	-3958	-8258	-4025	575	
Australia	-1544	-1927	-10667	1923	5813	
UK + Ireland	-113	1127	-2120	-380	-2395	
Pacific countries	6705	-3991	-1750	-3224	377	
Asian countries	-21340	1007	409	-5018	-2604	
Other Countries	31823	-174	5870	2674	-616	

Source: Department of Statistics

Table 10B highlights the continuing roles of Australia and the United Kingdom as the leading origins of permanent and long-term migrants but also shows that Asian countries (more widely defined than in Table 7 of *On the Move*) have increased to rival the United Kingdom, and in 1989-90 to exceed it. Tables 10A-10C show that net migration in the late 1980s was characterised by large net gains from Asia, the Pacific and Other countries, largely balancing out the net losses to Australia and the United Kingdom over the full five years, though not in each individual year. For a full discussion refer to *On the Move* (pp 46-52).

The net gains from the Pacific are principally the outcome of short-term movements (three-quarters of the total net gain being from declared short-term migration). The net gains from Asia and the net losses to Australia were also significantly augmented by net short-term migration gains.

New Zealand Itself as a Source of Migrants

The large total net gain from "Other" countries does not, as might be supposed, indicate substantial net gains from Europe, Africa or North and South America, the only major possible source areas not separately specified in Table 10 and the special tabulations. Rather, it arises mostly from the inclusion within the "Other" category of New Zealand itself and persons who did not adequately state their origin or destination.

For the effect of this on total net migration refer to the intersection of the net migration rows of part (a) of Table 11 with the right hand column of the table. The rows of the right hand column indicate the way different factors impact on the net result; the columns to the left indicate the variation between individual years (which is considerable).

It can be seen that the total net gain from those specifying New Zealand itself as their last/next place of permanent residence actually exceeds the total net gain from "Other" countries, being substantially offset by a net loss of people with unspecified origin/destination. The numbers inadequately specifying their origin/destination are generally only a small proportion of the total international movements, but unfortunately the imbalance between departures and arrivals was significant in the period in question.

The question logically arises as to the identity of these travellers of no specified origin or destination, given that the collection of the information is an integral part of the process of verification of the right of travellers to enter New Zealand - a procedure treated seriously by the authorities for a whole range of important reasons. However, very few of the travellers do not have their nationality identified in the migration statistics, as one would expect given the rigour of border checks. Therefore, it may be that the travellers of unknown last or next permanent residence are those whose intentions are genuinely uncertain.

A reasonable, but unsubstantiated, supposition is that it is mainly New Zealanders themselves who are most likely to fall into this category. In this case, they would have to be combined with the net gain of persons declaring their last/next permanent residence to be New Zealand, making the bulk of the recorded net migration gain from "Other countries" being actually migration from New Zealand to New Zealand. The possibility has to be seriously considered that many of these apparent migrants to New Zealand from New Zealand itself are Trans-Tasman migrants who changed their minds. In this case, the size of the true net loss to Australia during this period could have been significantly less than that indicated by taking the data at face value as recorded.

TABLE 11: Components of "Other" Last/Next Residence

	Year ended 31 March					
(a) Total Migration	**1987**	**1988**	**1989**	**1990**	**1991**	**5 years**
Arrivals						
(a) all "Other"	801387	974770	1085151	1030975	1068528	4960811
(b) New Zealand	512234	661001	775036	735789	761586	3445646
(c) not specified	26109	25481	32390	39589	34657	158226
(a) -(b) -(c)	263044	288288	277725	255597	272285	1356939
Departures						
(a) all "Other"	795753	969334	1073308	1016892	1054713	4910000
(b) New Zealand	489441	640417	765089	734898	757016	3386861
(c) not specified	50124	45453	31314	27600	30381	184872
(a) -(b) -(c)	256188	283464	276905	254394	267316	1338267
Net Migration						
(a) all "Other"	5634	5436	11843	14083	13815	50811
(b) New Zealand	22793	20584	9947	891	4570	58785
(c) not specified	-24015	-19972	1076	11989	4276	-26646
(a) -(b) -(c)	6856	4824	820	1203	4969	18672
(b) PLT Migration						
Arrivals						
(a) all "Other"	9492	9301	9690	9345	9804	47632
(b) New Zealand	880	754	1470	1192	956	5252
(c) not specified	1542	1554	1998	1709	1603	8406
(a) -(b) -(c)	7070	6993	6222	6444	7245	33974
Departures						
(a) all "Other"	8713	8546	8398	8487	8598	42742
(b) New Zealand	1238	1452	1320	1511	1269	6790
(c) not specified	2944	2650	1819	1771	1206	10390
(a) -(b) -(c)	4531	4444	5259	5205	6123	25562
Net Migration						
(a) all "Other"	779	755	1292	858	1206	4890
(b) New Zealand	-358	-698	150	-319	-313	-1538
(c) not specified	-1402	-1096	179	-62	397	-1984
(a) -(b) -(c)	2539	2549	963	1239	1122	8412
(c) Short-Term Migration						
Arrivals						
(a) all "Other"	791895	965469	1075461	1021630	1058724	4913179
(b) New Zealand	511354	660247	773566	734597	760630	3440394
(c) not specified	24567	23927	30392	37880	33054	149820
(a) -(b) -(c)	255974	281295	271503	249153	265040	1322965
Departures						
(a) all "Other"	787040	960788	1064910	1008405	1046115	4867258
(b) New Zealand	488203	638965	763769	733387	755747	3380071
(c) not specified	47180	42803	29495	25829	29175	174482
(a) -(b) -(c)	251657	279020	271646	249189	261193	1312705
Net Migration						
(a) all "Other"	4855	4681	10551	13225	12609	45921
(b) New Zealand	23151	21282	9797	1210	4883	60323
(c) not specified	-22613	-18876	897	12051	3879	-24662
(a) -(b) -(c)	4317	2275	-143	-36	3847	10260

Source: Department of Statistics

Nationality

Tables 12A-12C provide the counterpart to Tables 10A-10C for nationality rather than origin and destination of international travellers, the "All persons" rows bearing the same relationship to the values in Table 9 as the "All countries rows" of Table 10.

Substantial net gains of Pacific Island and "Other" nationals are apparent (Table 12A) largely offsetting the large net loss of New Zealanders and smaller net losses of Australians and United Kingdom nationals. The "Other" category in this case is genuine as it includes the Asian nationals who are identifiable only by their country of last/next permanent residence in the special tabulations (only 4,326 out of 3.5 million international travellers in 1990-91 were recorded as stateless or of unknown nationality).

Tables 12A-12C also show significant differences between PLT and short-term net migration with many instances of short-term net migration substantially offsetting or augmenting PLT net migration to produce the total end result. More specifically, net gains from short-term migration

offset more than 40 percent of the PLT net loss of New Zealand nationals,

turned the PLT net gains of Australian and United Kingdom and Irish nationals into net losses, and

substantially augmented the PLT net gains from the major Pacific source countries.

In fact only in the case of "Other" (in practice mostly Asian) nationals was PLT net migration for the whole period at all close to total net migration.

The nationality data therefore reinforce the need indicated in the discussion of the origins and destinations of migrants to consider the implications of category jumping for the analysis of PLT arrivals and departures, since as noted earlier there is no alternative to making PLT migration the starting point for analysis of international migration.

Nationality by Origin and Destination

The key feature of the special tabulations is that they provide details of migrant nationality *by* origin and destination, as distinct from merely nationality *or* origin and destination.

Given that the tabulations are age-sex specific for individual years, their size precludes convenient reproduction or their use other than in computerised form. Tables 13A-13C provide a highly aggregated summary of the tabulations for the five individual years using the categories of nationality and origin/destination by last/next permanent residence used in Tables 10A-10C and 12A-12C. Table 13A relates to total international movements, Table 13B to permanent and long-term and Table 13C to short-term.

Each part of each of the tables takes the form of a matrix of nationality by origin or destination, indicating the nationality of migrants from/to each country in the rows and the country of origin/destination of each migrant nationality in the columns. The lower part of each table presents the arrivals and departures as percentages of row and column totals respectively.

TABLE 12A: Summary of Total International Arrivals and Departures, by Nationality

Nationality	(Year ended 31 March) 1987	1988	1989	1990	1991	Sum of 5 years
NUMBER IN YEAR						
a) Total Arrivals						
New Zealand	557119	698023	795912	784624	814609	3650287
Australia	205832	218904	195900	233824	243989	1098449
UK + Ireland	114134	136771	148828	150081	160522	710336
Samoa (West)	16594	18616	19262	13572	12821	80865
Tonga	9943	7886	9322	8738	7383	43272
Fiji	10189	11600	13809	14395	14578	64571
Other nationals	407918	463192	486604	495822	518622	2372158
All persons	1321729	1554992	1669637	1701056	1772524	8019938
b) Total Departures						
New Zealand	570975	707406	832271	797283	807715	3715650
Australia	206701	219407	194881	234396	245336	1100721
UK + Ireland	115020	142411	147246	153219	159291	717187
Samoa (West)	12961	15432	14907	13636	12523	69459
Tonga	5306	6558	8215	9243	8327	37649
Fiji	7632	8486	10791	12799	13488	53196
Other nationals	398777	456249	479624	482113	511268	2328031
All persons	1317372	1555949	1687935	1702689	1757948	8021893
c) Total Net Migration						
New Zealand	-13856	-9383	-36359	-12659	6894	-65363
Australia	-869	-503	1019	-572	-1347	-2272
UK + Ireland	-886	-5640	1582	-3138	1231	-6851
Samoa (West)	3633	3184	4355	-64	298	11406
Tonga	4637	1328	1107	-505	-944	5623
Fiji	2557	3114	3018	1596	1090	11375
Other nationals	9141	6943	6980	13709	7354	44127
All persons	4357	-957	-18298	-1633	14576	-1955
ANNUAL CHANGE						
a) Total Arrivals						
New Zealand	126624	140904	97889	-11288	29985	
Australia	-19668	13072	-23004	37924	10165	
UK + Ireland	15326	22637	12057	1253	10441	
Samoa (West)	4063	2022	646	-5690	-751	
Tonga	4467	-2057	1436	-584	-1355	
Fiji	3186	1411	2209	586	183	
Other nationals	75805	55274	23412	9218	22800	
All persons	209803	233263	114645	31419	71468	
b) Total Departures						
New Zealand	115370	136431	124865	-34988	10432	
Australia	-21687	12706	-24526	39515	10940	
UK + Ireland	16535	27391	4835	5973	6072	
Samoa (West)	2971	2471	-525	-1271	-1113	
Tonga	544	1252	1657	1028	-916	
Fiji	1108	854	2305	2008	689	
Other nationals	72087	57472	23375	2489	29155	
All persons	186928	238577	131986	14754	55259	
c) Total Net Migration						
New Zealand	-13856	4473	-26976	23700	19553	
Australia	-869	366	1522	-1591	-775	
UK + Ireland	-886	-4754	7222	-4720	4369	
Samoa (West)	3633	-449	1171	-4419	362	
Tonga	4637	-3309	-221	-1612	-439	
Fiji	2557	557	-96	-1422	-506	
Other nationals	9141	-2198	37	6729	-6355	
All persons	4357	-5314	-17341	16665	16209	

Source: Department of Statistics

TABLE 12B: Summary of PLT International Arrivals and Departures, by Nationality

Nationality	(Year ended 31 March) 1987	1988	1989	1990	1991	Sum of 5 years
NUMBER IN YEAR						
a) PLT Arrivals						
New Zealand	22893	23882	21244	25746	29575	123340
Australia	4132	3976	3432	3815	4312	19667
UK + Ireland	6214	6647	5617	4574	4947	27999
Samoa (West)	1775	1526	1694	586	765	6346
Tonga	332	263	312	329	271	1507
Fiji	795	1919	2257	1906	1282	8159
Other nationals	8219	9631	11677	15045	15936	60508
All persons	44360	47844	46233	52001	57088	247526
b) PLT Departures						
New Zealand	48615	51860	58429	44388	33514	236806
Australia	2789	3016	3335	2465	2175	13780
UK + Ireland	3008	3516	3931	3767	3264	17486
Samoa (West)	692	816	828	657	761	3754
Tonga	204	245	268	307	394	1418
Fiji	144	149	175	289	392	1149
Other nationals	3177	3867	3975	4146	4972	20137
All persons	58629	63469	70941	56019	45472	294530
c) PLT Net Migration						
New Zealand	-25722	-27978	-37185	-18642	-3939	-113466
Australia	1343	960	97	1350	2137	5887
UK + Ireland	3206	3131	1686	807	1683	10513
Samoa (West)	1083	710	866	-71	4	2592
Tonga	128	18	44	22	-123	89
Fiji	651	1770	2082	1617	890	7010
Other nationals	5042	5764	7702	10899	10964	40371
All persons	-14269	-15625	-24708	-4018	11616	-47004
ANNUAL CHANGE						
a) PLT Arrivals						
New Zealand	4202	989	-2638	4502	3829	
Australia	597	-156	-544	383	497	
UK + Ireland	1742	433	-1030	-1043	373	
Samoa (West)	47	-249	168	-1108	179	
Tonga	65	-69	49	17	-58	
Fiji	293	1124	338	-351	-624	
Other nationals	1432	1412	2046	3368	891	
All persons	8378	3484	-1611	5768	5087	
b) PLT Departures						
New Zealand	1891	3245	6569	-14041	-10874	
Australia	-149	227	319	-870	-290	
UK + Ireland	-244	508	415	-164	-503	
Samoa (West)	1	124	12	-171	104	
Tonga	-35	41	23	39	87	
Fiji	-14	5	26	114	103	
Other nationals	-416	690	108	171	826	
All persons	1034	4840	7472	-14922	-10547	
c) PLT Net Migration						
New Zealand	-25722	-2256	-9207	18543	14703	
Australia	1343	-383	-863	1253	787	
UK + Ireland	3206	-75	-1445	-879	876	
Samoa (West)	1083	-373	156	-937	75	
Tonga	128	-110	26	-22	-145	
Fiji	651	1119	312	-465	-727	
Other nationals	5042	722	1938	3197	65	
All persons	-14269	-1356	-9083	20690	15634	

Source: Department of Statistics

TABLE 12C: Summary of Short-Term International Arrivals and Departures, by Nationality

Nationality	(Year ended 31 March) 1987	1988	1989	1990	1991	Sum of 5 years
NUMBER IN YEAR						
a) Short-Term Arrivals						
New Zealand	534226	674141	774668	758878	785034	3526947
Australia	201700	214928	192468	230009	239677	1078782
UK + Ireland	107920	130124	143211	145507	155575	682337
Samoa (West)	14819	17090	17568	12986	12056	74519
Tonga	9611	7623	9010	8409	7112	41765
Fiji	9394	9681	11552	12489	13296	56412
Other nationals	399699	453561	474927	480777	502686	2311650
All persons	1277369	1507148	1623404	1649055	1715436	7772412
b) Short-Term Departures						
New Zealand	522360	655546	773842	752895	774201	3478844
Australia	203912	216391	191546	231931	243161	1086941
UK + Ireland	112012	138895	143315	149452	156027	699701
Samoa (West)	12269	14616	14079	12979	11762	65705
Tonga	5102	6313	7947	8936	7933	36231
Fiji	7488	8337	10616	12510	13096	52047
Other nationals	395600	452382	475649	477967	506296	2307894
All persons	1258743	1492480	1616994	1646670	1712476	7727363
c) Short-Term Net Migration						
New Zealand	11866	18595	826	5983	10833	48103
Australia	-2212	-1463	922	-1922	-3484	-8159
UK + Ireland	-4092	-8771	-104	-3945	-452	-17364
Samoa (West)	2550	2474	3489	7	294	8814
Tonga	4509	1310	1063	-527	-821	5534
Fiji	1906	1344	936	-21	200	4365
Other nationals	4099	1179	-722	2810	-3610	3756
All persons	18626	14668	6410	2385	2960	45049
ANNUAL CHANGE						
a) Short-Term Arrivals						
New Zealand	534226	139915	100527	-15790	26156	
Australia	201700	13228	-22460	37541	9668	
UK + Ireland	107920	22204	13087	2296	10068	
Samoa (West)	14819	2271	478	-4582	-930	
Tonga	9611	-1988	1387	-601	-1297	
Fiji	9394	287	1871	937	807	
Other nationals	399699	53862	21366	5850	21909	
All persons	1277369	229779	116256	25651	66381	
b) Short-Term Departures						
New Zealand	522360	133186	118296	-20947	21306	
Australia	203912	12479	-24845	40385	11230	
UK + Ireland	112012	26883	4420	6137	6575	
Samoa (West)	12269	2347	-537	-1100	-1217	
Tonga	5102	1211	1634	989	-1003	
Fiji	7488	849	2279	1894	586	
Other nationals	395600	56782	23267	2318	28329	
All persons	1258743	233737	124514	29676	65806	
c) Short-Term Net Migration						
New Zealand	11866	6729	-17769	5157	4850	
Australia	-2212	749	2385	-2844	-1562	
UK + Ireland	-4092	-4679	8667	-3841	3493	
Samoa (West)	2550	-76	1015	-3482	287	
Tonga	4509	-3199	-247	-1590	-294	
Fiji	1906	-562	-408	-957	221	
Other nationals	4099	-2920	-1901	3532	-6420	
All persons	18626	-3958	-8258	-4025	575	

Source: Department of Statistics

TABLE 13A: Total Migration by Nationality and Country of Last/Next Permanent Residence, Five Years Ended March 1991

Last/Next Permanent Residence	Nationality NZ	Australia	UK/Ireland	Samoa	Tonga	Fiji	Other	Total
Arrivals								
All Countries	3650287	1098449	710336	80865	43272	64571	2372158	8019938
Australia	476151	944157	89456	1239	3677	1711	63498	1579889
UK/Ireland	67159	5497	340678	46	160	184	9658	423382
Pacific	45236	7711	4539	46946	24971	40523	63854	233780
Asia	28744	4629	21526	133	98	283	766663	822076
Other	3032997	136455	254137	32501	14366	21870	1468485	4960811
Departures								
All Countries	3715650	1100721	717187	69459	37649	53196	2328031	8021893
Australia	604310	952460	94219	1765	4118	2450	70534	1729856
UK/Ireland	81045	5374	329158	39	79	146	9543	425384
Pacific	45284	7664	4599	33431	16806	26763	57783	192330
Asia	29525	4462	18491	146	120	222	711357	764323
Other	2955486	130761	270720	34078	16526	23615	1478814	4910000
Net Migration								
All Countries	-65363	-2272	-6851	11406	5623	11375	44127	-1955
Australia	-128159	-8303	-4763	-526	-441	-739	-7036	-149967
UK/Ireland	-13886	123	11520	7	81	38	115	-2002
Pacific	-48	47	-60	13515	8165	13760	6071	41450
Asia	-781	167	3035	-13	-22	61	55306	57753
Other	77511	5694	-16583	-1577	-2160	-1745	-10329	50811
Nationals as % of Total Arrivals								
All Countries	45.5	13.7	8.9	1.0	0.5	0.8	29.6	100.0
Australia	30.1	59.8	5.7	0.1	0.2	0.1	4.0	100.0
UK/Ireland	15.9	1.3	80.5	0.0	0.0	0.0	2.3	100.0
Pacific	19.3	3.3	1.9	20.1	10.7	17.3	27.3	100.0
Asia	3.5	0.6	2.6	0.0	0.0	0.0	93.3	100.0
Other	61.1	2.8	5.1	0.7	0.3	0.4	29.6	100.0
Nationals as % of Total Departures								
All Countries	46.3	13.7	8.9	0.9	0.5	0.7	29.0	100.0
Australia	34.9	55.1	5.4	0.1	0.2	0.1	4.1	100.0
UK/Ireland	19.1	1.3	77.4	0.0	0.0	0.0	2.2	100.0
Pacific	23.5	4.0	2.4	17.4	8.7	13.9	30.0	100.0
Asia	3.9	0.6	2.4	0.0	0.0	0.0	93.1	100.0
Other	60.2	2.7	5.5	0.7	0.3	0.5	30.1	100.0
Nationality of Arrivals from Each Country (%)								
All Countries	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Australia	13.0	86.0	12.6	1.5	8.5	2.6	2.7	19.7
UK/Ireland	1.8	0.5	48.0	0.1	0.4	0.3	0.4	5.3
Pacific	1.2	0.7	0.6	58.1	57.7	62.8	2.7	2.9
Asia	0.8	0.4	3.0	0.2	0.2	0.4	32.3	10.3
Other	83.1	12.4	35.8	40.2	33.2	33.9	61.9	61.9
Nationality of Departures to Each Country (%)								
All Countries	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Australia	16.3	86.5	13.1	2.5	10.9	4.6	3.0	21.6
UK/Ireland	2.2	0.5	45.9	0.1	0.2	0.3	0.4	5.3
Pacific	1.2	0.7	0.6	48.1	44.6	50.3	2.5	2.4
Asia	0.8	0.4	2.6	0.2	0.3	0.4	30.6	9.5
Other	79.5	11.9	37.7	49.1	43.9	44.4	63.5	61.2

Source: Department of Statistics

TABLE 13B: Permanent and Long-Term Migration by Nationality and Country of Last/Next Permanent Residence, Five Years Ended March 1991

Last/Next Permanent Residence	Nationality NZ	Australia	UK/Ireland	Samoa	Tonga	Fiji	Other	Total
Arrivals								
All Countries	123340	19667	27999	6346	1507	8159	60508	247526
Australia	52072	17452	1807	69	103	164	1213	72880
UK/Ireland	34310	542	21914	6	4	12	844	57632
Pacific	9027	285	343	5159	1148	7454	2571	25987
Asia	7880	202	1300	9	2	20	33982	43395
Other	20051	1186	2635	1103	250	509	21898	47632
Departures								
All Countries	236806	13780	17486	3754	1418	1149	20137	294530
Australia	145770	12406	2390	372	114	153	2297	163502
UK/Ireland	46151	434	12693	6	8	13	592	59897
Pacific	8402	170	294	2790	1093	858	1405	15012
Asia	7319	188	420	13	1	13	5423	13377
Other	29164	582	1689	573	202	112	10420	42742
Net Migration								
All Countries	-113466	5887	10513	2592	89	7010	40371	-47004
Australia	-93698	5046	-583	-303	-11	11	-1084	-90622
UK/Ireland	-11841	108	9221	0	-4	-1	252	-2265
Pacific	625	115	49	2369	55	6596	1166	10975
Asia	561	14	880	-4	1	7	28559	30018
Other	-9113	604	946	530	48	397	11478	4890
Nationals as % of Total Arrivals								
All Countries	49.8	7.9	11.3	2.6	0.6	3.3	24.4	100.0
Australia	71.4	23.9	2.5	0.1	0.1	0.2	1.7	100.0
UK/Ireland	59.5	0.9	38.0	0.0	0.0	0.0	1.5	100.0
Pacific	34.7	1.1	1.3	19.9	4.4	28.7	9.9	100.0
Asia	18.2	0.5	3.0	0.0	0.0	0.0	78.3	100.0
Other	42.1	2.5	5.5	2.3	0.5	1.1	46.0	100.0
Nationals as % of Total Departures								
All Countries	80.4	4.7	5.9	1.3	0.5	0.4	6.8	100.0
Australia	89.2	7.6	1.5	0.2	0.1	0.1	1.4	100.0
UK/Ireland	77.1	0.7	21.2	0.0	0.0	0.0	1.0	100.0
Pacific	56.0	1.1	2.0	18.6	7.3	5.7	9.4	100.0
Asia	54.7	1.4	3.1	0.1	0.0	0.1	40.5	100.0
Other	68.2	1.4	4.0	1.3	0.5	0.3	24.4	100.0
Nationality of Arrivals from Each Country (%)								
All Countries	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Australia	42.2	88.7	6.5	1.1	6.8	2.0	2.0	29.4
UK/Ireland	27.8	2.8	78.3	0.1	0.3	0.1	1.4	23.3
Pacific	7.3	1.4	1.2	81.3	76.2	91.4	4.2	10.5
Asia	6.4	1.0	4.6	0.1	0.1	0.2	56.2	17.5
Other	16.3	6.0	9.4	17.4	16.6	6.2	36.2	19.2
Nationality of Departures to Each Country (%)								
All Countries	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Australia	61.6	90.0	13.7	9.9	8.0	13.3	11.4	55.5
UK/Ireland	19.5	3.1	72.6	0.2	0.6	1.1	2.9	20.3
Pacific	3.5	1.2	1.7	74.3	77.1	74.7	7.0	5.1
Asia	3.1	1.4	2.4	0.3	0.1	1.1	26.9	4.5
Other	12.3	4.2	9.7	15.3	14.2	9.7	51.7	14.5

Source: Department of Statistics

TABLE 13C: Short-Term Migration by Nationality and Country of Last/Next Permanent Residence, Five Years Ended March 1991

