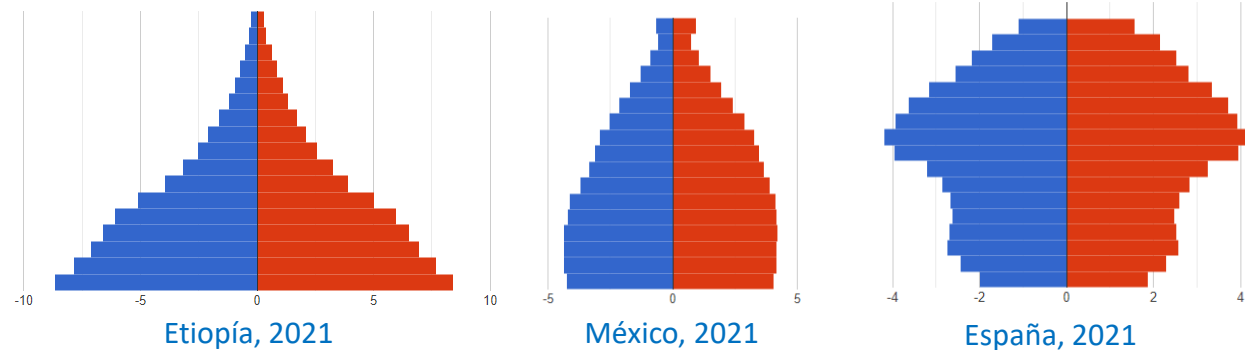


Tema 4

Demografía y género

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Universidad Complutense de Madrid
Curso 2022-2023
<https://www.ucm.es/aedipi>



Cuestiones fundamentales que queremos responder en este tema:

- **¿Puede el avance en la igualdad de género ser un factor que contribuya a corregir el problema del crecimiento natural negativo de la población?**
- **¿Por qué existe un desequilibrio en la ratio de masculinidad en algunos países?**

