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ESTIMATION OF INTERSTATE MIGRATION IN PENINSULAR MALAYSIA, 1947-1970

Saw Swee-Hock

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**ESTIMATION OF INTERSTATE MIGRATION
IN PENINSULAR MALAYSIA, 1947-1970**

by

Saw Swee-Hock

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I: CONCEPTS AND DEFINITION

One generally accepted definition of internal migration is change of residence from one community, or other clearly defined geographical unit, to another within the national boundaries. But this definition is not entirely free from ambiguities. There are people who do not have a fixed residence, and even for those who have one it may be difficult to distinguish between “migrants” and “local movers”. In fact, it is somewhat difficult to separate local movers from migrants in a way that is satisfactory for all purposes. The only practical way, for statistical purposes, is to set up boundaries the crossing of which in a specified time interval in the act of changing residence will constitute migration.

From the theoretical point of view, the term “migration” is reserved for those changes of residence that involve a complete change and readjustment of the community affiliations of the individual. In the process of changing his community of residence, the migrant tends simultaneously to change employers, friends, neighbours and many other social and economic ties. The local mover by contrast may simply move across the street or to a house a few blocks away. Very likely he retains his same job, breaks no community ties, and maintains most of his informal social relationship. The boundaries that are established for separating migrants from nonmigrants should make this distinction, if only roughly.

When migration-defining boundaries are selected, there is little choice in most cases. The census data or other statistics must necessarily follow civil boundaries of some kind. This means that for most practical purposes the administrative area or the state is taken as the migration-defining boundary because statistical data are only available for the administrative unit or state for the purpose of migration analysis. In this study the area units or the migration-defining boundaries are the eleven states in Peninsular Malaysia and the time reference is determined by the dates of the population censuses.

Apart from the general concept of internal migration, there are quite a number of terms that need to be defined and these are discussed below.

Lifetime interstate migration refers to migration that has occurred within the boundaries of a country, between the state of birth and the state of residence at the time of the census.

A lifetime in-migrant is a person enumerated in a given state at a particular census and born outside the state of enumeration but within the national boundaries.

A lifetime out-migrant is a person born in a given state and enumerated outside the state but within the national boundaries in a given census.

Lifetime net migration is the difference between the number of lifetime in-migrants and the number of lifetime out-migrants.

An in-migrant is a migrant who crosses a state-defining boundary in a given time interval in the process of changing residence and entering a given state from another within the same country.

An out-migrant is a migrant who crosses a state-defining boundary in a given time interval while departing from one state to reside in another within the same country.

Net internal migration is the migration balance of a state and it consists of the number of in-migrants minus the number of out-migrants. The net balance may be either positive, representing a net gain to that state, or negative, representing a net loss to that state.

II: METHODS OF MEASURING INTERNAL MIGRATION

Direct Method

The direct method of measuring internal migration in a country requires the continuous recording of persons who change their residence across migration-defining boundaries during a stated period of time. This system of collecting data on internal migration necessitates the establishment of an efficient administrative machinery in every state whereby a migrant can report his change of residence to the state he enters as well as to the state he leaves. This type of machinery will provide the basic data of in-migrants and out-migrants for any specified state of the country. Of course, this system will only be workable if it is compulsory

for all migrants to make a report of their change of residence to the respective authorities; otherwise, information on internal migration will not be complete. The statistics collected through this system of continuous resident registration not only provide the number of cases of net and gross migration in each state, but also indicate the direction of migration between the states of the country. The other advantages of this system are that these data can reveal the number of events of migration instead of migrants and hence the dynamics of migration can be studied in terms of short periods of time such as on a monthly or yearly basis.

Indirect Method

Vital Statistics Method

This method requires a reliable system of birth and death registration and two or more reasonably good consecutive censuses with age tabulations for each state. If these data are available, it is possible to estimate the amount of net migration that has taken place within the various states of the country. In order to estimate the net migration for a state, it is only necessary that the data should have been tabulated for the state for which the estimate is desired. The state boundaries then become the migration-defining boundaries for the purpose of the estimate.

This method assumes that for any specified state the total final population P^{+x} separated by a time interval x is obviously related by

$$P^{+x} = P + B - D + M$$

where total B , D , and M are respectively the births, deaths, and net migrants during the time interval. If all but the net migrants are known accurately, the latter is then easily estimated by transposing the formula to

$$M = P^{+x} - P - (B - D)$$

In other words, the net migration during an interval is estimated as the excess of population growth over the natural increase in the state. A positive value

for M denotes net inward migration for the state and a negative value, net outward migration. In using this method, it should be noted that during the period the flow of migration may not be uniform; in fact for part of the period, the flow of migration may be inward and for the other part, outward. When the method is applied to any state within a country, the result suffers from one shortcoming in that it does not distinguish between internal migration and migration to or from other countries. Because it is computed by taking differences, the vital statistics method is also known as a residual method, and in general, relatively small errors in the basic data may produce relatively large errors in the resulting difference.

The vital statistics method can yield a more accurate estimate of internal migration provided that additional information on migration to and from other countries for that particular state is known. The more refined formula for internal migration would then be

$$M = P^{+x} - P - (B - D) + E - I$$

where E refers to emigration and I immigration. The prerequisite statistics for E and I for the various states of a country are very rarely available and this renders the application of this refined method impossible.

Survival Rate Method

The survival rate method is similar to the vital statistics method and also produces the result as a residual. It is used where the necessary death statistics are not available for the vital statistics method to be adopted; in some instances, it may be used as a matter of convenience even though the required death statistics are on hand. The survival rate method itself can be subdivided into (a) Forward Formula, (b) Reverse Formula and (c) the Average Formula method of measuring internal migration.

(a) Forward Formula

This method makes use of the age distribution of the population for a state in two consecutive censuses, usually separated by a time interval of ten years. The principle underlying this method is that if two censuses are taken exactly ten years apart, the population that is age x at the first census will be age $x+10$ at the second. The actual number of people enumerated at the older age at the second census will compose of the number of survivors from the cohort (the initial population) plus net migrants. It follows that if we have a set of ten-year survival ratios $10R_x$ applicable to each cohort, we can calculate the expected number of survivors by multiplying the initial population by the survival ratio. The formula is given by:

$$M_x^f = P_{x+10}^{z+10} - 10R_x \cdot P_x^z$$

where M_x^f = net migration;

P_{x+10}^{z+10} = population 10 years older at the second census;

$10R_x \cdot P_x^z$ = number of expected survivors of the age group x at the first census 10 years later.

The forward survival rate formula would produce correct estimates of migration if all in-migration and all out-migration occurred at the end of the decade. In practice the estimate of net migration obtained by the forward survival method errs in two respects. First, the method carries an implicit assumption that all deaths among the initial population occur within the state, but we know that some may actually occur outside it, especially among those who have moved out during the decade. Secondly, in-migrants during the decade who have died before the second census do not enter into the computation. The size of the error introduced by these assumptions depends upon the size and timing of out-migration and in-migration during the decade.