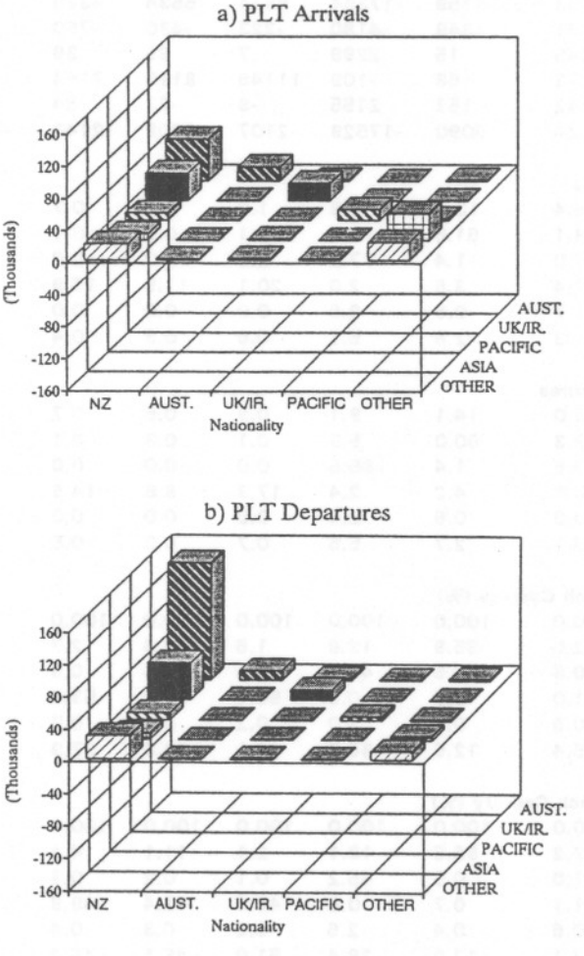
Last/Next Permanent Residence	Nationality NZ	Australia	UK/Ireland	Samoa	Tonga	Fiji	Other	Total
Arrivals								
All Countries	3526947	1078782	682337	74519	41765	56412	2311650	7772412
Australia	424079	926705	87649	1170	3574	1547	62285	1507009
UK/Ireland	32849	4955	318764	40	156	172	8814	365750
Pacific	36209	7426	4196	41787	23823	33069	61283	207793
Asia	20864	4427	20226	124	96	263	732681	778681
Other	3012946	135269	251502	31398	14116	21361	1446587	4913179
Departures								
All Countries	3478844	1086941	699701	65705	36231	52047	2307894	7727363
Australia	458540	940054	91829	1393	4004	2297	68237	1566354
UK/Ireland	34894	4940	316465	33	71	133	8951	365487
Pacific	36882	7494	4305	30641	15713	25905	56378	177318
Asia	22206	4274	18071	133	119	209	705934	750946
Other	2926322	130179	269031	33505	16324	23503	1468394	4867258
Net Migration								
All Countries	48103	-8159	-17364	8814	5534	4365	3756	45049
Australia	-34461	-13349	-4180	-223	-430	-750	-5952	-59345
UK/Ireland	-2045	15	2299	7	85	39	-137	263
Pacific	-673	-68	-109	11146	8110	7164	4905	30475
Asia	-1342	153	2155	-9	-23	54	26747	27735
Other	86624	5090	-17529	-2107	-2208	-2142	-21807	45921
Nationals as % of Total Arrivals								
All Countries	45.4	13.9	8.8	1.0	0.5	0.7	29.7	100.0
Australia	28.1	61.5	5.8	0.1	0.2	0.1	4.1	100.0
UK/Ireland	9.0	1.4	87.2	0.0	0.0	0.0	2.4	100.0
Pacific	17.4	3.6	2.0	20.1	11.5	15.9	29.5	100.0
Asia	2.7	0.6	2.6	0.0	0.0	0.0	94.1	100.0
Other	61.3	2.8	5.1	0.6	0.3	0.4	29.4	100.0
Nationals as % of Total Departures								
All Countries	45.0	14.1	9.1	0.9	0.5	0.7	29.9	100.0
Australia	29.3	60.0	5.9	0.1	0.3	0.1	4.4	100.0
UK/Ireland	9.5	1.4	86.6	0.0	0.0	0.0	2.4	100.0
Pacific	20.8	4.2	2.4	17.3	8.9	14.6	31.8	100.0
Asia	3.0	0.6	2.4	0.0	0.0	0.0	94.0	100.0
Other	60.1	2.7	5.5	0.7	0.3	0.5	30.2	100.0
Nationality of Arrivals from Each Country (%)								
All Countries	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Australia	12.0	85.9	12.8	1.6	8.6	2.7	2.7	19.4
UK/Ireland	0.9	0.5	46.7	0.1	0.4	0.3	0.4	4.7
Pacific	1.0	0.7	0.6	56.1	57.0	58.6	2.7	2.7
Asia	0.6	0.4	3.0	0.2	0.2	0.5	31.7	10.0
Other	85.4	12.5	36.9	42.1	33.8	37.9	62.6	63.2
Nationality of Departures to Each Country (%)								
All Countries	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Australia	13.2	86.5	13.1	2.1	11.1	4.4	3.0	20.3
UK/Ireland	1.0	0.5	45.2	0.1	0.2	0.3	0.4	4.7
Pacific	1.1	0.7	0.6	46.6	43.4	49.8	2.4	2.3
Asia	0.6	0.4	2.6	0.2	0.3	0.4	30.6	9.7
Other	84.1	12.0	38.4	51.0	45.1	45.2	63.6	63.0

Source: Department of Statistics

Figure 27 presents the arrivals, departures and net migration matrices for PLT migration from Table 13B together with the net migration matrices from the total and short-term migration tables. Figure 27 groups the Samoan, Tongan and Fijian nationalities to make it more readable, making a 5 x 5 matrix.

The tables and Figure 27 highlight the already identified significance of New Zealanders in arrivals and departures from or to all major sources and destinations. It can be seen that this applies not just to Australia and the United Kingdom and Ireland but to the Pacific and Asia as well, at least as far as PLT migration is concerned.

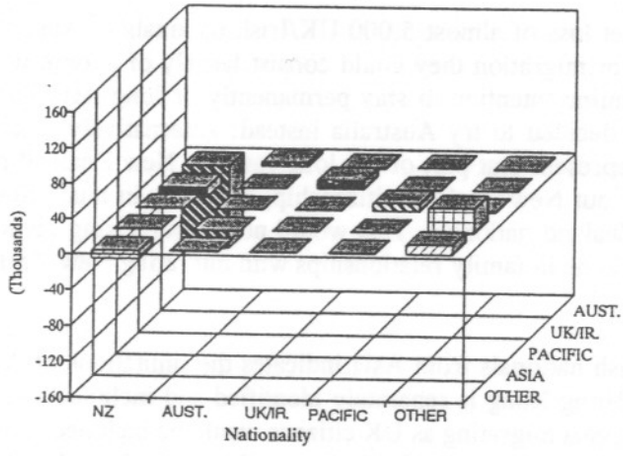
FIGURE 27: Migration by Nationality and Country of Last/Next Residence, Five Years Ended March 1991



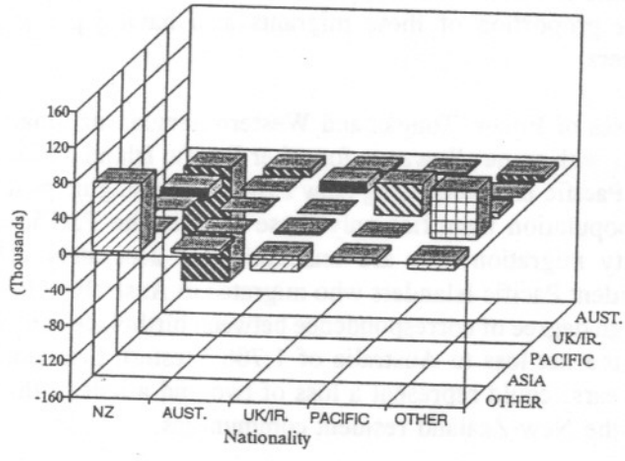
Source: Department of Statistics

FIGURE 27: Migration by Nationality and Country of Last/Next Residence, (contd) Five Years Ended March 1991

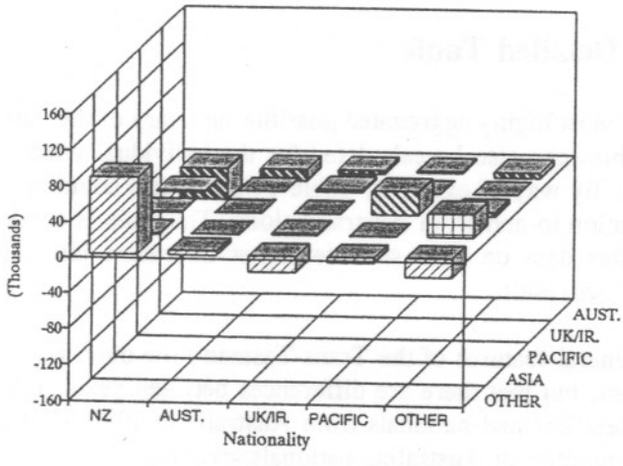
c) Net PLT Migration



d) Net Total Migration



e) Net Short-Term Migration



Source: Department of Statistics

The significance of the flows parallel to the sub-diagonal of the matrix is also particularly apparent in Figure 27; that is, migration of Australians from/to Australia, UK citizens from/to the UK, Pacific Islanders from/to the Pacific and "Other" (particularly Asian) nationals from/to Asia. This is hardly surprising so it is perhaps more significant that the tables do show significant migration outside these "obvious" flows and the flows of New Zealand nationals.

Of particular interest is the net loss of almost 5,000 UK/Irish nationals to Australia. Since they are mostly from net short-term migration they could consist largely of people who migrated to New Zealand declaring a genuine intention to stay permanently or long-term but who changed their minds after arrival and decided to try Australia instead. Alternatively (and perhaps more probably) they may simply represent that part of the long-resident New Zealand population that was UK born and never took out New Zealand citizenship, behaving in much the same manner as New Zealand born New Zealand nationals. This would not be surprising given that many of this sub-population are likely to be in family relationships with migrating New Zealand born New Zealanders.

The net gain of 3,000 UK/Irish nationals from Asia indicates the limitations of Asia as a source to indicate Asian migration (Hong Kong is separately identified and included in other nationals, although any Hong Kong residents migrating as UK citizens would be included). Again some part of these could be family members of New Zealanders returning from Asia, but the data show a net loss of New Zealand nationals to Asia. This loss is small so it does not necessarily preclude the possibility of a significant proportion of these migrants also having pre-existing family associations with New Zealanders.

The reported net migration losses of Fijian, Tongan and Western Samoan nationals to Australia (1,706) are very small and even with some allowance for other Pacific Island nationalities do not indicate a very high number of Pacific Islanders using New Zealand as a staging post to Australia. The New Zealand census of population identifies only those born in the Pacific or of Pacific ethnic origin so the nationality migration data are unsuitable for accurately calculating the percentage of New Zealand resident Pacific Islanders who migrated to Australia. However, a very rough calculation assuming a high degree of correspondence between birthplace and the nationality of the migrants, suggests that the net loss to Australia of 1,706 Western Samoan, Tongan and Fijian nationals over the five years, could represent a loss of two and a half to three percent of the overseas born members of the New Zealand resident communities.

An Example of a More Detailed Table

Tables 13A-13C constitute the most highly aggregated possible summary of the data in the special tabulations. Corresponding tables can also be calculated for the individual years, but additional detail can be extracted as well. By way of example, Table 14 presents a counterpart to Table 12 (nationality by year) for migration to and from Australia alone. The table is condensed to focus on PLT migration but includes data on how short-term net migration interacted with PLT migration to produce the total net result.

It can be seen that the most general features of the Trans-Tasman flow over the five year period do apply to the individual years, but that there are differences between years. For example, the increase in PLT arrivals of New Zealand nationals from Australia in 1990-91 was not matched by as rapid an increase in the number of Australian nationals arriving.

Equivalent tables could also be compiled for the other countries of origin or destination. Similarly, equivalents to Tables 10A-10C could be compiled for each nationality.

TABLE 14: Migration to/from Australia by Nationality

Nationality	1986-87	1987-88	1988-89	1989-90	1990-91	Sum of 5 years
PLT Arrivals						
New Zealander	9072	9519	7914	11368	14199	52072
Australian	3684	3507	2975	3400	3886	17452
UK/Irish	395	405	328	303	376	1807
Western Samoan	19	15	11	10	14	69
Tongan	22	11	20	25	25	103
Fijian	8	25	36	44	51	164
Other	188	241	233	267	284	1213
Total	13388	13723	11517	15417	18835	72880
PLT Departures						
New Zealander	30776	34340	40412	25217	15025	145770
Australian	2488	2761	3086	2188	1883	12406
UK/Irish	538	687	540	371	254	2390
Western Samoan	167	134	40	19	12	372
Tongan	13	18	37	22	24	114
Fijian	8	13	22	48	62	153
Other	330	765	455	388	359	2297
Total	34320	38718	44592	28253	17619	163502
PLT Net Migration						
New Zealander	-21704	-24821	-32498	-13849	-826	-93698
Australian	1196	746	-111	1212	2003	5046
UK/Irish	-143	-282	-212	-68	122	-583
Western Samoan	-148	-119	-29	-9	2	-303
Tongan	9	-7	-17	3	1	-11
Fijian	0	12	14	-4	-11	11
Other	-142	-524	-222	-121	-75	-1084
Total	-20932	-24995	-33075	-12836	1216	-90622
Total Net Migration						
New Zealander	-25435	-29113	-44540	-22679	-6392	-128159
Australian	982	-194	-2478	-4611	-2002	-8303
UK/Irish	-1073	-2147	-1431	-560	448	-4763
Western Samoan	-192	-242	-20	16	-88	-526
Tongan	-129	-122	39	-172	-57	-441
Fijian	-18	-172	-230	-188	-131	-739
Other	-926	-791	-2868	-1172	-1279	-7036
Total	-26791	-32781	-51528	-29366	-9501	-149967
Short-term Net Migration						
New Zealander	-3731	-4292	-12042	-8830	-5566	-34461
Australian	-214	-940	-2367	-5823	-4005	-13349
UK/Irish	-930	-1865	-1219	-492	326	-4180
Western Samoan	-44	-123	9	25	-90	-223
Tongan	-138	-115	56	-175	-58	-430
Fijian	-18	-184	-244	-184	-120	-750
Other	-784	-267	-2646	-1051	-1204	-5952
Total	-5859	-7786	-18453	-16530	-10717	-59345

Source: Department of Statistics

Summary of Part B

Part B has shown how the earlier analysis can be extended to consider a more complex categorisation of migration flows by relating nationality to origin and destination using special data tabulations. It provided a number of further indications that even though analysis of migration must take permanent and long-term migration as the starting point of migration, it is also necessary to consider category jumping between PLT migration and short-term travel.

The various rows, columns and cells of the nine matrices included in the upper parts of Tables 13A-13C (and the subset of them in Figure 27) are used as the basis for analysing the age and gender characteristics of different migration flows in Part C of the *Supplement*.

The characteristics of the migrants in different migration streams are of considerable intrinsic interest and important to understanding how migration is changing and to identifying the policy implications of these changes. Information about the migrant characteristics of the major migration streams should be able to be linked to information about the changing relative importance of the migration streams in order to draw conclusions about the implications for changes in the structure of total migration, both currently and under various future scenarios. It is conceivable that these implications will be significantly different under different migration scenarios, in which case there will be implications for the size and composition of the future population.

PART C

Age and Gender Composition of Migration Flows

A sub-section of Chapter Two of *On the Move* (pp 33-37) discussed the age-sex composition of New Zealand's international migration flows, noting that New Zealand fitted into the general pattern of international migration flows being dominated by younger people, especially those aged between 20 and 30 years. However, Figures 11-13 indicated significant differences between different flows within the general pattern. The discussion of Figure 11 drew attention to how the proportion of New Zealanders within some migration flows influenced the shape of certain flows. Figure 12 illustrated how the profiles of New Zealand nationals migrating from and to different origins and destinations differed considerably in the degree to which they were concentrated into the 20-24 and 25-29 year age groups. Figure 13 indicated variations in migration rates (that is the propensity to migrate) between males and females and arrivals and departures. No comparisons with other time periods were included, nor was it possible to include the full range of information available about variations in age and gender composition between migration flows. The relevant graphs in *On the Move* used 1986-90 data; those in Part C use 1986-91 data.

Part C substantially increases the range of information available about variations in the age and gender composition of migration flows. The presentation differs considerably from *On the Move* and other Parts of the *Supplement,* in that it consists mostly of several dozen graphs with brief interspersed commentary. It may be useful to approach Part C as in effect a form of "slide show".

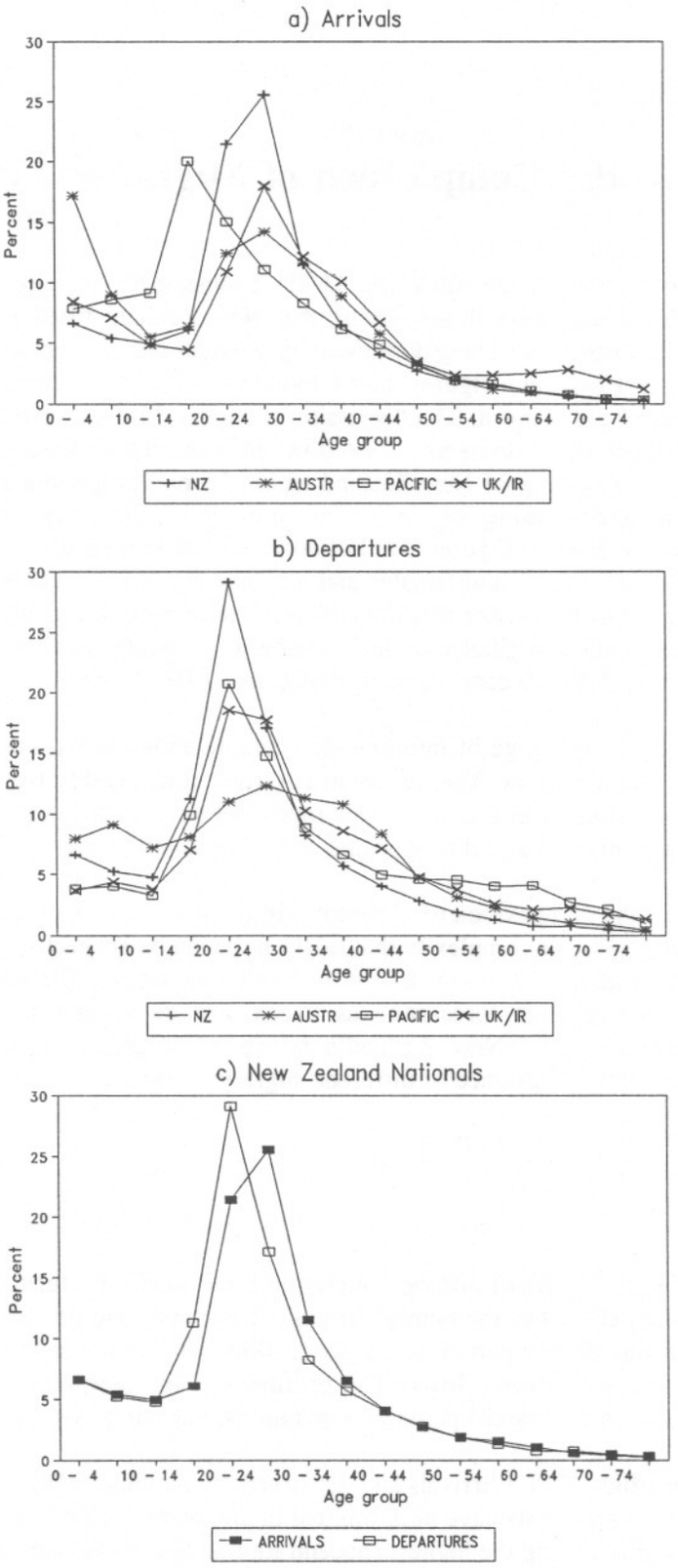
The variation identified in the composition of different migration streams is of intrinsic interest, indicating a process of considerable complexity that might not even be suspected by those whose involvement in migration analysis has been narrow in motive or scope. The analysis also has potential application in demographic forecasting as it can provide a basis for exploring the implications for the composition of New Zealand's future net migration gains of actual or postulated shifts in the relative importance of different migration flows.

Age Profiles

Figures 28 to 32 provide age profiles of different migration flows in similar format to Figures 11 and 12. The profiles simply consist of the number of migrants in each age group as a percentage of the total of all age groups for the particular migration flow, to provide standardised profiles that can be directly compared between flows. The profiles can be interpreted as lines drawn around the outlines of (percentage based) population pyramids, superimposed upon each other.

Figure 28 provides age profiles of PLT arrivals and departures by nationality [the "All Countries" rows of Table 13B]. "Other" nationals have been omitted in the interests of readability. The New Zealand nationals stand out as having the highest concentration in the young adult age groups; the Australian nationals the least. The high value for arriving 0-4 year old Australian nationals reflects the Australian born children of returning New Zealanders and mixed Australian/New Zealand

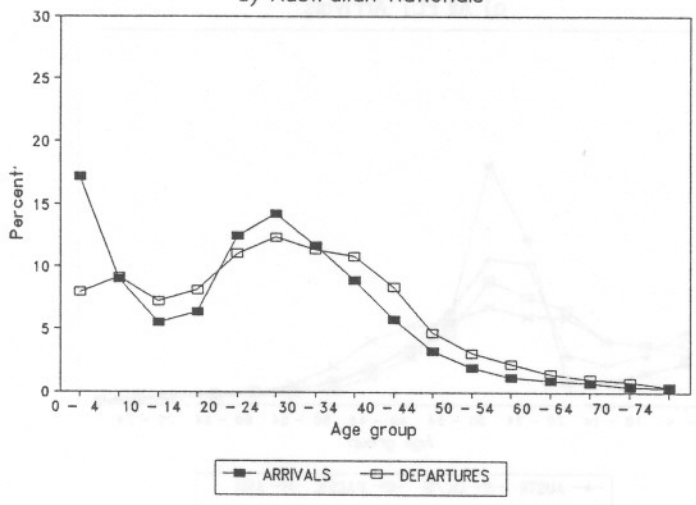
FIGURE 28: Age Profiles for PLT Migrants by Nationality, 1986-91



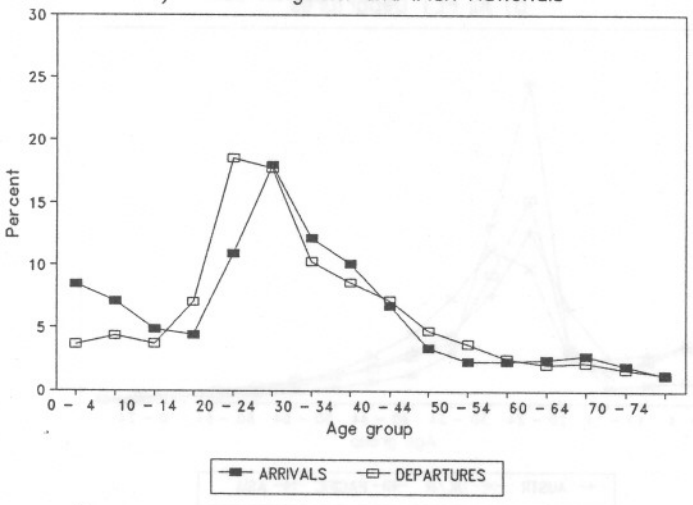
Source: Department of Statistics

FIGURE 28: Age Profiles for PLT Migrants by Nationality, 1986-91 (contd)