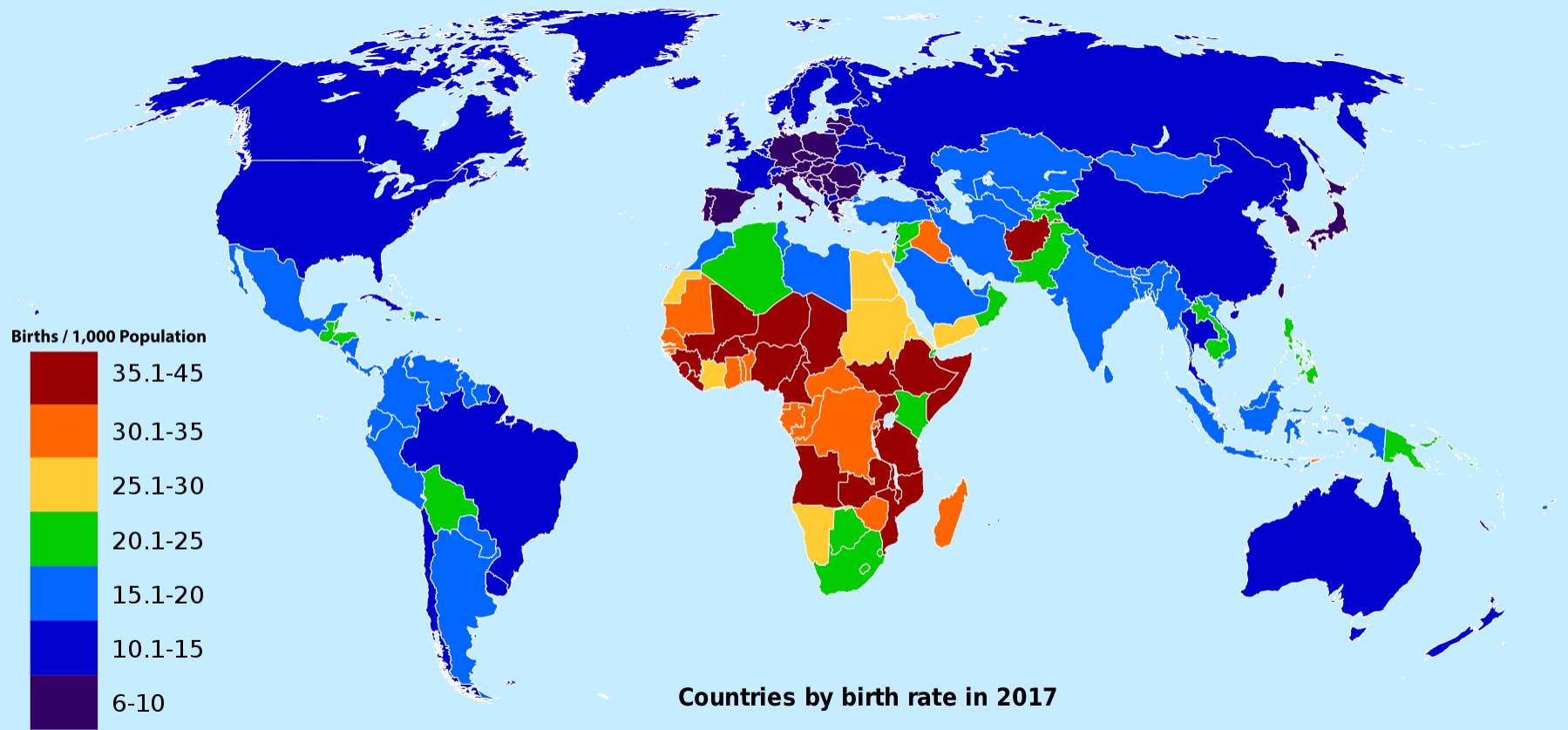
Tasas de natalidad y de mortalidad

Tasa de natalidad:

número de nacidos vivos por cada 1.000 habitantes

Tasa de mortalidad:

número de fallecidos por cada 1.000 habitantes

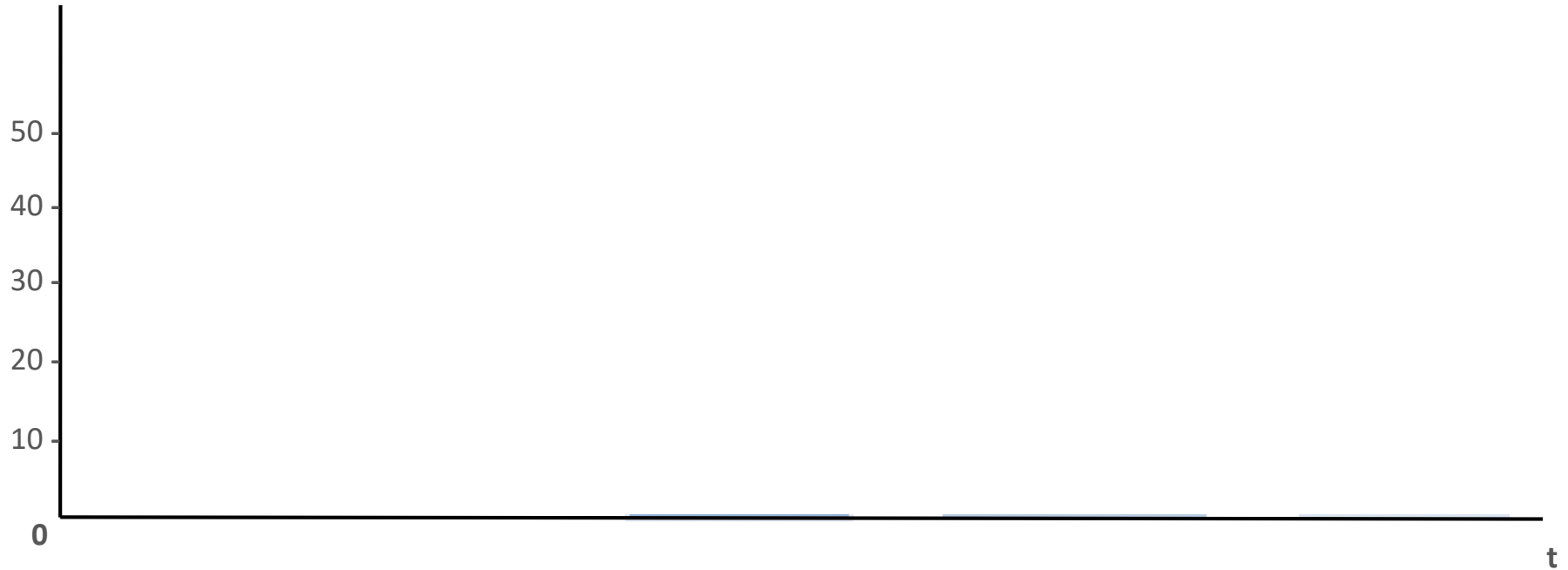


Cinco etapas demográficas...

Ejemplo de etapas y transiciones demográficas...

Tasa de natalidad (nacimientos /1.000 hab.)

Tasa de mortalidad (muertes /1.000 hab.)



Ejemplo de etapas y transiciones demográficas...

Tasa de natalidad (nacimientos /1.000 hab.)

