

International migration at the Population Division

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and Social Affairs (UN DESA)**

www.unmigration.org

Regional workshop on international migration data
Bangkok, Thailand
5 - 8 February 2019



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Who is an international migrant?

(UNDESA, 1998. Recommendation on statistics of international migration)

- Anyone who changes their country of residence
 - This definition includes:
 - A physical move
 - Minimum duration of stay (1 year or more)
 - This definition does not distinguish between:
 - Reasons for migration (work, family, study, asylum, etc.)
 - Legal status of migrants
- How to measure?



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Stocks, flows and net migration

Migrant stock

- Number of foreign-born or foreign citizens living in a particular place at one point in time.

Migration flows

- The event of changing place of usual residence (generally) for at least 1 year.

Net migration

- Balance of flows (in and out)



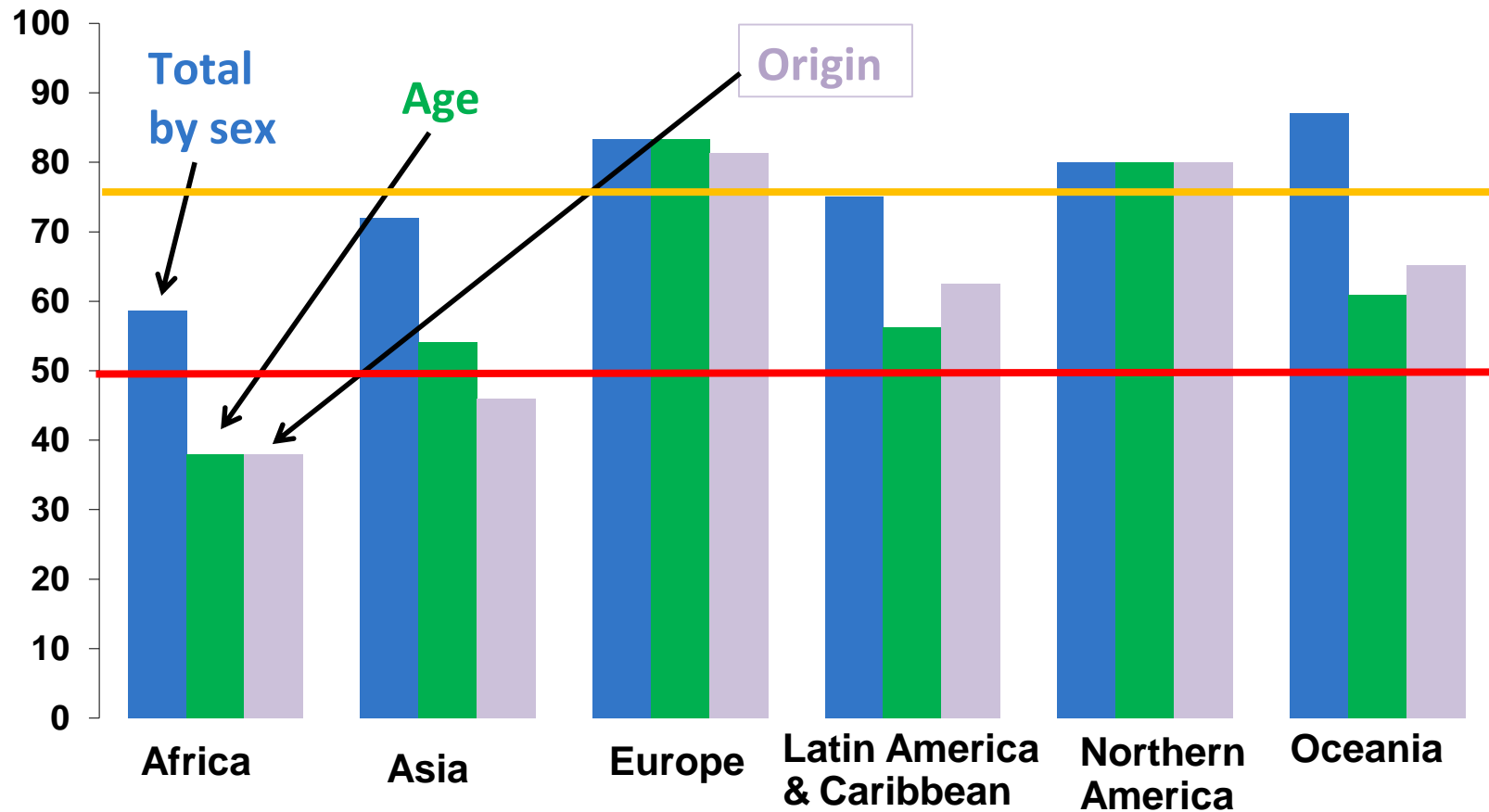
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Uneven regional data collection from 2010 census round