(b) Reverse Formula

The difference between this method and the one just discussed above is that in this method the ten-year survival ratio $10R_x$ is divided into the corresponding population P_{x+10}^{z+10} , enumerated in the second census, which is ten years older at the end of the decade to obtain an estimate of the number living at an age ten years younger at its beginning. This number is compared with the enumerated population P_x^z at the first census to obtain an estimate of net migration. Thus,

$$M_x^r = \frac{P_{x+10}^{z+10}}{10R_x} - P_x^z$$

The reverse survival rate formula would produce correct estimates of migration if all in-migration and all out-migration occurred at the beginning of the decade. On the one hand, the reverse survival rate formula yields an overstatement of net migration because the method includes the hypothetical deaths among in-migrants before they actually migrated. On the other hand, an understatement is introduced because no allowance is made for deaths after out-migration among the initial population.

(c) Average Formula

Because of the contrary nature of the implied errors in the forward and reverse survival rate methods, an average of the two would seemingly appear to yield an improved estimate of net migration. The average formula becomes

$$M_x^a = \frac{1 + 10R_x}{2 \cdot 10R_x} (P_{x+10}^{z+10} - 10R_x \cdot P_x^z)$$

The average survival rate method yields the same result as the vital statistics method when there is an even flow of in-migration and out-migration during the decade or when all migration is assumed to occur at the middle of the decade.

Place-of-birth Method

The census data on place of birth can be used indirectly to measure internal migration of any country. With this information, we can derive the population born in each state and enumerated outside the state of birth but within the same country. Therefore, using data from a single census, we can calculate out-migration from any state as the difference between the number born in the state and the number among them still resident in the state at the time of the census. In-migration will be the difference between the total residents of the state born within the country and the number among them born within the state of enumeration. The difference between in-migration and out-migration yields the net migration to or from one state to another.

If I stands for the number of persons enumerated in a state and born elsewhere in the country and O the number of people born in the state and enumerated elsewhere in the country, we may define I as the lifetime in-migrants to the state and O as the lifetime out-migrants from the state. The difference between these two ($I - O$) is known as the lifetime net migrants (M). I , O , and M are estimates of in-migration, out-migration, and net migration that have occurred in the past prior to the census date, and do not refer to migration during any specified period. They belong to the category of stock data which reflect the balance sheet as of the census day of the net effect of interstate migration and mortality among the migrants of the past. They can, however, be manipulated to yield an estimate of interstate migration during the intercensal period by utilizing two sets of census data on place of birth.

If I_1 , O_1 and M_1 are the lifetime in-migrants, lifetime out-migrants and net lifetime migrants of a given state in a census and I_2 , O_2 , and M_2 the corresponding quantities in a second census, the difference $(I_2 - O_2) - (I_1 - O_1)$ may be taken as an estimate of net migrants to this state during the intercensal period. This is the usual method of estimating intercensal net migration to a state from place-of-birth data.

We may express the above formula in a slightly different form as follows:

$$I_2 - I_1 = \text{net migrants during the intercensal period to the state among persons born outside the state;}$$

$O_1 - O_2$ = net migrants during the intercensal period to the state among persons born in the state;

and the sum:

$(I_2 - I_1) + (O_1 - O_2)$ = total net migrants during the intercensal period to the state.

This form has an advantage in that it gives two components of net migration, namely, net migration among persons born in the state and net migration among persons born elsewhere in the country. In our discussion, we have considered migration between one state and all other states; the same formula can be used for estimating migration between any two states of the country.

III: ESTIMATE OF INTERSTATE MIGRATION

Lifetime Migration

The main source of information on internal migration in Peninsular Malaysia is the data on place of birth collected in population censuses. In the three postwar censuses conducted in 1947, 1957, and 1970, there are figures showing the number of persons classified by race and sex enumerated in a state and born in each state. The same data can be arranged to show the number of persons classified by race and sex born in a state and enumerated in each state. To obtain the estimates of lifetime in-migration of each state, we add up the number of people born in each of the other states of Peninsular Malaysia who were enumerated in each state. Similarly, to obtain the estimate of lifetime out-migration of each state, we add up the number of people born in each state who were enumerated in other states within Peninsular Malaysia.

An illustration of this method is shown below in respect of the 1970 Census for both sexes of All Races:

State	Enumerated in each state, born elsewhere in Peninsular Malaysia (Lifetime in-migrants)	Born in each state, enumerated elsewhere in Peninsular Malaysia (Lifetime out-migrants)	Difference of (1) and (2) (Lifetime net migrants)
	(1)	(2)	(3)
Johore	81,581	86,565	- 4,984
Kedah	78,408	103,765	-25,357
Kelantan	19,669	67,497	-47,325

The first column gives the total number of people who were enumerated in a particular state but born elsewhere in Peninsular Malaysia. These figures represent the lifetime in-migration for the various states. They tell us how many of the people enumerated in a particular state in 1970 were born in the other ten states of Peninsular Malaysia. The second column shows us the number of people born in each state who were enumerated in the other ten states of Peninsular Malaysia in 1970. The last column in the table is obtained by subtracting the second column from the first; it gives the lifetime net migration, that is, the balance in the exchange of local born population between each state and the rest of the country.

As an example, the 1970 figures for Johore may be interpreted in this manner:

- First column : 81,581 persons of All Races were enumerated in Johore and born outside Johore but within Peninsular Malaysia;
- Second column : 86,565 persons of All Races were born in Johore and enumerated outside Johore but within Peninsular Malaysia;
- Third column : This gives a net loss of 4,984 to the state of Johore as a result of migration within the country.

The estimates of lifetime in-migrants, out-migrants, and net migrants have been separately constructed for each of the three main races, the Malays, the Chinese and the Indians, and of course for the All Races combined. Separate figures for each sex of these four population groups have also been computed. The results of the computation for 1970, 1957 and 1947 are given in full in Tables 1-12.

Intercensal Migration

The figures given in Tables 1-12 do not refer to interstate migration in any defined period of time. For example, the figures for Johore in Table 1 show that there were 81,581 people born in other states of Peninsular Malaysia and enumerated in Johore, but this does not give a picture of in-migration per time interval. Likewise, the figure of 86,565 out-migrants from Johore to the other states reflects past migration in the sense that some time in the past these Johore-born people have moved to the other states. We do not know when they moved. In order to estimate the magnitude of migration during the intercensal period for each state, we have to apply the formula $M = (I_2 - O_2) - (I_1 - O_1)$.

To measure the net intercensal migration during the period 1957-1970 for each state within Peninsular Malaysia, we will therefore apply the above formula as follows:

$$M_{1957-1970} = (I_{1970} - O_{1970}) - (I_{1957} - O_{1957})$$

- where
- $M_{1957-1970}$ = the net migration for each state during the period 1957-1970;
 - I_{1970} = lifetime in-migrants as estimated in the 1970 census for each state;
 - O_{1970} = lifetime out-migrants as estimated in the 1970 census for each state;
 - I_{1957} = lifetime in-migrants as estimated in the 1957 census for each state;
 - O_{1957} = lifetime out-migrants as estimated in the 1957 census for each state.

In estimating net internal migration during the intercensal period 1947-1957, the same formula is used.