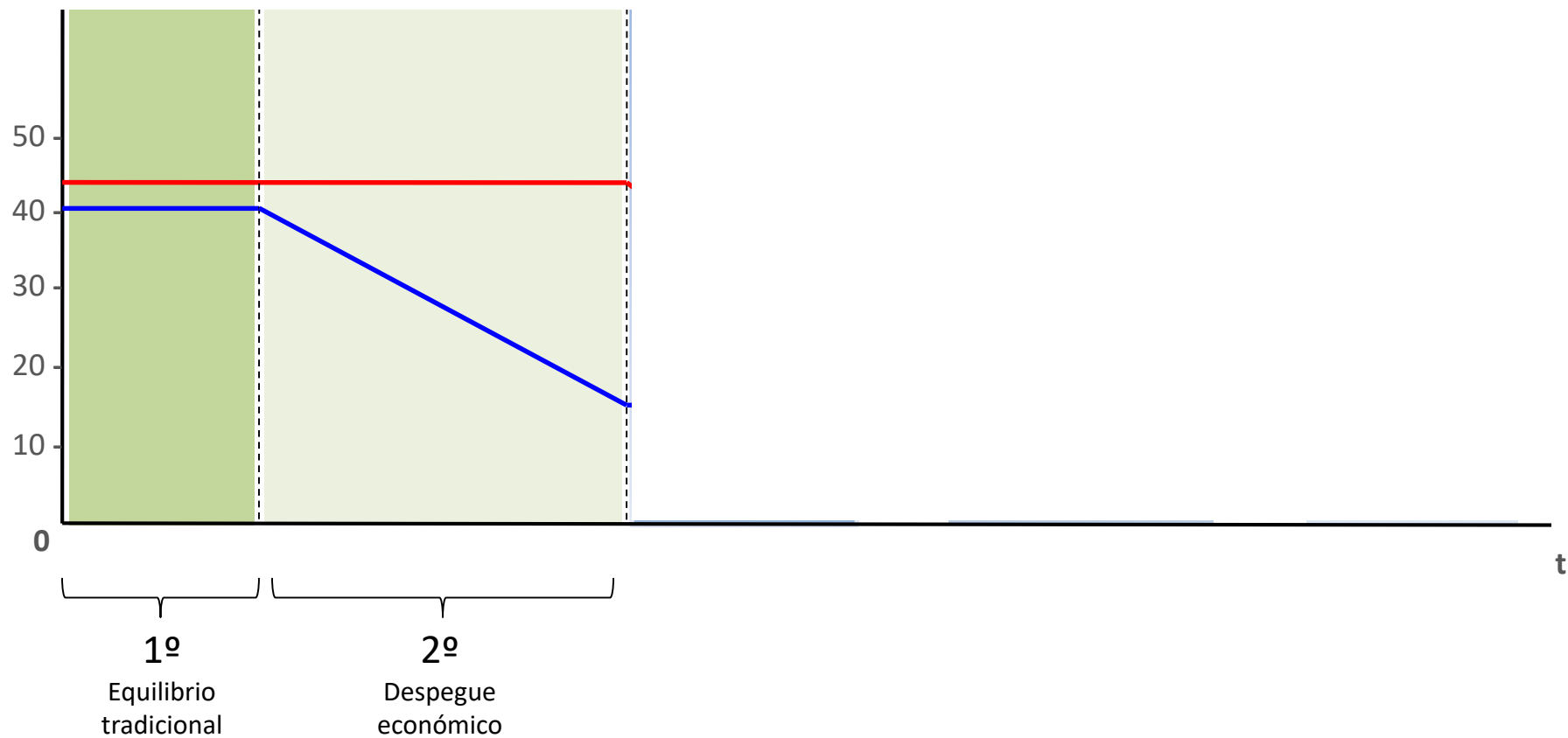
Tasa de mortalidad (muertes /1.000 hab.)



Ejemplo de etapas y transiciones demográficas...

Tasa de natalidad (nacimientos /1.000 hab.)