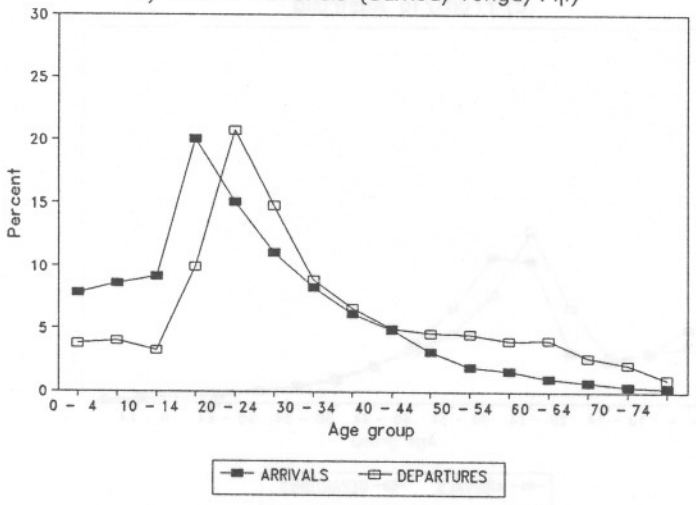
d) Australian Nationals



e) United Kingdom and Irish Nationals

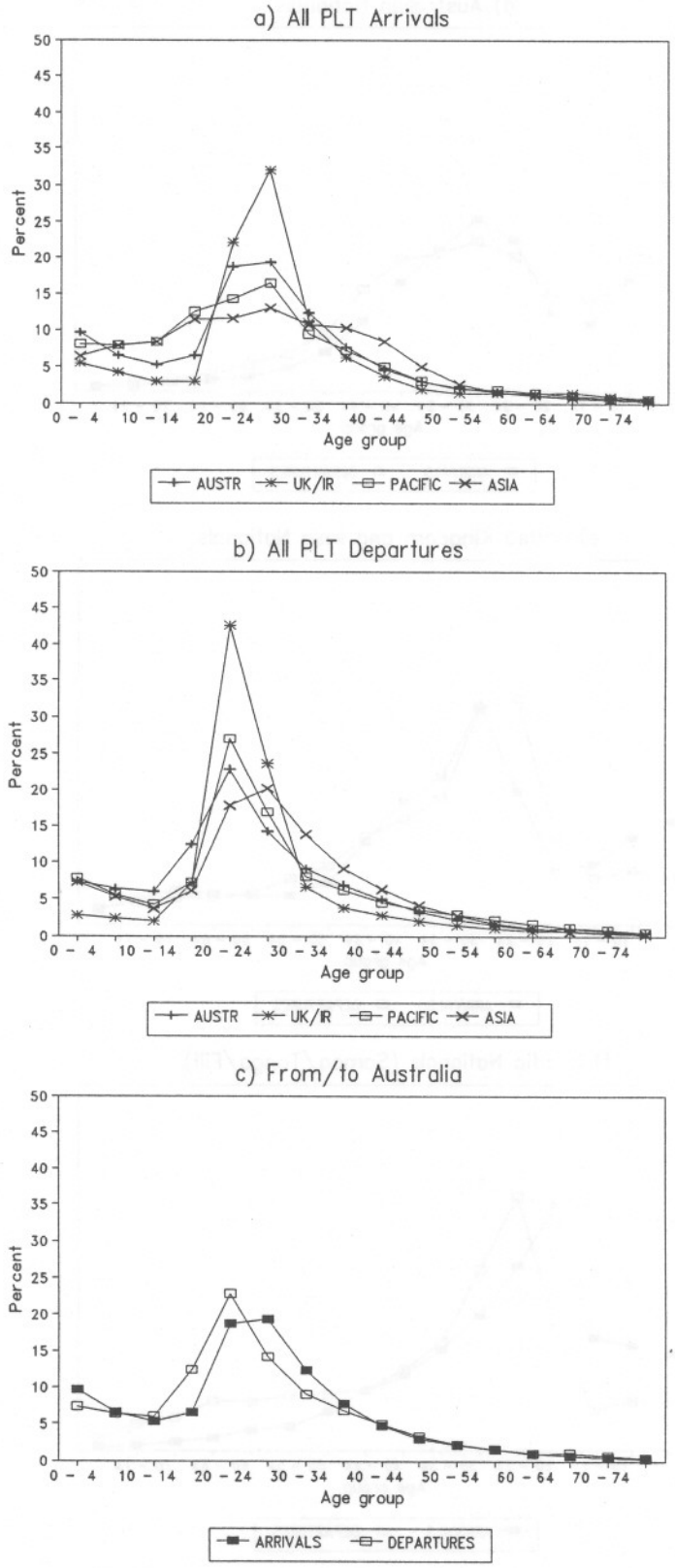


f) Pacific Nationals (Samoa/Tonga/Fiji)



Source: Department of Statistics

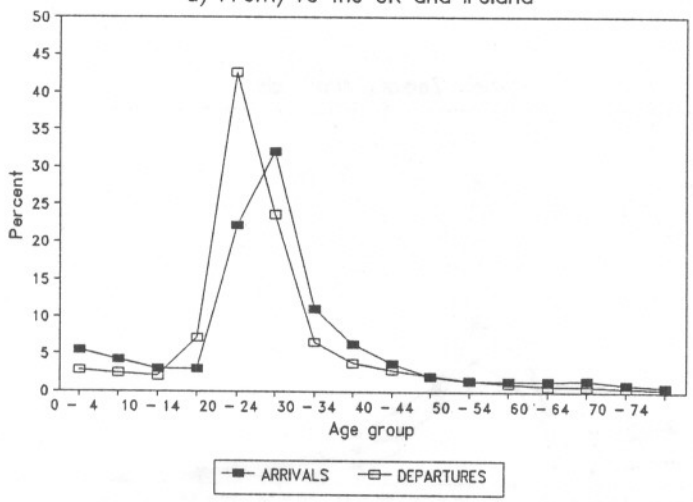
FIGURE 29: Age Profiles for PLT Migrants by Origin and Destination, 1986-91



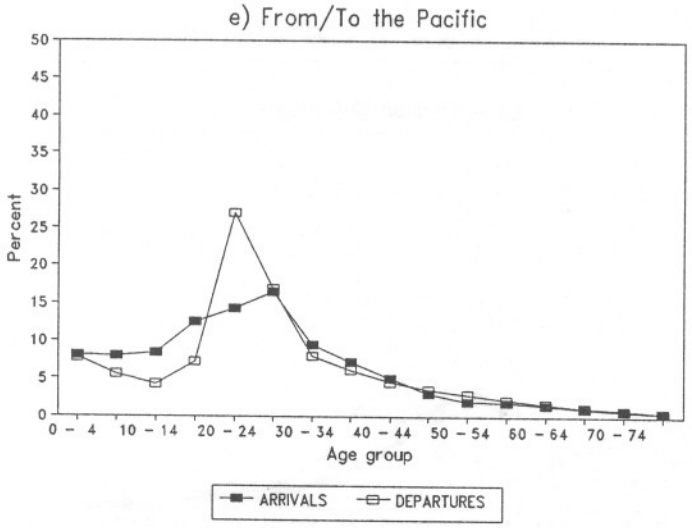
Source: Department of Statistics

FIGURE 29: Age Profiles for PLT Migrants by Origin and Destination, 1986-91 (contd)

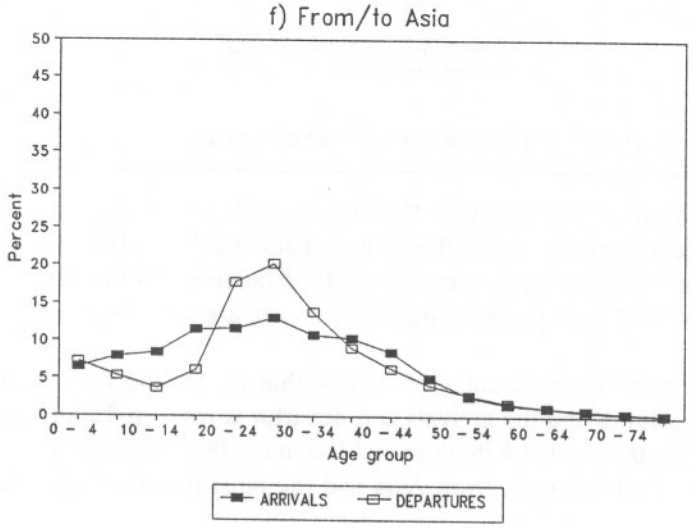
d) From/To the UK and Ireland



e) From/To the Pacific

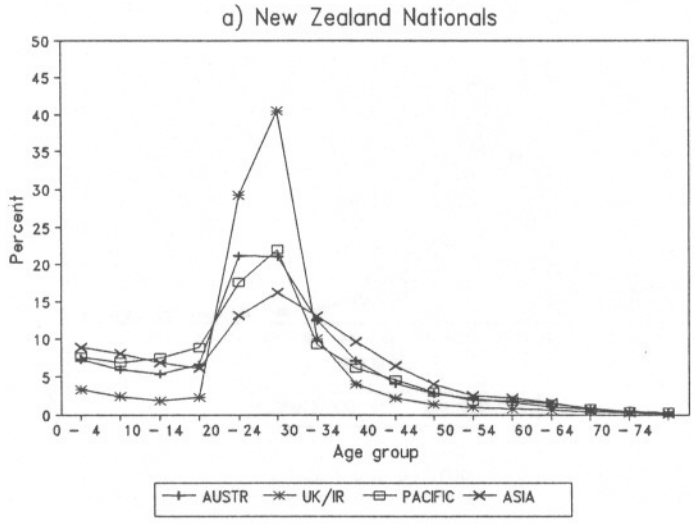


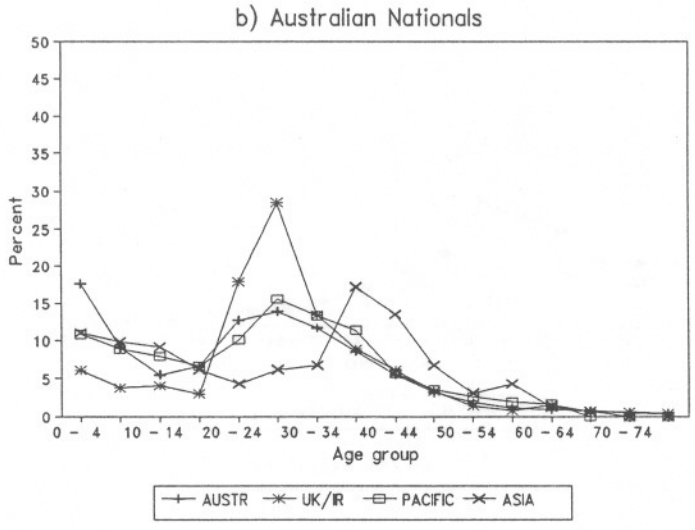
f) From/to Asia



Source: Department of Statistics

FIGURE 30: Age Profiles for PLT Migrants, Nationality of Arrivals by Country of Origin, 1986-91





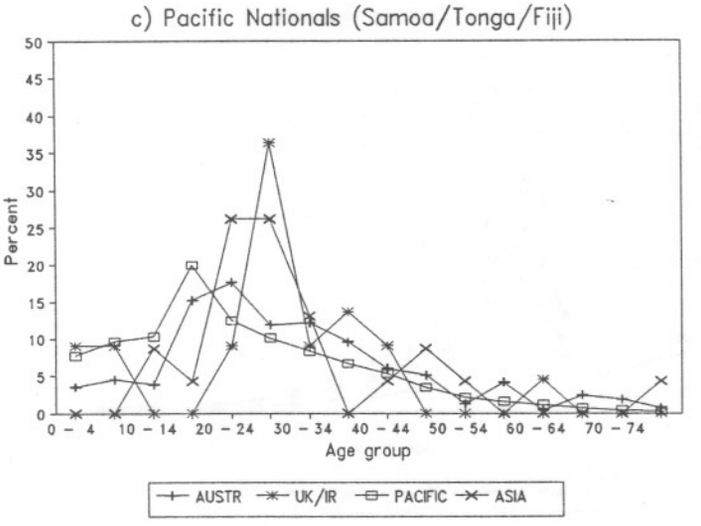
Source: Department of Statistics

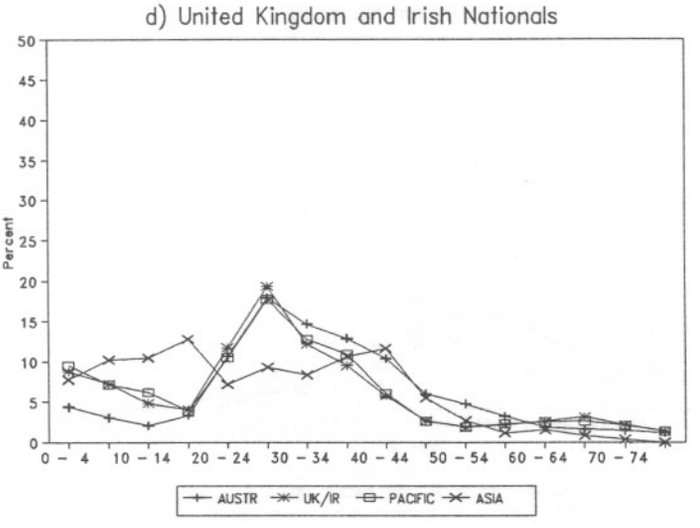
couples. Note the variation in whether it is the arrival peak or the departure peak that is the earlier. In the case of New Zealanders it is the arrivals peak that is the later (since they must first depart in order to return) whereas in the case of Pacific Islanders it is the departures peak that is the later, while the Australian and United Kingdom profiles are less clear cut.

Figure 29 provides age profiles by country of origin [that is, for the flows represented by the intersection of the total column and the arrivals and departures rows in Table 13B]. It is apparent that migration to and from the United Kingdom and Ireland is the most highly concentrated in the young adult age groups, while arrivals from Asia had the most balanced age structure.

Figures 30-32 provide age profiles by both nationality and country of origin or destination [that is, for the individual cells of the arrivals and departures matrices of Table 13B and Figure 27]. Figures 30 and 31 show nationality by origin/destination, whereas Figure 32 shows origin/destination by nationality.

FIGURE 30: Age Profiles for PLT Migrants, Nationality of Arrivals by Country of Origin, 1986-91 (contd)



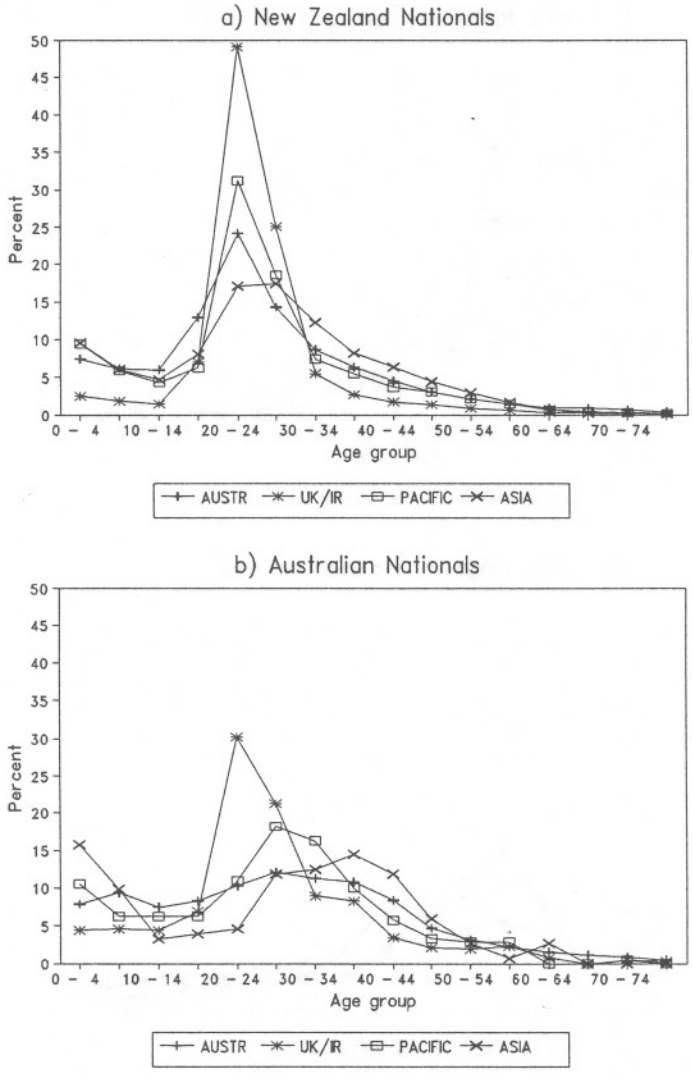


Source: Department of Statistics

Figures 30(a) and 31(a) update Figure 12 of *On the Move* which shows the age profiles of PLT migration of New Zealand nationals to and from different countries. The remainders of Figures 30 and 31 provide equivalent graphs for the other nationalities. It is apparent that there is considerable variation in the composition of each national flow depending on the origin or destination. In the case of the New Zealand nationals it is the migration to and from the United Kingdom that is the most concentrated in the young adult age groups, and that to and from Asia that is the least concentrated, with migration to and from Australia and the Pacific in between.

The Australian nationals also show their highest young adult concentration in the case of migration to and from the United Kingdom, as to varying degrees do Pacific and United Kingdom nationals also. Pacific Island nationals arriving from the Pacific itself peaked at ages 15-19, whereas arrivals of United Kingdom and Irish nationals from most countries peaked at ages 25-29. Pacific

FIGURE 31: Age Profiles for PLT Migrants, Nationality of Departures by Country of Destination, 1986-91

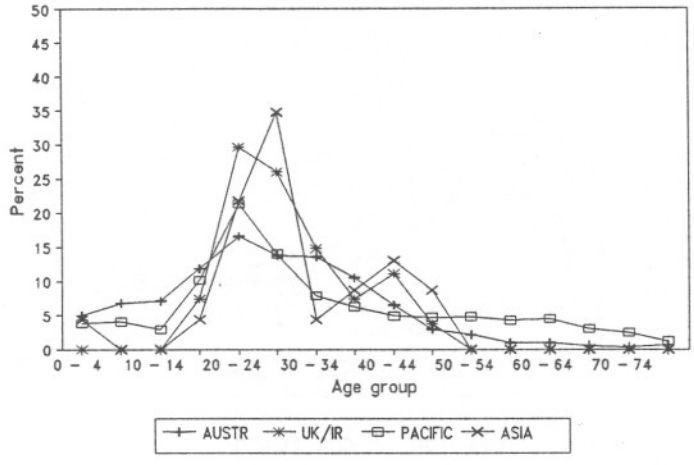


Source: Department of Statistics

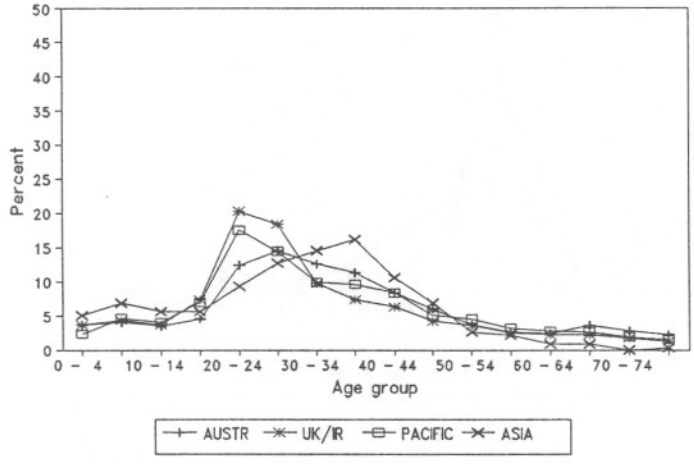
Island departures to the Pacific peaked at ages 20-24, while departures of United Kingdom and Irish nationals to the United Kingdom and Ireland also peaked at ages 20-24. The fact that the United Kingdom departures peak at an earlier age than the arrivals peak may possibly be explained by many of the individuals concerned being long established members of the New Zealand resident population behaving in a similar way to the New Zealand born. It may well not have been the pattern in earlier years when New Zealand was gaining large numbers of "new" immigrants from the United Kingdom (the initial wave of return migration from which would necessarily have been older).

FIGURE 31: Age Profiles for PLT Migrants, Nationality of Departures by Country of Destination, 1986-91 (contd)

c) Pacific Nationals



d) UK and Irish Nationals

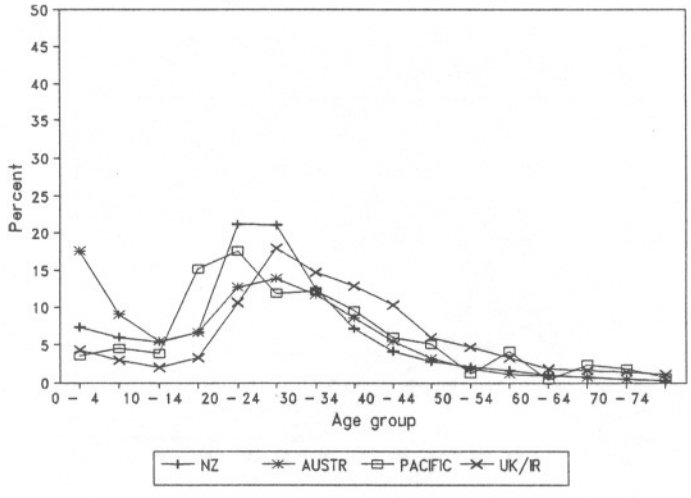


Source: Department of Statistics

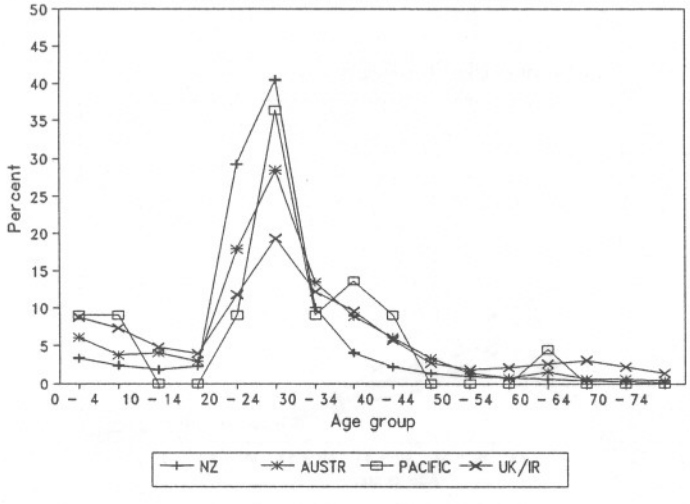
Figure 32 (following) recombines most of the profiles in Figures 30-32 in order to show origin/destination by nationality. Looking at the flows to and from Australia it is apparent that it is the New Zealanders who show the sharpest concentration into the young adult age groups although the arrivals of Pacific Islanders show a younger peak (there are very few individuals involved in the latter case, however; refer Table 13B). In the case of migration to and from the United Kingdom and Ireland it is again the New Zealanders who show the sharpest concentration into the young adult age groups, while the United Kingdom and Irish nationals have the most balanced age structure. Migration to and from Asia is more balanced in most cases with Pacific Islanders being the most highly concentrated in the young adult age groups, though it is debatable how much significance should be attached to so small a flow.

FIGURE 32: Age Profiles for PLT Migrants, Origin and Destination by Nationality, 1986-91

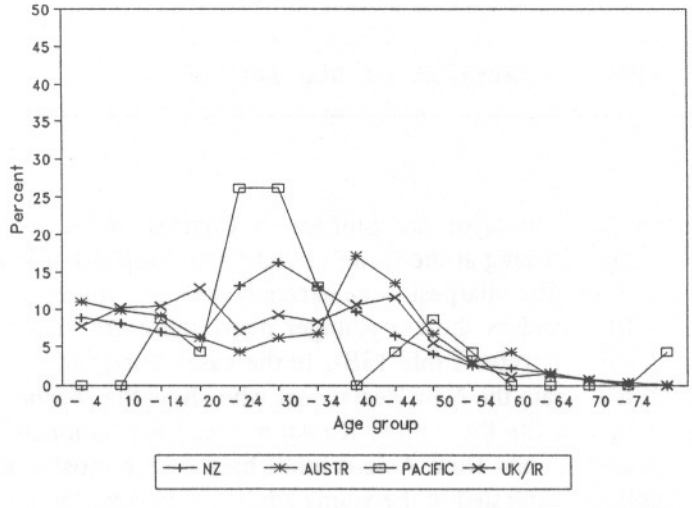
a) Arrivals from Australia



b) Arrivals from UK and Ireland



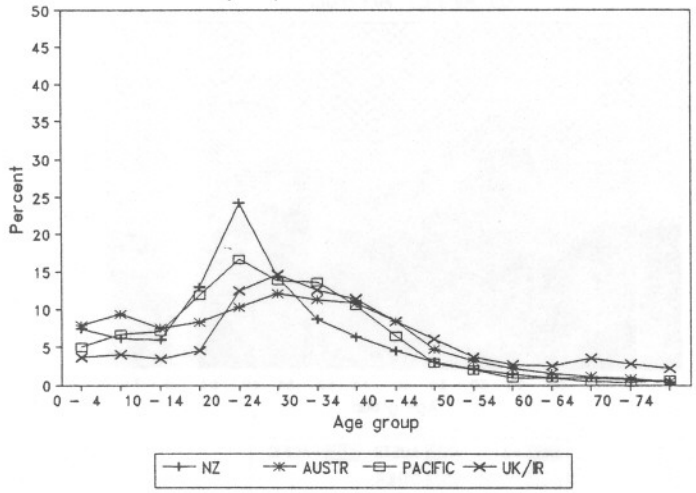
c) Arrivals from Asia



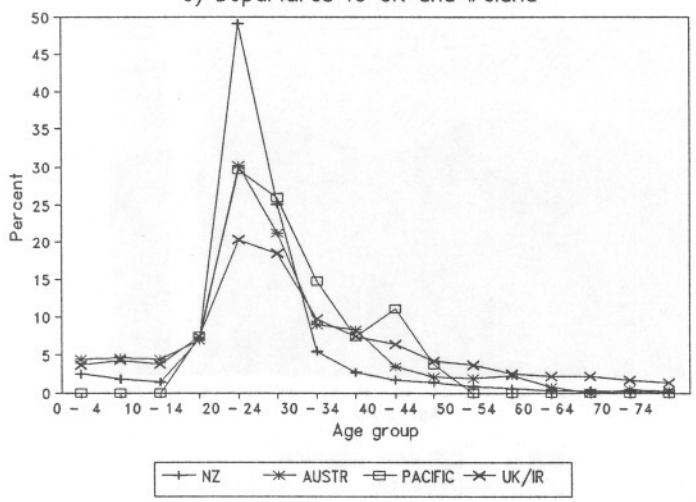
Source: Department of Statistics

FIGURE 32: Age Profiles for PLT Migrants, Origin and Destination by Nationality, 1986-91 (contd)

