Fertility Decline and the Role of Culture – Thailand's Demographic Challenges for the 21st Century

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Changing Demographics, Changing Challenges – Southeast Asia in Transition

Declining birth and death rates, changes in age distribution, in mortality and morbidity, in fertility and marriage behavior, in the average life expectancy and in family and household structures, as well as a transformation of traditional family life arrangements and social structures of ever larger sections of the population – these are all scenarios that only a few years ago were only relevant for countries of the Global North. In the meantime, however, demographic change has also affected parts of the less developed world with a vehemence and dynamism that, even in the 1980s, neither demographers nor politicians considered possible in the affected regions of the world: the demographic transition, which is often also graphically illustrated through the well-known demographic transition model, has taken place much more rapidly in Southeast Asia in recent decades than in other less developed parts of the world.

Accordingly, as the demographic transition progressed, the focus shifted to the demographic situation in Southeast Asia: Until the mid-20th century, population development in this region was still classified as a 'demographic anomaly' by many demographers. Around the middle of the last century, Wilbur Zelinsky (1950: 115), for example, commented on the demographic situation of Southeast Asia in comparison to that of India and China as follows:

> "[...] it is more than a little startling that side by side with these fearfully overcrowded regions [meaning India and China] there should be found others, apparently comparable in natural resources, where the actual density is conspicuously low, so much so that underpopulation is often a serious issue."

Shortly afterwards – after the end of the Second World War and the withdrawal of the colonial powers – it was the strong population growth and the high birth rates that were regarded by Southeast Asian governments as well as international organizations as the main problems of population development and were the focus of scientific interest and population policy measures.

The 1990s and 2000s brought with them a completely different assessment of the demographic situation in Southeast Asia: the pronounced decline in birth rates in most states in the region, the equally impressive reduction in mortality rates (above all, infant mortality rates), and – hence – the sharp rise in life expectancy brought demographic changes in Southeast Asia (see Table 1) once again into the public eye, but this time with a new focus. Above all, the rapidly changing age structure and its possible long-term effects on society and economy have already become the cause of a 'rhetoric of demographic crisis' in some states of the region today – not everywhere did the demographic revolution of the last decades take place at the same speed – which is increasingly being paid attention to both on a political level and in the mass media.

Table 1: Selected Indicators of Population Development in Southeast Asia 1950 to 2017

	1950	1960	1970	1980	1990	2000	2010	2017
Population (in millions)	165	213	281	357	444	525	597	644
Index (1950 = 100)	100	129	170	216	269	318	362	390
Average annual growth rate (in %)*	1.7-1.9	2.59	2.81	2.42	2.20	1.69	1.29	1.09
Population density (km²)	37.9	49.1	64.6	82.2	102.3	120.9	137.8	148.4
Crude birth rate (in ‰)	43.7	42.7	37.2	31.8	25.7	21.5	19.3	18.0
Crude death rate (in ‰)	19.1	14.7	11.7	8.8	7.2	6.9	6.7	6.7
Total fertility rate (children per woman)	5.9	6.1	5.5	4.2	3.1	2.5	2.4	2.3
Infant mortality rate (in ‰)	156	115	86	68	47	34	24	23
Median age (years)	20.5	19.6	18.1	19.1	21.3	24.2	27.1	29.1
Life expectancy at birth (years)	37.0	43.4	49.4	54.8	59.7	64.0	67.9	70.5

Source: Husa and Wohlschlägl 2018: 181, Data calculated from UN-DESA 2017; PRB 2017

* average rates for the 10-years-periods (1950-1960; 1960-1970; 1970-1980, 1980-1990, 1990-2000, 2000-2010) as well as for 2010-2017, each entered in the column marking the end of each period. Column 1950: average rates for the period 1910 to 1950 based on Hirschman 1994 and Caldwell/Caldwell 1997

The English-language Thai daily "The Nation", for example, entitled its editorial "Grey boom on its way" on the occasion of World Population Day on 11 July 2001. The

core message of the article was that a number of Southeast and East Asian societies and governments would be under pressure in the coming decades to take appropriate measures in good time to effectively counter problems in the labor market, but above all in health care and care for the elderly, due to the foreseeable changes in the age structure of their populations.

In the meantime, there is no longer any need for an international event to draw attention to the challenges posed by rapidly ageing societies in the affected Southeast Asian states: the issues of 'lowest low fertility' and – associated with this – stagnation or even future shrinkage of the population and above all of the working population have arrived at the center of society, as the – by now – regular reporting on this topic with newspaper articles such as "Singapore's ageing population a ticking 'time bomb'" (Business Times, Singapore 7 December 2017) or "Act now on ageing society before it's too late" (Bangkok Post, Thailand 5 July 2018) has shown. But also demographers and family planning experts are already warning of an "aging tsunami" and the transition from a period of "demographic bonus" to a phase of "demographic disruption" (cf. for example Prasartkul et al., 2019).

The demographic transition was particularly dynamic in the Kingdom of Thailand, which – although the country is not among the Asian Tiger Economies – has not only achieved an impressive performance from an economic point of view and meanwhile already belongs to the group of Lower Middle Income Countries, but has also undergone socio-demographic processes of change at a speed that is unparalleled within Southeast Asia, apart from the developments in the city-state of Singapore. Within only about four decades, Thailand has undergone the phases of the classic "first demographic transition" and has faced many challenges posed by ageing population since the early 2000s (Sasiwongsaroj and Burasit, 2018). Actually it is about to enter a phase in which constantly low fertility rates and rapid demographic ageing occur simultaneously (Prasartkul et al., 2019: 2).

Similar developments have so far only been known from countries of the Global North (above all from Northern and Western Europe), where it became apparent as early as the end of the 1970s that the usual explanatory approaches such as the concept of the First Demographic Transition were not sufficient to adequately explain the continuing sub-replacement fertility and the emergence of a variety of forms of partnership and cohabitation instead of traditional family forms, the decoupling of sexuality and reproduction, the rapid demographic ageing, and thus the tendency towards population shrinkage.

Probably the most comprehensive and well-known attempt to date to remedy the deficits of the First Demographic Transition is found in the concept of the "Second Demographic Transition" (SDT) formulated by Lesthaeghe and Van de Kaa in 1986, in which the basic assumptions of the classic demographic transition were complemented by considerations from Maslow's "theory of shifting needs" and thus by a central cultural component. Critics, however, consider the Second Demographic Transition as a phenomenon that is typical above all for Northwestern Europe and overseas states characterized by Europe such as the USA, Canada, Australia and New Zealand, and do not believe that it will spread in a similar form to other cultural circles, for example Asia

or Latin America. Lesthaeghe (2014: 18114) accurately describes this point of criticism, which was among others held by demographers from Asia, as follows: "The typical reaction was, 'Not us, we're different', and therefore the SDT would describe only 'Western idiosyncrasies'."

Meanwhile, there are increasing signs that the Second Demographic Transition has also gained a foothold in parts of East Asia since the turn of the millennium: the cohabitation of young Japanese and Taiwanese couples before marriage and starting a family is becoming more and more the rule (cf. e.g. Raymo et al., 2008). For example, signs of far-reaching cultural changes can already be seen in Japan, such as the loss of significance of traditional authorities, a slow reduction in gender differences, and a gradual shift away from collective patterns of behavior towards individualism and Western norms and moral concepts (Lesthaeghe 2010, 2011a,b).