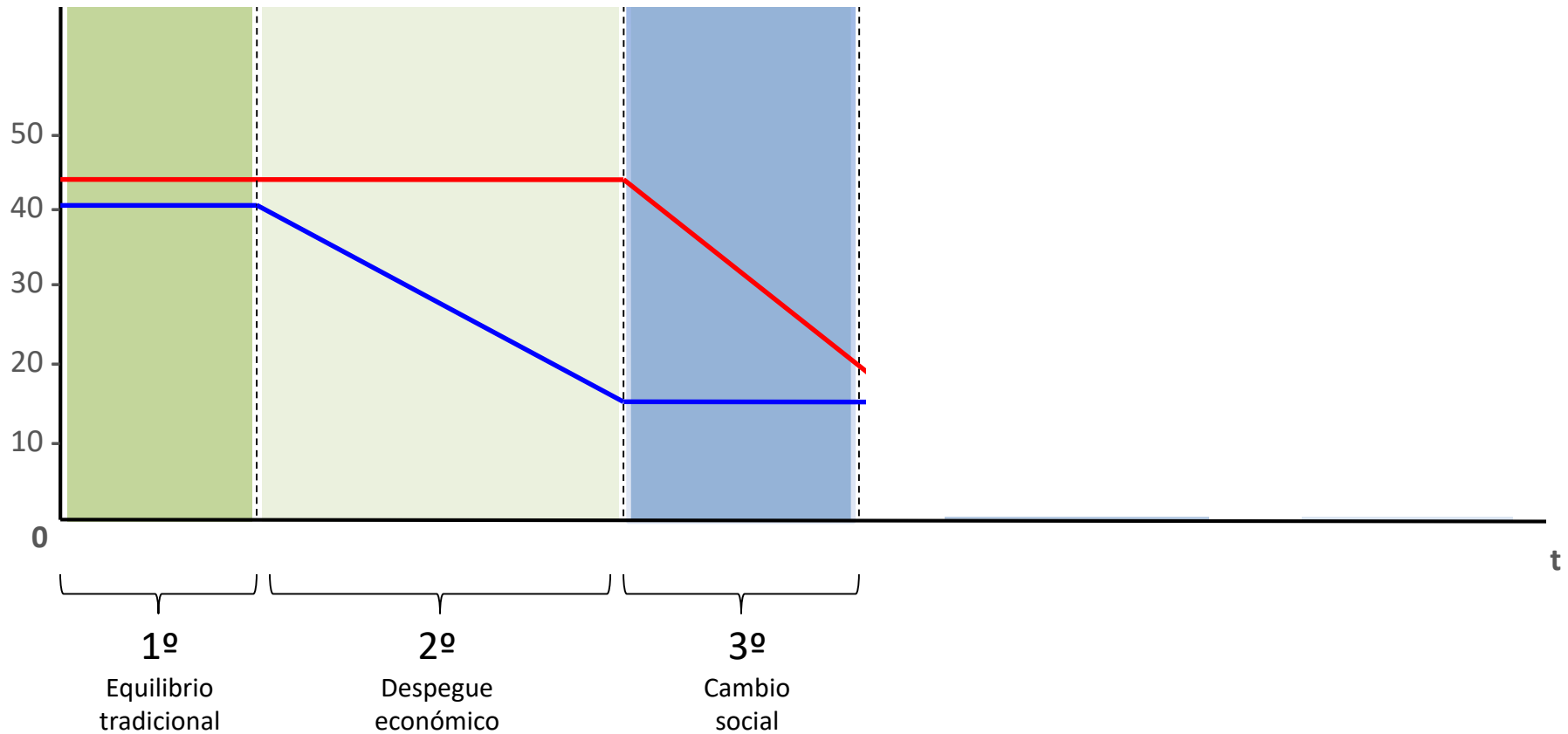
Tasa de mortalidad (muertes /1.000 hab.)



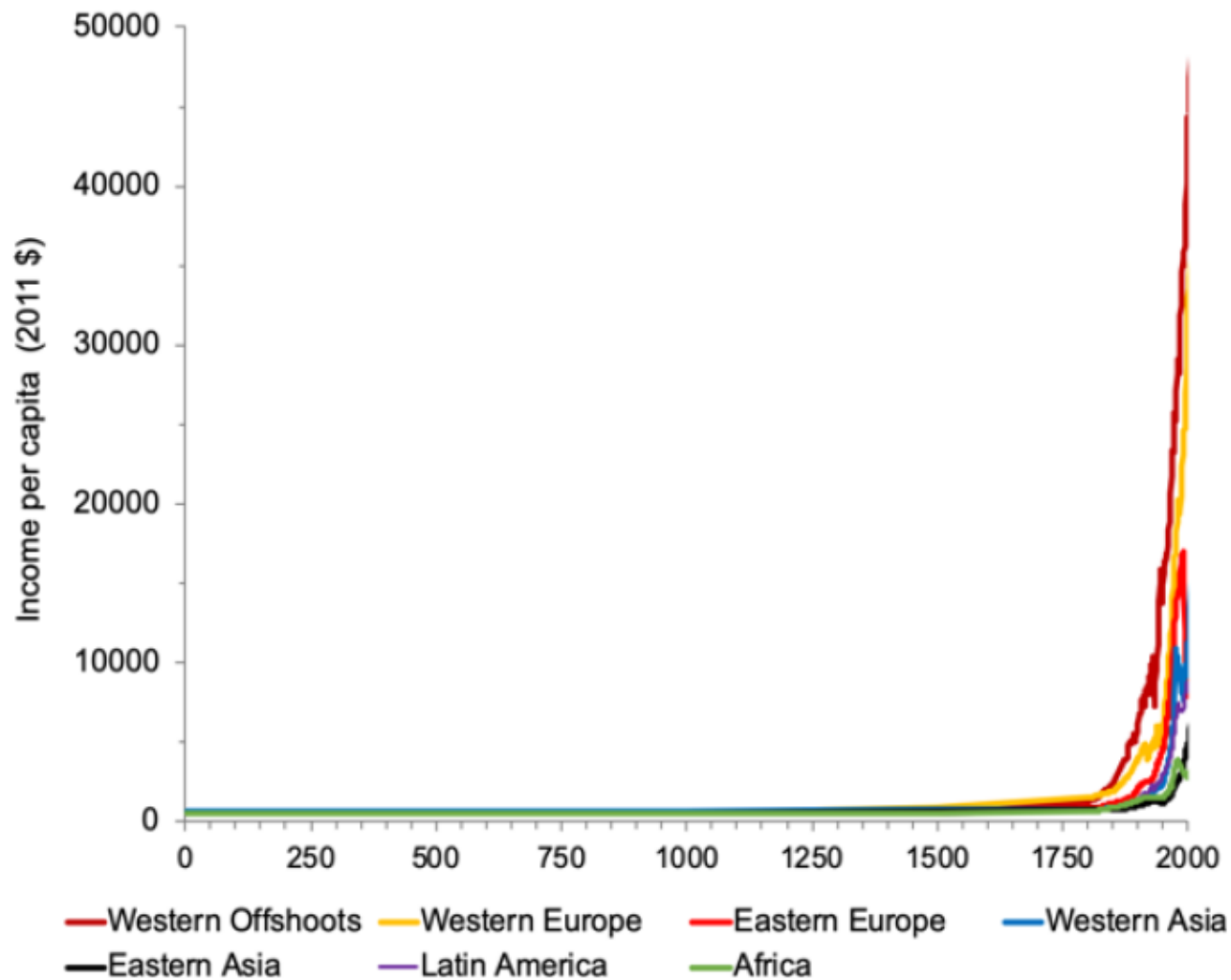
Ejemplo de etapas y transiciones demográficas...