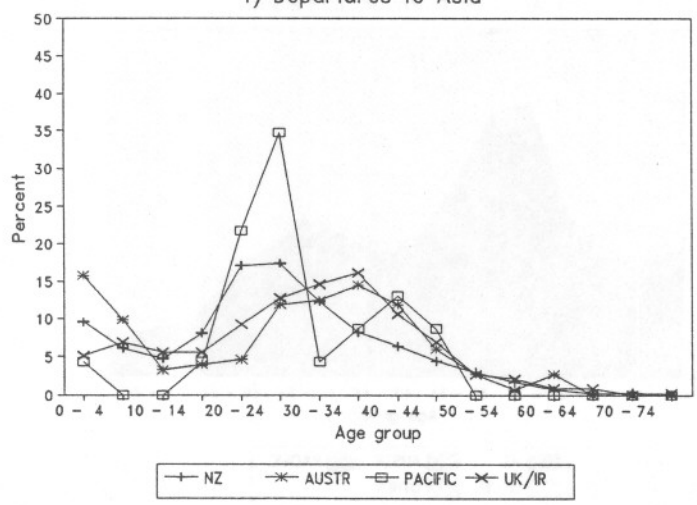
d) Departures to Australia



e) Departures to UK and Ireland

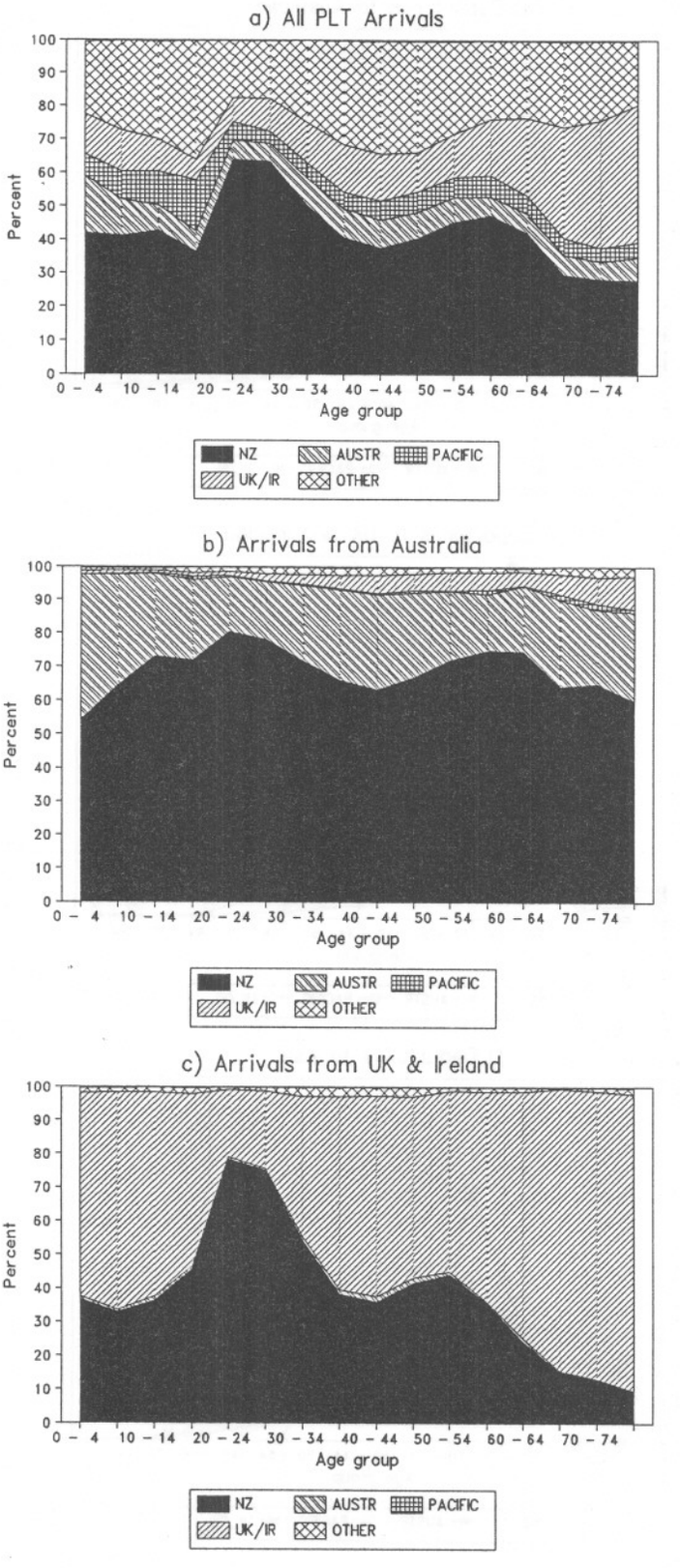


f) Departures to Asia



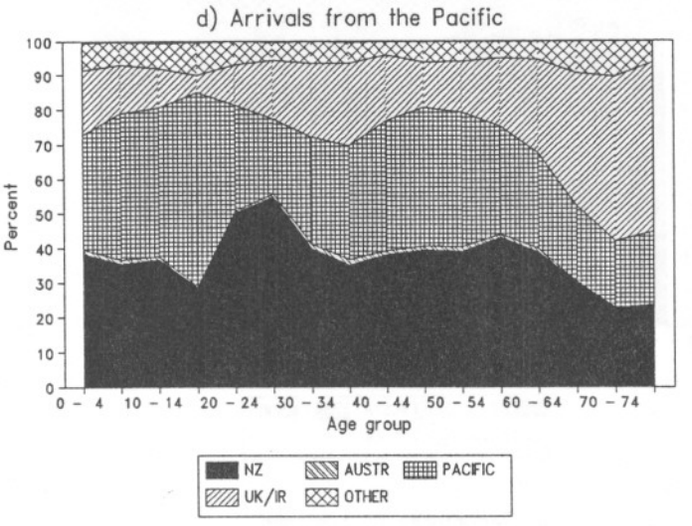
Source: Department of Statistics

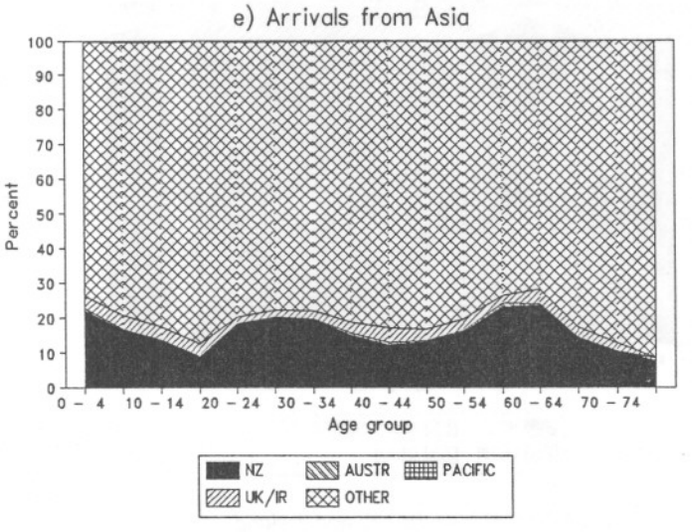
FIGURE 33: Nationals as Percentage of Age Group by Country of Origin, 1986-91



Source: Department of Statistics

FIGURE 33: Nationals as Percentage of Age Group by Country of Origin, 1986-91





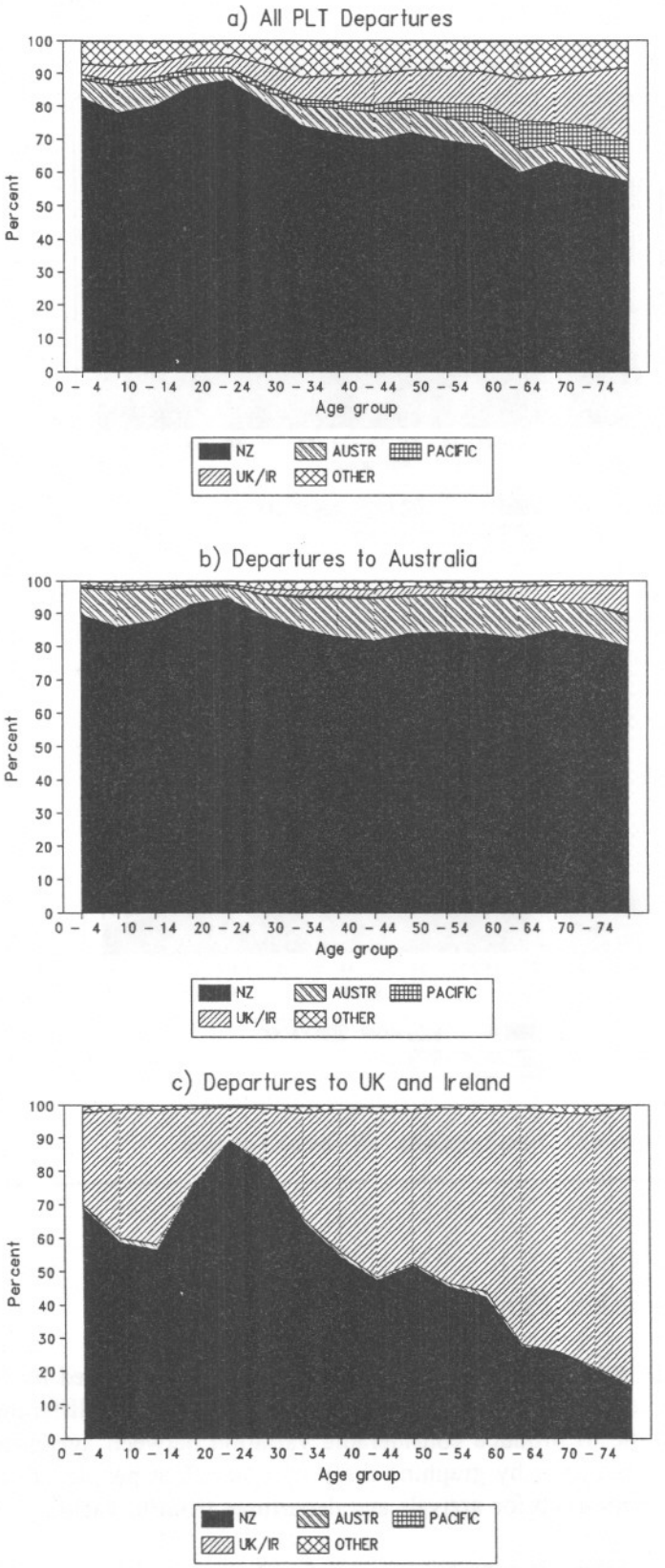
Source: Department of Statistics

Composition of Migration Flows by Age

Figures 28-32 graphed the age structures of various migration flows defined by nationality and origin or destination. Figures 33 and 34 on the other hand show how the differences in migrant flow age structures combine to produce considerable variation between age groups in who is moving where. This has been done by graphing the proportions that people of each nationality form of migrants in each age group for arrivals and departures from/to various countries.

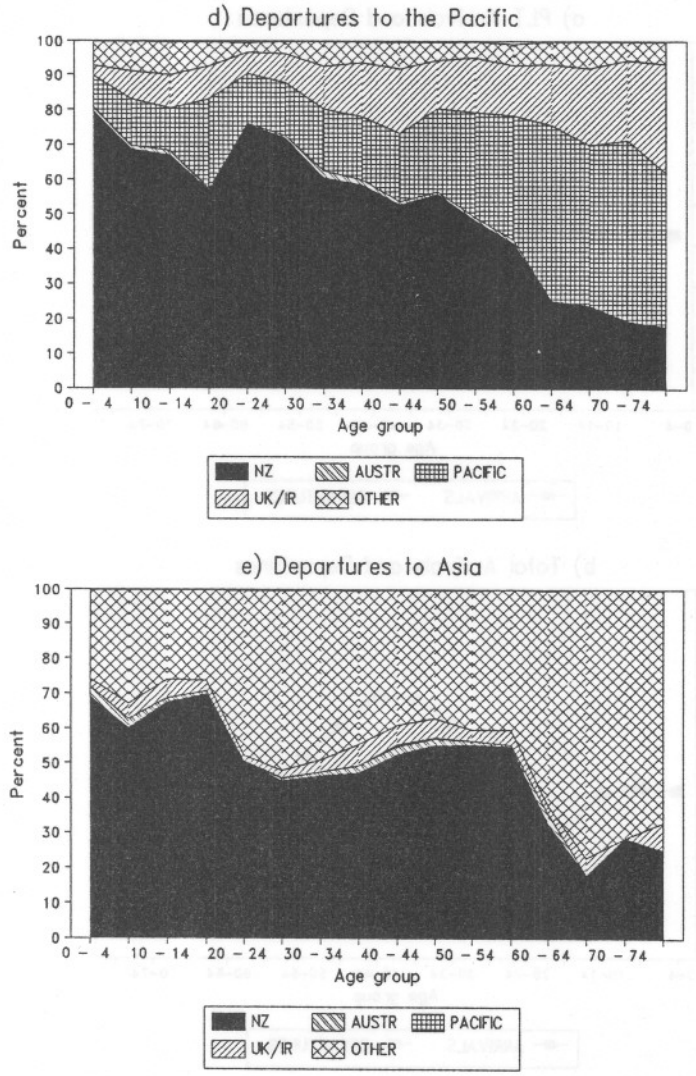
Figures 33 and 34 show that there is considerable variation by age in the composition of arrivals and departures. If there was no such variation then the different shadings in Figures 33 and 34 would simply appear as horizontal rectangles. It is apparent that this is far from the case.

FIGURE 34: Nationals as Percentage of Age Group by Country of Destination, 1986-91



Source: Department of Statistics

FIGURE 34: Nationals as Percentage of Age Group by Country of Destination, 1986-91 (contd)

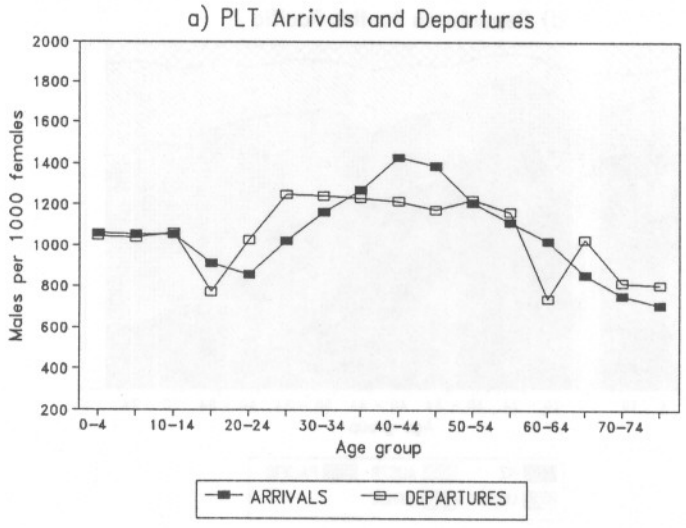


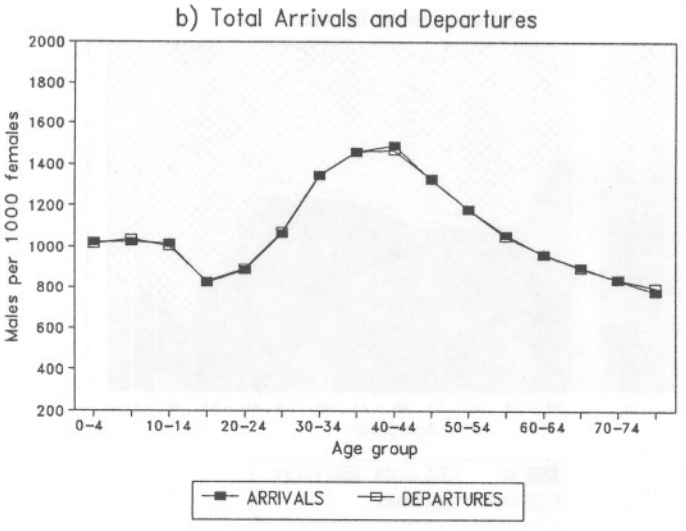
Source: Department of Statistics

New Zealand nationals show sometimes large, sometimes small, but always highly variable proportions of the numbers of migrants of each age group in each migration flow. It is noteworthy that in most instances Non - New Zealanders make up much larger proportions of the older than the younger migrants affecting even the patterns of total arrivals and departures. The greater contribution of United Kingdom and Irish nationals to migration at older age groups applies not just to migration to and from the United Kingdom itself (Figures 33c and 34c), but also to migration from Australia to a degree (Figure 33b) and to migration both to and from the Pacific as well (Figures 33d and 34d).

Unsurprisingly, Pacific Island nationals make up above average proportions in older age groups migrating to and from the Pacific (Figures 33d and 34d). "Other" (principally Asian) nationals make up particularly large proportions of older departures to Asia (Figure 34e), to almost the

FIGURE 35: Migration Flow Sex Ratios 1986-91, PLT and Total Arrivals and Departures





Source: Department of Statistics

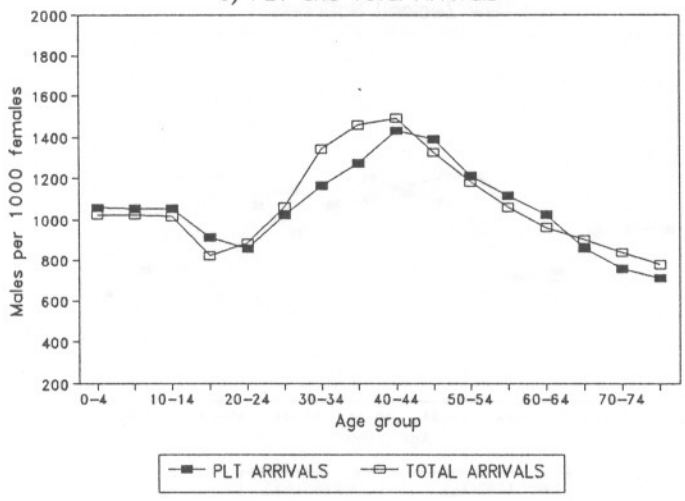
same degree that UK/Irish nationals dominate older migration to the UK and Ireland (Figure 33c). Arrivals from Asia show the nearest to a uniform composition of migrants across all ages (Figure 33e), but even in this case the proportions of New Zealand nationals vary noticeably between age groups.

Sex Ratios

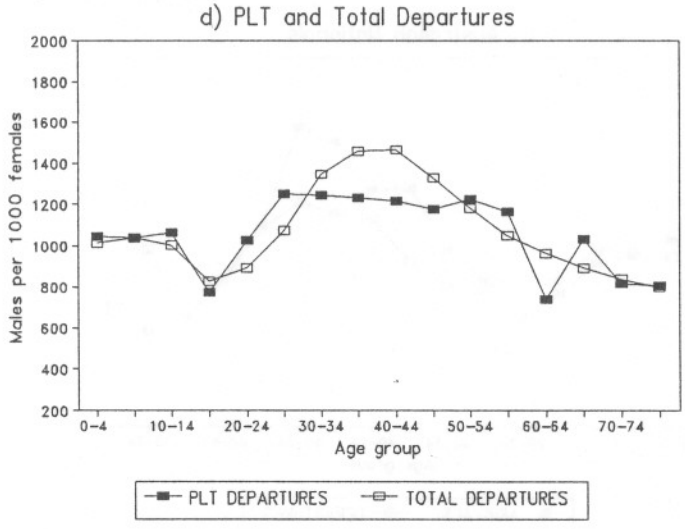
The analysis of the composition of migration flows has so far addressed only age and not gender. Figures 35 to 41 present sex ratios for most of the migration flows identified earlier in Part C. These have been calculated as the number of males per 1000 females in each age group. Exact balances between males and females in each instance would result in straight lines at a value of

FIGURE 35: Migration Flow Sex Ratios 1986-91, PLT and Total Arrivals and Departures (contd)

c) PLT and Total Arrivals



d) PLT and Total Departures



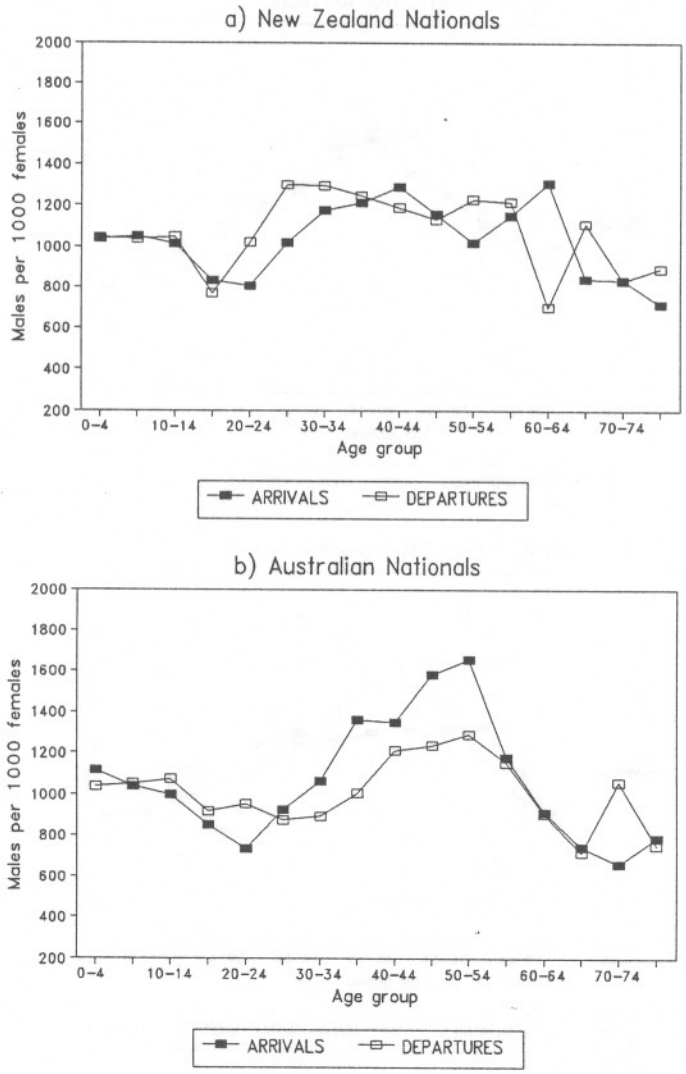
Source: Department of Statistics

1000 in each of the graphs, which the most casual glance shows to be far from the case. Values in fact range widely with instances of either sex exceeding migration by the other to the extent of 50 percent or more not uncommon.

Figure 35 compares sex ratios for PLT arrivals and departures with those for total arrivals and departures, while the following figures relate to PLT migration alone.

Figure 35 shows that the sex ratios for total arrivals and departures are almost identical to each other. This is not surprising given that short-term migration makes up most of the total, and that most short-term arrivals do depart within a year, and most short-term departures do return within a year, so that most short-term arrivals and departures do appear in both flows. They may well depart or return in a different March year but the grouping together of five March years will have

FIGURE 36: Migration Flow Sex Ratios 1986-91, by Nationality

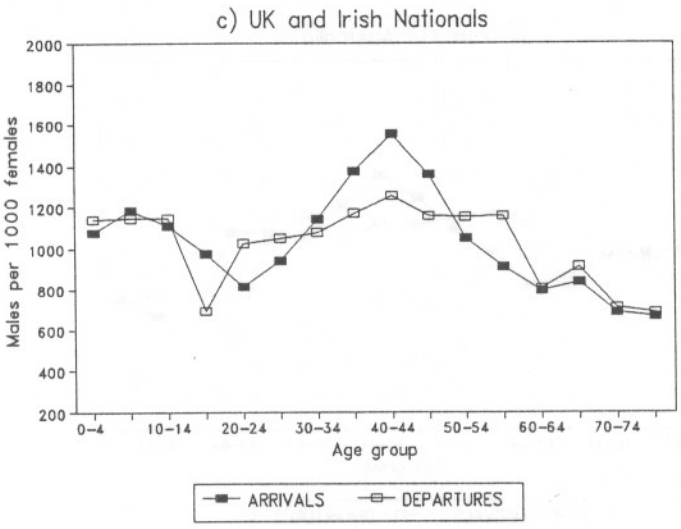


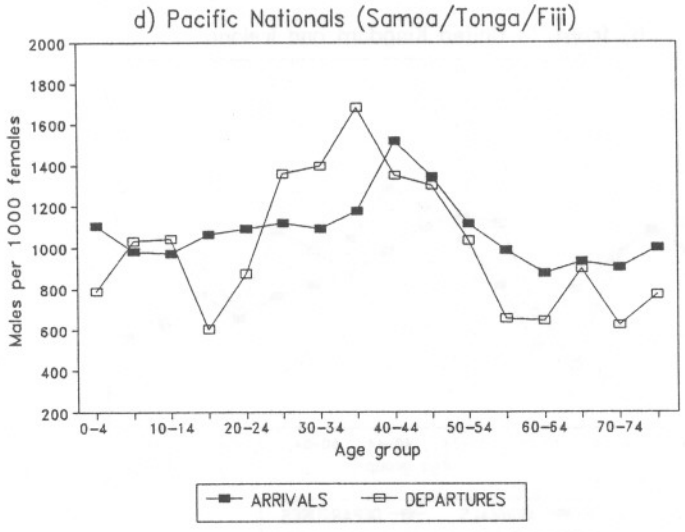
Source: Department of Statistics

eliminated most of this effect. This is not the case with PLT arrivals and departures which will not involve a move in the opposite direction within 12 months (apart from category jumping), although a significant proportion may migrate again during a five-year period.