It is noted that the above formula does not take into consideration mortality of the migrants recorded in the 1957 Census and some of these 1957 migrants would have died before the 1970 Census was taken. However, statistics of deaths among the 1957 migrants at state levels are not available and we have to resort to survival ratios for each race by sex derived from the census data. The survival ratio denoted by S is obtained as follows:

$$S = \frac{\text{Cohort population ten years older in P. Malaysia at 1970 Census}}{\text{Same population in P. Malaysia in 1957 Census}}$$

The survival ratios derived from the population of Peninsular Malaysia and applied to persons born outside the state of enumeration by race and by sex for the period 1957-1970 and 1947-1957 have been computed and they are given below:

<u>Race</u>	<u>1957-1970</u>		<u>1947-1957</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
All Races	0.8425	0.8737	0.8178	0.8772
Malays	0.8495	0.8425	0.8727	0.8943
Chinese	0.7917	0.8968	0.7953	0.8761
Indian	0.8886	0.8350	0.7708	0.8631

To obtain a slightly better estimate of net intercensal migration for each of the eleven states in Peninsular Malaysia for the period 1957-1970, we will modify the previous formula by correcting the figures for mortality. The formula may now be stated as:

$$\begin{aligned} M_{1957-1970} &= (I_{1970} - O_{1970}) - S(I_{1957} - O_{1957}) \\ &= I_{1970} - O_{1970} - SI_{1957} + SO_{1957} \\ &= (I_{1970} - SI_{1957}) + (SO_{1957} - O_{1970}) \end{aligned}$$

All the computations for the intercensal migration estimates for each state between 1957 and 1970, and also between 1947 and 1957 are based on this formula. This form has an advantage in that it gives two components of net migration, namely, net migration among persons born in the state and net migration among persons born elsewhere.

To illustrate this method, we will take the lifetime migration estimates for Johore for All Races males for 1970 and 1957 shown in Tables 1 and 5. The number of lifetime in-migrants for 1970 was 41,712 and the corresponding number of lifetime in-migrants for 1957 was 29,867, while the lifetime out-migrants for the two census dates were 46,913 and 21,423 for 1970 and 1957 respectively. Therefore, the net intercensal migration for out-of-state born and in-state born is:

$$\begin{aligned} & (41,712 - 0.8425 \times 29,867) + (0.8425 \times 21,423 - 46,913) \\ &= (41,712 - 25,163) + (18,049 - 46,913) \\ &= 16,549 + (-28,864) \\ &= -12,315 \end{aligned}$$

From the above computation we can analyse the two components of migration. The figure 16,549 tells us that during the period 1957-1970 there were 16,549 local born males of All Races who moved from the other ten states to Johore; and at the same time there were 28,864 Johore-born males of All Races who migrated to the other ten states in Peninsular Malaysia. As a result there was a net loss of 12,315 males of All Races for the state of Johore during the intercensal period 1957-1970.

The estimates of intercensal migration for each state of Peninsular Malaysia during the two intercensal periods 1957-1970 and 1947-1957 are given in full in Tables 13 to 20. These tables provide the net migration among persons born in the state and those born outside the state separately. The sum of these two components shown in the last column represents the net gain or loss of each state for the intercensal period.

Table 1: Lifetime In-Migrants, Out-Migrants and Net Migrants for All Races by Sex, 1970

State	Lifetime In-Migrants	Lifetime Out-Migrants	Lifetime Net Migrants
Both Sexes			
Johore	81,581	86,565	- 4,984
Kedah	78,408	103,765	- 25,357
Kelantan	19,669	67,497	- 47,828
Malacca	47,805	88,130	- 40,325
Negri Sembilan	75,162	96,762	- 21,600
Pahang	107,113	41,315	+ 65,798
Penang	91,060	111,147	- 20,087
Perak	105,678	219,990	-114,312
Perlis	16,317	13,241	+ 3,076
Selangor	293,928	94,257	+199,671
Trengganu	36,959	31,011	+ 5,948
Males			
Johore	41,712	46,913	- 5,201
Kedah	38,252	52,664	- 14,412
Kelantan	11,208	36,434	- 25,226
Malacca	23,623	45,961	- 22,338
Negri Sembilan	38,751	50,385	- 11,634
Pahang	58,507	20,764	+ 37,743
Penang	42,953	54,603	- 11,650
Perak	52,706	112,565	- 59,859
Perlis	7,990	6,748	+ 1,242
Selangor	154,946	47,326	+107,620
Trengganu	20,116	16,401	+ 3,715
Females			
Johore	39,869	39,652	+ 217*
Kedah	40,156	51,101	- 10,945
Kelantan	8,461	31,063	- 22,602
Malacca	24,182	42,169	- 17,987
Negri Sembilan	36,411	46,377	- 9,966
Pahang	48,606	20,551	+ 28,055
Penang	48,107	56,544	- 8,437
Perak	52,972	107,425	- 54,453
Perlis	8,327	6,493	+ 1,834
Selangor	138,982	46,931	+ 92,051
Trengganu	16,843	14,610	+ 2,233

Table 2: Lifetime In-Migrants, Out-Migrants and Net Migrants for Malays by Sex, 1970

State	Lifetime In-Migrants	Lifetime Out-Migrants	Lifetime Net Migrants
Both Sexes			
Johore	41,904	47,311	- 5,407
Kedah	43,790	58,808	- 15,018
Kelantan	13,686	61,954	- 48,268
Malacca	21,993	54,214	- 32,221
Negri Sembilan	33,565	50,727	- 17,162
Pahang	65,618	19,481	+ 46,137
Penang	35,796	48,187	- 12,391
Perak	56,026	96,400	- 40,374
Perlis	10,498	8,252	+ 2,246
Selangor	153,608	34,387	+119,221
Trengganu	31,006	27,769	+ 3,237
Males			
Johore	22,421	26,144	- 3,723
Kedah	21,424	31,294	- 9,870
Kelantan	7,680	33,699	- 26,019
Malacca	11,315	28,953	- 11,638
Negri Sembilan	18,769	27,458	- 8,689
Pahang	35,957	10,294	+ 25,663
Penang	17,795	24,011	- 6,216
Perak	29,219	51,326	- 22,107
Perlis	5,065	4,385	680
Selangor	84,140	18,046	+ 66,094
Trengganu	16,601	14,776	1,825
Females			
Johore	19,483	21,167	- 1,684
Kedah	22,366	27,514	- 8,148
Kelantan	6,006	28,255	- 22,249
Malacca	10,678	25,261	- 14,583
Negri Sembilan	14,796	23,269	- 8,473
Pahang	29,661	9,187	20,474
Penang	18,001	24,176	- 6,175
Perak	26,807	45,074	- 18,267
Perlis	5,433	3,867	1,554
Selangor	69,468	16,341	53,127
Trengganu	14,405	12,993	1,412

Table 3: Lifetime In-Migrants, Out-Migrants and Net Migrants for Chinese by Sex, 1970