Tasa de natalidad (nacimientos /1.000 hab.)

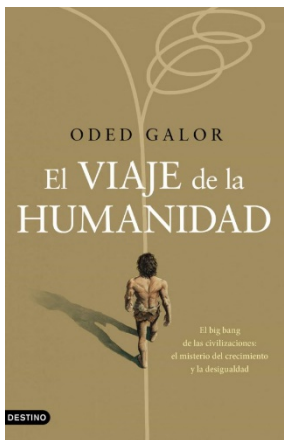
Tasa de mortalidad (muertes /1.000 hab.)



“Trampa malthusiana”

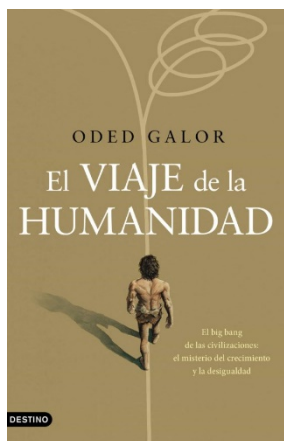
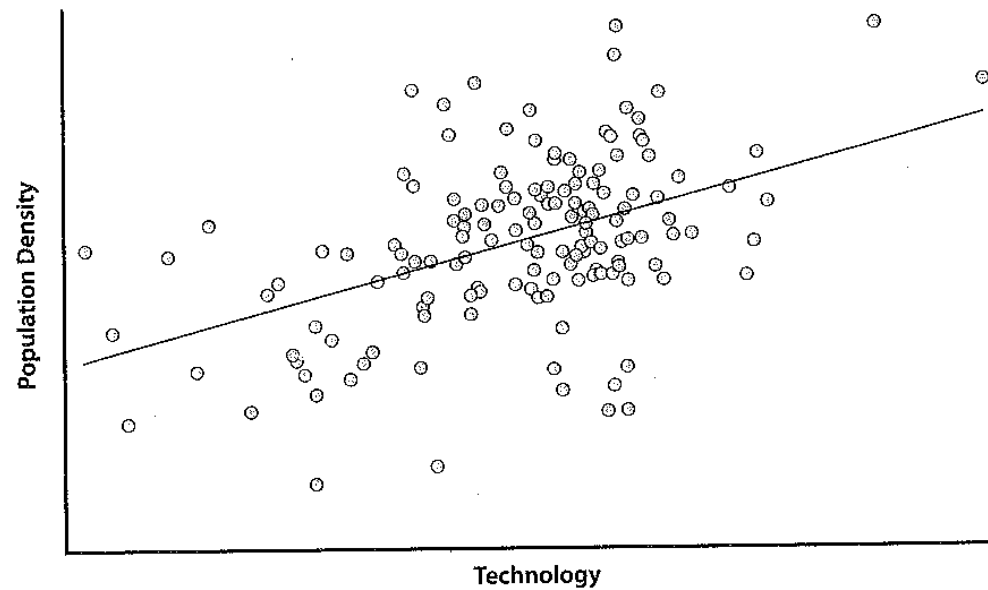
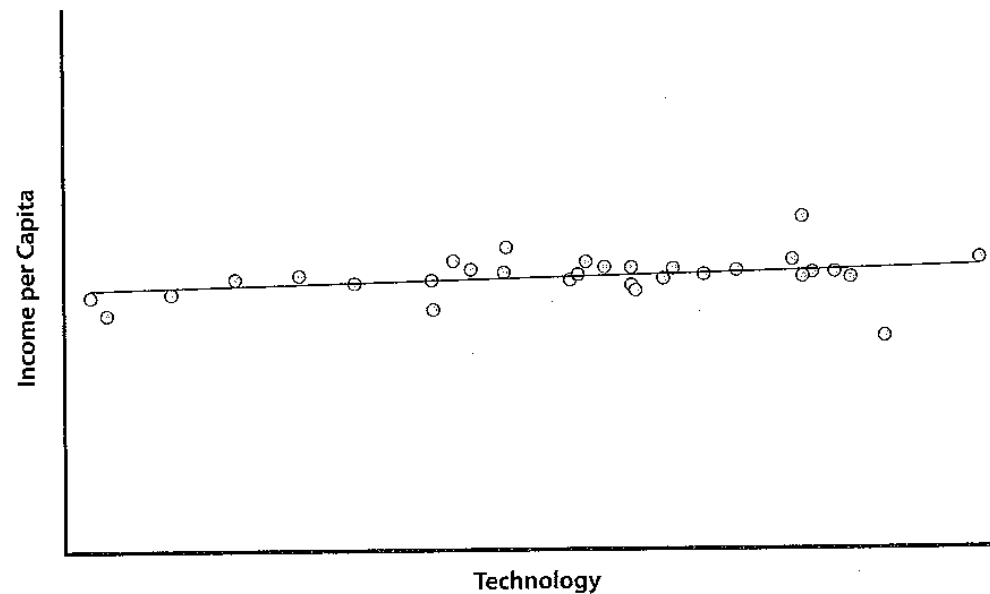