It is apparent that sex ratios for total arrivals and departures vary considerably across age groups with almost exact balance in the child age groups, a preponderance of women at ages 15-19 and 20-24, and a substantial preponderance of men between ages 30 and 55. The ratios in retirement age groups fall back to close to the actual ratios of men to women in the total population.

FIGURE 36: Migration Flow Sex Ratios 1986-91, by Nationality (contd)

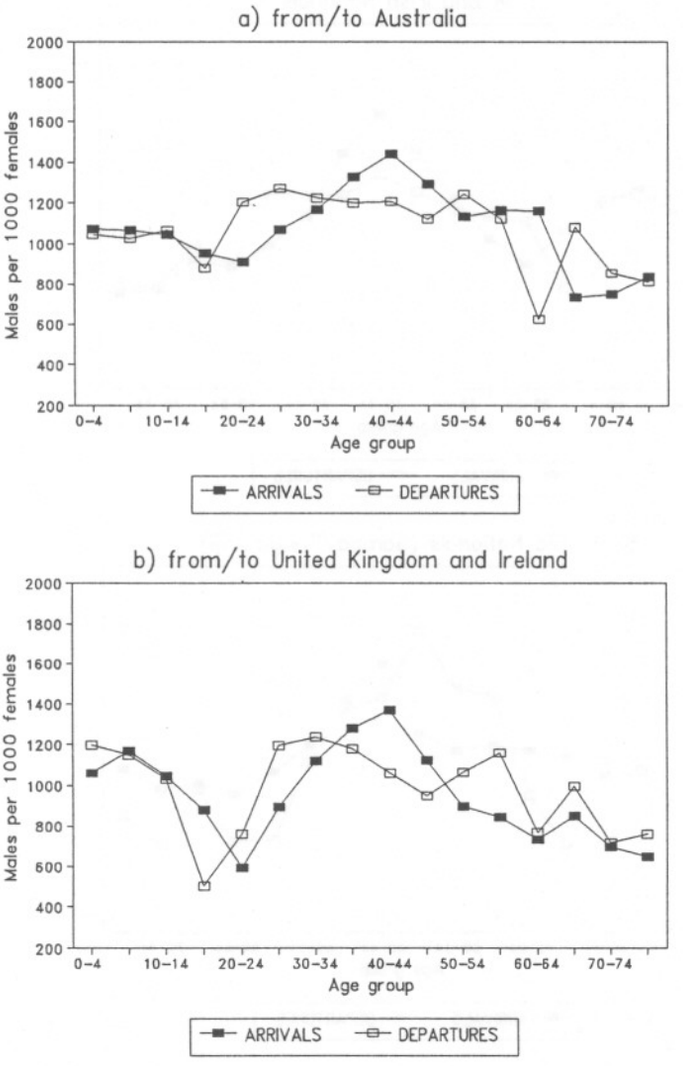




Source: Department of Statistics

The sex ratios for PLT arrivals are fairly close to those for Total arrivals with the most significant differences being a slightly lesser preponderance of women at age 15-19 and of men over women at ages 30-39. The female preponderance at age 15-24 presumably reflects in part the lesser likelihood of female late teenagers to be continuing their education. At both this and later ages, the ratios are likely to reflect the fact that adult women are commonly a few years younger than their domestic partners and therefore will be in a younger five year age group than males with whom they are travelling in a significant proportion of instances. Business trips could also contribute to explaining some high sex ratios in the case of Short-Term and Total migration but not PLT migration to any great degree. It is beyond the scope of the project to attempt to explain the variation in ratios more fully.

FIGURE 37: Migration Flow Sex Ratios 1986-91, by Country of Last/Next Permanent Residence

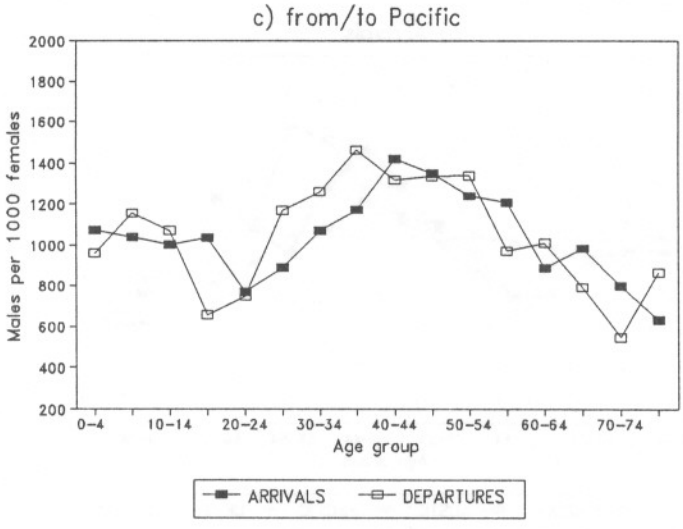


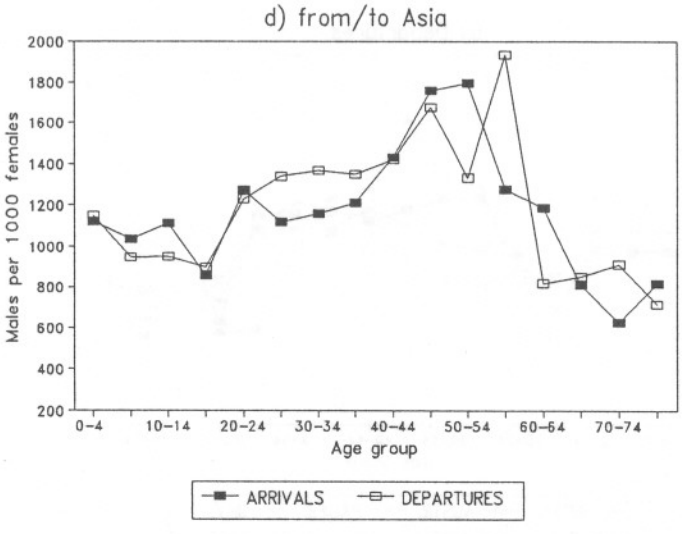
Source: Department of Statistics

The sex ratios for PLT departures differ from the pattern for Total migration to a greater degree than do arrivals, there being higher ratios at ages 20-24 and 25-29, but lower ratios in those age groups where the ratios for Total departures peak.

Figure 36 plots the ratios for PLT arrivals and departures for each of the main nationalities in turn, and Figure 37 does the same for the main origins and destinations. Figure 38 overlays the ratios for each nationality for arrivals and departures separately. Figure 39 does the same for countries of origin or destination.

FIGURE 37: Migration Flow Sex Ratios 1986-91, by Country of Last/Next Permanent Residence (contd)

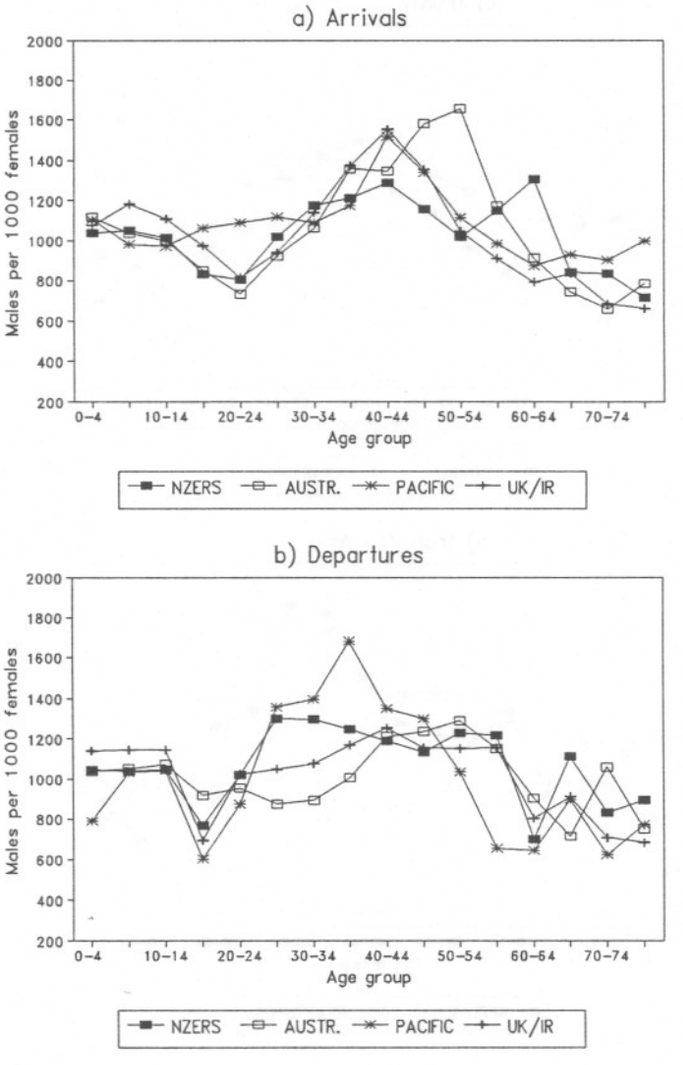




Source: Department of Statistics

Figure 40 compares the sex ratios for PLT arrivals and departures of New Zealand nationals from/to Australia, the United Kingdom and Ireland and the Pacific. The equivalent graph for Asia has been omitted because of extreme values in some age groups that are of doubtful significance given the very small numbers of individuals involved. Figure 41 plots sex ratios for PLT arrivals and departures of selected nationalities from/to particular countries, focusing on the primary origin/destination of each nationality (as distinct from migration to/from all countries as shown in Figure 36).

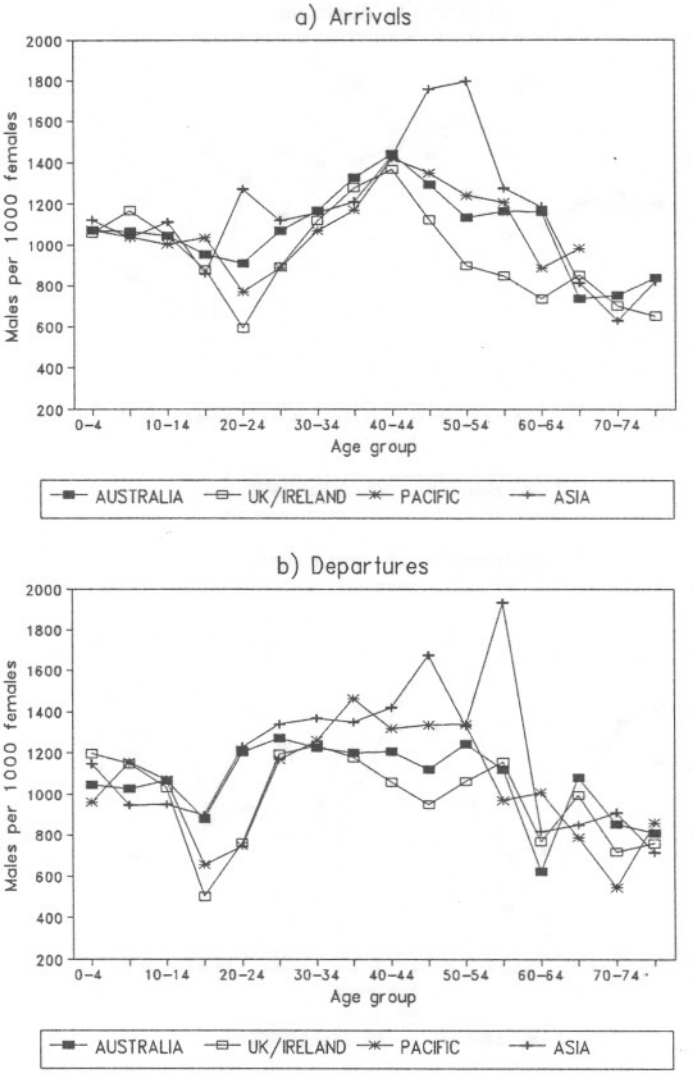
FIGURE 38: Migration Flow Sex Ratios 1986-91, Arrivals and Departures by Nationality



Source: Department of Statistics

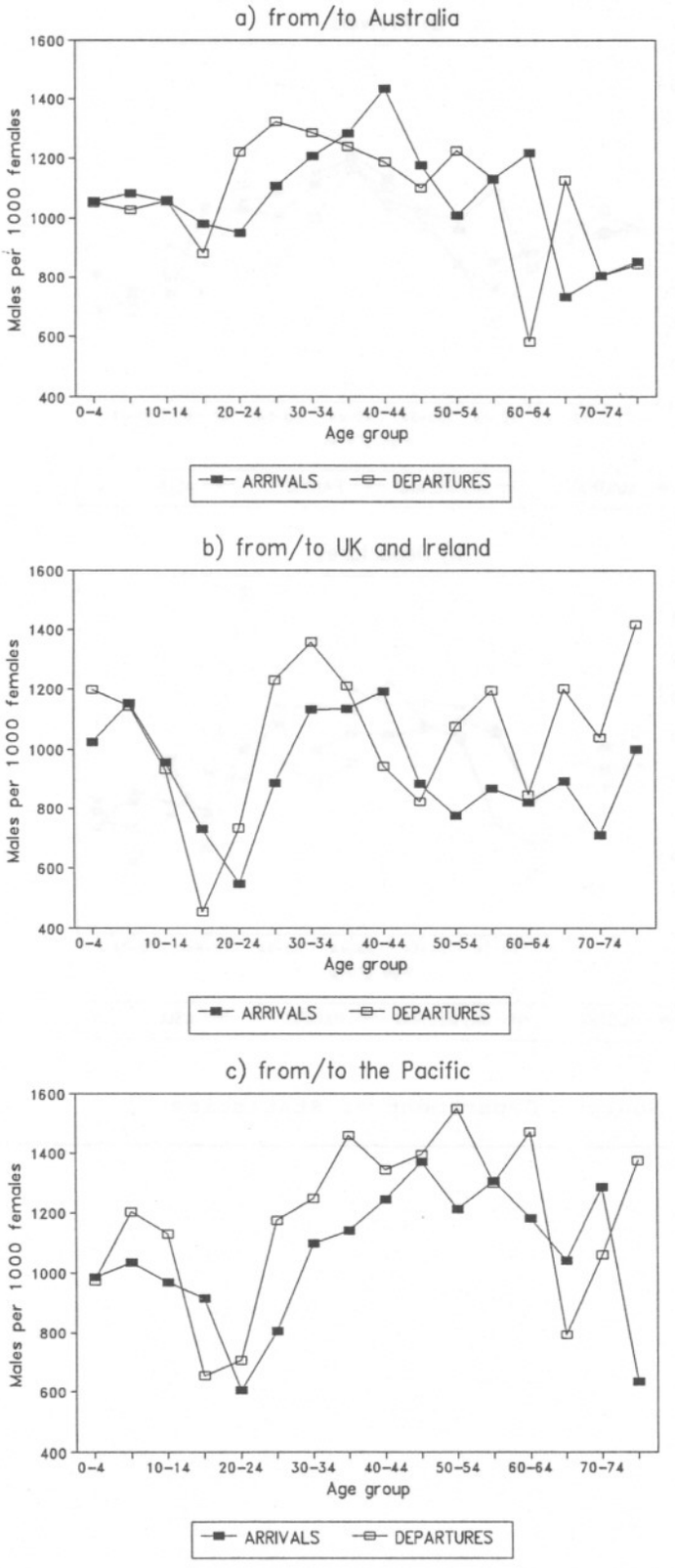
No attempt has been made to explain in detail the patterns shown in Figures 36-41. It is sufficient to note for the present purpose that they do show considerable variation from the pattern for total PLT arrivals and departures, adding to the picture of New Zealand international migration as one of considerable variety and complexity.

FIGURE 39: Migration Flow Sex Ratios 1986-91, Arrivals and Departures by Origin/Destination



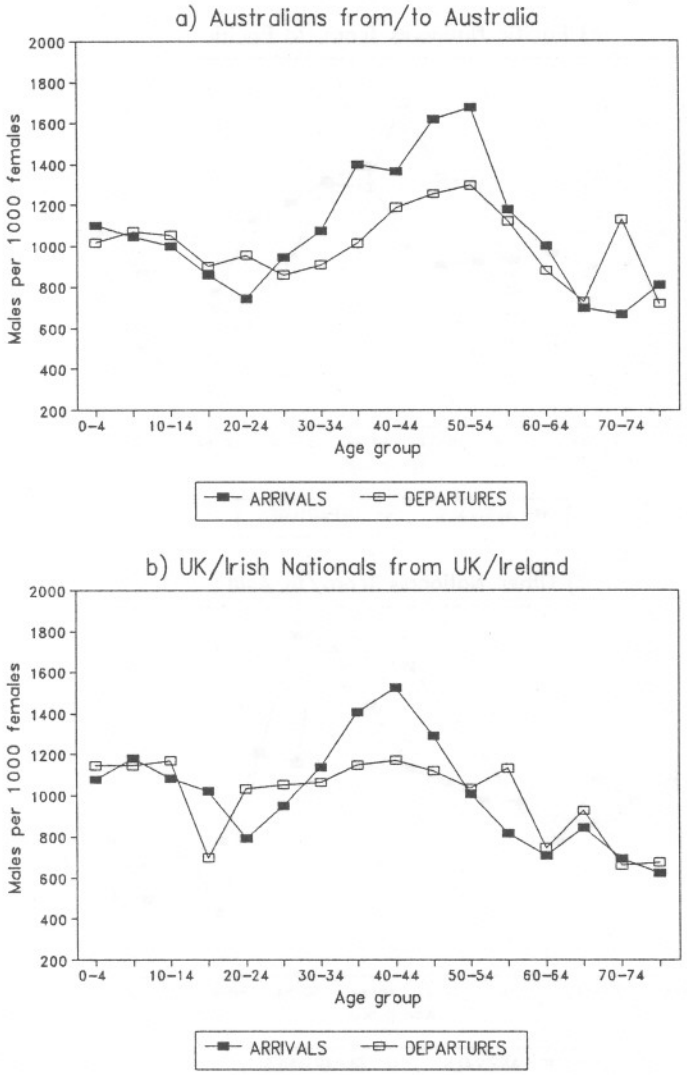
Source: Department of Statistics

FIGURE 40: Migration Flow Sex Ratios 1986-91, New Zealand Nationals by Origin/Destination



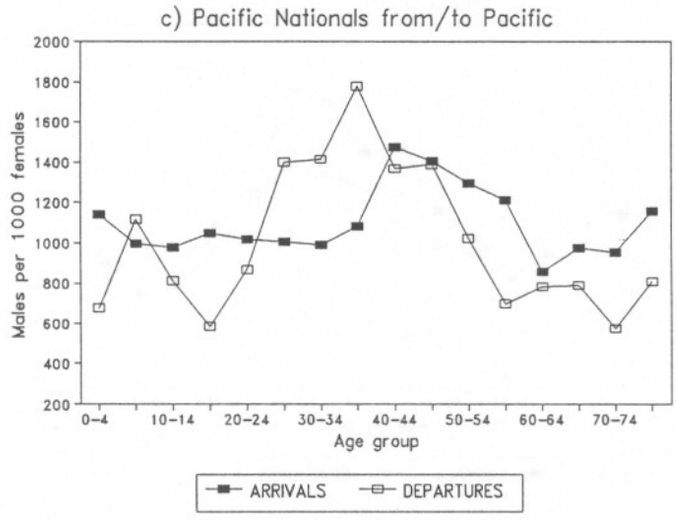
Source: Department of Statistics

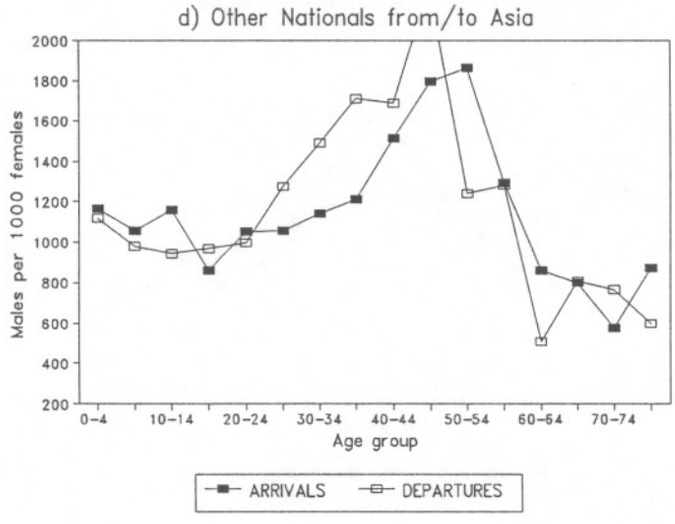
FIGURE 41: Selected Migration Flow Sex Ratios, 1986-91



Source: Department of Statistics

FIGURE 41: Selected Migration Flow Sex Ratios, 1986-91 (contd)





Source: Department of Statistics

Comparisons with Other Periods

The analysis in Part C has been confined to the 1986-91 period so far. It is of relevance to establish whether the patterns of this period are of general applicability or specific to the particular period, given the major changes in the national composition and origins and destinations of migrants that have occurred over the last 45 years, and more particularly the last 20 or so. This is particularly important given the underlying interest in the possibility of using the analysis as a base upon which to build a more developed monitoring and forecasting system.

It was beyond the resources and scope of the project to examine fully the question of the stability of migrant composition through time. What has been done is to make a number of comparisons with selected earlier years and between selected years within the 1986-91 period. The earlier years selected are 1973-74 and 1978-79 which are, respectively, the years of New Zealand's record net migration gain and record net migration loss. It is hoped that comparing the recent period with the two extremes will provide pointers to whether patterns are stable through time. Similar comparisons are also shown between the two extremes within the 1986-91 period.

Comparisons Between Age Profiles for Selected Years and Periods

Figure 42 compares age profiles similar to those in Figures 28-32, for male and female PLT arrivals and departures for 1973-74, 1978-79 and 1986-91; that is the two earlier peaks with the last five years.

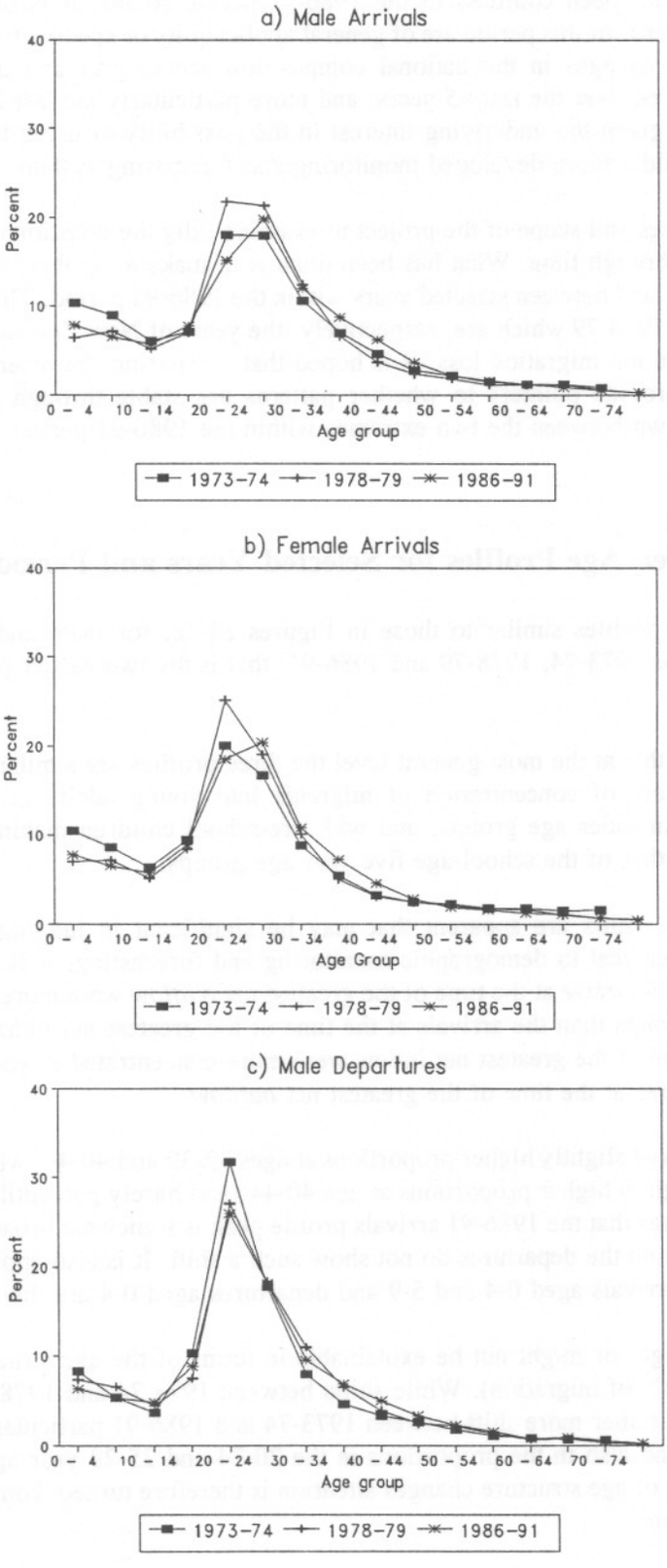
These comparisons show that at the most general level the three profiles are similar, all showing the familiar general pattern of concentration of migrants into young adult age groups, low proportions of migrants in older age groups, and with pre-school children making up slightly larger proportions than either of the school-age five year age groups.