State	Lifetime In-Migrants	Lifetime Out-Migrants	Lifetime Net Migrants
Both Sexes			
Johore	28,431	29,213	- 782
Kedah	23,163	30,810	- 7,647
Kelantan	4,782	3,764	+ 1,018
Malacca	18,146	24,835	- 6,689
Negri Sembilan	25,088	30,963	- 5,875
Pahang	30,236	16,553	+ 13,683
Penang	41,211	47,936	- 6,725
Perak	32,498	86,238	- 53,740
Perlis	4,617	3,998	+ 618
Selangor	101,314	37,228	+ 64,086
Trengganu	4,876	2,821	+ 2,055
Males			
Johore	13,742	15,743	- 2,001
Kedah	11,267	14,414	- 3,147
Kelantan	2,843	1,852	991
Malacca	8,597	12,569	- 3,972
Negri Sembilan	11,959	15,462	- 3,503
Pahang	16,837	7,885	8,952
Penang	18,348	23,187	- 4,839
Perak	15,189	42,511	- 27,322
Perlis	2,329	1,860	469
Selangor	51,009	18,137	32,872
Trengganu	2,926	1,424	1,502
Females			
Johore	14,689	13,470	1,219
Kedah	11,896	16,396	- 4,500
Kelantan	1,939	1,912	27
Malacca	9,549	12,266	- 2,717
Negri Sembilan	13,129	15,501	- 2,372
Pahang	13,399	8,668	4,731
Penang	22,863	24,749	- 1,886
Perak	17,309	43,727	- 26,418
Perlis	2,287	2,138	149
Selangor	50,305	19,091	31,214
Trengganu	1,950	1,397	553

Table 4: Lifetime In-Migrants, Out-Migrants and Net Migrants for Indians by Sex, 1970

State	Lifetime In-Migrants	Lifetime Out-Migrants	Lifetime Net Migrants
Both Sexes			
Johore	10,658	9,673	+ 985
Kedah	10,824	13,422	- 2,598
Kelantan	1,095	1,591	- 496
Malacca	7,312	8,065	- 753
Negri Sembilan	15,957	14,501	+ 1,456
Pahang	10,981	5,104	+ 5,877
Penang	13,400	13,878	- 478
Perak	16,291	36,140	- 19,849
Perlis	1,020	786	+ 234
Selangor	36,714	21,701	+ 15,013
Trengganu	972	363	+ 609
Males			
Johore	5,259	4,835	+ 424
Kedah	5,244	6,600	- 1,356
Kelantan	636	804	- 168
Malacca	3,549	3,977	- 428
Negri Sembilan	7,753	7,188	+ 565
Pahang	5,561	2,491	+ 3,070
Penang	6,507	6,837	- 330
Perak	7,849	18,135	- 10,286
Perlis	511	410	+ 101
Selangor	18,689	10,665	+ 8,024
Trengganu	544	169	+ 375
Females			
Johore	5,399	4,838	+ 561
Kedah	5,580	6,822	- 1,242
Kelantan	459	787	- 328
Malacca	3,763	4,088	- 325
Negri Sembilan	8,204	7,313	+ 891
Pahang	5,420	2,613	+ 2,807
Penang	6,893	7,041	- 148
Perak	8,442	18,005	- 9,563
Perlis	509	376	+ 133
Selangor	18,025	11,036	+ 6,989
Trengganu	428	194	+ 234

Table 5: Lifetime In-Migrants, Out-Migrants and Net Migrants for All Races by Sex, 1957

State	Lifetime In-Migrants	Lifetime Out-Migrants	Lifetime Net Migrants
Both Sexes			
Johore	55,943	40,497	+ 15,446
Kedah	59,977	53,925	+ 6,052
Kelantan	10,522	27,631	- 17,109
Malacca	24,238	49,452	- 25,214
Negri Sembilan	52,182	49,295	+ 2,887
Pahang	41,186	23,207	+ 17,979
Penang	48,674	79,515	- 30,841
Perak	76,597	108,003	- 31,406
Perlis	10,793	6,690	+ 4,103
Selangor	116,807	61,372	+ 55,435
Trengganu	18,491	15,823	+ 2,668
Males			
Johore	29,867	21,423	+ 8,444
Kedah	29,252	27,966	+ 1,286
Kelantan	6,016	14,955	- 8,979
Malacca	12,293	26,098	- 13,805
Negri Sembilan	27,592	26,702	+ 890
Pahang	22,318	12,461	+ 9,857
Penang	24,134	38,261	- 14,487
Perak	39,780	56,105	- 16,325
Perlis	5,249	3,465	+ 1,784
Selangor	61,552	31,624	+ 29,928
Trengganu	10,080	8,673	+ 1,407
Females			
Johore	26,076	19,074	+ 7,002
Kedah	30,725	25,959	+ 4,766
Kelantan	4,506	12,636	- 8,130
Malacca	11,945	23,354	- 11,409
Negri Sembilan	24,590	22,593	+ 1,997
Pahang	18,868	10,746	+ 8,122
Penang	24,540	40,894	- 16,354
Perak	36,817	51,898	- 15,081
Perlis	5,544	3,225	+ 2,319
Selangor	55,255	29,748	+ 25,507
Trengganu	8,411	7,150	+ 1,261

Table 6: Lifetime In-Migrants, Out-Migrants and Net Migrants for Malays by Sex, 1957

Stage	Lifetime In-Migrants	Lifetime Out-Migrants	Lifetime Net Migrants
Both Sexes			
Johore	27,225	19,254	+ 7,971
Kedah	32,712	30,653	+ 2,059
Kelantan	7,481	24,521	- 17,040
Malacca	8,013	28,010	- 19,997
Negri Sembilan	18,676	23,831	- 5,155
Pahang	22,163	10,175	+ 11,988
Penang	17,640	36,400	- 18,760
Perak	39,403	44,581	- 5,178
Perlis	6,948	4,163	+ 2,785
Selangor	56,658	16,555	+ 40,103
Trengganu	15,545	14,321	+ 1,224
Males			
Johore	15,563	10,488	+ 5,075
Kedah	15,948	16,379	- 431
Kelantan	4,306	13,417	- 9,111
Malacca	4,244	15,537	- 11,293
Negri Sembilan	10,690	13,895	- 3,205
Pahang	12,357	5,677	+ 6,680
Penang	9,042	17,893	- 8,851
Perak	21,635	23,937	- 2,302
Perlis	3,324	2,222	+ 1,102
Selangor	30,891	9,152	+ 21,739
Trengganu	8,440	7,843	+ 597
Females			
Johore	11,662	8,766	+ 2,896
Kedah	16,764	14,274	+ 2,490
Kelantan	3,175	11,104	- 7,929
Malacca	3,769	12,473	- 8,704
Negri Sembilan	7,986	9,936	- 1,950
Pahang	9,806	4,498	+ 5,308
Penang	8,598	18,507	- 9,909
Perak	17,768	20,644	- 2,876
Perlis	3,624	1,941	+ 1,683
Selangor	25,767	7,403	+ 18,364
Trengganu	7,105	6,478	+ 627

Table 7: Lifetime In-Migrants, Out-Migrants and Net Migrants for Chinese by Sex, 1957