Percentage of countries with data on the number of international migrants by sex, age and origin



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Number of international migrants living in ESCAP - 2017

Region	Total Population	Migrant Stock	Migs over Pop. %	Female %	0_19 %	20_64 %	65+ %
East and North-East Asia (China)	1,624,538	7,777	0.47 - (3.15)	53.2	11.2	75.6	13.2
North and Central Asia	231,500	17,643	7.6	51.3	8.5	75.0	16.5
Pacific	40,678	8,408	20.7	51.0	10.4	70.3	19.3
South and South-West Asia (India)	1,949,730	18,464	0.95 - (2.17)	49.9	17.3	72.8	9.9
South-East Asia	648,780	9,874	1.5	48.1	14.8	79.6	5.6
ESCAP	4,495,225	62,165	1.38 - (3.20)	50.6	12.7	74.5	12.8
WORLD	7,550,262	257,715	3.4	48.4	14.0	74.3	11.7
ESCAP / WORLD (- India & China)	60 - (23)	24 - (22)					



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Number of international migrants originating in ESCAP – 2017 ('000)

Region	Total Population	Ex-patriates	Migs over Pop. %
East and North-East Asia	1,624,538	14,661	0.9
North and Central Asia	231,500	21,229	9.2
Pacific	40,678	1,870	4.6
South and South-West Asia	1,949,730	42,994	2.2
South-East Asia	648,780	21,085	3.2
ESCAP	4,495,225	101,839	2.3
WORLD	7,550,262	257,715	3.4
ESCAP / WORLD	60%	40%	



Estimating levels of migration

- International migration is often the most challenging part of estimating a given population:
 - Reliable data on the number of immigrants and emigrants are often not available
 - Migration exhibits strong fluctuations that make extrapolations difficult, if not untenable.
 - Not possible to calculate meaningful demographic rates (exposure/occurrence rates) for immigration and net migration.



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Sources of data

- Population and housing censuses
- Sample surveys
 - Household sample surveys
 - Border surveys
- Administrative sources
 - Registers: population register; register of foreigners
 - Issuance of residence permits; work permit
 - Border: embarkation and disembarkation cards



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Census data for estimating migration

- 1. Recent immigration** (place of usual residence 1 or 5 years ago)
- 2. Net migration** from two censuses

Component method (natural increase +/- migration)

$$P1 - P0 = (B-D) + (I-E)$$

Cohort method

$$(I_a - E_a) = P1(a) - S * P0$$



Methods for estimating migration



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What is a “net migrant”?

- Recall the population balancing equation

$$P_{t+n} = P_t + B_{t,t+n} - D_{t,t+n} + I_{t,t+n} - E_{t,t+n}$$

- P_t is the population at time t
- $B_{t,t+n}$ and $D_{t,t+n}$ are number of births and deaths occurring between t and $t + n$. The difference between births and deaths is known as natural change.
- $I_{t,t+n}$ and $E_{t,t+n}$ are number of immigrants and emigrants from the country during the same period



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Intercensal component method

Year	Total Population	Intercensal period	Number of births	Number of deaths	Total population growth	Natural Growth	Estimate of net migration
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(4)-(5)	(8)=(6)-(7)
1976	23,450						
1981	24,820	5	1,820	843	1,370	977	393
1986	26,101	5	1,872	885	1,281	987	294
1991	28,031	5	1,933	946	1,930	987	943