At a more detailed level, shifts are apparent that may be significant in judging the stability through time of patterns critical to demographic monitoring and forecasting. It is apparent that those PLT migrants who did *arrive* at the time of the greatest net *outflow* were more concentrated in the young adult age groups than the arrivals at the time of the greatest net *inflow*. Similarly, PLT *departures* at the time of the greatest net *inflow* were more concentrated in young adult age groups than were departures at the time of the greatest net *outflow*.

The 1986-91 arrivals showed slightly higher proportions at ages 35-39 and 40-44, while the 1986-91 departures showed slightly higher proportions at age 40-44 (and barely perceptibly at age 45-49). Figure 42 also indicates that the 1986-91 arrivals profile peak is somewhat broader and older than the 1973-74 peak, while the departures do not show such a shift. It is also apparent that the 1973-74 proportions for arrivals aged 0-4 and 5-9 and departures aged 0-4 are the highest.

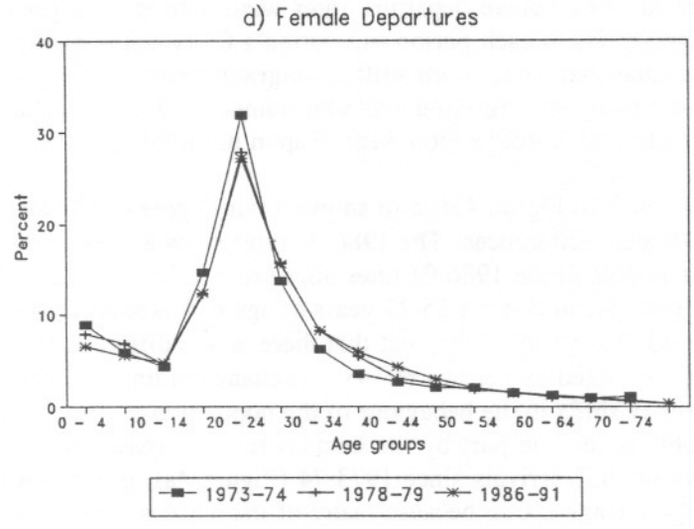
Variations of this type might or might not be explainable in terms of the age structure changes in the populations "at risk" (of migration). While shifts between 1973-74 and 1978-79 were not very great, there has been rather more shift between 1973-74 and 1986-91 particularly in respect of the child proportions and also in the proportions in the 20-24 and 25-29 year age groups. In order to reduce the effects of age structure changes attention is therefore turned from age profiles to examining migration *rates*.

FIGURE 42: Age Profiles for PLT Migrants 1973-74, 1978-79 and 1986-91



Source: Department of Statistics

FIGURE 42: Age Profiles for PLT Migrants 1973-74, 1978-79 and 1986-91 (contd)



Source: Department of Statistics

PLT Migration Rates

Migration rates relate migration to population rather than considering migration independently as do the age profiles. Rates thereby provide a means of controlling for changes in age and/or sex composition. Migration rates discussed in the remainder of Part C have been calculated as PLT age or age-sex specific rates per 1000 mean (de facto) New Zealand population for the period in question. The de jure population would be a technically more appropriate denominator, but the differences for the purposes of this particular application are slight and most unlikely even to be visible in graphs of the scale reproduced here.

It is important to recognise that, strictly speaking, in these particular calculations it is only in the case of the *departure* rates that the denominator is the population "at risk" (of migration). The *arrival* rates are not relating the arrivals to the population at risk, because it is the various overseas source populations that are the population at risk as far as arrivals are concerned. Rather, what arrival rates calculated in this way are measuring is *the relative impact on the receiving population* (that is, the relative differences in the impacts on the different age-sex groups of the New Zealand resident population). To the degree that the at-risk populations have been going through similar age structure changes to the New Zealand resident population, the arrival rates will provide a certain degree of standardisation for age structure change.

Despite the above qualifications, the arrival and departure rates provide a more satisfactory basis for comparing the different points in time than do the age profiles because of the adjustment for population age structure change.

Figure 13 of *On the Move* (pp 36-37) made various comparisons between migration rates for PLT arrivals and departures, for males and females respectively, for the 1986-90 period. Figures 43A-43E update the 1986-90 data in *On the Move* to 1986-91 and compare them with the equivalent rates for 1973-74 and 1978-79. Parts A to E of Figure 43 correspond to parts (a) to (e) of Figure 13. Following graphs recombine different lines from the graphs of Figure 43 in order to facilitate

making direct comparisons, and also to make comparisons with individual years within the 1986-91 period.

Figure 43A indicates that male or female departure rates were noticeably higher or lower than each other in the same age groups in each period suggesting a fairly stable pattern up to a point. However, it also suggests that there was more shift in migration rates in the young adult peak migration age groups in the peak net migration loss year compared with the other periods, than in the case of younger or older age groups (commented upon more fully later).

The comparison of arrival rates in Figure 43B also shows a fair degree of similarity between the three periods in the male/female differences. The 1986-91 rates show a smoother profile than the two extreme periods. The profile of the 1986-91 rates does seem to be flatter and therefore older than those for the earlier periods, in that the 25-29 years of age part is sharper relative to the 20-24 years part compared with the earlier years, and that there is less difference between the peak and the mature adult rates. As noted earlier this reflects the change in impact on the New Zealand population and not necessarily shifts in the behaviour of the population at risk. It is likely that the apparent shift is explainable at least in part by the demonstrated increase in the contribution of returning New Zealanders to PLT arrivals since 1973-74 (Figure 4a), given that they are more concentrated in the 25-29 year age group because many of them are people who departed aged 20-24.

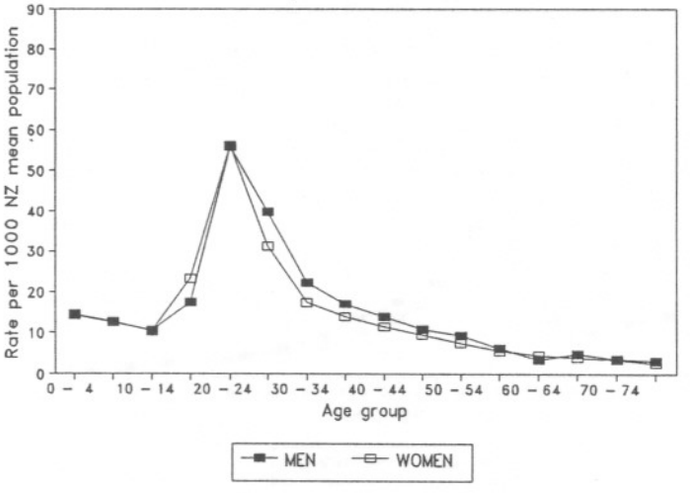
Figures 43C, D and E compare arrival and departure rates for, respectively, women, men and both sexes combined, for each of the three periods. These show a degree of general similarity between the graphs for each sex for a particular year, subject to the important qualification that the ageing of the arrivals peak by 1986-91 is more marked for men than for women.

Figures 44-47 recombine the series in Figure 43 to facilitate comparisons between years, and also add comparisons with and between the extreme years of the 1986-91 period. It is hoped that these will help to indicate whether changes in the levels of arrivals and departures are achieved by all age groups increasing or decreasing their rates in parallel, or else by more activity in the more migration prone age groups.

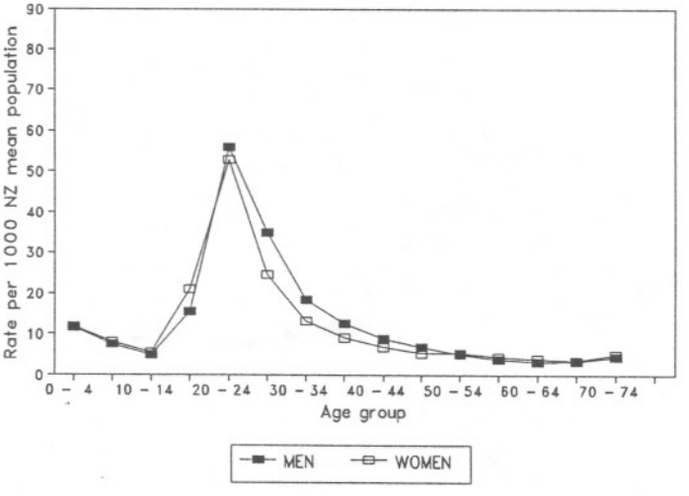
(text continues page 72)

FIGURE 43A: PLT Migration Rates by Age Group and Sex, 1986-91, 1973-74, and 1978-79 - Departures

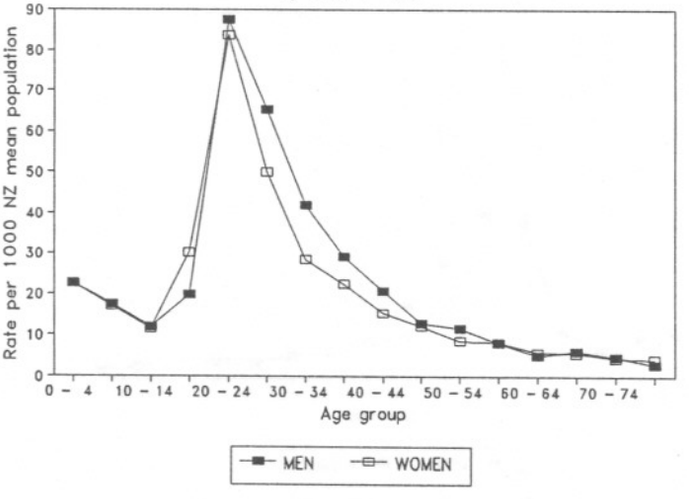
a) 1986–91



b) 1973–74

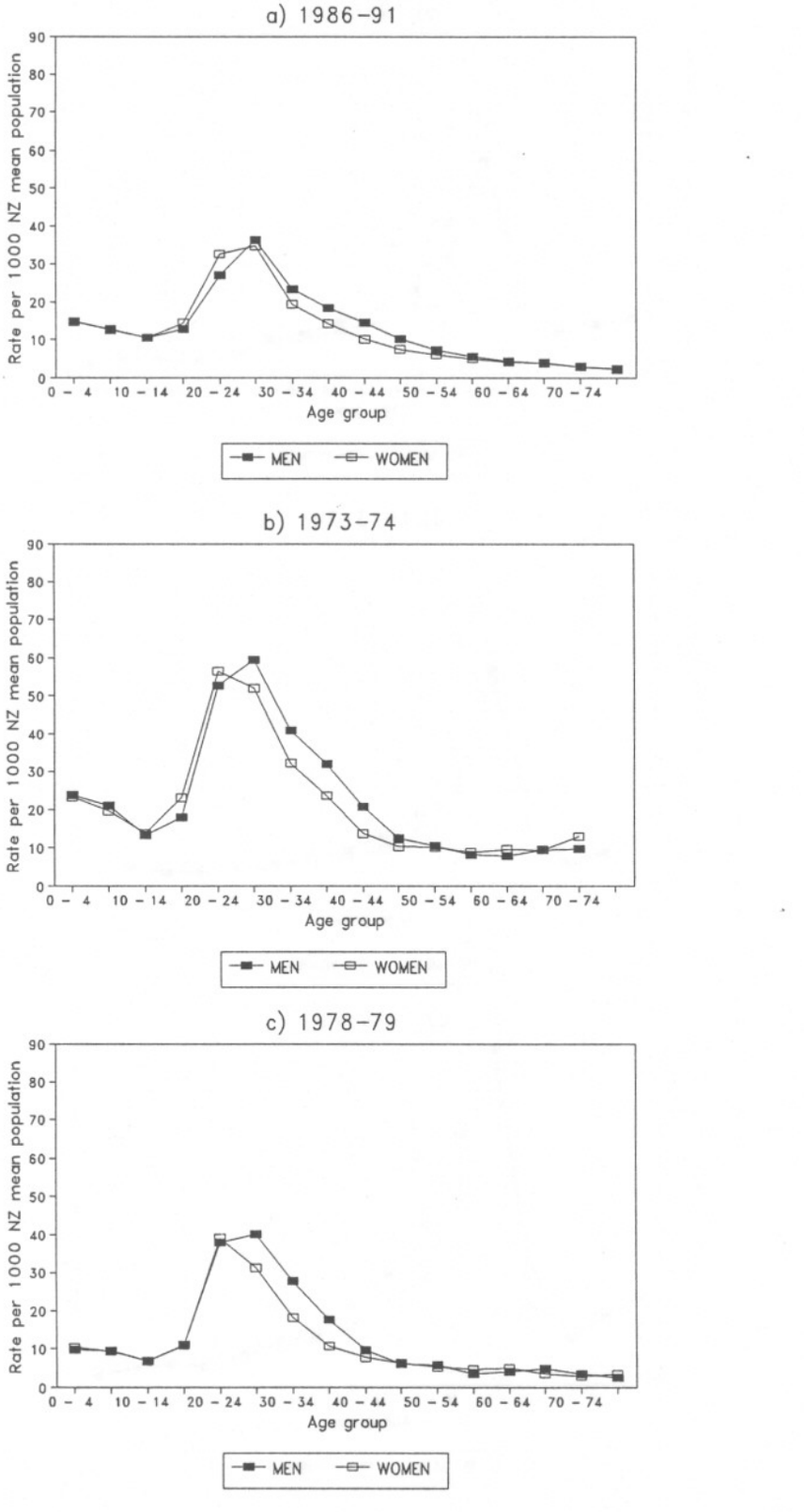


c) 1978–79



Source: Department of Statistics

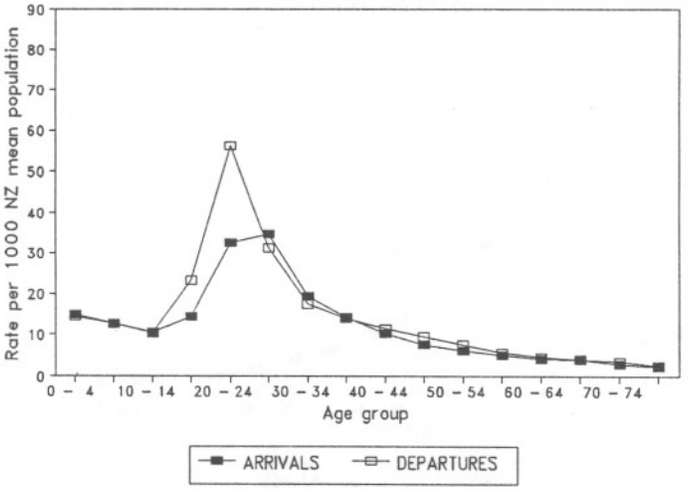
FIGURE 43B: PLT Migration Rates by Age Group and Sex, 1986-91, 1973-74 and 1978-79 - Arrivals



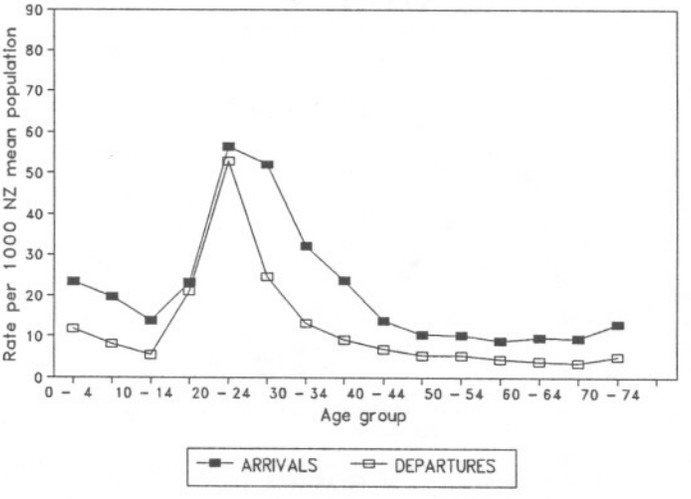
Source: Department of Statistics

FIGURE 43C: PLT Migration Rates by Age Group and Sex, 1986-91, 1973-74 and 1978-79 - Women

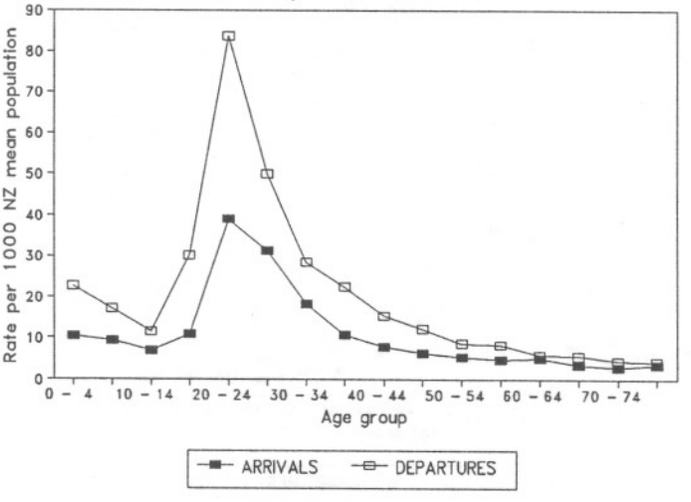
a) 1986-91



b) 1973-74



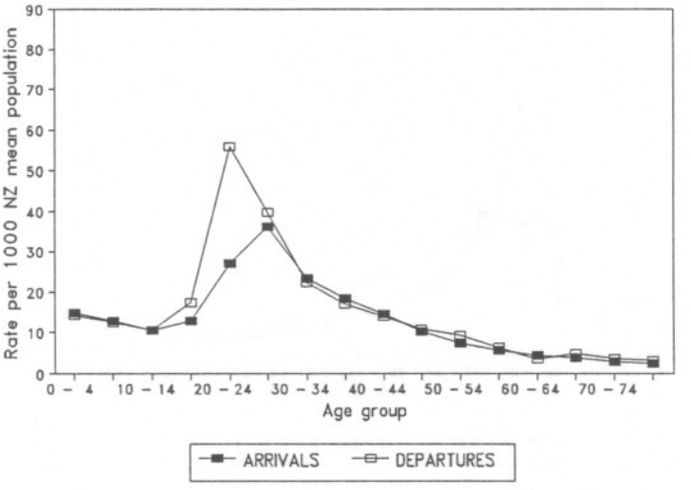
c) 1978-79



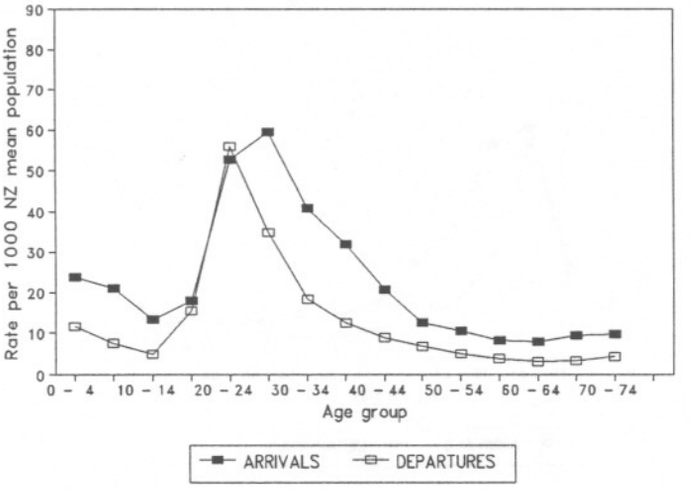
Source: Department of Statistics

FIGURE 43D: PLT Migration Rates by Age Group and Sex, 1986-91, 1973-74 and 1978-79 - Men

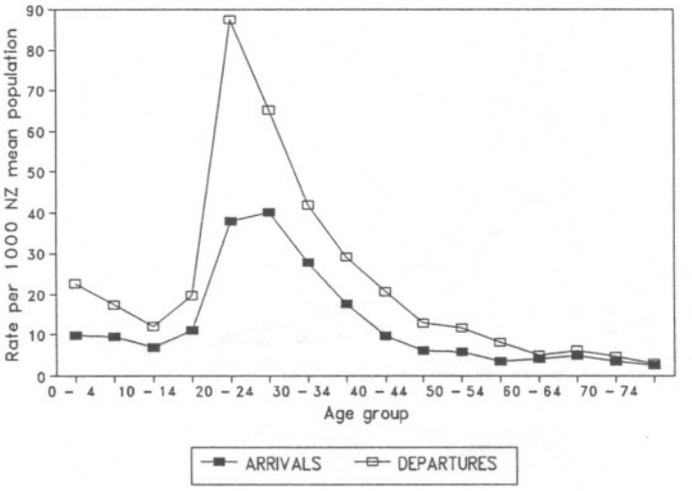
a) 1986–91



b) 1973–74



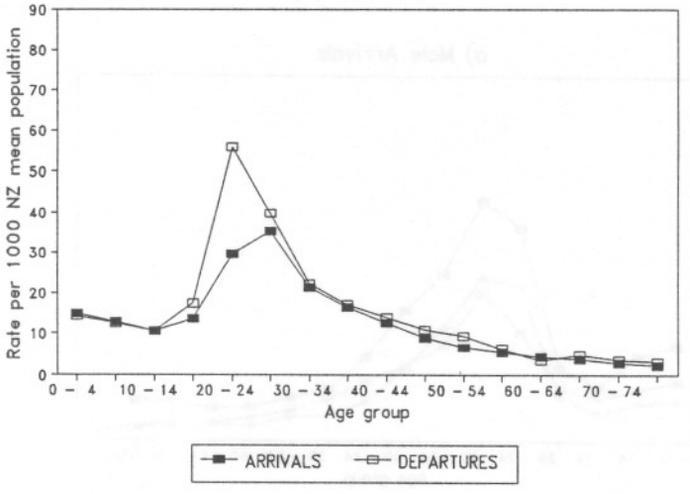
c) 1978–79



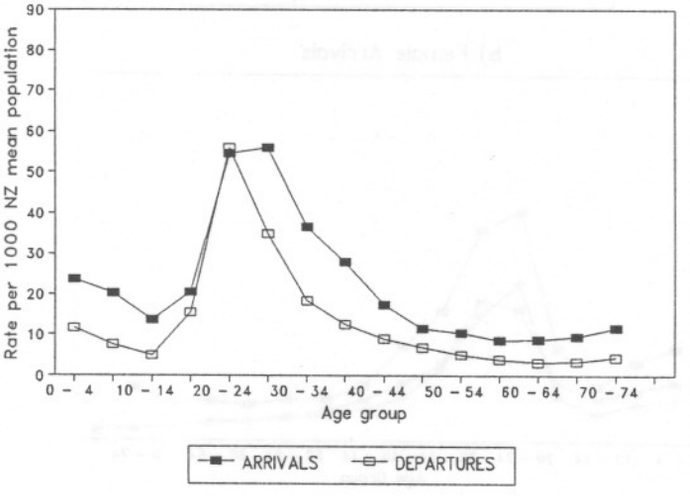
Source: Department of Statistics

FIGURE 43E: PLT Migration Rates by Age Group and Sex, 1986-91, 1973-74 and 1978-79 - Both Sexes

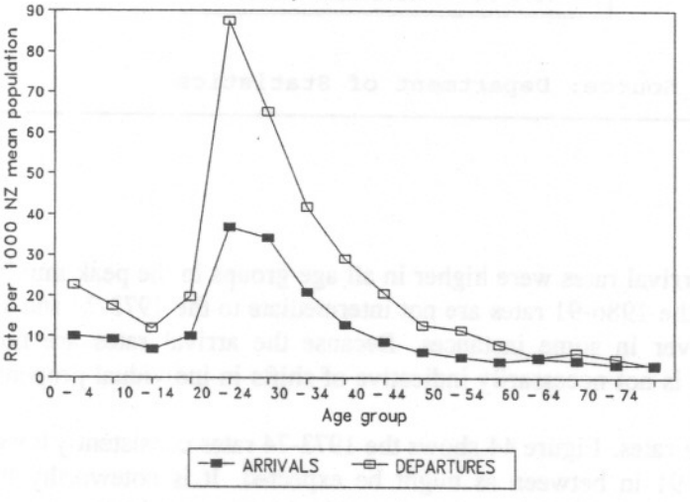
a) 1986-91



b) 1973-74

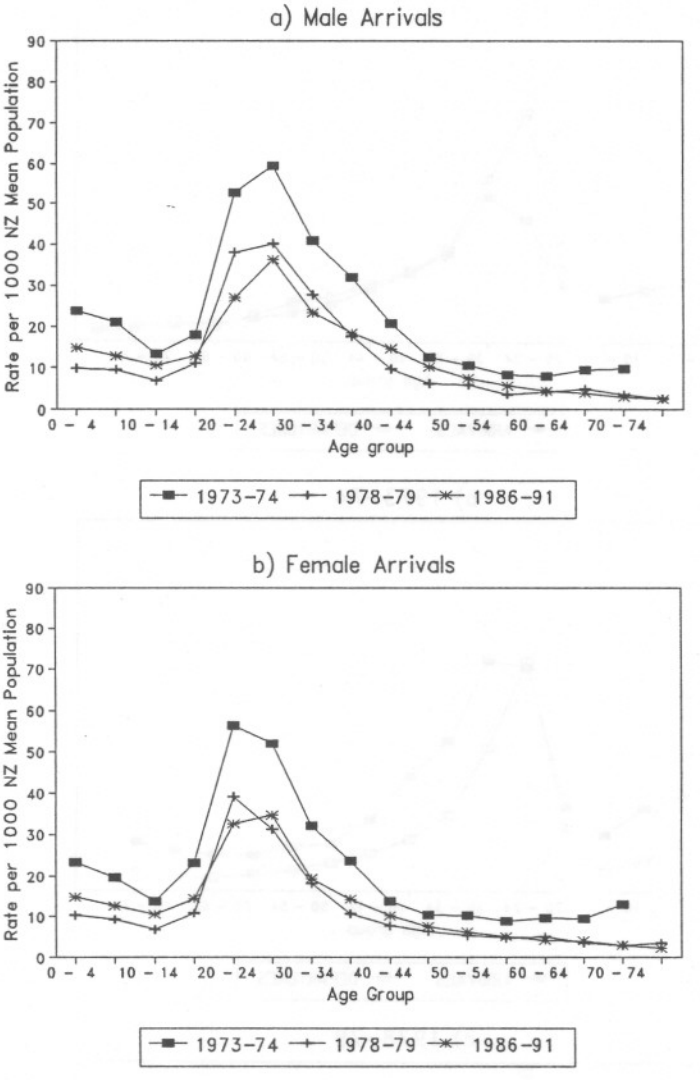


c) 1978-79



Source: Department of Statistics

FIGURE 44: PLT Migration Rates by Age Group and Sex, 1973-74, 1978-79 and 1986-91