State	Lifetime In-Migrants	Lifetime Out-Migrants	Lifetime Net-Migrants
Both Sexes			
Johore	20,376	16,014	+ 4,362
Kedah	17,682	15,852	+ 1,830
Kelantan	2,239	2,235	+ 4
Malacca	11,892	15,548	- 3,656
Negri Sembilan	22,545	16,121	+ 6,424
Pahang	14,203	10,119	+ 4,084
Penang	23,723	31,929	- 8,206
Perak	24,477	41,731	- 17,254
Perlis	3,319	1,754	+ 1,565
Selangor	39,501	29,749	+ 9,752
Trengganu	2,398	1,303	+ 1,095
Males			
Johore	10,121	8,345	+ 1,776
Kedah	8,527	7,973	+ 554
Kelantan	1,249	1,136	+ 113
Malacca	5,886	7,670	- 1,784
Negri Sembilan	11,395	8,176	+ 3,219
Pahang	7,497	5,279	+ 2,218
Penang	11,548	15,180	- 3,632
Perak	11,784	21,214	- 9,430
Perlis	1,650	848	+ 802
Selangor	20,302	14,746	+ 5,556
Trengganu	1,339	731	+ 608
Females			
Johore	10,255	7,669	+ 2,586
Kedah	9,155	7,879	+ 1,276
Kelantan	990	1,099	- 109
Malacca	6,006	7,878	- 1,872
Negri Sembilan	11,150	7,945	+ 3,205
Pahang	6,706	4,840	+ 1,866
Penang	12,175	16,749	- 4,574
Perak	12,693	20,517	- 7,824
Perlis	1,669	906	+ 763
Selangor	19,199	15,003	+ 4,196
Trengganu	1,059	572	+ 487

Table 8: Lifetime In-Migrants, Out-Migrants and Net Migrants for Indians by Sex, 1957

State	Lifetime In-Migrants	Lifetime Out-Migrants	Lifetime Net Migrants
Both Sexes			
Johore	7,167	4,497	+ 2,670
Kedah	8,833	6,613	+ 2,220
Kelantan	574	598	- 24
Malacca	3,721	4,728	- 1,007
Negri Sembilan	9,393	7,820	+ 1,573
Pahang	4,158	2,379	+ 1,779
Penang	6,280	9,736	- 3,456
Perak	10,866	18,903	- 8,037
Perlis	891	585	+ 306
Selangor	16,801	13,067	+ 3,734
Trengganu	408	166	+ 242
Males			
Johore	3,573	2,216	+ 1,357
Kedah	4,345	3,239	+ 1,106
Kelantan	340	315	+ 25
Malacca	1,850	2,343	- 493
Negri Sembilan	4,717	3,862	+ 855
Pahang	2,107	1,190	+ 917
Penang	3,044	4,822	- 1,778
Perak	5,443	9,517	- 4,074
Perlis	477	314	+ 163
Selangor	8,478	6,694	+ 1,784
Trengganu	226	88	+ 138
Females			
Johore	3,594	2,281	+ 1,313
Kedah	4,488	3,374	+ 1,114
Kelantan	234	283	- 49
Malacca	1,871	2,385	- 514
Negri Sembilan	4,676	3,958	+ 718
Pahang	2,051	1,189	+ 862
Penang	3,236	4,914	- 1,678
Perak	5,423	9,386	- 3,963
Perlis	414	271	+ 143
Selangor	8,323	6,373	+ 1,950
Trengganu	182	78	+ 104

Table 9: Lifetime In-Migrants, Out-Migrants and Net Migrants for All Races by Sex, 1947

State	Lifetime In-Migrants	Lifetime Out-Migrants	Lifetime Net Migrants
Both Sexes			
Johore	27,346	11,784	15,562
Kedah	35,976	18,392	17,584
Kelantan	4,618	8,972	- 4,354
Malacca	8,946	22,031	- 13,085
Negri Sembilan	22,249	19,692	2,557
Pahang	17,553	8,142	9,411
Penang	20,897	46,887	- 25,990
Perak	34,725	49,763	- 15,038
Perlis	5,648	2,150	3,498
Selangor	42,240	32,645	9,595
Trengganu	7,596	7,336	260
Males			
Johore	14,771	6,125	8,646
Kedah	18,408	9,319	9,089
Kelantan	3,038	4,830	- 1,792
Malacca	4,305	11,730	- 7,425
Negri Sembilan	11,834	11,226	609
Pahang	9,134	4,590	4,544
Penang	10,696	22,740	- 12,044
Perak	17,325	26,208	- 8,883
Perlis	2,871	1,131	1,740
Selangor	22,324	16,912	5,412
Trengganu	4,200	4,087	113
Females			
Johore	12,575	5,659	6,916
Kedah	17,568	9,073	8,495
Kelantan	1,580	4,142	- 2,562
Malacca	4,641	10,301	- 5,660
Negri Sembilan	10,414	8,466	1,948
Pahang	8,419	3,552	4,867
Penang	10,201	24,147	- 13,946
Perak	17,400	23,555	- 6,155
Perlis	2,777	1,019	1,758
Selangor	19,916	15,733	4,183
Trengganu	3,396	3,249	147

Table 10: Lifetime In-Migrants, Out-Migrants and Net Migrants for Malays by Sex, 1947

State	Lifetime In-Migrants	Lifetime Out-Migrants	Lifetime Net Migrants
Both Sexes			
Johore	11,676	6,176	+ 5,500
Kedah	21,196	10,953	+ 10,243
Kelantan	3,465	7,956	- 4,491
Malacca	3,341	12,767	- 9,426
Negri Sembilan	7,939	11,223	- 3,284
Pahang	8,868	4,213	+ 4,655
Penang	8,746	23,253	- 14,507
Perak	17,351	22,693	- 5,342
Perlis	3,574	1,622	+ 1,952
Selangor	22,972	7,964	+ 15,008
Trengganu	6,620	6,928	- 308
Males			
Johore	6,587	3,306	+ 3,281
Kedah	11,040	5,577	+ 5,463
Kelantan	2,418	4,336	- 1,918
Malacca	1,757	7,171	- 5,414
Negri Sembilan	4,610	6,897	- 2,287
Pahang	4,763	2,527	+ 2,236
Penang	4,717	11,510	- 6,793
Perak	8,925	12,377	- 3,452
Perlis	1,813	867	+ 946
Selangor	12,561	4,432	+ 8,129
Trengganu	3,690	3,874	- 184
Females			
Johore	5,089	2,870	+ 2,219
Kedah	10,156	5,376	+ 4,780
Kelantan	1,047	3,620	- 2,573
Malacca	1,584	5,596	- 4,012
Negri Sembilan	3,329	4,326	- 997
Pahang	4,105	1,686	+ 2,419
Penang	4,029	11,743	- 7,714
Perak	8,426	10,316	- 1,890
Perlis	1,761	755	+ 1,006
Selangor	10,411	3,532	+ 6,879
Trengganu	2,930	3,054	- 124

Table 11: Lifetime In-Migrants, Out-Migrants and Net Migrants
for Chinese by Sex, 1947

