

it is expected to decline on account of socioeconomic development and diffusion of the small family norm and contraceptive use even in the absence of further intervention. Thus, it appears that neo-Malthusian programmes have run their course in Asia and are no longer relevant.

But Asia is not a single entity as far as policies and programmes are concerned; the U.N. population Division lists 48 countries plus the Hong Kong and Macao SARs and other non-specified areas. There is huge diversity within the continent. This is seen in the level of development, nature of development, and demographic conditions. The aggregate indicators for Asia are dominated by China and India, which together account for 62 percent of Asia's population. But Asian countries do vary in demographic conditions. While some have completed the demographic transition long ago, some are at an early phase. Clearly what applies to one may not to another.

As noted above, if the population is at or near replacement level, the growth rate would be quite small or would be bound to fall to a low level in the near future, population momentum only delaying the inevitable decline in the growth rate. One could look at the NRR to see how close the population is to replacement level. But instead of the NRR, it is convenient to use the TFR, which is simpler to comprehend and at low mortality levels, the correspondence between these two indicators is high. A TFR below 2 certainly implies below replacement fertility. But TFRs in the range of 2 to 2.5 would not be far from replacement level given that mortality is not very low in many countries. On the other hand, TFRs above 3 clearly imply high growth even in conditions of moderate mortality. Therefore, the Asian countries are categorised into classes of fertility based on TFR for 2010-15 as: High (TFR above 4), Moderately High (TFR between 3 and 4), Moderate (TFR between 2.5 and 3), Moderately Low (TFR between 2 and 2.5), and Low (TFR below 2). Further, these are cross classified by the level of income (per capita GDP in 2010 in U.S. \$) as: High (over 10000 \$), Middle (5000-10000\$), Low-Middle (2000 to 5000\$), and Low (below 2000 \$). Some Asian countries have been severely affected by wars, external or civil, in the recent years and for these the population growth is not an important issue at the moment. These are shown in a separate category.

The cross-classification in Table 5 gives some idea about the relevance of neo-Malthusianism in the Asian countries. One can adopt the process of elimination. First, there are 14 countries with TFR less than 2 and clearly below replacement

level. It has been generally observed that once fertility falls to such a low level, it rarely rises even with pro-natalist efforts. Thus, not much growth is expected for these populations in the future once the effect of momentum gets phased out. Unless the goal is to reduce population below the current level, there is no case for a programme to promote fertility regulation. It is pertinent to note here that China did promote below replacement fertility when the one child campaign was introduced in 1979 but this has been given up recently. Some of the countries in this low fertility group did not have neo-Malthusian programmes. Among these, Japan has long had relatively low fertility and has been promoting a higher fertility. Georgia and Armenia (parts of the erstwhile Soviet Union), Cyprus, Lebanon, and the oil rich countries of Brunei and UAE did not subscribe to neo-Malthusian policies but have reached low fertility. On the other hand, Singapore and Republic of Korea had strong family planning programmes but after the success in lowering fertility, have abandoned these. Given the level of development of these countries, continuing low fertility is only to be expected. Iran, Malaysia, and Thailand too have followed suit. China and Vietnam have persisted with their programmes. But there has been some moderation in China recently as the one-child strategy has been discontinued.

For countries with TFR between 2 and 2.5, fertility is at or close to replacement level. High population growth is no longer a concern in these countries though the rate of growth will be moderate for some time. Some of these countries, notably those which were once part of the Soviet Union and oil rich countries from West Asia did not have neo-Malthusian programmes. Now that fertility in these countries is not high, no need is felt for such programmes. Besides, the rich countries have been dependent on migrant labour and would like to raise the natural growth rate; neo-Malthusian policies are clearly not relevant for them anyway. Of course, contraceptive services are provided towards reproductive health and these continue. On the other hand, India, Indonesia, Bangladesh, and Nepal have had strong programmes for a long time. Given the fall in fertility to near replacement level, promotion of lowering fertility further is no longer needed. Though these countries have not abandoned their programmes, they have already moderated these. Indonesia did it some time ago. India too seems to have done so following the ICPD and international pressures. India's 2000 population policy gave prominence to addressing unmet need and ruled out coercion. The recent introduction of some measures that may appear pro-natalist, namely child care leave and extending the period of maternity leave, shows that the obsession with

neo-Malthusianism has ended. Though the Indian family planning (welfare) programme has continued, it does not attract as much attention in policy circles and in media as in the past. Conditions in Nepal and Bangladesh, which too have had programmes for quite some time and have reached fairly low fertility, are similar. Sri Lanka and Turkey have reached low fertility and propose to maintain the current level. In most of the countries in this group, family size desires have fallen substantially and the norm of a two child family has been well accepted. But there is some unmet need for family planning and contraceptive services need to be strengthened with wider choice and higher quality. No programmes to promote a small family, whether through media or personal campaigns, incentives or disincentives are seen to be required. Neo-Malthusianism has not been given up but has gradually been allowed to fade out.