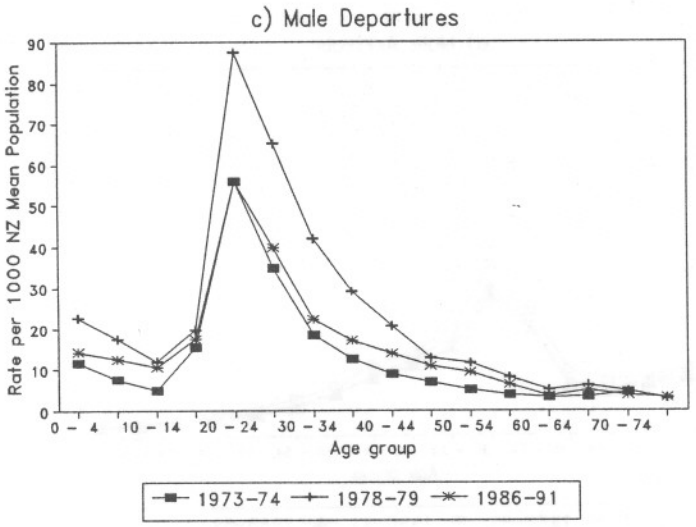


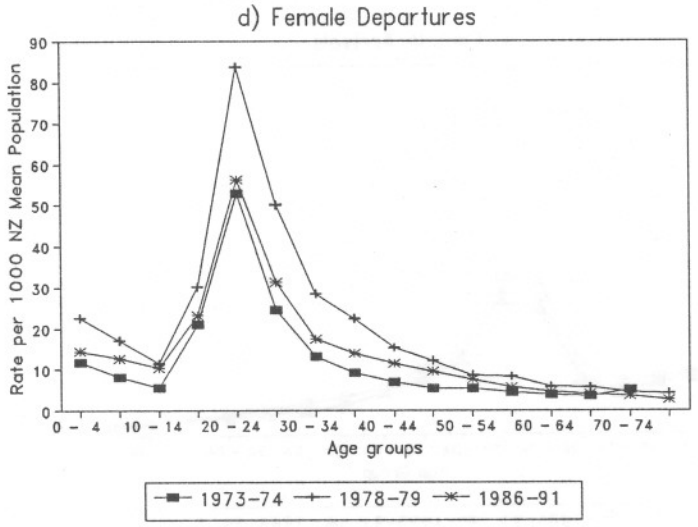
Source: Department of Statistics

Figure 44 shows that arrival rates were higher in all age groups in the peak immigration year for both sexes. However, the 1986-91 rates are not intermediate to the 1973-74 and 1978-79 rates in all cases, but cross over in some instances. Because the arrival rates are not based on the population at risk, this is not necessarily indicative of shifts in individual propensity to migrate.

In the case of departure rates, Figure 44 shows the 1973-74 rates consistently lowest and 1978-79 the highest with 1986-91 in between as might be expected. It is noteworthy that most of the additional departures in the peak year were achieved by higher rates in the more migration prone age groups indicating actual shifts in the individual migration propensities of some age groups more than others, with very little shift at all at pensioner ages.

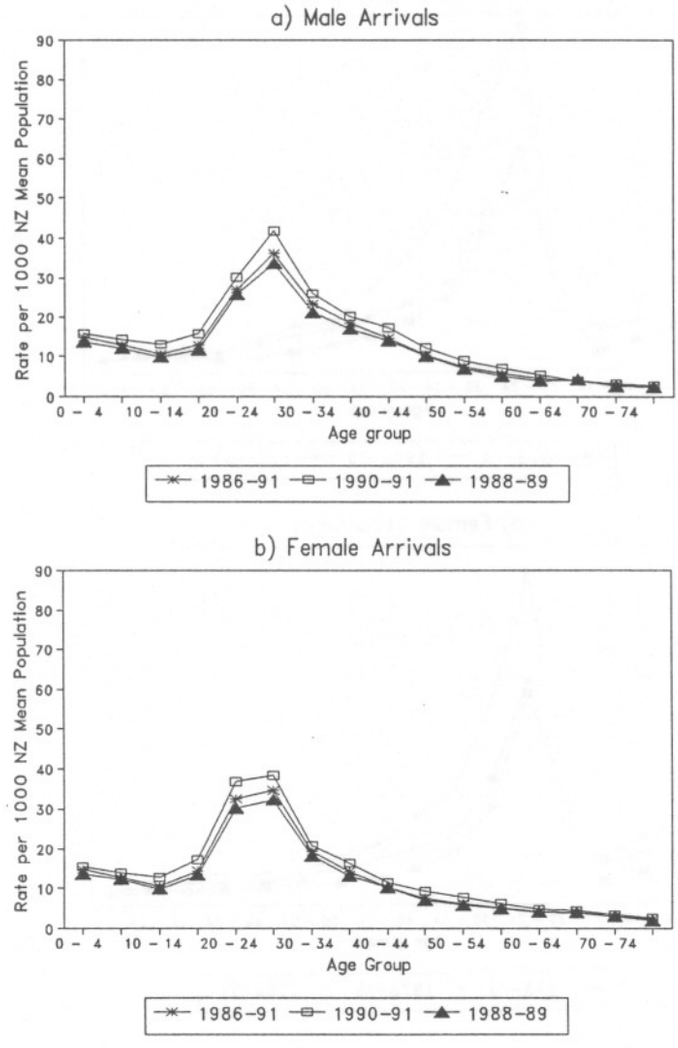
FIGURE 44: PLT Migration Rates by Age Group and Sex, 1973-74, 1978-79 and 1986-91 (contd)





Source: Department of Statistics

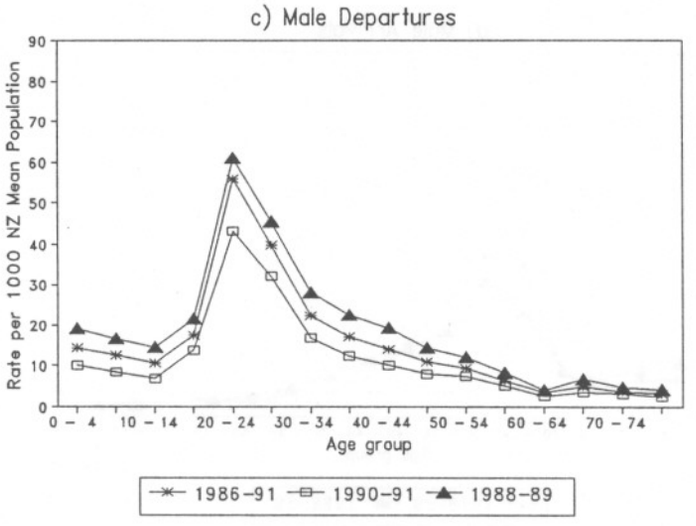
FIGURE 45: PLT Migration Rates by Age Group and Sex, 1986-91, 1990-91 and 1988-89

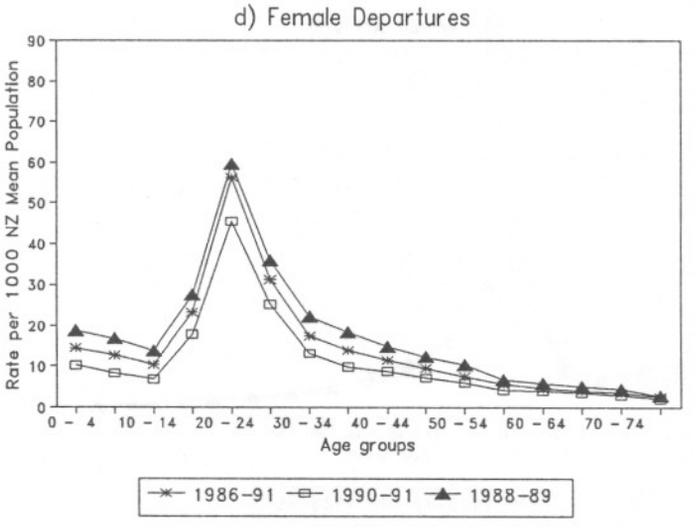


Source: Department of Statistics

Figure 45 compares migration rates for the two extreme years *within* the 1986-91 period, namely 1988-89, when the net migration loss closely rivalled the 1978-79 record loss, and 1990-91 which experienced a net migration gain that was more or less "normal" by postwar average standards. It can be seen that the profiles of the migration rates are very similar suggesting considerable stability over short periods. Even so the departure rates do seem to support an interpretation that significant shifts in the numbers of departures entail greater shifts in migration propensity at younger more than at older ages.

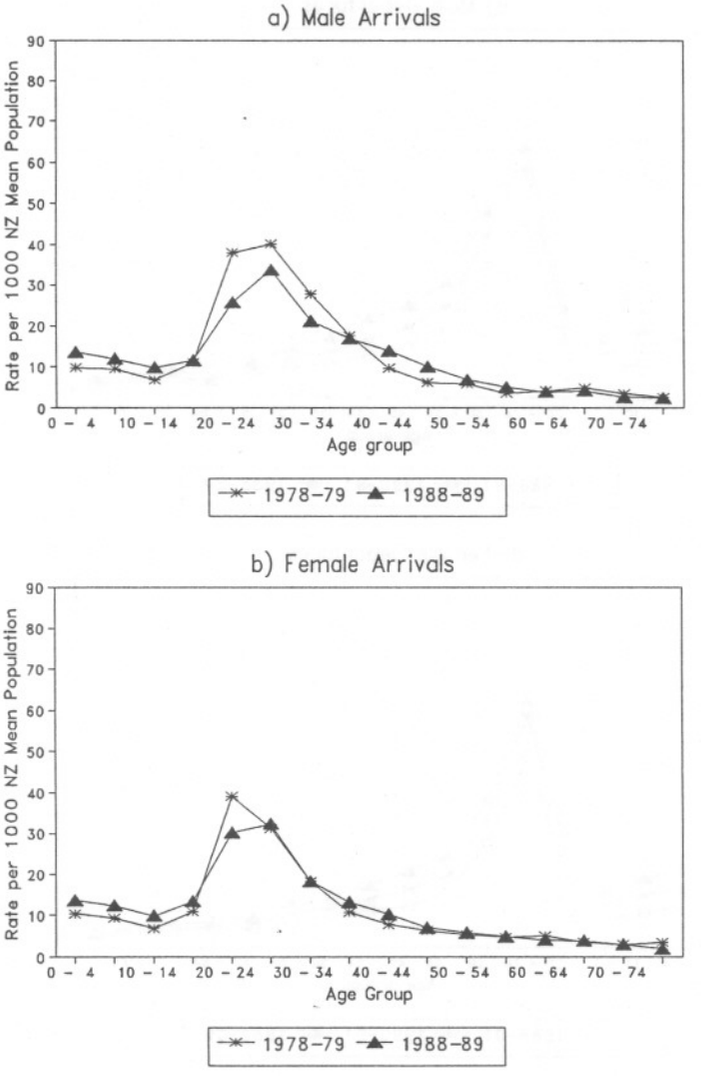
FIGURE 45: PLT Migration Rates by Age Group and Sex, 1986-91, 1990-91 and 1988-89 (contd)





Source: Department of Statistics

FIGURE 46: PLT Migration Rates by Age Group and Sex, 1978-79 and 1988-89

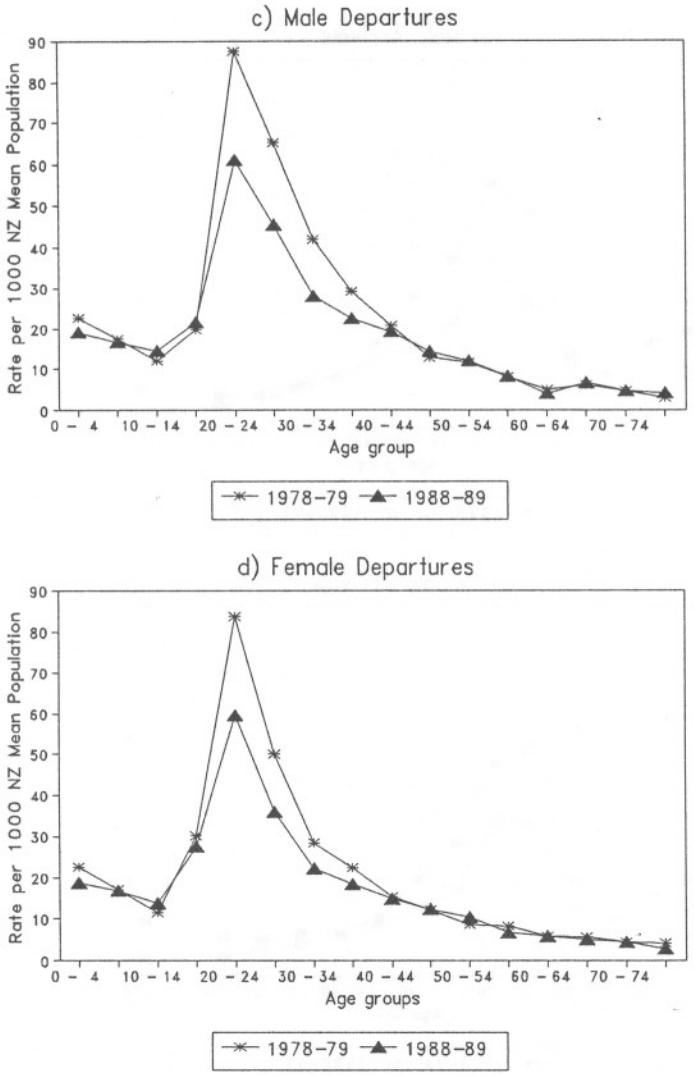


Source: Department of Statistics

Figure 46 compares arrival and departure rates for 1978-79 and 1988-89, which are respectively the year of the record net migration loss, and the greatest net migration loss within the 1986-91 period. In fact, 1988-89 came very close to rivalling the 1978-79 loss with a total net migration loss of 18,298 (compared with 18,518). However, the PLT net migration loss was less (24,708 compared to 40,200), which implies significant category jumping in both years.

Both the arrival and departure rates indicate considerable similarity of shape but significant differences in detail. The differences in *arrival* rates may or may not indicate differences in individual migration propensity. However, Figures 46 (c) and (d), which show departure rates, do provide evidence of shifts in individual behaviour between the two years, the departure rates

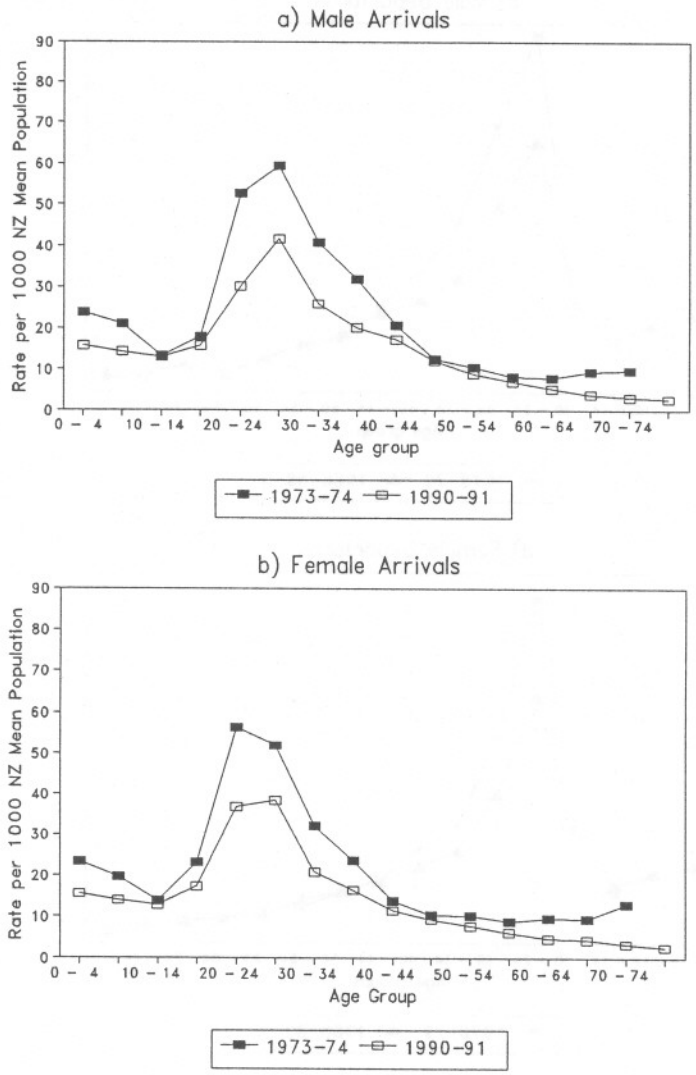
FIGURE 46: PLT Migration Rates by Age Group and Sex, 1978-79 and 1988-89 (contd)



Source: Department of Statistics

at the youngest and older ages being fairly similar, while the rates for ages 20-24 through to 35-39 were significantly higher in 1978-79 compared to 1988-89 (subject to the qualification that differences in the age composition of category jumping between the two years could have contributed).

FIGURE 47: PLT Migration Rates by Age Group and Sex, 1973-74 and 1990-91

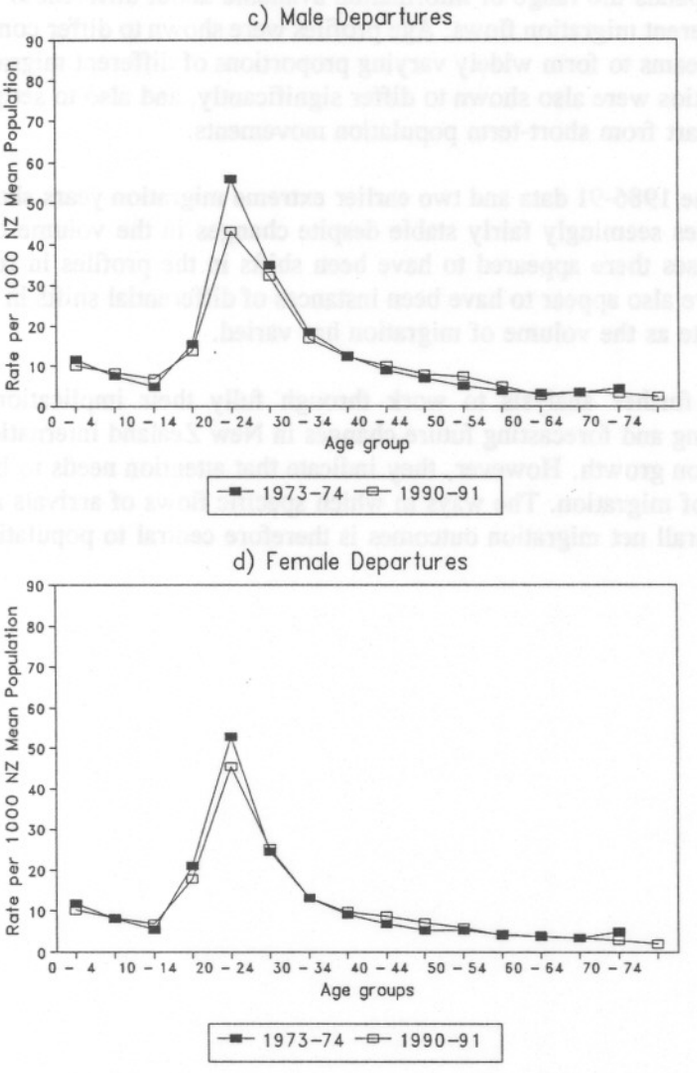


Source: Department of Statistics

Figure 47 compares the arrival and departure rates for the record migration year with the year within the 1986-91 period that had the largest net migration gain (though a fairly average one by historical standards). PLT arrivals in 1973-74 were 69,815 compared with 57,088 in 1990-91, while PLT departures were 42,338 in 1973-74 compared with 45,472 in 1990-91.

Figure 47 also shows greater differences in arrival rates at some ages than others, though again these differences may or may not indicate differences in the migration propensity of like individuals. However, it may well be significant that returning New Zealanders formed a much higher proportion of PLT arrivals in 1990-91 than they did in 1973-74, which was a low point in this regard (refer Figure 4a).

FIGURE 47: PLT Migration Rates by Age Group and Sex, 1973-74 and 1990-91 (contd)



Source: Department of Statistics

The departure rates do not indicate the same degree of difference but the rates for the 20-24 age group are visibly higher in 1973-74 than 1990-91, while some other age groups are slightly different. This contrast seems most likely to result from changes in the composition of the migrants as the principle of shifts in volume being achieved by shifts in behaviour at the most migration-prone ages would require switching the 1973-74 and 1990-91 departure rate profiles. The explanation may lie in New Zealanders being a somewhat higher proportion of the departures in 1990-91. It is possible that the very special circumstances of 1973-74 make it a poor comparison since a record year is being compared with an average year, whereas Figure 46 compares two record years.

Summary of Part C

Part C substantially expands the range of information available about differences in the age and gender structure of different migration flows. Age profiles were shown to differ considerably, and particular migration streams to form widely varying proportions of different migration age strata in consequence. Sex ratios were also shown to differ significantly, and also to set permanent and long-term migration apart from short-term population movements.

Comparison between the 1986-91 data and two earlier extreme migration years showed instances of migration age profiles seemingly fairly stable despite changes in the volume of arrivals and departures. In other cases there appeared to have been shifts in the profiles in response to age structure changes. There also appear to have been instances of differential shifts in the propensity of age groups to migrate as the volume of migration has varied.

These results require further analysis to work through fully their implications for current approaches to monitoring and forecasting future changes in New Zealand international migration and its role in population growth. However, they indicate that attention needs to be given to the changing composition of migration. The ways in which specific flows of arrivals and departures interact to produce overall net migration outcomes is therefore central to population monitoring and forecasting.

PART D

Implications for Demographic Monitoring and Forecasting

The Future Contribution of Migration to Population Growth

On the Move noted that net migration had made only a small contribution to New Zealand's total population growth over the last two decades compared with the natural increase (the excess of births over deaths). However, it stressed the importance of international migration in *regulating* population growth because of its volatility. It also demonstrated that immigration would have made a larger contribution to population growth had it not been for the increased departures of New Zealanders, all other things being equal.

There is every reason to believe that international migration will continue to be important in regulating population growth. There are also good grounds for the interpretation that it is likely that net migration will be a more directly significant factor in the *volume* of population growth over the next two or three decades even if moves to expand immigration were to be halted. This is because the volume of natural increase will tend to shrink progressively as population ageing causes the number of deaths to move closer to (or overtake) the number of births, unless there is a dramatic revolution in fertility behaviour (Department of Statistics 1991, Figure 2.2, p 34).

Population natural increase is forecast to shrink for this reason in many countries despite *improving* life expectancy. While this process will affect outcomes to only a limited degree during the 1990s in New Zealand it will become steadily more significant during the early decades of next century.

Even a low steady contribution from migration to growth would become increasingly more significant in these circumstances, well within the period of time affected by current policy decisions. The successful implementation of policies to increase immigration could make the effect significantly greater (although the emigration behaviour of New Zealanders could reduce or eliminate any additional inflow).

International migration is therefore likely to be doubly important to future population growth, both in its regulating role and as a more directly significant component of growth compared with the recent past.

Implications for Demographic Monitoring

The *On the Move* work programme should have provided ample evidence that monitoring international migration is considerably more complex than just tracking the volume of total net migration. Anticipating the impact of "new" immigration on total net migration must have regard

to return migration and to emigration as they may either augment or reduce the impact of the "new" immigration very substantially. Changes in the characteristics of migrants are occurring.

Such conclusions will not appear original to any demographic professional. That they have not yet sunk in to the wider public perception is attested to by the frequency of press statements in which it is difficult or impossible to tell whether it is total net migration or immigration (of new migrants) to which the speaker is referring.