State	Lifetime In-Migrants	Lifetime Out-Migrants	Lifetime Net Migrants
Both Sexes			
Johore	11,380	3,878	+ 7,502
Kedah	9,544	4,782	+ 4,762
Kelantan	928	581	+ 347
Malacca	3,746	6,533	- 2,787
Negri Sembilan	9,278	5,189	+ 4,089
Pahang	6,614	2,743	+ 3,871
Penang	8,424	18,001	- 9,577
Perak	12,008	16,788	- 4,780
Perlis	1,693	341	+ 1,352
Selangor	12,088	17,249	- 5,161
Trengganu	696	314	+ 382
Males			
Johore	6,040	1,965	+ 4,075
Kedah	4,682	2,421	+ 2,261
Kelantan	496	281	+ 215
Malacca	1,666	3,277	- 1,611
Negri Sembilan	4,733	2,638	+ 2,095
Pahang	3,312	1,485	+ 1,827
Penang	4,133	8,401	- 4,268
Perak	5,734	8,612	- 2,878
Perlis	857	166	+ 691
Selangor	6,161	8,759	- 2,598
Trengganu	351	160	+ 191
Females			
Johore	5,340	1,913	+ 3,427
Kedah	4,862	2,361	+ 2,501
Kelantan	432	300	+ 132
Malacca	2,080	3,256	- 1,176
Negri Sembilan	4,545	2,551	+ 1,994
Pahang	3,302	1,258	+ 2,044
Penang	4,291	9,600	- 5,309
Perak	6,274	8,176	- 1,902
Perlis	836	175	+ 661
Selangor	5,927	8,490	- 2,563
Trengganu	345	154	+ 191

Table 12: Lifetime In-Migrants, Out-Migrants and Net Migrants for Indians by Sex, 1947

State	Lifetime In-Migrants	Lifetime Out-Migrants	Lifetime Net Migrants
Both Sexes			
Johore	3,793	1,466	+ 2,327
Kedah	4,951	2,283	+ 2,668
Kelantan	197	280	- 83
Malacca	1,468	2,028	- 560
Negri Sembilan	4,214	2,611	+ 1,603
Pahang	1,720	827	+ 893
Penang	3,200	4,815	- 1,615
Perak	4,353	8,952	- 4,599
Perlis	336	91	+ 245
Selangor	5,325	6,281	- 956
Trengganu	157	80	+ 77
Males			
Johore	1,894	714	+ 1,180
Kedah	2,544	1,122	+ 1,422
Kelantan	111	138	- 27
Malacca	697	960	- 263
Negri Sembilan	2,102	1,347	+ 755
Pahang	862	414	+ 448
Penang	1,571	2,451	- 880
Perak	2,167	4,539	- 2,372
Perlis	175	46	+ 129
Selangor	2,689	3,132	- 443
Trengganu	95	44	+ 51
Females			
Johore	1,899	752	+ 1,147
Kedah	2,407	1,161	+ 1,246
Kelantan	86	142	- 56
Malacca	771	1,068	- 297
Negri Sembilan	2,112	1,264	+ 848
Pahang	858	413	+ 445
Penang	1,629	2,364	- 735
Perak	2,186	4,413	- 2,227
Perlis	161	45	+ 116
Selangor	2,636	3,149	- 513
Trengganu	62	36	+ 26

Table 13: Intercensal Internal Migration for All Races by Sex, 1957-1970

State	Out-of-State Born Migrants	In-State Born Migrants	Total Net Migrants
Both Sexes			
Johore	33,635	- 51,851	- 18,216
Kedah	26,919	- 57,524	- 30,605
Kelantan	10,663	- 43,857	- 33,194
Malacca	27,012	- 45,738	- 18,726
Negri Sembilan	30,432	- 54,526	- 24,094
Pahang	71,825	- 21,428	+ 50,397
Penang	49,286	- 43,183	+ 6,103
Perak	39,996	-127,379	- 87,383
Perlis	7,051	- 7,504	- 453
Selangor	193,794	- 41,623	+152,171
Trengganu	21,118	- 17,457	+ 3,661
Males			
Johore	16,549	- 28,864	- 12,315
Kedah	13,607	- 29,103	- 15,496
Kelantan	6,139	- 23,834	- 17,695
Malacca	13,266	- 23,973	- 10,707
Negri Sembilan	15,505	- 27,889	- 12,384
Pahang	39,704	- 10,266	+ 29,438
Penang	22,620	- 22,368	+ 252
Perak	19,191	- 65,297	- 46,106
Perlis	3,568	- 3,829	- 261
Selangor	103,088	- 20,683	+ 82,405
Trengganu	11,624	- 9,094	+ 2,530
Females			
Johore	17,086	- 22,987	- 5,901
Kedah	13,312	- 28,421	- 15,109
Kelantan	4,524	- 20,023	- 15,499
Malacca	13,746	- 21,765	- 8,019
Negri Sembilan	14,927	- 26,637	- 11,710
Pahang	32,121	- 11,162	+ 20,959
Penang	26,666	- 20,815	+ 5,851
Perak	20,805	- 62,082	- 41,277
Perlis	3,483	- 3,675	- 192
Selangor	90,706	- 20,940	+ 69,766
Trengganu	9,494	- 8,363	+ 1,131

Table 14: Intercensal Internal Migration for Malays by Sex, 1957-1970

State	Out-of-State Born Migrants	In-State Born Migrants	Total Net Migrants
Both Sexes			
Johore	18,858	- 31,016	- 12,158
Kedah	16,118	- 32,868	- 16,750
Kelantan	7,353	- 41,201	- 33,848
Malacca	15,213	- 30,506	- 15,293
Negri Sembilan	17,756	- 30,552	- 12,796
Pahang	46,859	- 10,868	+ 35,991
Penang	20,871	- 17,395	+ 3,476
Perak	22,677	- 58,673	+ 35,996
Perlis	4,621	- 4,729	- 108
Selangor	105,657	- 20,375	+ 85,282
Trengganu	17,850	- 15,648	+ 2,202
Males			
Johore	9,200	- 17,234	- 8,034
Kedah	7,876	- 17,380	- 9,504
Kelantan	4,022	- 22,301	- 18,279
Malacca	7,710	- 15,754	- 8,044
Negri Sembilan	9,688	- 15,654	- 5,966
Pahang	25,460	- 5,471	+ 19,989
Penang	10,114	- 8,811	+ 1,303
Perak	10,840	- 30,992	- 20,152
Perlis	2,241	- 2,497	- 256
Selangor	57,898	- 10,271	+ 47,627
Trengganu	9,431	- 8,113	+ 1,318
Females			
Johore	9,658	- 13,782	- 4,124
Kedah	8,242	- 15,488	- 7,246
Kelantan	3,331	- 18,900	- 15,569
Malacca	7,503	- 14,752	- 7,249
Negri Sembilan	8,068	- 14,898	- 6,830
Pahang	21,399	- 5,397	+ 16,002
Penang	10,757	- 8,584	+ 2,173
Perak	11,837	- 27,681	- 15,844
Perlis	2,380	- 2,232	+ 148
Selangor	47,759	- 10,104	+ 37,655
Trengganu	8,419	- 7,535	+ 844