How likely is it that the Second Demographic Transition will quickly spread to countries in Southeast Asia such as Thailand, which has already largely completed the "classic" first demographic transition? Are persistent sub-replacement fertility, shrinking family sizes, and the rapid ageing of the population already precursors of the onset of the Second Demographic Transition, as already hinted at in some studies (cf. Prasartkul et al., 2019), or do culturally conditioned norms and values prove to be forces that delay or modify such processes?

In the following, we will attempt to analyze the extent and course of the major demographic changes in Southeast Asia using the example of the Kingdom of Thailand, without disregarding the possible influence of deeply rooted cultural patterns of behavior and values and norms.

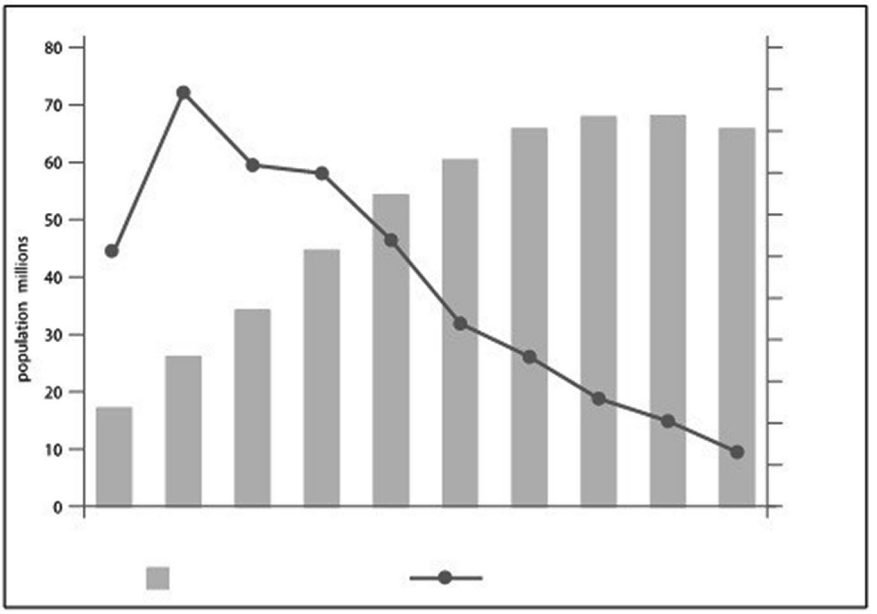
From Growth to Stagnation? The Dynamics of Population Change in Thailand

According to the results of the National Statistical Office of Thailand, the population of Thailand in 2018 amounted to about 66.4 million people. A population projection by the National Economic and Social Development Board (NESDB), which also takes into account the population groups not included in the register data but very well included in the 2010 census, shows a population of 68.1 million by 2020 (NESDB, 2013). This means that the population is likely to be only around two million people higher than the 65.98 million inhabitants determined at the last census in 2010, which corresponds to an average annual population growth of only 0.3 percent. After decades of rapid population growth, Thailand's population growth has almost come to a standstill within just two decades (Figure 1).

In the 1950s and 1960s, the country was still one of the fastest growing countries in the world, with average annual growth rates of between 3 and 4 percent. Up to this time – with birth rates, which, as estimates and adjustment calculations of Bourgeois-Pichat (1960) and the UN-ESCAP Population Division (1976) have shown, remained constant until the 1960s at a level of over 40 per mil – one can speak of an accelerated population growth in Thailand. The strongest growth phase was in the 1950s; from the first half of the 1960s a slow and then accelerating decline in fertility set in, which continues to this day. As a result of this development, the average annual growth rate already fell

from 1980 to 1990 to just over 2 percent, although it should not be overlooked that such a figure still amounted to an annual population increase of around one million people per year at the time.

Figure 1: From Growth to Stagnation: Population Change in Thailand 1947- 2040



Data sources: NSO (Thailand, National Statistical Office), Population Censuses 1947-2010; NESDB (2013) Population Projection 2020-2040; own design

The official population forecasts of the Working Group on Population Projections for the Fifth National Economic and Social Development Plan (1982-1986) of the Thai government (Thailand, NESDB, 1982; Working Group on Population Projections, 1983), drawn up on the basis of the census results of 1980, assumed that the birth rate would continue to fall sharply and that the growth rate could thus be reduced to around 1.5 percent by the year 2000. However, the results of the 2000 census already showed that the decline in the birth rate in Thailand after 1990 had accelerated considerably and that the original target of 1.5 percent had already been undercut with an average annual growth rate of only 1.2 percent between 1990 and 2000.

The first decade of the 21st century showed a continuation of the trend: between 2000 and 2010, the average annual growth rate fell further to only 0.8 percent, and as the latest update results indicate, population growth in Thailand has almost come to a standstill in the meantime – within a very short period of time, concern about too rapid a population growth has now turned into concern about the consequences of too rapidly falling and now too low fertility and about the consequences of an unexpectedly rapid stagnation of the population.

Thailand's Fertility Transition – a Spatio-Temporal Approach

A first glance at the development of birth and death rates since 1950 already shows that Thailand is the country among the more populous states of Southeast Asia that has made the most rapid transition from high to low birth and death rates and now has a similar demographic situation to the states of the Global North – only the city-state of Singapore experienced a similarly pronounced demographic change within Southeast Asia during the same period (cf. Fig. 2).

In the mid-1960s, official Thai statistics still showed a continuous increase in the birth rate up to a value of just over 40 per mil compared to 27.3 per mil in 1951, but this increase undoubtedly reflects not only an actual increase in the number of live births per 1,000 inhabitants, but also – primarily – improvements in the registration system, which cannot accurately be recorded quantitatively (cf. Wohlschlägl, 1986: 365). With a value of around 48 per mil, 1956 marks the peak of post-war developments in the birth rate. Between 1956 and 1970, the ESCAP data indicate a slow decline to a level of just over 40 per mil (1960: 44.3, 1970 with 39.4 for the first time below 40 per mil).