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Intercensal cohort component method

Pop by age and sex (in 5-yr age groups)

Survival rates for population

Number of births



Net migration estimates

births

Age Group	Total population 2010	Survival ratio (2005-10)	Surviving population	Population 2015	Estimated net migration
(1)	(2)	(3)	(4)	(5)=(2)*(3)	(6)=(5)-(4)
0-4	1,457.825	0.99931	1,525.000	1,545.117	20.117
5-9	1,354.538	0.99958	1,456.826	1,521.110	64.284
10-14	1,393.988	0.99925	1,353.972	1,416.483	62.511
15-19	1,487.297	0.99872	1,392.942	1,480.342	87.400
20-24	1,626.540	0.99860	1,485.394	1,663.583	178.189
25-29	1,637.906	0.99829	1,624.257	1,763.281	139.024
30-34	1,477.410	0.99750	1,635.107	1,753.076	117.969
35-39	1,619.142	0.99620	1,473.715	1,574.158	100.443
40-44	1,525.127	0.99427	1,612.985	1,655.519	42.534
45-49	1,578.034	0.99121	1,516.393	1,559.507	43.114
50-54	1,465.213	0.98717	1,564.171	1,569.432	5.261
55-59	1,306.861	0.98080	1,446.410	1,451.868	5.458
60-64	1,215.577	0.97062	1,281.772	1,281.614	-0.158
65-69	894.039	0.95031	1,179.857	1,153.780	-26.077
70-74	699.986	0.91583	849.613	843.696	-5.917
75-79	550.716	0.84934	641.068	628.870	-12.198
80-84	829.865	0.55480	467.745	938.120	9.963
85+			460.411		
	22 120.064		22 967.639		831.917



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Exercise for estimating migration



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Australia net migration estimates

Age Group	Total population 2010	Survival ratio (2005-10)	Surviving population	Population 2015	Estimated net migration
(1)	(2)	(3)	(4)	(5)=(2)*(3)	(6)=(5)-(4)
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Thailand net migration estimates

Age Group	Total population 2010	Survival ratio (2005-10)	Surviving population	Population 2015	Estimated net migration
(1)	(2)	(3)	(4)	(5)=(2)*(3)	(6)=(5)-(4)
0-4	4,039.437	0.99735	3,823.000	3,843.801	20.801
5-9	4,229.585	0.99557	4,028.746	4,121.049	92.303
10-14	4,632.865	0.99347	4,210.850	4,387.951	177.101
15-19	4,875.552	0.99004	4,602.608	4,819.226	216.618
20-24	4,746.068	0.98781	4,826.995	4,829.272	2.277
25-29	5,076.903	0.98389	4,688.203	4,477.494	-210.709
30-34	5,437.688	0.97965	4,995.107	4,798.800	-196.307
35-39	5,709.419	0.97562	5,327.048	5,390.823	63.775
40-44	5,844.304	0.97057	5,570.245	5,717.763	147.518
45-49	5,388.844	0.96303	5,672.294	5,732.028	59.734
50-54	4,800.420	0.95078	5,189.622	5,242.753	53.131
55-59	3,724.262	0.93458	4,564.144	4,564.256	0.112
60-64	2,718.490	0.90802	3,480.625	3,478.890	-1.735
65-69	2,062.588	0.86090	2,468.455	2,523.297	54.842
70-74	1,672.773	0.79452	1,775.674	1,858.187	82.513
75-79	1,150.874	0.69969	1,329.058	1,394.198	65.140
80-84	1,098.736	0.48494	805.251	1,477.812	139.741
85+			532.820		
	67 208.808		67 890.742		766.858