Table 15: Intercensal Internal Migration for Chinese by Sex, 1957-1970

State	Out-of-State Born Migrants	In-State Born Migrants	Total Net Migrants
Both Sexes			
Johore	11,221	- 15,728	- 4,507
Kedah	8,202	- 17,432	- 9,230
Kelantan	2,905	- 1,879	+ 1,026
Malacca	8,100	- 11,698	- 3,598
Negri Sembilan	6,068	- 17,365	- 11,297
Pahang	18,287	- 8,033	+ 10,254
Penang	21,149	- 20,897	+ 252
Perak	11,786	- 51,043	- 39,257
Perlis	1,813	- 2,513	- 700
Selangor	68,023	- 12,099	+ 55,924
Trengganu	2,866	- 1,729	+ 1,137
Males			
Johore	5,729	- 9,136	- 3,407
Kedah	4,516	- 8,102	- 3,586
Kelantan	1,854	- 953	+ 901
Malacca	3,937	- 6,497	- 2,560
Negri Sembilan	2,938	- 8,989	- 6,051
Pahang	10,902	- 3,706	+ 7,196
Penang	9,205	- 11,169	- 1,964
Perak	5,860	- 25,716	- 19,856
Perlis	1,023	- 1,188	- 165
Selangor	34,936	- 6,463	+ 28,473
Trengganu	1,866	- 845	+ 1,021
Females			
Johore	5,492	- 6,592	- 1,100
Kedah	3,686	- 9,330	- 5,644
Kelantan	1,051	- 926	+ 125
Malacca	4,163	- 5,201	- 1,038
Negri Sembilan	3,130	- 8,376	- 5,246
Pahang	7,385	- 4,327	+ 3,058
Penang	11,944	- 9,728	+ 2,216
Perak	5,926	- 25,327	- 19,401
Perlis	790	- 1,325	- 535
Selangor	33,087	- 5,636	+ 27,451
Trengganu	1,000	- 884	+ 116

Table 16: Intercensal Internal Migration for Indians by Sex, 1957-1970

State	Out-of-State Born Migrants	In-State Born Migrants	Total Net Migrants
Both Sexes			
Johore	4,482	- 5,799	- 1,317
Kedah	3,216	- 7,727	- 4,511
Kelantan	598	- 1,075	- 477
Malacca	4,106	- 3,992	+ 114
Negri Sembilan	7,861	- 7,764	+ 97
Pahang	7,396	- 3,054	+ 4,342
Penang	7,993	- 5,490	+ 2,503
Perak	6,926	- 19,846	- 12,920
Perlis	250	- 281	- 31
Selangor	22,230	- 10,432	+ 11,798
Trengganu	619	- 220	+ 399
Males			
Johore	2,084	- 2,866	- 782
Kedah	1,383	- 3,722	- 2,339
Kelantan	334	- 524	- 190
Malacca	1,905	- 1,895	+ 10
Negri Sembilan	3,561	- 3,756	- 195
Pahang	3,689	- 1,434	+ 2,255
Penang	3,802	- 2,552	+ 1,250
Perak	3,012	- 9,678	- 6,666
Perlis	87	- 131	- 44
Selangor	11,155	- 4,717	+ 6,438
Trengganu	343	- 91	+ 252
Females			
Johore	2,398	- 2,933	- 535
Kedah	1,833	- 4,005	- 2,172
Kelantan	264	- 551	- 287
Malacca	2,201	- 2,097	+ 104
Negri Sembilan	4,300	- 4,008	+ 292
Pahang	3,707	- 1,620	+ 2,087
Penang	4,191	- 2,938	+ 1,253
Perak	3,914	- 10,168	- 6,254
Perlis	163	- 150	+ 13
Selangor	11,075	- 5,715	+ 5,360
Trengganu	276	- 129	+ 147

Table 17: Intercensal Internal Migration for All Races by Sex, 1947-1957

State	Out-of-State Born Migrants	In-State Born Migrants	Total Net Migrants
Both Sexes			
Johore	35,033	- 30,524	+ 4,509
Kedah	29,512	- 38,345	- 8,833
Kelantan	6,652	- 20,008	- 13,356
Malacca	15,646	- 30,823	- 15,177
Negri Sembilan	33,369	- 32,688	+ 681
Pahang	26,331	- 16,037	+ 10,294
Penang	30,979	- 39,376	- 8,397
Perak	47,166	- 65,908	- 18,742
Perlis	6,010	- 4,871	+ 1,139
Selangor	81,080	- 33,740	+ 47,340
Trengganu	12,077	- 9,631	+ 2,446
Males			
Johore	19,988	- 16,414	+ 3,574
Kedah	14,198	- 20,345	- 6,147
Kelantan	3,532	- 11,005	- 7,473
Malacca	8,772	- 16,505	- 7,733
Negri Sembilan	17,914	- 17,521	+ 393
Pahang	14,848	- 8,407	+ 6,441
Penang	15,387	- 19,664	- 4,277
Perak	25,612	- 34,672	- 9,060
Perlis	2,902	- 2,540	+ 362
Selangor	43,295	- 17,793	+ 25,502
Trengganu	6,645	- 5,331	+ 1,314
Females			
Johore	15,045	- 14,110	+ 935
Kedah	15,314	- 18,000	- 2,686
Kelantan	3,120	- 9,003	- 5,883
Malacca	6,874	- 14,318	- 7,444
Negri Sembilan	15,455	- 15,167	+ 288
Pahang	11,483	- 7,630	+ 3,853
Penang	15,592	- 19,712	- 4,120
Perak	21,554	- 31,236	- 9,682
Perlis	3,108	- 2,331	+ 777
Selangor	37,785	- 15,947	+ 21,838
Trengganu	5,432	- 4,300	+ 1,132

Table 18: Intercensal Internal Migration for Malays by Sex, 1947-1957

State	Out-of-State Born Migrants	In-State Born Migrants	Total Net Migrants
Both Sexes			
Johore	16,926	- 13,802	+ 3,124
Kedah	13,994	- 20,978	- 6,984
Kelantan	4,435	- 17,500	- 13,065
Malacca	5,063	- 16,747	- 11,684
Negri Sembilan	11,676	- 13,943	- 2,267
Pahang	14,335	- 6,462	+ 7,873
Penang	9,920	- 15,853	- 5,933
Perak	24,079	- 24,554	- 475
Perlis	3,791	- 2,731	+ 1,060
Selangor	36,385	- 9,528	+ 26,857
Trengganu	9,705	- 8,209	+ 1,496
Males			
Johore	9,815	- 7,603	+ 2,212
Kedah	6,313	- 11,512	- 5,199
Kelantan	2,196	- 9,633	- 7,437
Malacca	2,711	- 9,279	- 6,568
Negri Sembilan	6,667	- 7,876	- 1,209
Pahang	8,200	- 3,472	+ 4,728
Penang	4,925	- 7,848	- 2,923
Perak	13,846	- 13,136	+ 710
Perlis	1,742	- 1,465	+ 277
Selangor	19,929	- 5,284	+ 14,645
Trengganu	5,220	- 4,462	+ 758
Females			
Johore	7,111	- 6,199	+ 912
Kedah	7,681	- 9,466	- 1,785
Kelantan	2,239	- 7,867	- 5,628
Malacca	2,352	- 7,468	- 5,116
Negri Sembilan	5,009	- 6,067	- 1,058
Pahang	6,135	- 2,990	+ 3,145
Penang	4,995	- 8,005	- 3,010
Perak	10,233	- 11,418	- 1,185
Perlis	2,049	- 1,266	+ 783
Selangor	16,456	- 4,244	+ 12,212
Trengganu	4,485	- 3,747	+ 738