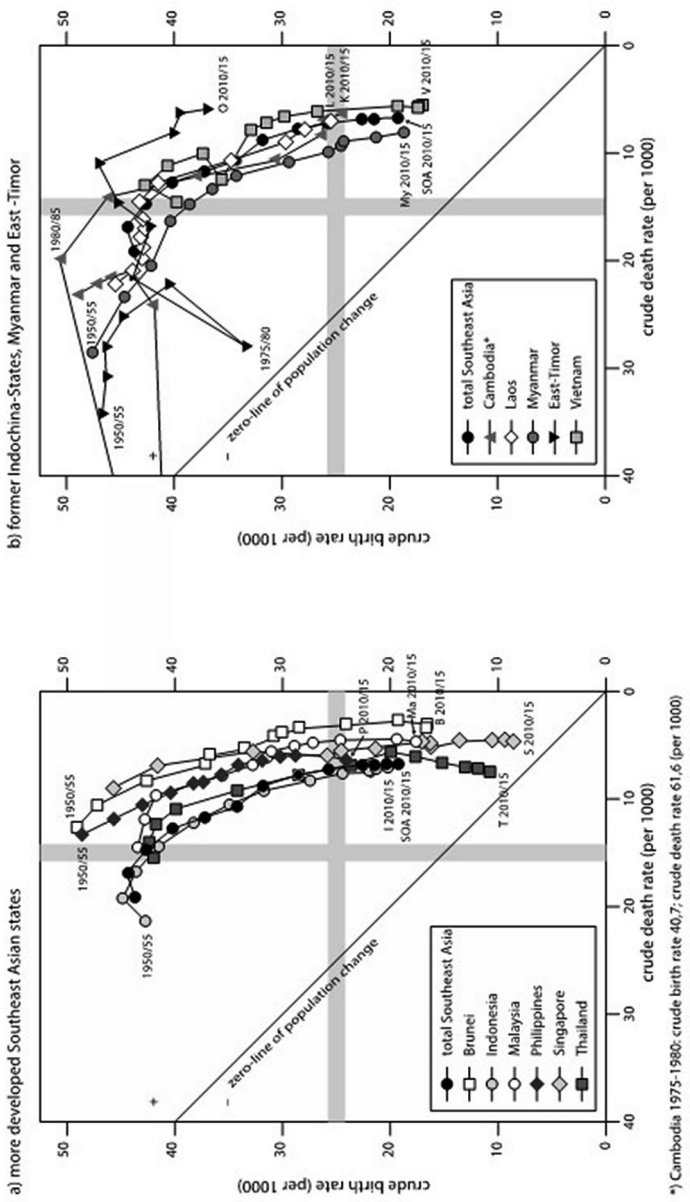
Until the early 1970s, however, the decline in the birth rate was not strong enough to have an impact on the dynamics of the natural growth rate, which remained at an annual level of more than three percent between 1965 and 1970, as the mortality rate was simultaneously decreasing. Only since the early 1970s has there been a marked and comparatively rapid decline in the birth rate, which led to the fact that in the mid-1980s the birth rate was already only around 28 per mil, around 20 per mil lower than in 1956 and around 10 per mil lower than in 1970. In the meantime, the value of the crude birth rate was again more than halved and in the five years from 2010 to 2015 is only at around 11 per mil (UN-DESA, World Population Prospects, Revision, 2019).

If one only considers the change in the birth rate when estimating the decline in fertility in Thailand, one must not overlook the fact that this clearly underestimates the actual extent of this decline. The birth rate also depends on the age and gender structure of a population, and if – as in many less developed countries – more and more women born in a period of almost uninterrupted fertility advance into reproductive age over time, it can theoretically even rise despite declining fertility levels; its decline will at least be much slower. It makes more sense to use the average number of children per woman, measured over the total fertility rate (TFR), to analyze the decline in fertility.

According to Prasartkul et al. (2011: 17), the decline in fertility in Thailand can be roughly divided into four phases:

- high fertility before 1970 (TFR 6 children per woman and more),
- phase of rapid fertility decline from 1970-1990 (drop in TFR from over 6 to just over 2 children per woman),
- further decline of the already low fertility rate to the replacement level of just over two children per woman 1991-1996, and
- finally, from 1997 onwards, the "lowest low fertility" phase, characterized by a continuous further drop in fertility below the replacement level to date (decline in TFR from just over 2 to currently 1.5 to 1.6).

Figure 2: The Development of Birth and Death Rates in Southeast Asian Countries 1950- 2015



Source: Husa and Wohlschlägl, 2018: 200. Data: Calculated from UN-DESA (2017) World Population Prospects Database – The 2017 Revision; own design

The high level of fertility that prevailed in Thailand in the 1950s and 1960s has been the subject of little research. For the first half of the 1950s, the United Nations estimated a gross reproduction rate of 3.2 on average (United Nations, 1965). As can be inferred from the results of the *Survey of Population Change 1964-65*, the rate is likely to have remained fairly stable until the mid-1960s, when this nationwide survey, which did not include Bangkok-Thonburi however, found a figure of 3.1. The total fertility rate of 6.3 shows that in the mid-1960s, an average of more than six children were still born alive by a woman during her entire reproductive period.

The pronounced decline in fertility began around the second half of the 1960s. Due to the lack of reliable and age-specific birth statistics from the official registration of natural population movements, it is difficult to determine the exact date. However, the available figures – most of them estimated or derived from empirical representative surveys – allow the conclusion that the decline before the mid-1960s was very low and that it was only between 1965 and 1970 that the process of generative behavioral change that Knodel and Debavalya (1978) called "Thailand's reproductive revolution" began.

The total fertility rate is likely to have fallen from 6.3 to 5.6 between 1965 and 1970 alone, i.e. by an average of 0.7 children per woman or 11 percent. According to the *Survey of Population Change 1974-76*, a rate of 4.9 can be assumed for the mid-1970s. In summary and with a cautious interpretation of the available data, it can be stated for this first phase of fertility decline that the total fertility rate in the first half of the 1960s was between 6.3 and 6.6, then began to fall significantly, namely to a level of 5.4 to 5.8 around 1970 and 4.5 to 4.9 around 1975 (see also Wohlschlägl, 1986).

The downward trend continued from the second half of the 1970s onwards, possibly even with increasing acceleration. After all, the first two rounds of the *Contraceptive Prevalence Survey* indicate that the total fertility rate at the turn from the 1970s to the 1980s probably only had a value of 3.7 to 3.8, while the calculations from the data of the third round of this survey as well as the fertility estimates of the Population Division of the United Nations or the Population Reference Bureau for the mid-1980s only showed a value of 3.5. By the early 1990s, the TFR had finally fallen to fewer than 2.5 children per woman.

In the early 1990s (1991-1996), a third, brief intermediate phase of fertility transition followed, in which the already low fertility rate continued to drop to the replacement level of just under two children per woman, which was finally reached around 1996. From 1997, Thailand then entered the "lowest low fertility" phase, in which the TFR fell further and further below the replacement level and currently oscillates at between 1.4 and 1.5 children per woman in the second half of the 2010s (Jones, 2011: 6).

Within just a third of a century, Thailand has experienced a decline from more than 6 children per woman in the 1960s to around 1.5 children per woman at the beginning of the 21st century, a dynamic development that deserves the term revolutionary and is also internationally unparalleled: even within Southeast Asia, the Kingdom – in terms of the speed of the fertility transition – is only surpassed by the city-state of Singapore, which, however, due to the completely different circumstances, cannot be compared with a populous territorial state with extensive rural areas such as Thailand (Table 2).

Table 2: The Dynamics of Fertility Decline in Southeast Asian Countries 1960/65 to 2010 /15

Country	Total Fertility Rate (TFR)			Percent Change (%)	
	1960/1965	1985/1990	2010/2015	1960/65 to 1980(85	1980/85 to 2010/15
Brunei Darus-salam	6.66	3.47	2.02	-47.9	-41,8
Cambodia	6.95	5.99	2.70	-13.8	-54.9
Indonesia	5.62	3.40	2.45	-39,5	-27.9
Lao PDR	5.97	6.27	2.93	+5.0	-53.3
Malaysia	6.36	3.67	2.11	-42.3	-42.5
Myanmar	6.10	3.78	2.25	-38.0	-40.5
Philippines	6.98	4.53	3.05	-35.1	-32.7
Singapore	5.12	1.70	1.23	-66.8	-27.6
Thailand	6.13	2.30	1.53	-62.5	-33.5
Timor-Leste	6.20	5.40	4.40	-12.9	-18.5
Vietnam	6.42	3.85	1.96	-40.0	-50.9

Data source: UN-DESA (2019) World Population Prospects Database – The 2019 Revision; columns 5 and 6: own calculations

The decline in fertility in Thailand – as in most other parts of the world – did not start in all parts of the country at the same time. In this context, however, it is difficult to estimate how much earlier the fertility decline began in the cities, especially in Bangkok, than in rural areas – from a similarly high niveau or from a level that was already lower in the 1950s (?) – because the necessary data are lacking. Unfortunately, the first *Survey of Population* Change 1964-65 did not include Bangkok-Thonburi as the only part of Thailand.