Five countries have TFR in the range 2.5 to 3 and thus are not yet close to replacement level. Of these, the rich countries of Saudi Arabia and Oman desire population growth. Mongolia and Kazakhstan are sparsely populated and feeling no population pressures would like to raise or maintain the level of fertility. Neo-Malthusian programmes are not seen as relevant in these countries. Only Cambodia has a family planning programme; this was introduced rather late as the country was affected by disturbed conditions for a long time.

Asian countries with moderately high fertility, TFR in the range 3 to 4, Israel has long desired to raise the growth rate and the Syrian Arab Republic has been affected by wars. Tajikistan and Kyrgyzstan, formerly in the Soviet Union, did not have neo-Malthusian programmes but contraceptive services were available. The position of these countries on the population issue is not clear. On the other hand, Pakistan has had a programme functioning for a long time; this was introduced soon after India did, but has faced interruptions. Jordan, Philippines and Laos too have programmes and these continue.

Five Asian countries have high fertility now, with TFR over 4. Of these, Afghanistan, Iraq, Yemen, and Palestine have had civil strife or wars in the recent past and for these countries, the population factor will come into play only when peace is restored. In spite of high fertility, neo-Malthusian policies do not appear relevant in the present conditions. Timor-Leste suffered during the process of separation but conditions are settled by now yet the high fertility and the high growth rate, exceeding 3 percent (this is the only Asian country with such a high rate at present) does not seem to have received much attention.

Conclusions

We thus see that Asia has passed through a remarkable demographic transition in the past 60 years. Mortality has declined as has fertility but with a lag as is the case in a classical transition. Around the middle of the last century, when mortality decline had begun and further decline was expected but fertility was still at a high level, rapid population growth was imminent and Malthusian concerns emerged and gradually neo-Malthusian programmes were introduced. But over time, fertility declined throughout Asia though in varying degrees and over different time periods. As a result, after an initial rise, the population growth rate began to decline. In many countries, fertility has reached a low replacement level or even lower level than that. Whether credit for this goes to socioeconomic development, family planning programmes, or diffusion, or to be more precise, what are the relative contributions of various factors, is a matter of debate. But the small family has been well established in many countries. Regardless of whether this is attributed to the neo-Malthusian programmes or not, once a small family norm is accepted, fertility is not likely to rise even after the withdrawal of the programmes so long as contraceptive services remain easily accessible. For these countries, a neo-Malthusian programme is now clearly not relevant. The case of countries on the verge of replacement level fertility is quite similar. There too the small family norm seems to have been accepted and low fertility would be maintained in these countries as long as efficient means of regulation are available that is, contraceptive services with adequate choice are provided at no cost as most of the programmes have done. Thus, while the promotion component of the neo-Malthusian programmes has become irrelevant for these countries, the service component will have an important role to play. Contraceptive services have long been linked to the neo-Malthusian programmes as these have served as their instrument. But with the recognition of reproductive health as a need in itself, especially since the ICPD, contraceptive service has acquired an identity of its own, not merely as a component of neo-Malthusian programmes.

Some of the countries with moderate or high fertility being rich in resources and sparse populations seek to increase their populations. It is not clear what is the optimum size desired, but at present the feeling is of under-population and obviously, these countries have no interest in neo-Malthusian policies. But a few countries, notably Pakistan, Philippines, Jordan, Laos and Cambodia and the newly emerged Timor-Leste, continue to experience high growth and are yet to

move close to low fertility. The small family norm has not been well accepted in these. Added to these are countries which have disturbed conditions due to wars with neighbours or civil strife, some of which, once the internal situation is settled, may address the issue of population growth. They will have to take a call on whether growth is desirable, and if not, whether to adopt neo-Malthusian programmes.

Briefly, a large portion of Asia, in terms of population, has reached low fertility, has seen decline in the growth rate, and is well set towards very low, zero, or negative growth in the foreseeable future. These countries have nearly abandoned or moderated efforts to promote low fertility. Neo-Malthusian programmes are not relevant for them as long as contraceptive services are maintained. For some others, population growth has not been an issue in the recent past at all and neo-Malthusian programmes have no relevance for them. There are only a few countries, in which fertility is yet far from replacement level, to which the classical neo-Malthusian thinking may appear relevant. Neo-Malthusianism, once a favourite of international development organisations and national governments, and widely adopted in many Asian countries in the past few decades, appears to be gradually withdrawing from Asia. Will it migrate to Africa now? We could wait and see.