Data Source: Maddison Project (2020)



“Trampa malthusiana”

Figure 4. Effects of thechnology level on population density and per capita income across countries in the year 1500 ce



“Trampa malthusiana”

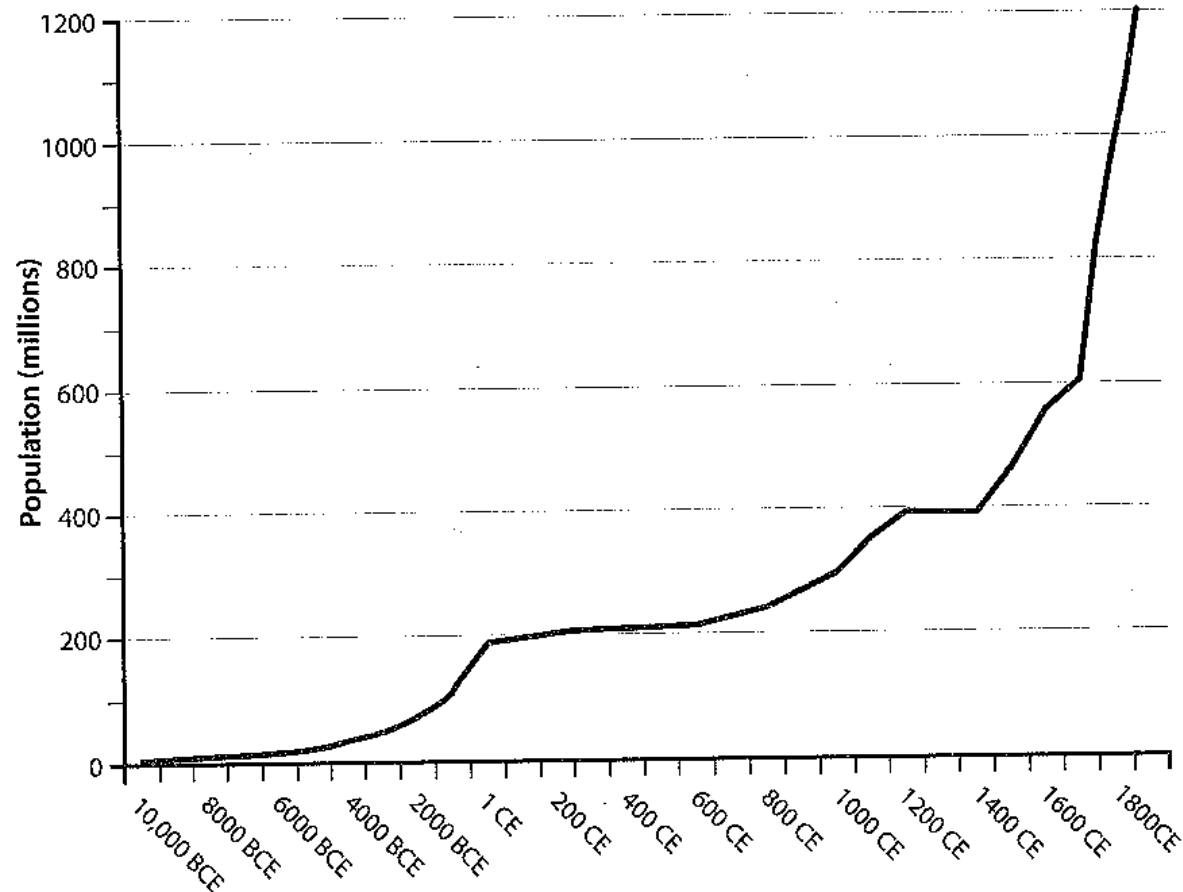
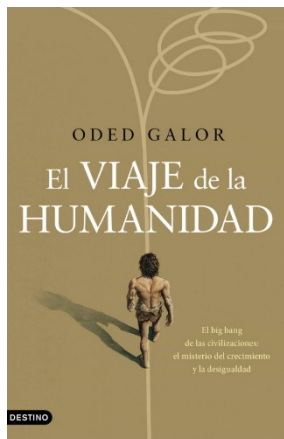