However, the calculation of the total fertility rate for the provincial cities (municipal areas) from the collected data leads to the conclusion that the fertility level in the capital at that time must have been well below that of the rural areas, because even in the municipal areas, which were usually only small rural towns and administrative seats, the total fertility rate (TFR) was only 4.2 compared with a value of 6.5 for the non-municipal areas. On the other hand, the data available from the 1970s show that it can be assumed that the provincial cities had a higher fertility level than Bangkok-Thonburi (Survey of Population Change 1974-76: TFR values: Bangkok-Thonburi 3.6, municipal areas 4.5, non-municipal areas 5.3; cf. Thailand, National Statistical Office, 1969, and 1978).

At the beginning of the fertility transition in the first half of the 1970s, the TFR in rural regions was probably only slightly higher than in urban areas (Table 3). A decade later, however, the fertility level in the cities, especially in the metropolis of Bangkok, with a TFR of 1.8 in 1985/86 was already below the replacement level and thus well below that of the rural areas (TFR 1985/86: 3.0). It was not until the beginning of the 2000s that the TFR in rural Thailand also fell below the population replacement level and,

meanwhile, the number of children per woman in rural Thailand is only slightly higher than in the cities.

Clear differences in fertility levels and in the dynamics of the decline in fertility also exist between the individual parts of the country: the earliest fertility transition began in Bangkok, where it fell below the replacement level already in the mid-1980s, followed by the northern and central regions in the early 1990s (NSO 2017, Survey of Population Change 2015/16). The rural north-eastern region fell below replacement fertility in the early 2000s, and the last part of the country to follow was the southern region in the mid-2000s (Table 3).

Table 3: Fertility Decline in Thailand 1974/76 to 2015 /16, by Urban and Rural Residence and Regions

Area	Total Fertility Rate (TFR) by Year of Survey				
	1974/76	1985/86	1995/96	2005/06	2015/16
National Level	4.9	2.73	2.02	1.47	1.61
Municipal Areas (Urban)	4.5	1.77	1.33	1.03	1.33
Nonmunicipal Areas (Rural)	5.0	2.96	2.28	1.73	1.87
Bangkok Metropolitan Region	3.5	1.74	1.26	0.88	0.86
Central Region	4.1	2.49	1.66	1.19	1.33
Northern Region	3.7	2.25	1.89	1.57	1.79
Northeastern Region	6.3	3.10	2.44	2.04	1.78
Southern Region	6.1	4.05	2.85	1.52	1.78

Data source: NSO (Thailand, National Statistical Office) (2017) The 2015-16 Survey of Population Change; *Please note: Data on fertility from Thai data sources can slightly differ from the international data of UN-DESA (2017, 2019) due to different surveys and estimation procedures.*

The Role of Family Planning Programs in Fertility Decline

The changes in fertility behavior were accompanied by an extraordinarily strong increase in the use of contraceptives and contraceptive methods and the corresponding level of knowledge of the Thai population. Whereas in the early 1970s, about half of Thai women still had practically no information on methods of birth control and could not even name a single contraceptive method (cf. Wohlschlägl, 1986: 373), today practically all Thai women between the ages of 15 and 49 are well-informed on this issue, whereby – corresponding to the lower initial level – the increase in the level of knowledge and application among the rural population was much greater than in urban areas.

Nationwide, in the forty years from the introduction of Thailand's first family planning program in 1970 to the currently last nationwide fertility survey (the *Reproductive and Health Survey, 2009*), the proportion of married women between 15 and 44 or between 15 and 49 who use a method of birth control has increased almost sixfold: from 14 per

cent in 1969/70 to almost 80 per cent in 2009. The initial differences between urban and rural areas have largely disappeared over time. Regionally, however, there are still significant differences between the southern region of Thailand and the rest of the country, as the data from the "Thailand 14 Provinces Multiple Index Cluster Survey (MICS) 2015-16", conducted jointly by the National Statistical Office of Thailand, the National Health Security Office in Thailand and UNICEF, show: While the nationwide Contraceptive Prevalence Rate (CPR) 2015-16 was 78.4 percent, the rate for the southern region was only around 71 percent. In the three Muslim-dominated provinces of Narathiwat, Yala and Pattani in particular, the CPR was between 35.4 and 55 percent respectively, far below the values of other regions (NSO/UNICEF, 2017: 12).

As far as the differences in fertility behavior and the contraceptive prevalence rate between the southern provinces and the rest of the country are concerned, religious and cultural attitudes also play a role. From a Buddhist point of view based on one of the Five Precepts, it is fundamentally wrong to kill any living being, for whatever reason. But according to Buddhist ethics, birth control is acceptable if contraceptives are to help prevent conception. Contraceptives that stop the development of an already fertilized egg are frowned upon and should not be used. Behind this is the Buddhist belief that life begins or consciousness develops with the fertilization of the egg (Payutto, 1999). In contrast to most other religions and belief systems, Buddhist teaching does not advocate for any explicitly family-oriented positions either; conceiving children is not considered a religious duty. Even sexual activities without the intention of procreation are not rejected in principle, however acting on one's sexual (and other) desires generally stands in the way of the goal of enlightenment.

In contrast to Buddhism, Islam has a strong focus on the family, and children are basically regarded as a gift from God. There is no uniform 'Islamic position' on the issue of birth control, but eight of the nine classical schools of law advocate for allowing birth control. This always refers to inner-marital birth control, premarital sex is forbidden. However, the emergence of fundamentalist currents in recent decades has led more and more conservative preachers to openly campaign against the use of condoms and other means of birth control, which have undermined state measures for family planning and birth control in many Islamic areas. The view that the majority of Muslims in the southern provinces of Thailand tend predominantly towards holding strong conservative views and regard birth control as "haram" – forbidden – is also confirmed by the results of a broad-based study on the nexus between religion and reproduction among Muslims in Buddhist Thailand (Knodel et al., 1999).

In this context, the central role in (as some even believe from today's perspective, too) successfully disseminating knowledge on various contraceptive methods to distant parts of the country, in creating a broad awareness of the necessity of birth control, in providing psychological and material support to interested persons and in providing information material, doctors, and contraceptives was held by the tightly organized state family planning program, which was steered by the Ministry of Public Health. Following the establishment of a National Committee on the Family Health, the first systematic measures began in November 1964 in Potharam District, Ratchaburi Province, Central Thailand. They were accompanied by a scientific study conducted with the support of the "Population Council" in New York, the so-called "Potharam Study", which

was "Thailand's first population/family planning field research project" (Prachuabmoh and Thomlinson, 1971).