References

Bloom, David E., David Canning, Jaypee Sevilla, 2003. *The Demographic Dividend*, Santa Monica, CA: Rand.

Boserup, Esther, 1965. *The Conditions of Agricultural Growth- the economics of agrarian change under population pressure*. London: Allen and Unwin.

Coale, Ansley J. and E.M. Hoover, 1958. *Population Growth and Economic Development in Low-Income Countries*. Princeton: Princeton University Press.

Davis, Kingsley, 1967. "Population Policy: Will Current Programs Succeed?", *Science* 158(3802): 730-739.

Donaldson, Peter J. (2002). "The Elimination of Contraceptive Acceptor Targets and the Evaluation of Population Policy of India", *Population Studies* 56(1):971-110.

Ehrlich, Paul R., 1968. *The Population Bomb*. New York: Sierra Club/Ballantine Books.

Finkle, Jason L. and Barbara B. Crane, 1975. "The Politics of Bucharest: Population, Development, and the New Economic Order", *Population and Development Review*, 1(1):87-114.

Finkle, Jason L. and Barbara B. Crane, 1985. "Ideology and Politics at Mexico City: The United States at the 1984 International Conference on Population", *Population and Development Review*, 11(1):1-28.

Finkle, Jason L. and C. Alison McIntosh, 1994. "Introduction: The New Politics of Population", in Finkle, Jason L. and C. Alison McIntosh (Eds.), *The New Politics of Population: Conflict and Consensus in Family Planning*, *Population and Development Review*, a Supplement to Vol. 20: 3-36.

Hardin, Garrett, 1968. "The Tragedy of the Commons", *Science* 162: 1243-1248.

Lee, Ronald Damos, 1986. "Malthus and Boserup: A dynamic synthesis", in David Coleman and Roger Schofield (eds.), *The State of Population Theory*. Oxford: Basil Blackwell.

Mamdani, Mahmood, 1972. *The Myth of Population Control: Family, class and caste in an Indian village*. New York: Monthly Review Press.

Meadows, D. H., D.L. Meadows, J. Randers, and W.W. Behrens, 1972. *The Limits to Growth: A report for the Club of Rome's project on the predicament of mankind*. New York: Universe.

United Nations, 1994. *ICPD Plan of Action*. New York: United Nations.

United Nations, Department of Economic and Social Affairs, Population Division, 2013a. *World Population Prospects: The 2012 Revision, DVD Edition*.

United Nations, Department of Economic and Social Affairs, Population Division, 2013b. *World Population Policies 2013*, ST/ESA/SER.A/341. New York: United Nations.

United Nations, Department of Economic and Social Affairs, Population Division, 2015. *World Population Prospects: The 2015 Revision-Key Findings and Advance Tables* <http://esa.un.org/wpp/> accessed on November 13, 2015.

World Bank, 2015. *World Development Indicators 2015*. Washington, D.C.: The World Bank. <http://data.worldbank.org/indicator>.

Table 1: Demographic Situation in Asia, 1950-55

A. Total Fertility Rate			B. Life Expectancy (both sexes)		
TFR	No. of countries	Percent of Asia's population	Life expectancy (years)	No. of countries	Percent of Asia's population
5.00 +	40	92.1	< 40.00	12	33.7
4.00-4.99	4	0.9	40.00-49.99	15	51.9
3.00-3.99	4	6.9	50.00-59.99	14	7.7
2.00-2.99	0	0.0	60.00-69.99	7	6.7
< 2.00	0	0.0	70 +	0	0.0
Total	48	100	Total	48	100.0
Average	5.82		Average	42.1	

C: Rate of natural Increase			D: Net Reproduction Rate		
RNI (% annual)	No. of countries	Percent of Asia's population	NRR	No. of countries	Percent of Asia's population
3.00 +	7	2.5	2.50+	7	1.7
2.00-2.99	22	16.5	2.00-2.49	16	46.9
1.00-1.99	18	80.3	1.50-1.99	21	44.4
0.00-0.99	1	0.8	1.00-1.49	4	6.9
< 0.00	0	0.0	< 1.00	0	0.0
Total	48	100.0	Total	48	100.0
Average	1.91		Average	1.83	

Source: Obtained from United Nations (2013a).