It follows from the varying significance of different migration streams that have different migrant characteristics that X thousand net migrants in Year Y will not necessarily result from the same combination of factors as the same number of net migrants in Year Z. The characteristics of the migrants may therefore differ significantly even when the total number of migrants does not. The separate components of migration will also need to be monitored for demographically and/or socially significant changes in their age, gender and ethnic composition, because even when very marked and apparently stable patterns are found there may still be processes at work leading to changes in these patterns.

While much useful demographic monitoring (including making judgments about the future implications of current and anticipated changes) can be carried out without recourse to projections, projections are useful for many applications and essential for some. Indications are that it will be necessary to extend current projection methods if the range and variety of migration composition changes is to be fully taken into account and if all of the inputs required for policy formation are to be provided.

Implications for Demographic Projections

Part C indicated that in some instances migration age profiles seemed relatively stable between periods when migration processes operated quite differently. In other instances there were indications of shifts through time in individual migration behaviour at particular ages. Some of the variation in the volume of migration has been achieved therefore, through changes in migration propensity at different ages that must affect migrant age profiles.

The most developed system of national demographic projections in New Zealand incorporates age-sex specific net migration assumptions that are based on historic structures of net migration (Department of Statistics 1984, 1991b). The methodology allows for net migrant age structures to be different when the levels of net migration are different but not when they are the same or similar (Department of Statistics 1984, pp 67, 69; 1991b, pp 19, 26). The methodology does not take account directly of future changes in the age structure of the New Zealand population, or for there to be changes in the mix of migration flows making up particular net migration levels.

The *On the Move* project has indicated that there have been some significant shifts in the composition of migration through time. In any case it should be apparent that any set of migration assumptions that has fixed numbers of net migrants in particular age groups for a particular level of net migration while a population is ageing, is effectively assuming relatively higher migration rates at younger ages and lower migration rates at older ages, relative to base year rates. This might be what happens, but it would be desirable for such an assumption to be based on a deliberate judgment of likely behaviour rather than assumed by default.

Equally reasonable alternative assumptions based on age-sex specific individual migration propensities same could yield significantly different results. This raises the theoretical possibility of a degree of systematic bias in the current methodology. However, it could be possible for this point to be validated conceptually, but to be immaterial in practice for many applications. This

could only be determined empirically. The Department of Statistics projections therefore could be quite suitable for many applications, but less suitable for others than they might be (and possibly unsuitable for some). Any such empirical testing would have to be conducted in relation to medium and long-term future contexts as well as current and historical contexts.

Towards a Gross Migration Model

Given an interest in extending the monitoring of the changing composition of the components of international migration into systematically tracking through the implications into the future, implies extending current projection methodology to accommodate the major individual migration flows directly. If it is the ability to directly address such changes and trace through their implications into the future that drives the interest of the researcher or the commissioning agency, then it will be incidental whether or not further exploration confirms in practice the theoretical argument for reviewing current projection methodology. If there is a need for output detail that can only be provided by extension of projection methods, then there is no either/or choice; it simply becomes a matter of practicality and affordability.

It should be noted that the existing Department of Statistics projection methodology can accommodate a range of alternative migration scenarios, such as might be produced by a more sophisticated model of future migration. However, it would be necessary to incorporate alternative migrant age-sex structures as well as alternative net migration totals into the projections.

Preliminary assessment suggests that such an extension of projection methodology would entail

1 specifying arrivals and departures separately

2 distinguishing between New Zealanders and Non - New Zealanders

3 taking account of links between the migration of individuals of different nationalities (and/or birthplaces)

4 specifying the major immigration sources separately

5 identifying the major return migration flows both to and from New Zealand and modelling these separately

6 relating the age-sex composition of migration to that of the major populations at risk

7 making appropriate linkages between migration and economic growth bearing in mind that the two are interdependent

8 specifying relative economic and unemployment conditions in Australia

9 taking account of direct Government control of certain parts of the process (controlling annual flow of new immigrants, regularising overstayers, deporting overstayers etc)

10 taking account of "category-jumping"

The above points are not necessarily in priority order and are not all mutually exclusive.

Obviously, any such forecasting system would be more complex by several orders of magnitude than any New Zealand application to date of the standard cohort-component demographic projection model. However, it would not be more complex than several models thought necessary for New Zealand economic forecasting.

Equally obviously, such a system would need to be developed in stages over a period. Like econometric models it would require ongoing updating, and like them would never be intended to be actually "finished". Some elements of the complete conceptual model might well prove difficult to develop satisfactorily without an effort that could not be justified by the improved outputs. This would not necessarily preclude the possibility of significant improvements flowing from a less completely developed model.

A relatively inexpensive pilot study could explore the connections between the elements and identify those which most significantly affect the outcomes, using surrogate data for some elements if need be. At very least such a pilot study could provide alternative migration inputs for use with existing methodology to establish the actual significance of using alternative migration assumptions.

The separate elements listed above are elaborated upon in the remaining sections of Part D.

Separate Specification of Arrivals and Departures

Separate specification of arrivals and departures is inherently part of a gross migration model, the whole point being to take account of differences between different components of the total picture. Net migration can only be an outcome of (or an internal step within) such a model; not a primary input. Migration flows cannot be related to populations at risk in a net migration projection model.

Dealing separately with the individual sub-components of arrivals and departures would make it possible for the same numbers of net migrants in different years to have different age-sex structures if the net migration numbers result from different combinations of structurally distinct separate migrant flows. For example, an increase in the proportion of immigrants from Asia relative to immigrants from the Pacific would mean a relatively older immigrant age structure if recent patterns persist (Figure 29a, p 40).

Distinguishing New Zealand Migrants From Non - New Zealanders

One of the most significant developments of the last twenty years has been the increased contribution of returning New Zealanders to total immigration. This has particular implications for the total migration structure because New Zealanders have the most highly concentrated age structure of any major immigrant group (Figure 28a, p 38). Changes in the balance between New Zealand return migrants and "new" immigrants therefore have the potential to significantly affect the age-structure of the total migrant inflow.

However, the return migration age profile is not necessarily fixed for ever. The very high age concentration of the returning New Zealanders could lessen as the middle-aged show signs of becoming a larger proportion of the now substantial community of former New Zealanders resident in Australia. Such change is particularly likely if departures from New Zealand were to slacken significantly for more than a few years. This is because many migrants who return to New Zealand do so in the first few years, so that it is the high concentration of departures in the

20-24 year age group which causes the high recent concentration of returning New Zealanders in the 20-24 and 25-29 year age groups. A significant reduction in emigration of New Zealanders from New Zealand could herald a discernible ageing of the return migration flow as the balance between recent and longer-term Australian residents in the return flow would tend to shift. A further reason for the high age concentration of the returning New Zealanders is that often their children may be classed as Australian citizens and so not included in the return migration flow if it is defined solely as New Zealand nationals.

Links Between Migrants of Different Nationality

Some migrant flows are linked to other migrant flows of different nationality or birthplace. The clearest example is that of Australian-born spouses and children accompanying New Zealand return migrants from Australia. Bedford and Lowe (forthcoming) uses 1986 census data to confirm that many of the Australian born migrants to New Zealand between 1981 and 1986 (and by implication subsequently) were the spouses or children of the returning New Zealanders. Figure 32a (p 46) shows the high proportions of Australian nationals migrating to New Zealand between 1986 and 1991 who were young children, a quarter or so being less than ten years of age.

It is also likely that there are family links between New Zealand and United Kingdom born migrants given the large numbers of United Kingdom migrants of the 1950s, 1960s and early 1970s who have long since become part of the New Zealand population as far as demographic behaviour is concerned, but who still appear as of United Kingdom birthplace or citizenship in travel records and census returns.

Such linkages are difficult to measure with routinely produced migration statistics and may be difficult to build into a gross migration model without disproportionate cost. However, the significance of the links should be borne in mind when designing any model.

Providing for this aspect may be further complicated by the fact that children born in Australia after 20 August 1986 are not Australian citizens unless their parents are Australian citizens also, so that significant numbers of the Australian-born children of New Zealanders resident in Australia may now be being registered as New Zealand citizens (for which New Zealand law provides). Australian-born children of New Zealanders may in fact be technically neither Australian nor New Zealand citizens even though they may be covered by a New Zealand passport. How consistently travel records are being compiled is an open question, as it appears that some parents are unaware that their children are not officially New Zealand citizens.

Specifying the Major Source Areas Separately

Given the differences in composition between the immigrant flows from different areas (Figures 29-32) it is desirable to specify the changing mix of source areas to take account of these differences. Most of the immigrants from some areas will require entry permission, so it should be possible to identify changes in the importance of different areas for at least a short period in advance.

Obviously, the age composition of particular immigrant flows is not necessarily fixed. For example, a possible scenario for immigration from a particular new immigration source is for an initial preponderance of business migrants followed by a higher component of family reunion migration later. Demographic ageing of source populations may be expected to have an effect.

Specifying Major Return Migration Flows

A number of return migration flows may be sufficiently large and distinct to be worth specifying separately in a model. Much the largest pool of potential return migrants to New Zealand is the population of former New Zealanders in Australia (estimated by the Australian Bureau of Statistics as numbering 289,000 in June 1990). However, the 1981 United Kingdom census of population recorded almost 29,000 New Zealanders.

Figure 30a shows significant differences between the age structures of New Zealanders returning from the United Kingdom and from Australia; the age profile of the New Zealanders returning from the United Kingdom being significantly more sharply peaked in the young adult age groups than the profile of returnees from Australia. This is consistent with the interpretation that young New Zealanders having a few years "Overseas Experience" are a more significant component of return migration from the United Kingdom, with family migration being more significant in the flow from Australia.

All the migration flows of immigrants *to* New Zealand have associated return migration flows. Substantial numbers of United Kingdom, Australian and Pacific migrants to New Zealand have returned home. A proportion of migrants from new sources can be expected to do so, but it is no foregone conclusion that their propensity to return will be the same as that of migrants from traditional sources, particularly in the cases of migrants from a number of South-East and East Asian countries who are not refugees, but who are concerned about the directions that the Governments of their homelands may take.

Relating the Age-Sex Composition of Migration to the Populations at Risk

Relating individual experience and behaviour to the population at risk is fundamental to demographic analysis and projections. It is highly developed in New Zealand in relation to fertility and mortality, but not in relation to migration.

The analysis of *net* migration is extremely valuable for indicating the impact of migration on population structural change but it says nothing about the behaviour of individuals since the same apparent outcome may result from quite different combinations of individual behaviour. Net migration cannot be related to the population at risk. Projection assumptions that historic net migration patterns will continue for a period are reasonable within limits, but do not directly provide a means for identifying the implications of migration composition changes. In theory, net migration assumptions are capable of introducing a degree of systematic bias into projections if the particular historical circumstances pertaining to the assumptions are unlikely to persist throughout the projection period.

In order to relate migration to the populations at risk it is necessary to separately calculate departure rates by age and sex for whatever migration flows differentiated by nationality (or birthplace) or origin or destination are judged necessary. The departure rates shown in many of the graphs in Part C provide such rates, although the arrival rates graphed do not, because they are calculated in relation to the New Zealand population (which is the population at risk of departure only).

The populations at risk of *arrival* in New Zealand are the various source populations. Of these, the population of former New Zealanders in Australia is probably the most important to distinguish, both on account of the size of its contribution to recent immigration and because it can be directly linked to departures from New Zealand with a time lag. Fairly up to date time

series of age-sex specific estimates of the New Zealand born resident in Australia are now regularly available (Australian Bureau of Statistics 1991). The true total population of former New Zealanders is larger than the New Zealand born alone (it even includes a few of the Australian born). It is likely to prove difficult to satisfactorily identify this additional population let alone monitor or forecast its movement, because it is very hard to identify in standard statistical series.

There is no particular difficulty in getting fairly up to date data relating to the age-sex structure of the Australian and United Kingdom populations but in these and other cases where the numbers of migrants are extremely low relative to the populations at risk, it is highly debatable whether calculating the age-sex structures of migrants in this way is likely to enhance projection accuracy. In any case, so many of the migrants from the United Kingdom are now returning New Zealanders that it would be essential to distinguish former New Zealanders from other migrants from the United Kingdom, as two distinct populations at risk.

A likely compromise in at least the initial stages of developing a gross migration projection model, would be the allocation of migrants by age and sex using departure rates for all departures from New Zealand and for the main return migration flows to New Zealand, while assuming constant age profiles for the other flows of arrivals in New Zealand (subject to ongoing monitoring of immigrant age structures).

Linking Migration and Economic Growth

Forecasting migration implies establishing linkages with the forecasting of economic growth because this is one of the factors affecting migration trends. However, population growth (including migration) is one of the factors affecting economic trends, so that population and economic change cannot be independently forecast.

Historical statistical time series indicate quite strong links between fluctuations in economic growth and changes in net migration, particularly with a degree of data smoothing. This is not surprising given the role of migration in regulating population growth and thus change in internal demand "all other things being equal". Net migration gains or losses have commonly represented half to one percent or more of internal demand through a long period when the national economy seldom grew by a larger percentage, and in some other years declined outright.

All economic forecasting models in use in New Zealand have some demographic component that embodies some assessment or assumption about migration, at least indirectly. It would be necessary to make some sort of link with at least one such model as part of a complete migration forecasting programme, even though it is believed that the demographic components of these models are generally weak.

Developing a fully integrated economic/demographic model could not possibly be a trivial exercise, but several lesser degrees of development are possible and might suffice. Within limits it might be sufficient to estimate migration using inputs from an independent economic model, translate the results into population growth and then re-enter it as an input into the same economic model and repeat the process one or more times until the amount of difference made by changing the values became insignificant. This would probably be the most practical way to handle the question in a pilot study.

It would not be appropriate to take a forecast of future national economic growth from an economic model and use it to independently estimate migration without checking that the resulting estimate of population growth was consistent with the original assumptions about population growth in the economic model.

Specifying Australian Economic Conditions

Brosnan and Poot (1987b) have modelled Trans-Tasman migration in terms of a range of factors amongst which relative economic conditions in Australia and New Zealand feature prominently, as might be expected. Earlier, Pope (1985) modelled net Trans-Tasman migration in terms of the unemployment rates in the two countries and the difference in real wages. St Hill (1987) modelled the Trans-Tasman migration of individual occupational groups.

Brosnan and Poot's model should provide a basis for modelling a major part of the departures from New Zealand and the greater part of return migration to New Zealand. It may, however, require significant modification to serve as a component of a more comprehensive model of migration as it does not provide directly for a number of aspects discussed in Part D. Converting its application from a historical explanatory model to a forecasting model adds a further order of magnitude in the shape of links to Australian economic forecasts, but quite simple scenarios should suffice for a pilot study and for a range of policy applications.

Modelling emigration from Australia may have to have regard to relative conditions in third countries as well.

Government Immigration Controls

Those categories of immigrants subject to Government immigration controls would need to be specified in any migration model. It should be possible to predict arrivals for some months in advance from the numbers of approvals; otherwise assumptions would have to be based on stated policy (perhaps modified to take account of anticipated economic conditions).

Government actions in relation to deporting and regularising the status of "overstayers" should be taken into account when calibrating any migration model as these actions will have significantly affected some statistical series in some years. This may be difficult to unravel satisfactorily, as the indirect effects may be greater than the numbers of people directly involved, but the technical need to allow for this should be noted.

"Category Jumping"

"Category jumping" occurs when individuals are recorded once in statistical records in a particular way and subsequently in an inconsistent way, with implications for interpreting the statistics and for calibrating projections. The most obvious example is a person who arrives declaring an intention to stay for less than twelve months but who stays for longer, thereby "jumping" from the category of short-term arrival to permanent or long-term migrant (legally or otherwise). Similarly, persons initially intending to stay for more than a year may leave earlier. New Zealand residents departing may return either sooner or later than they indicated when departing.

Some cases of category jumping may result from a deliberate intention to deceive authorities, as when someone arrives as an ostensible tourist with the intention of attempting to settle illegally. Other cases may involve no deceit. Many people will have quite genuine reasons for changing their minds and act within the law. Temporarily resident overseas visitors who die before departing will leave no corresponding migration departure record. New Zealand residents who intended to return but who die overseas will not generate the expected arrival record.

Apparent mismatches between total and permanent and long-term net migration do not all result from category jumping. Net migration gains and losses from declared short-term arrivals and departures could, in theory, result entirely from overseas visitors arriving in one statistical period and departing in the next. For example, if all short-term arrivals came for stays of identical duration and departed on the due date, while the number of such arrivals was steadily increasing through time, then there would always be increasing net gains from this source without any category jumping, because there would always be more arriving in a particular period than leaving. With similar assumptions there would always be increasing net losses from temporarily departing New Zealanders without category jumping necessarily having occurred. Once this simple model is varied to take account of fluctuations in the numbers of travellers and the duration of stay, it will be apparent that the net migration effects of short-term travel movements may be either positive or negative and vary significantly through time, without any category jumping having occurred at all. Gains or losses from short-term arrivals and departures are therefore simply just that. They do not equate with category jumping. Though they are a fairly reliable indication that it is taking place they may be a poor indicator of its extent. Methods are available to estimate the actual category jumping (at least in net terms).

Apparent category jumping may also occur solely because of imprecision in travel plans. Longer term visitors are likely to define their intended duration of stay in round terms as one year, but by leaving even slightly sooner than an exact 365 days would thereby jump between the long and short-term statistical categories without any change in intention, or being aware of the statistical effect of their actions. New Zealand does not follow the Australian statistical practice of reapportioning arrivals who indicate their intended duration of stay as "one year", across the 11, 12 and 13 month categories.

There is no reason to suppose that the incidence of category jumping is uniform across all classes of migrants, nationalities and origins and destinations. The opposite is more likely since individuals intending to attempt to settle illegally will have to misrepresent their intentions while returning New Zealanders and some other categories of arrivals will have no such need. Individuals travelling on shorter/cheaper journeys (most obviously Australia) may well be more likely to change their minds as they will have set out knowing that they could do so without incurring major cost.

In principle, category jumping should be taken into account in calibrating all aspects of a gross migration projection model. This also has the potential to significantly increase the effort and expense. However, a number of relatively crude adjustments to total arrivals and departures and to a limited number of key migration flows may be sufficient to significantly improve the realism of the model. The Trans-Tasman migration flows are almost certainly the most important to "correct" in this way.

Summary of Part D

Migration will tend to become a more important factor in New Zealand's future population growth even if policies to increase immigration were not to proceed. It will be necessary to monitor the changing importance of the different components of migration and their changing composition. Useful inferences may be drawn about the implications of current and foreseeable migration behaviour without necessarily using demographic projections at all in the monitoring process. However, projections are almost always useful and for a range of important applications they are essential.

To incorporate the migration composition changes studied during the *On the Move* work programme into demographic projections would require substantial modification of the migration component of current New Zealand methodology. At the extreme, a continuously updated modelling system of similar complexity to New Zealand's major economic models is implied, linked to or even forming a sub-model of one such model. Much more modest intermediate stages would be likely to offer useful improvements on current methods.

A comparatively inexpensive pilot study should be sufficient to explore the relative importance of refining the different migration elements discussed in Part D by developing a basic, roughly calibrated model. Such a study could be used to identify the costs and benefits of more elaborate models. It should also be able to provide some indication of the likely implications of alternative migration scenarios for various population-related policy areas, in a manner that has not previously been possible.

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APPENDIX 1

Data Issues and Statistical Recommendations

Recommendations Concerning Updating the Special Tabulations

The Population Monitoring Group's approach to the special tabulations upon which Parts B and C of the *Supplement* are based, was constrained by financial resources and involved a degree of exploration in unfamiliar statistical territory. With the benefit of hindsight a number of things could have been handled better. These are listed below for the benefit of anyone wishing to update or extend the analysis.

It is recommended that:

1 Both New Zealand and Unspecified country of last/next residence (code 999) be separately tabulated as countries of last/next permanent residence. This is necessary for the reasons illustrated in Table 11 and discussed in the related text. (Age-sex specific details were obtained for New Zealand nationals as a last/next residence for 1990-91 only.)

2 That unspecified nationality not be separately tabulated unless the numbers of people not specifying their nationality increases. (Age-sex specific details for persons of unspecified nationality were obtained for 1990-91 only.)

3 That Asian nationalities be separately tabulated because of their increased importance.

4 That short-term arrivals and departures whose last/next permanent residence was New Zealand or Unspecified be classified by immediate origin/destination in order to help to establish the extent of Trans-Tasman and other migrant category jumping. Trans-Tasman migrant category jumping is most likely to occur with people whose nationality and country of (declared) last/next permanent residence is New Zealand, but who stay longer than intended in, or return early from, Australia. Separate tabulations are necessary to identify the extent of this factor in migration, as the tabulations compiled for the *Supplement* relate only to last/next permanent residence.

Data Issues

A variety of issues arose concerning the suitability of current New Zealand international migration statistics during the project. The main issues are listed below for the record. The list is not necessarily comprehensive or in priority order. While the issues have been discussed by the Population Monitoring Group at various times, the comments have not been read by the Group as a whole in their particular form and wording.

1 It is highly desirable that the collection of migrant birthplace data (terminated in 1987) be reinstated by one means or another (Bedford 1987b, 1988, 1990). Nationality data were used in this study only because migrant birthplace data were unavailable. Nationality data are relevant to linking migration statistical records to the issuing of visas to non-citizens, but are otherwise the

least preferred alternative of nationality, birthplace and place of residence data (for the relationship refer Figures 19 and 20). Nationality changes through time whereas birthplace does not, so category jumping may arise through a change in nationality (or because of dual nationality) in addition to other reasons. The census provides only birthplace data so that statistics of the flows of migrants cannot be related back to the stocks now that the flows are identified only by nationality. It would not solve the problem to collect nationality instead of birthplace in the census (or as well, as is done in Australia) because with nationality changing through time it would still not be possible to consistently relate stocks and flows. Representations to reinstate migrant birthplace statistics before the 1991 census (so that only the 1986-91 intercensal period would be affected) were unsuccessful. Resolving the problem before the 1996 census would limit the damage to statistical continuity to two intercensal periods rather than three.

2 Figures 4 and 19-21 indicate that there is significant migration of New Zealand residents who were not born in New Zealand and who are not New Zealand nationals. The time series of migration of New Zealand residents was also broken in 1987. Several graphs in *On the Move* and in Part A of the *Supplement* are unnecessarily complex and less meaningful for this reason. The statistics continue to be produced for short-term arrivals and departures, but not for permanent and long-term arrivals and departures. It is desirable that this statistical series should also be re-established.

3 The earlier distinction between "permanent" and "long-term" arrivals and departures has also been lost, and the two absorbed into a single category. These flows do relate to two distinct populations so that it is desirable to maintain the distinction, as do Australian statistics.

4 It will have been apparent that *On the Move* was able to address only the policy aspect of Maori international migration. This is because the collection of Maori international migration statistics was terminated in 1986 except insofar as they are still covered by five yearly census data. Official estimates of the size and growth of the Maori population for dates in between census years require the use of migration statistics in their computation that are now no longer available. Similarly, statistics on Pacific Islander migration (by ethnicity) were lost earlier in the 1980s, with adverse implications for the ability of demographers to provide necessary policy information. Because the Immigration Authorities were "understood" to regard the reinstatement of the ethnic question in arrival and departure cards as unacceptable, the Report of the Inter-departmental Committee on Population Policy Guidelines called for a "review of external migration statistics [to be] carried out, with a view to developing new methods of collecting this category of figures [external migration data generally, including ethnic statistics] independently of the Immigration Service arrival and departure information." (Department of Statistics 1990, 54).

5 Official estimates of category jumping would constitute a useful addition to the range of regularly available migration statistics. It will be more efficient if these are centrally produced by the Department of Statistics than by sporadic individual experiments.

6 Benefits will flow to the analysis of Trans-Tasman migration from improvements in the consistency and comparability of Australian and New Zealand migration statistics, both from the arrival and departure cards and from the population census. A common census date would facilitate combining data from the two censuses and would make it possible to "put back" data for those residents of either country temporarily present in the other on census night (these are a significant proportion of all New Zealanders temporarily overseas at the time of the census). It would be necessary for the Australian census to differentiate temporary overseas visitors by country of usual residence (or at least New Zealand from the remainder) which it does not do at present, although this is a (highly desirable) New Zealand statistical practice.

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7 The New Zealand census practice of identifying the country of former residence of persons resident overseas five years before the census should be retained, even though it is not Australian practice. These data have proved very useful in a number of New Zealand migration studies, establishing (amongst other things) that return migrants and various immigrant groups disperse themselves geographically to significantly different degrees (Population Monitoring Group 1989), and that there are significant family links between migrants of different nationalities (Bedford and Lowe, forthcoming).

8 The New Zealand census question on duration of residence in New Zealand was dropped for the 1991 census. This question is necessary if census data are to be used to study the integration of migrants into the New Zealand population. This may be expected to become more important given Government moves to increase immigration. It is desirable that this question be reinstated in the 1996 census.

9 A number of calculations involving the combination of census data and data from international arrival and departure records are handicapped by the lack of information about the undercounting of the New Zealand population census. A survey along the lines of the Australian census post-enumeration survey is overdue.

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