In 1968, the Ministry of Health began carrying out family planning activities on a broad scale throughout the whole country as part of the Family Health Project and in 1972, with reference to the official proclamation of a government population policy aimed at family planning in 1970, for the first time in a national five-year economic and social development plan (namely in the third five-year plan from 1972 to 1976), the aim was to reduce the annual growth rate of the population to 2.5 percent by the end of 1976. In fact, this figure was almost reached, while the further reduction in the intensity of population growth demanded in the fourth five-year plan to an annual growth rate of 2.1 percent in 1981, as well as the reduction to 1.5 per cent provided for in the fifth plan by 1986 (NESDB, 1982: 175, 176), was somewhat too optimistic and was not quite achieved despite the sharp decline in fertility – partly due to the move towards the reproductive age of cohorts with large populations.

The success of the program, especially its large presence even in remote rural regions of Thailand and its acceptance in most of the country (as already mentioned, the smallest successes were achieved in the southern provinces with a strong Muslim population), depended – in addition to the favorable socio-cultural background, which will be discussed in more detail later – on several factors (Knodel et al., 1980: 9f): the inclusion of specially trained personnel at all levels of state activities for birth control should be mentioned here, but especially the delegation of various tasks within the framework of family planning, such as passing on oral contraceptives and advice on their use, to people who were not doctors, especially midwives and nurses, as well as the free distribution of the pill from 1976 onwards and the establishment of a branched network of 'family planning outlets' even in small villages.

From the sixth five-year plan (1987-91) onwards, the emphasis in the area of population-related measures was no longer only on reducing fertility and growth rates, but shifted towards "enhancing the quality of the population" (Jones, 2011: 9). In the eighth plan (1997-2001), for the first time no target value was set for the reduction of the population growth rate, since by the end of the 1990s fertility had already fallen below the replacement level; from now on other targets such as Human Resource Development and Sustainable Development were to be promoted.

Explicit fertility-related measures then reappeared in the ninth plan (2002-2006). However, the new objective was to stabilize fertility at replacement level, with additional preparatory measures to cope with the rapid demographic ageing of the Thai population added in the tenth plan (2007-2011). In the eleventh plan (2012-2016), the measures proposed in the tenth plan were essentially retained. In the area of population-relevant measures, the to date last, twelfth plan (2017-2021) also focuses on coping with rapid demographic ageing, but especially on the risk of a shrinking working population in the future.

In any case, it is clear that the Thai family planning program – at least as far as its original intention, namely the rapid reduction of fertility, is concerned – is undoubtedly one of the most successful in the world (WHO, 2013). Whether the opposite orientation can be achieved just as effectively from the beginning of the 2000s, namely the stabilization of the already extremely low fertility rates or possibly even their increase,

can, however, be doubted on the basis of the many years of international experience which, for example, Western, Northern European and East Asian states have had with programs for the renewed stimulation of fertility.

With the population policy goals of the last two five-year plans are associated the hope of some Thai politicians and planners that the often invoked Asian values or the different cultural backgrounds of the Thai population would ultimately also contribute to a higher value of children and family and thus mitigate or at least delay a complete slide into Western individualization, self-realization, and the associated shift in personal priorities. Thailand is thus trying to follow a motto for solving demographic problems – caused by the rapid decline in fertility and the subsequent demographic aging of society – which was already issued in 1997 by the then Singaporean health minister Yeo Chow Tong at a conference on the demographic situation in the city-state as follows: "[…] family is still the best approach." (Husa and Wohlschlägl, 2008: 165).

The following passage from the 12th National Economic and Social Development Plan addresses the concern that to what extent traditional Thai values and norms are still upheld by the younger generation:

> "[…] the influences of foreign cultures, being absorbed into the Thai society more easily in the digital era, can negatively impact social norms, attitudes and the behavior of some Thai people, especially those who are unable to screen out inadequate cultures." (NESDB, 2017: 13)

To what extent the characteristics of demographic change from the low fertility countries of the Global North, which are commonly summarized under the term 'Second Demographic Transition', are also noticeable in Thailand, will be examined in more detail below.

A "Second Demographic Transition" in Thailand? The Impact of Culture on Demographic Change

Mortality rates that dropped from around 30 per mil after the Second World War to only 15 per mil in the mid-1960s and a TFR that fell little later from over six children per woman around 1960 to below the replacement level towards the end of the millennium – these are the typical characteristics of a country that underwent the so-called first demographic transition in record time: Thailand needed only about 30 to 40 years for the transition from high to low birth and death rates, while this transformation process took place in those regions of the world where it first began (in northwestern European countries such as England or Sweden) within a time span of about 200 or 140 years and took place in Central Europe (Germany, Austria) for about 70 years.

The joy about the great success of Thailand's family planning program, which continued until the 1990s, has meanwhile given way to a certain disillusionment, after the equilibrium postulated in the concept of classical demographic transition has failed to materialize in Thailand as well, as in most countries of the Global North, and the fertility rate has dropped to undreamt-of lows.

In order to sufficiently explain such new phenomena as "baby bust" (Lesthaeghe, 2014), "birth dearth" (Pearce, 2011), sub-replacement fertility, the systematic postponement of marriage and parenthood as well as the emergence of alternative forms of partnership and cohabitation, the concept of the first demographic transition is not sufficient, as briefly indicated in the introduction. Although the theory of the 'Second Demographic Transition' continues to build on the classic transitional concept, it attempts to expand its explanatory framework. Lesthaeghe (2014: 18112) writes: "Although it accepts the major tenets of bounded rational economic choice, it also allows for autonomous preference drift by relying on Maslow's theory of shifting needs. As such, an essential cultural component is being added."

Table 4 gives a comparative overview of the main characteristics and influencing factors of the First and Second Demographic Transitions using the example of developments in the countries of the Global North.

Before the question of the extent to which specific Thai cultural components influence or modify a possible Second Demographic Transition in Thailand can be addressed in the following, a brief clarification of how the often very diffuse term culture is used in this paper appears necessary. Here, 'Thai culture' does not mean the definition *wáttánátam*, which is based on the three pillars nation, religion, and monarchy, nor the concept of a Thai-ness of any kind recently strained by the Thai tourism authority in advertising campaigns, which can be seen as "[…] an ideology, not a description but a prescription, a set of instructions of how to be a well-behaved citizen" (Cornwel-Smith, 2013: 10). Rather, the use of the term "culture" in this work draws on the classical definition of Kroeber and Kluckhohn (1952):

> "Culture consists of patterns, explicit and implicit, of and for behavior acquired and transmitted by symbols, constituting the distinctive achievements of human groups, including their embodiments in artefacts; the essential core of culture consists of traditional (i.e. historical derived and selected) ideas and especially their attached values; culture systems may, on the one hand, be considered as products of action, on the other as conditioning elements of further action." (Kroeber and Kluck-Hohn, 1952, cited after Ehnert, 2004: 8)

Table 4: The First Demographic Transition and the Second Demographic Transition in Comparison – Demographic and Societal Characteristics