Table 2: Demographic Situation in Asia, 1970-75

A. Total Fertility Rate			B. Life Expectancy (both sexes)		
TFR	No. of countries	Percent of Asia's population	Life expectancy (years)	No. of countries	Percent of Asia's population
5.00 +	33	51.1	< 40.00	4	0.9
4.00-4.99	8	41.9	40.00-49.99	6	30.2
3.00-3.99	3	1.7	50.00-59.99	12	15.5
2.00-2.99	4	5.2	60.00-69.99	22	48.1
< 2.00	0	0.0	70 +	4	5.4
Total	48	100	Total	48	100.0
Average	5.06		Average	56.4	

C: Rate of natural Increase			D: Net Reproduction Rate		
RNI(% annual)	No. of countries	Percent of Asia's population	NRR	No. of countries	Percent of Asia's population
3.00 +	10	1.5	2.50+	16	5.3
2.00-2.99	28	91.5	2.00-2.49	15	57.5
1.00-1.99	9	6.7	1.50-1.99	11	31.2
0.00-0.99	1	0.2	1.00-1.49	6	6.0
< 0.00	0	0.0	< 1.00	0	0.0
Total	48	100.0	Total	48	100.0
Average	2.30		Average	1.97	

Source: Obtained from United Nations (2013a).

Table 3: Demographic Situation in Asia, 1990-95

A. Total Fertility Rate			B. Life Expectancy (both sexes)		
TFR	No. of countries	Percent of Asia's population	Life expectancy (years)	No. of countries	Percent of Asia's population
5.00 +	13	5.9	< 40.00	0	0.0
4.00-4.99	6	6.5	40.00-49.99	0	0.0
3.00-3.99	12	33.9	50.00-59.99	9	30.3
2.00-2.99	13	45.9	60.00-69.99	20	56.9
< 2.00	4	7.8	70 +	19	12.8
Total	48	100	Total	48	100.0
Average	2.96		Average	65.1	

C: Rate of natural Increase			D: Net Reproduction Rate		
RNI (% annual)	No. of countries	Percent of Asia's population	NRR	No. of countries	Percent of Asia's population
3.00 +	5	1.4	2.50+	6	1.9
2.00-2.99	22	16.3	2.00-2.49	8	4.5
1.00-1.99	19	78.2	1.50-1.99	14	36.3
0.00-0.99	2	4.2	1.00-1.49	14	13.2
< 0.00	0	0.0	< 1.00	6	44.1
Total	48	100.0	Total	48	100.0
Average	1.68		Average	1.26	

Source: Obtained from United Nations (2013a).

Table 4: Demographic Situation in Asia, 2010-15

A. Total Fertility Rate			B. Life Expectancy (both sexes)		
TFR	No. of countries	Percent of Asia's population	Life expectancy (years)	No. of countries	Percent of Asia's population
5.00 +	2	0.7	< 40.00	0	0.0
4.00-4.99	3	1.4	40.00-49.99	0	0.0
3.00-3.99	8	7.6	50.00-59.99	1	0.7
2.00-2.99	21	46.4	60.00-69.99	19	47.9
< 2.00	14	43.9	70 +	28	51.5
Total	51	100	Total	48	100.0
Average	2.20		Average	71.6	

C: Rate of natural Increase			D: Net Reproduction Rate		
RNI (% annual)	No. of countries	Percent of Asia's population	NRR	No. of countries	Percent of Asia's population
3.00 +	1	0.0	2.50+	1	0.0
2.00-2.99	9	6.8	2.00-2.49	3	1.5
1.00-1.99	27	52.9	1.50-1.99	4	5.0
0.00-0.99	10	37.3	1.00-1.49	23	47.2
< 0.00	1	3.1	< 1.00	17	46.3
Total	48	100.0	Total	48	100.0
Average	1.07		Average	0.97	

Source: Obtained from United Nations (2015).

Table 5: Asian Countries by Total Fertility Rate and Income Level

Income level (in 2010) or conditions around 2010					
TFR (2010-15)	Low	Low-Middle	Middle	High	War affected
≥4		Timor-Leste			Afghanistan, Iraq, Yemen, Palestine
3.00-3.99	Pakistan, Tajikistan, Kyrgyzstan, Lao Rep	Jordan, Philippines			Israel, Syrian AR
2.50-2.99	Cambodia	Mongolia	Kazakhstan	Oman, S. Arabia	
2.00-2.49	Uzbekistan, India, Nepal, Bangladesh, Bhutan, Myanmar, DPR Korea	Indonesia, Turkmenistan, Sri Lanka	Azerbaijan, Maldives, Turkey	Kuwait, Bahrain, Qatar	
< 2	Vietnam	Georgia, Armenia, China, Thailand	Malaysia, Iran, Lebanon	Cyprus, Brunei, UAE, Singapore, Ro Korea, Japan	

Note : Income based on per capita GDP, 2010: Low: < 2000 \$,
Low-Middle: 2000- < 5000 \$, Middle: 5000- < 10000 \$, High: 10000 \$ or more.

Sources: Per capita GDP: World Development Report (World Bank, 2015).
TFR (Total Fertility Rate): United Nations (2015).

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