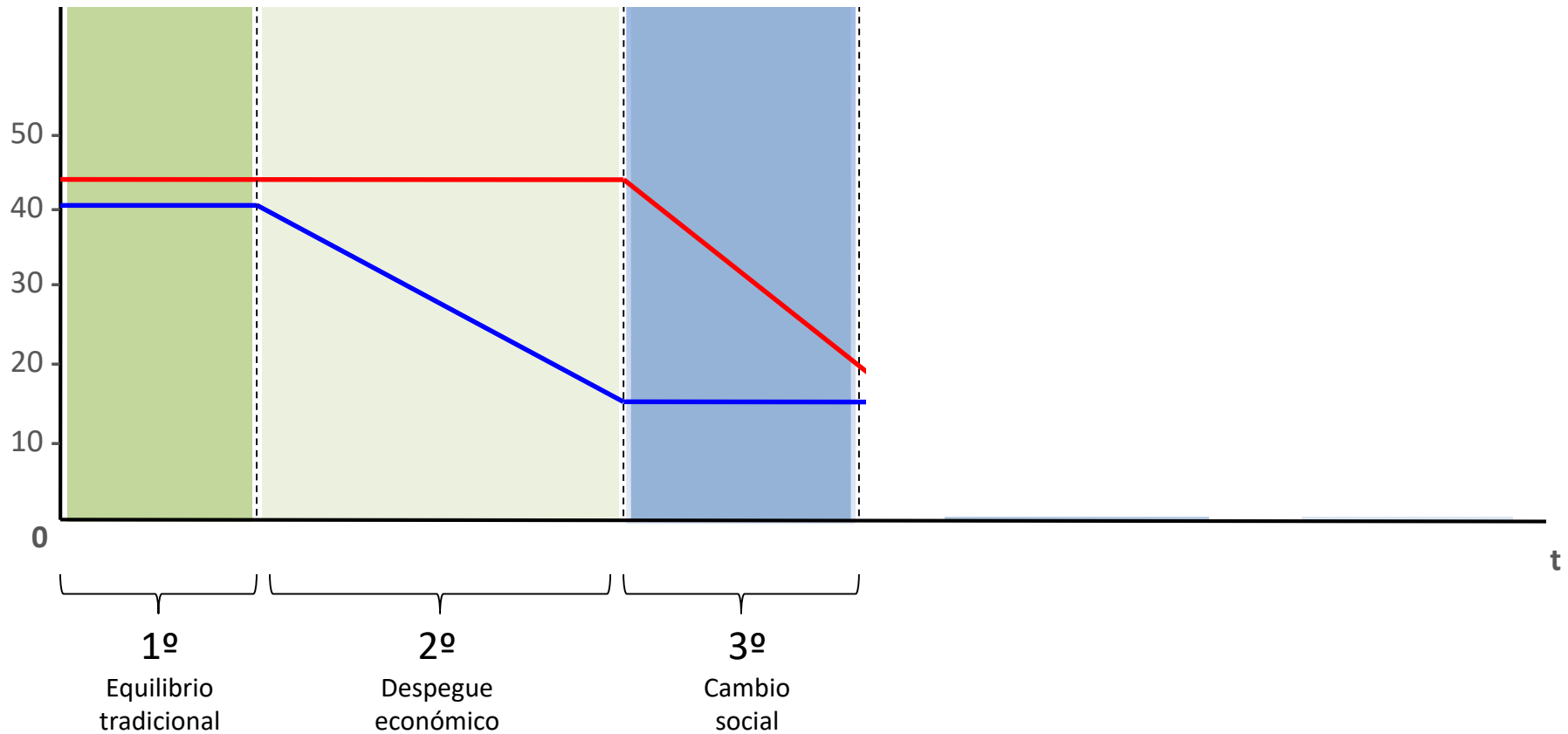
Figure 6. Human Population Growth during the Malthusian Epoch⁴



Ejemplo de etapas y transiciones demográficas...