First Demographic Transition (FDT)	Second Demographic Transition (SDT)
Marriage · Rise in proportions marrying, declining ages at first marriage · Low or declining incidence of cohabitation · Low divorce rates · High remarriage rates after widowhood or divorce	*Marriage* · Fall in proportions married, rising ages at first marriage · Increasing cohabitation, both pre- and postmarital · Rise in divorce, earlier divorce · Decline in remarriage rates, LAT relationships instead
Fertility · Declining marital fertility via reductions at older ages, lowering mean ages at first childbearing · Deficient contraception, parity and timing failures · Declining illegitimate fertility · Low final childlessness among married couples	*Fertility* · Fertility postponement, increasing mean ages at parenthood, structural subreplacement fertility · Efficient contraception · Rising nonmarital fertility, parenthood outside marriage (among cohabiting couples, single mothers) · Rising definitive childlessness among woman ever in a union
Societal background · Preoccupation with basic material needs: income, work conditions, housing, children and adult health, schooling, social security; solidarity a prime value · Rising membership of political, civic, and community-oriented networks · Strong normative regulation by churches and state, first secularization wave, political and social "pillarization" · Segregated sex roles, familistic policies, "embourgeoisement" of the family with the breadwinner model at its core · Ordered life-course transitions and dominance of one single nuclear family model	*Societal background* · Rise of "higher order" needs: individual autonomy, expressive work and socialization values, self-actualization, grass-roots democracy, recognition; tolerance a prime value · Disengagement from civic and community-oriented networks · Retreat of the state, second secularization wave, sexual revolution, refusal of authority, political "depillarization" · Rising symmetry in sex roles, rising female education levels, greater female autonomy · Flexible life-course organization, multiple lifestyles, open future

Source: Lesthaeghe, 2014.

Thailand's "Contraceptive Revolution" and its Consequences

According to Lesthaeghe (2010: 216), the Second Demographic Transition will be characterized by three successive "revolutionary" developments, which tend to characterize the change in demographic behavior. At the beginning, there is the so-called "contraceptive revolution". As described in the previous section, this already affected Thailand since the 1970s and was largely completed with the achievement of the replacement level at the turn of the millennium. It is also a good example of the shift in personal preferences postulated by Lesthaeghe and van de Kaa from the fulfilment of basic needs towards

"higher order needs" such as "individual autonomy, self-actualization" etc.: While at the beginning, the decline in fertility was mainly influenced by the government's birth control programs and economic considerations, in the course of this process birth control is used less and less for preventive purposes, but more to control the desired number of children.

This generative change in behavior can also be seen in the attitude of Thai women towards the desired ideal family size and number of children. A series of empirical surveys since the 1970s, for example, have provided information on the extent to which the Thai population's ideas about the desired ideal number of children have changed over time. The results show that the desired number of children had already fallen considerably in the 1970s and 1980s, both in rural and urban areas. While the total number of children that a Thai woman between 15 and 44 years of age could expect to give birth during her life was still an average of 4.5 in 1969/70, this figure had already fallen to 4 children in 1975 and to 3.1 children in 1984 (Wohlschlägl, 1986: 370). According to the results of the *Contraceptive Prevalence Survey 1984*, those women who had been married for less than five years at the time of the survey, i.e. the so-called newlyweds, only expected to have an average of 2.3 children by the end of their reproduction period, whereby – and this is particularly emphasized – practically no differences between urban and rural areas could be proven (Bangkok Metropolis: 2.2, rural areas and provincial towns: 2.3). Also regarding the duration of the schooling of women, there was no longer any significant differentiation in terms of the desired number of children (cf. Kamnuansilpa and Chamrathritirong 1985).

This indicates that the establishment and awareness of "new" fertility concepts had already been extraordinarily broad and successful in all parts of the population by the mid-1980s – with the exception of the provinces with a large Muslim population in the south of the country. In 1984, for example, around 57 percent of married women between the ages of 15 and 44 stated two children as the ideal number of children, 26 percent three children and only 10 percent four or more children – an attitude that even then was not too far removed from that in European states.

Current data from the most recent *Reproductive Health Survey 2009* show that the ideas about the desired number of children only marginally changed between the surveys of 1984 and 2009 (see Table 5): the desired number of children of married women aged 15-49 was, with an average of 1.9 children, only slightly below the figure from 1984, whereby the differences between urban and rural areas were rather small (municipal areas: 1.8; non-municipal areas: 2.0). Regionally, the largest difference is between Bangkok with an average of 1.7 children and the southern region with 2.3 (NSO, 2010, Key Findings of the RHS 2009).

Table 5: Average desired number of children, number of living children and "unmet fertility" in Thailand 2009

Area; Region; Age group	Average desired number of children	Average number of living children	Difference of unmet fertility
Whole Kingdom	1.93	1.67	0.26
Municipal Areas	1.76	1.54	0.22
Non-Municipal Areas	2.00	1,72	0.28
Bangkok Metropolitan Region	1.69	1.53	0.16
Central Region	1.72	1.52	0.20
Northern Region	1.75	1.53	0.22
Northeastern Region	2.08	1.78	0.30
Southern Region	2.33	1.94	0.39
Age Group 15-29	1.48	0.90	0.58
Age Group 30-39	1.96	1.74	0.22
Age Group 40-49	2.20	2.10	0.10

Source: NSO (Thailand, National Statistical Office) (2010a) The 2009 *Reproductive Health Survey*

The differences in the desired number of children among the women surveyed by age group are also shown in Table 5: In the highest age group over 40 years, a larger number of children is generally expected than among married women under 30 years of age. This is hardly surprising, since this characteristic value is generally determined from the number of living children plus the number of children still desired by the interviewees and the tendency of older women to have a higher number of children reflects their more traditional fertility behavior in earlier years (or even at the time of the survey) (Wohlschlägl, 1986: 370).

However, a comparison of the desired number of children with the ideal number of children desired at the time of the respective survey shows that the "average number of living children" is lower than the "average desired number of children" in all cases. While the women surveyed in the *Reproductive Health Survey 2009* wished for 1.93 children on a national average, their actual number of children at the time of the survey was only 1.67. This is very remarkable, because what prevents women from turning their desired number of children into reality is not only of great interest to demographers and social scientists, but also above all to politicians and planners.

Sexual Revolution

The contraceptive revolution was followed by a so-called sexual revolution – first in the countries of northern and northwestern Europe and a little later also in Central Europe and in the USA – triggered by the broad availability of the contraceptive pill, which for the first time made an efficient decoupling of reproduction and sexuality possible. The younger generation revolted against the traditional moral concepts of the parents'

generation, premarital sex – not only for the purpose of having children – became the rule instead of the exception. This phenomenon, which for a long time was considered typical for Western societies, initially spread to other developed countries in Asia, such as Japan and South Korea, with a time lag of about two to three decades (Lesthaeghe, 2010: 236ff). Meanwhile, the first signs of an ideational change in terms of sexual freedom and decoupling fertility from sexuality can also be observed among the younger generation in Thailand. Today, the younger generation decides largely autonomously and independently on their fertility behavior, without being influenced primarily by traditional social norms.

The resulting sexual behavior, which diametrically opposes traditional Thai norms and values and considerably weakens the importance of the institution of marriage, can also be seen from numerous recent surveys on this topic. Premarital sexual activities that were frowned upon according to current sexual norms are becoming more and more common among the younger generation. A *National Sexual Behaviour Survey*, conducted in 2006, in which more than 6000 people aged 18 to 59 were surveyed, regardless of their marital status, clearly showed the prevalence of premarital sex among Thai adolescents. The proportion of respondents in the 18-24 age group who had already had sexual experiences was higher among male adolescents than among young women (around 99 percent compared to 89 percent).