Table 19: Intercensal Internal Migration for Chinese by Sex, 1947-1957

State	Out-of-State Born Migrants	In-State Born Migrants	Total Net Migrants
Both Sexes			
Johore	10,894	- 12,775	- 1,881
Kedah	9,698	- 11,859	- 2,161
Kelantan	1,467	- 1,749	- 282
Malacca	8,745	- 10,089	- 1,344
Negri Sembilan	14,799	- 11,788	+ 3,011
Pahang	8,675	- 7,836	+ 839
Penang	16,677	- 16,837	- 160
Perak	14,420	- 27,719	- 13,299
Perlis	1,905	- 1,469	+ 436
Selangor	29,408	- 15,345	+ 14,063
Trengganu	1,817	- 1,041	+ 776
Males			
Johore	5,317	- 6,782	- 1,465
Kedah	4,803	- 6,048	- 1,245
Kelantan	855	- 913	- 58
Malacca	4,561	- 5,064	- 503
Negri Sembilan	7,631	- 6,078	+ 1,553
Pahang	4,862	- 4,098	+ 764
Penang	8,261	- 8,499	- 238
Perak	7,224	- 14,365	- 7,141
Perlis	968	- 716	+ 252
Selangor	15,402	- 7,780	+ 7,622
Trengganu	1,060	- 604	+ 456
Females			
Johore	5,577	- 5,993	- 416
Kedah	4,895	- 5,811	- 916
Kelantan	612	- 836	- 224
Malacca	4,184	- 5,025	- 841
Negri Sembilan	7,168	- 5,710	+ 1,458
Pahang	3,813	- 3,738	+ 75
Penang	8,416	- 8,338	+ 78
Perak	7,196	- 13,354	- 6,158
Perlis	937	- 753	+ 184
Selangor	14,006	- 7,565	+ 6,441
Trengganu	757	- 437	+ 320

Table 20: Intercensal Internal Migration for Indians by Sex, 1947-1957

State	Out-of-State Born Migrants	In-State Born Migrants	Total Net Migrants
Both Sexes			
Johore	4,068	- 3,298	+ 770
Kedah	4,795	- 4,746	+ 49
Kelantan	414	- 369	+ 45
Malacca	2,519	- 3,066	- 547
Negri Sembilan	5,950	- 4,287	+ 1,663
Pahang	2,753	- 1,704	+ 1,049
Penang	3,663	- 5,807	- 2,144
Perak	7,309	- 11,595	- 4,286
Perlis	617	- 511	+ 106
Selangor	12,453	- 7,935	+ 4,518
Trengganu	281	- 101	+ 180
Males			
Johore	2,113	- 1,666	+ 447
Kedah	2,384	- 2,374	+ 10
Kelantan	254	- 209	+ 45
Malacca	1,313	- 1,603	- 290
Negri Sembilan	3,097	- 2,824	+ 273
Pahang	1,443	- 871	+ 572
Penang	1,833	- 2,933	- 1,100
Perak	3,773	- 6,018	- 2,245
Perlis	342	- 279	+ 63
Selangor	6,405	- 4,280	+ 2,125
Trengganu	153	- 54	+ 99
Females			
Johore	1,955	- 1,632	- 323
Kedah	2,411	- 2,372	+ 39
Kelantan	160	- 160	0
Malacca	1,206	- 1,463	- 257
Negri Sembilan	2,853	- 2,867	- 14
Pahang	1,310	- 833	+ 487
Penang	1,830	- 2,874	- 1,044
Perak	3,536	- 5,577	- 2,041
Perlis	275	- 232	+ 43
Selangor	6,048	- 3,655	+ 2,393
Trengganu	128	- 47	+ 81

IV: RESULTS OF ESTIMATION

A summary of the main findings of our estimation of internal migration is presented in Table 21. During the first postwar period 1947-1957, there were six states receiving a surplus of internal migrants and five states recording a net loss. Among those benefiting from a net gain are Selangor with 47,340 migrants, Pahang with 10,294, Johore with 4,509, Trengganu with 2,446, Perlis with 1,139 and Negri Sembilan with only 681. Among those suffering a net loss, Perak recorded the greatest deficit with 18,742, followed closely by Malacca with 15,177, Kelantan with 13,356, Kedah with 8,633 and Penang with 8,397.

During the second postwar period 1957-1970, the number of states recording a surplus of internal migrants was reduced to four, a reflection of the narrowing in the range of attractive places for potential migrants brought about by the concentration of socio-economic progress in these areas. Not surprisingly, Selangor and Pahang continued to maintain their strong first and

Table 21: Internal Migration in Peninsular Malaysia, 1947-1970

State	1947-1957	1957-1970
Johore	+ 4,509	- 18,216
Kedah	- 8,833	- 30,605
Kelantan	- 13,356	- 33,194
Malacca	- 15,177	- 18,726
Negri Sembilan	+ 681	- 24,094
Pahang	+ 10,294	+ 50,397
Penang	- 8,397	+ 6,103
Perak	- 18,742	- 87,388
Perlis	+ 1,139	- 453
Selangor	+ 47,340	+152,171
Trengganu	+ 2,446	+ 3,661

second positions, the former gaining 152,171 migrants and the latter 50,397 migrants. Selangor, the most developed state and the one containing the federal capital, Kuala Lumpur, offers the greatest employment opportunities and the most modern living amenities and life-style, while Pahang has experienced large agricultural development projects such as the Jengka Triangle and the Pahang-Trengganu projects. Trengganu succeeded in remaining in the surplus group of states, while Penang managed to reverse the previous adverse trend and to move into this surplus group.

Among the seven states recording a net loss are three new states which could not maintain their surplus position during the second postwar period. These states are Johore, Perlis and Negri Sembilan, which suffered a loss of 18,216, 453 and 24,094 migrants, respectively. The four states which continued to suffer a loss in internal migrants are Kedah with 30,605, Kelantan with 33,194, Malacca with 18,726 and Perak with 87,383. As for the relative position, Perak remained as the state experiencing the greatest loss in the number of migrants, but the second greatest loser is now Kelantan instead of Malacca.

The population growth of Peninsular Malaysia during the years after the Second World War is due mainly to natural increase rather than to international migration which has been brought under rigid immigration laws and regulations. This has resulted in a shift in interest from international migration to rural/urban migration and internal migration. The detailed results of our estimation of interstate migration have important bearings on questions of policy and the planning of action programmes in the social and economic development of the country. In many respects, they are relevant to policies with regard to the location of industrial and other economic projects and to the balance of social and economic development between the advanced and less advanced states, the rural and urban sectors, and agricultural and nonagricultural industries.

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