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Net migration - Australia



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Net migration - Thailand



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0-4



5-9

10-14

15-19

20-24

25-29

30-34

35-39

40-44

45-49

50-54

55-59

60-64

65-69

70-74

75-79

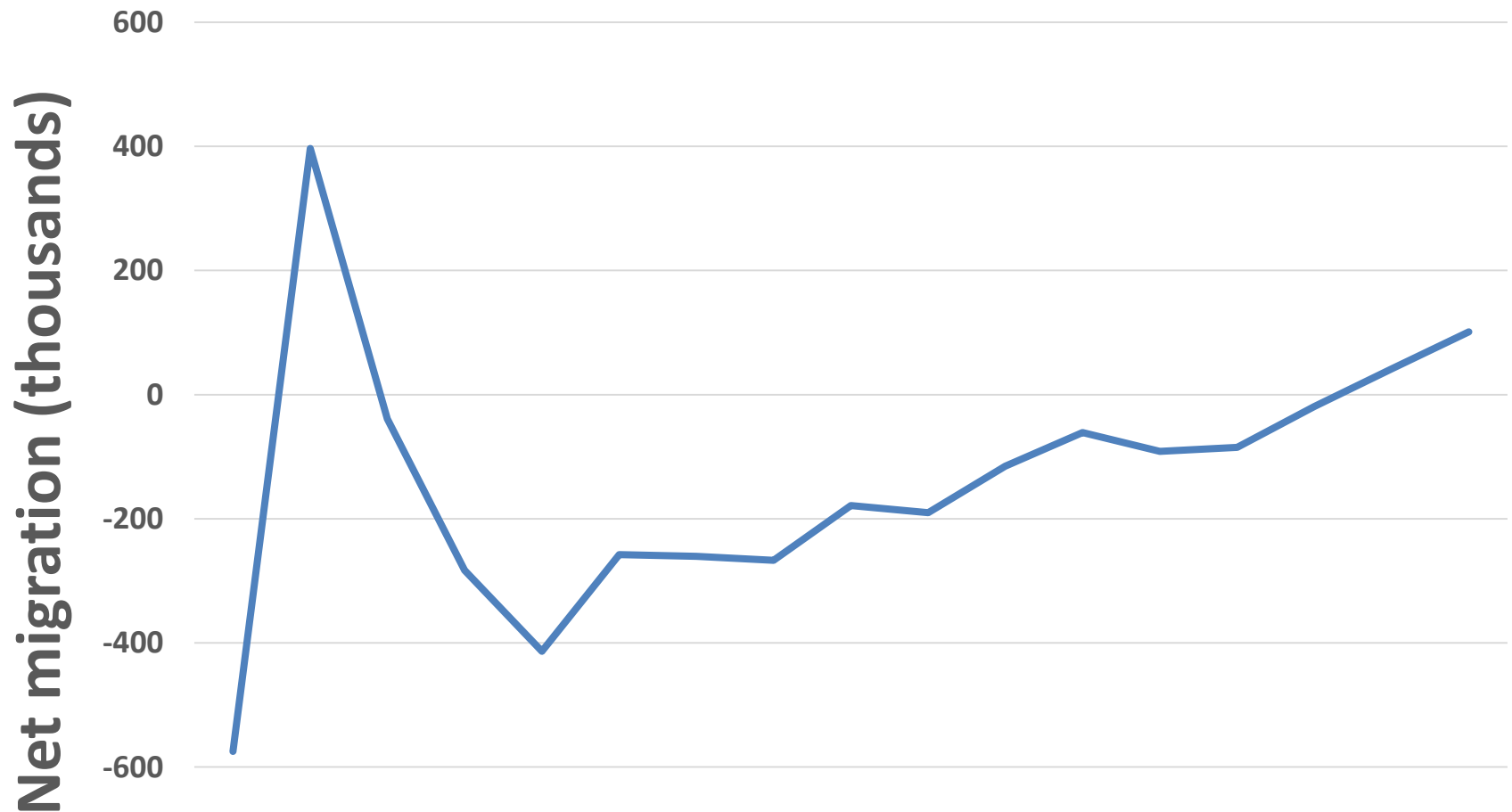
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Net migration - Bangladesh



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0-4

5-9

10-14

15-19

20-24

25-29

30-34

35-39

40-44

45-49

50-54

55-59

60-64

65-69

70-74

75-79

80-84

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Thank you

*–Regional Workshop on the Production of Population Projections
–Addis Ababa, 7-11 March 2016*