The survey also showed, however, that female adolescents quickly equal men when it comes to premarital sex: in the age group of 18-24-year-old young women, the proportion of respondents with premarital sexual experiences was three times higher than in the age group of 25-29-year-old women (Chamrathritirong et al., 2007; Prasartkul et al., 2011: 25f). Thus, the traditional gender-related role attributions also seem to be slowly changing, which had largely tolerated sexual freedom among men, but not among women:

> "Thais distinguish between gender – a public identity to be kept 'riabroi' (proper) – and sexuality, which remains undiscussed, unrestrained. Male urges are regarded as natural and requiring plentiful, but private outlets [...] with Thai women's virginity still a commodity to be guarded [...]." (Cornwel-Smith, 2013: 113f)

The increasing emancipation of young Thai women in terms of sexuality and marriage behavior is also expressed in themarital age that has been rising continuously for about 50 years (Table 6): While the age of first marriage of Thai women in 1960 was still around 22 years, in 2010 it was already 24.4 years (Prasartkul et al., 2011: 24); at the same time the male age of first marriage rose from 25 years in 1960 to 28.3 years in 2010 (Peek et al., 2015: 27). In Thailand, too, the postponement of marriage goes hand in hand with a general improvement in Thai women's access to higher education and increasing participation in employment (Jones, 2005).

Table 6: Increases in Singulate Mean Age at First Marriage of Thai Women (SMAM), 1960- 2010

Year	1960	1970	1980	1990	2000	2010
SMAM	22.1	22.0	22.8	23.5	24.0	24.4

Source: Prasartkul, et al. 2011: 24.

In the past, decisions regarding family formation were crucially influenced by traditional norms and values: not to marry was not an option, most married couples had children and parents lived with their adult children in the same household. Due to lifestyle changes of the younger generation, however, traditional family formation patterns are increasingly receding into the background: "[…] decisions regarding family formation have now become preeminently based upon individual choices surrounding desired lifestyles, economic opportunities, spatial limitations, educational levels and the vagaries of the modern marriage market" (Peek et al., 2015: 16).

One indicator of these changes is the increasing proportion of singles among both Thai men and women in recent decades. Table 7 shows that the proportion of men who were still unmarried at the age of 45-49 increased fivefold between 1960 and 2000, and the proportion of unmarried women in the same age group more than tripled.

Table 7: Increases in Percentages of Never-married Thais Aged 30-49, 1960- 2000

Age Group and Year	30-34		35-39		40-44		45-49	
	1960	2000	1960	2000	1960	2000	1960	2000
Never married male Thais	9.9	36.6	5.2	24.7	3.1	16.2	2.3	11.2
Never married female Thais	8.1	24.1	5.3	15.3	3.9	11.3	3.0	9,5

Source: Soonthorndhada and Khumsuwan (2014: Figures 2, 3, p. 53)

A further indicator of the upheaval in family founding behavior is the increasing share and acceptance of cohabitation. Starting in Scandinavia, this pattern of family formation began to displace the traditional family images of the nuclear family or extended family, which shaped the 'golden age of marriage and family', as the 1950s and 1960s are called in European family sociology, and continued to spread to other regions of the developed world. Undoubtedly the signs of an increase in cohabitation in recent years are also increasing among young Thais, although the still valid cultural norms are counteracting or delaying this trend.

Traditionally, premarital cohabitation is against Thai norms as a woman's virginity at marriage is of high value and according to Thai custom, a ceremonial marriage represents a social announcement of a couple's living together. Lately, attitude towards union patterns among Thai people has changed. According to the *Survey on Conditions of Society, and Culture and Mental Health* (NSO, 2010, 2018), within 10 years the acceptance of cohabitation of respondents aged 13 and over has significantly increased from 26.8 percent in 2008 to 41.2 percent in 2018.

So far, however, there have been few studies on the extent of cohabitation in Thailand. The results from one of these surveys show that this is most common in Bangkok, where 10.2 percent of respondents aged 18-59 said they were unmarried and lived with their partner. In rural areas, on the other hand, this way of life is obviously still highly unpopular as it applied to only 1 percent of respondents. Obviously, the inhabitants of

the capital are much more open to unconventional lifestyles than is the case in small and medium-sized towns or in rural areas (Jampaklay and Haseen, 2011).

Although no empirical study exists to support an increase in cohabitation in Thailand, regular surveys of cultural values among Thai people indicate that its acceptance is slowly increasing: the percentage of respondents aged 13 and over who considered premarital cohabitation acceptable increased from 26.8 percent in 2008 to 34.6 percent in 2011 (NSO, 2008; NSO, 2011), with male respondents more positive than female respondents and – unsurprisingly – the younger generation showing higher acceptance than the older generation (Prasartkul et al., 2011: 25). In any case, it is clear that the still relatively low tolerance towards premarital cohabitation has a fertility dampening effect because it also stigmatizes premarital parenthood.

Gender Revolution in Thailand ... Still a Long Way To Go

Finally, the question remains to what extent the third revolution, which contributed to the Second Demographic Transition in the Western world, also affected Thailand and strengthened the trend towards "below replacement fertility". Lesthaeghe (2010: 216) describes this development for 1960s Europe as follows: "[…] a gender revolution occurred whereby women were no longer subservient to men and husbands, but asserted the right to regulate their fertility."

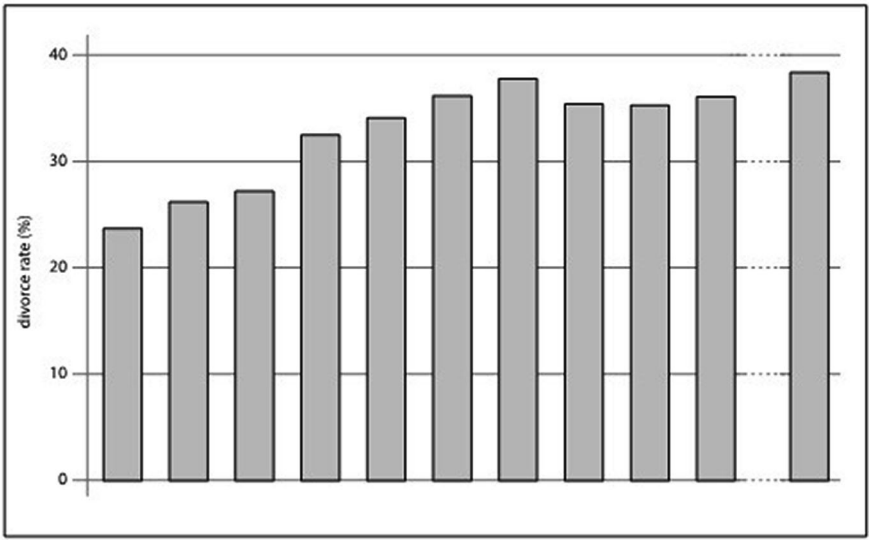
Male dominance has a long history in Thailand and this tradition can also be found in the so-called "Three Sealed Laws", a collection of legal texts, mostly from the Ayutthaya period, which were collected in 1805 by order of King Rama I (Assavarak, 2007). The attitude that women generally have a lower status than men and are therefore hardly entitled to autonomous action is also expressed in numerous Thai proverbs. One of them, for example, is "woman is a buffalo while man is a human", which expresses the belief that men are generally far superior to women. Another common saying is, "husband is elephant's front legs, wife is elephant's hind legs", which means that the men lead while the women have to follow.

After women's rights have become more of an issue in Thailand in recent years under the influence of increasing globalization, traditional role clichés are beginning to change more and more in the Kingdom as well: Rising levels of education and increasing labor force participation bring not only more economic independence, but also increasing autonomy in the choice of non-traditional desired lifestyles and above all control over one's own fertility.

One consequence of these tendencies is not only a rising age at marriage and an increasing number of female singles, but also the willingness to end a dissatisfactory marriage, as the continuously rising number of divorces shows (Figure 3). The general divorce rate in Thailand in 2016, at 38.5 percent, was only slightly below the level in European countries (e.g. Austria in 2016: 43 percent).

This trend also runs contrary to the prevailing cultural norm. Conventionally, marital ties are expected to last a lifetime, and divorce is considered a disgrace, especially for women. Divorced women are stigmatized and divorce is usually attributed to a woman's failure or "defect" of some kind. Thai women have therefore traditionally tried as far as possible to maintain their marriage despite family pressure, or even enduring

Figure 3: Divorce Rates in Thailand 2004- 2016 (in percent)



Data source: NSO (Thailand, National Statistical Office) 2019; own design

domestic violence in order to avoid stigmatization and the associated loss of face (Assavarak, 2007). The response of modern, well-educated, and economically independent women to existing traditional norms that work to their disadvantage was inevitable: the number of divorces filed by women is on the rise, and this has probably also contributed to the slight increase in single-parent families, the number of which rose from around 970,000 in 1987 to 1.4 million in 2013 (Peek et al., 2015: 72f).

One factor that has also contributed to the gender revolution in Thailand, but is only mentioned in this article for the sake of completeness, is the increasing feminization of rural-urban migration in all its forms over recent decades. The majority of migrant women are young and unmarried and migrate to big cities – mostly to Bangkok – for educational reasons or to find work. However, the norms and circumstances under which migration can take place are central to women's migration decisions. Traditionally, much more is expected from Thai women than from men. For example, the care of parents and children is their sole responsibility, without any help from the male household members. Such ideas, deeply rooted in Thai culture, also remain valid in case a daughter migrates, but the nature of the obligation shifts. Adult children are generally expected to contribute to the financial well-being of their parents in old age; however, usually more is expected from daughters, because migrated daughters are usually regarded as more reliable than sons when it comes to remitting money to their parents (cf. e.g. Husa, 1986; Clausen, 2002; Guest et al., 1994).

At the same time, however, after having lived in the city for a while, the family expectations placed on migrated young women no longer correspond with their urban reality. Young men in Thailand have always been granted a social life outside the family,

even encouraged to do so, while girls have been taught to stay at home and concentrate on their family responsibilities. However, after migrating to the city, migrant women spend much of their youth away from their families, confronted with new views, attitudes, and social practices. Whenever they return to their village of origin for whatever reason, they also bring with them ideas of urban, modern life with completely different social norms and values and thus become role models for the young girls and women who have remained in the village (Clausen, 2002: 61).

The confrontation of the female village youth with the *tan sà-mâi* (modern) lifestyle of returned migrant women drives the gender revolution in rural areas as much as the depiction of images of urban life in social media and mass media, since not only abstract images and ideas are conveyed, but also experienced and lived reality.

Convergent Development – Convergent Problems?

Can the theses of the Second Demographic Transition help to adequately explain recent demographic developments in Thailand? Yes, all major indicators point to a demographic convergence of Thailand with the countries of the Global North, albeit with some delay. On the whole, however, the current demographic reality in Thailand suggests that the Kingdom will face similar demographic problems in the coming years and decades as has been the case for some time in many countries of the Global North.

However, whether the insistence on strengthening or maintaining culturally determined traditional values and norms will suffice to solve the problems at hand may be doubted on the basis of the experiences of southern European countries in recent decades, for example. Traditional family image and decision-making structures, traditional gender roles and a lack of women's emancipation, reform-resistant religious institutions such as the Catholic Church and the associated lack of state support in the creation of childcare facilities to enable a better compatibility of family and career – we can see today where this leads from the example of Italy and other European Mediterranean countries: namely to a society with an ultra-low fertility, where more adult diapers are sold than baby diapers, where a generation of grandparents "cheated of their grandchildren" spends more money on pets than on their grandchildren. … Is this the way that Thailand is about to take in the near future or will the Kingdom, as so often in its history, find its very special "Thai Way" in this respect?

The renowned Thai demographer, Boonlert Leoprapai, expressed his idea on future trends of fertility in Thailand with the phrase "the river has no return" (Leoprapai, 2014: 38-39). Policy implications to promoting fertility seem to fail in reversing fertility decline; conversely, estimations indicate that the fertility rate will stay below replacement level for the next 30 years (until 2050). However, in the last few years, fertility trends in some highly developed countries have been slightly reversed. Myrskylä et al. (2009) find a so-called "inverse J-shaped" relationship between the *Human Development Index* (HDI) and total fertility rates in developed countries, suggesting a fertility rebound at a HDI of more than 0.9 which marks the approximate turning point.

Human development in terms of GDP per capita, life expectancy, and school enrolment are claimed to provoke a revival of fertility. Applying this concept to Thailand

(HDI, 2017: 0.755), the country is still a long way from an upswing in fertility (see Table 8).

Table 8: Development Indicators and Total Fertility Rate in Thailand 1990- 2017

Year	Life expectancy at birth	Expected years of school	Mean years of schooling	GNI per capita (US $ ppp 2011)	HDI value	TFR
1990	70.3	8.4	4.6	6,560	0.574	2.40
1995	70.2	9.6	5.0	9,177	0.611	2.20
2000	70.6	11.2	6.1	9,003	0.649	2.00
2005	72.1	12.7	7.0	11,006	0.693	1.81
2010	73.9	13.3	7.7	12,918	0.724	1.81
2015	75.1	13.9	7.6	14,455	0.741	1.60
2016	75.3	14.3	7.6	14,971	0.748	1.60
2017	75.5	14.7	7.6	15,516	0.755	1.59

Sources: Columns 2-6: UNDP 2018: 2; Column 7: Prasartkul et al. 2011: 19, IPSR: Mahidol Population Gazette 2015, 2016 and 2017.

More recently, Luci and Thevenon (2010) have specified that economic development is likely to induce a fertility rebound. They have identified female employment as the main factor impacting fertility, behind GDP variations. The increase in female employment and fertility rates suggests a key role played by the changes in norms and institutions supporting the combination of work and family that go along with the process of economic development. According to studies in the Global North, it implies a signal for the unwinding of demographic challenges. It is important for Thailand to consider new economic and social dimensions and attitudes and norms towards fertility, female education and gender roles to find a 'Thai Way' to lift fertility. Norms concerning fertility-related behavior in form of "public campaigns"– "Having many children leads to poverty"– have had a remarkable influence on the perception of Thai people for several decades. Reverse norms on having children and changes in norms concerning childbearing, labor market contexts, and policies to support the work-life balance may facilitate Thailand to "drive" its fertility.

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