Tasa de natalidad (nacimientos /1.000 hab.)

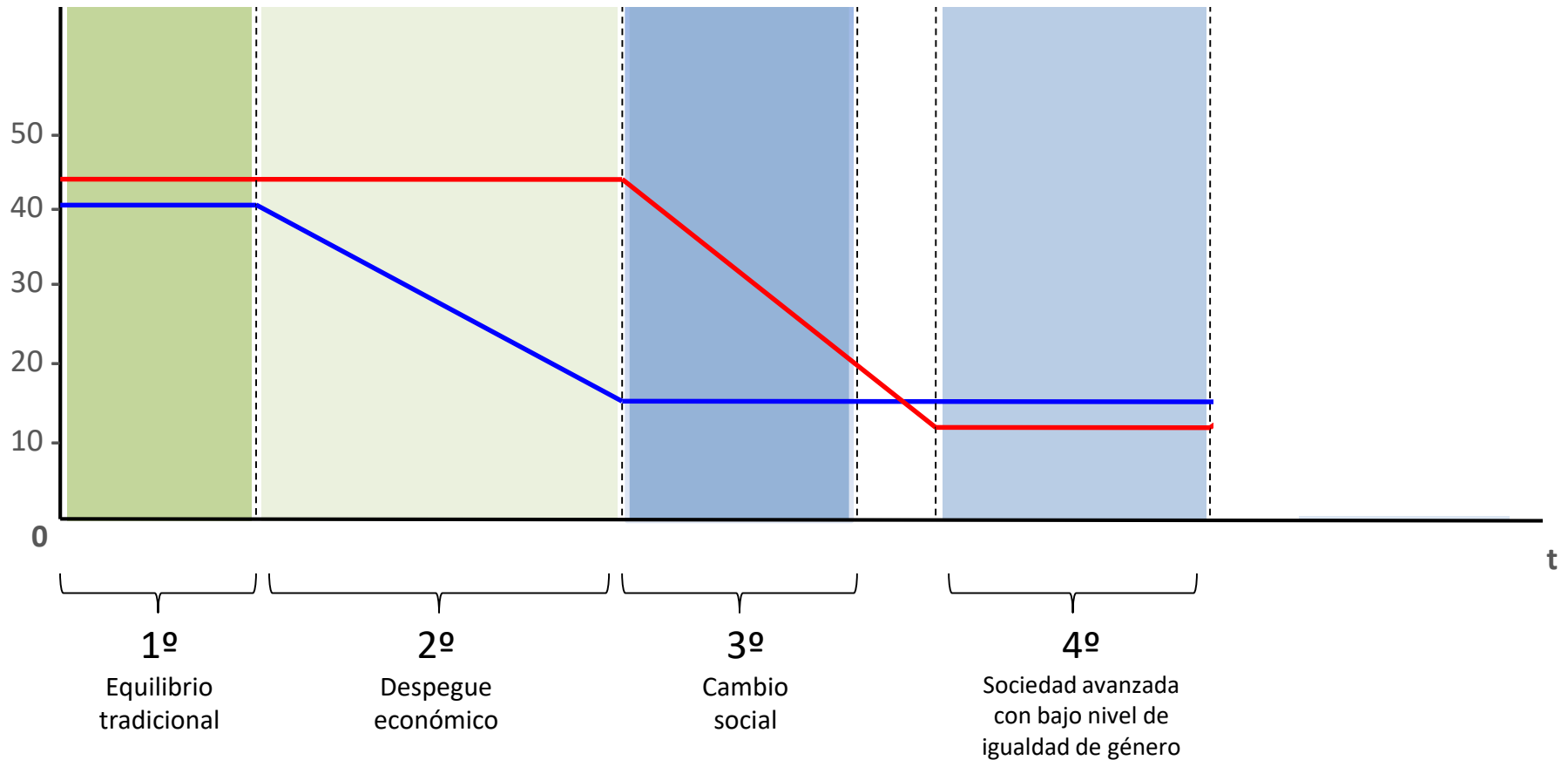
Tasa de mortalidad (muertes /1.000 hab.)



Ejemplo de etapas y transiciones demográficas...

Tasa de natalidad (nacimientos /1.000 hab.)

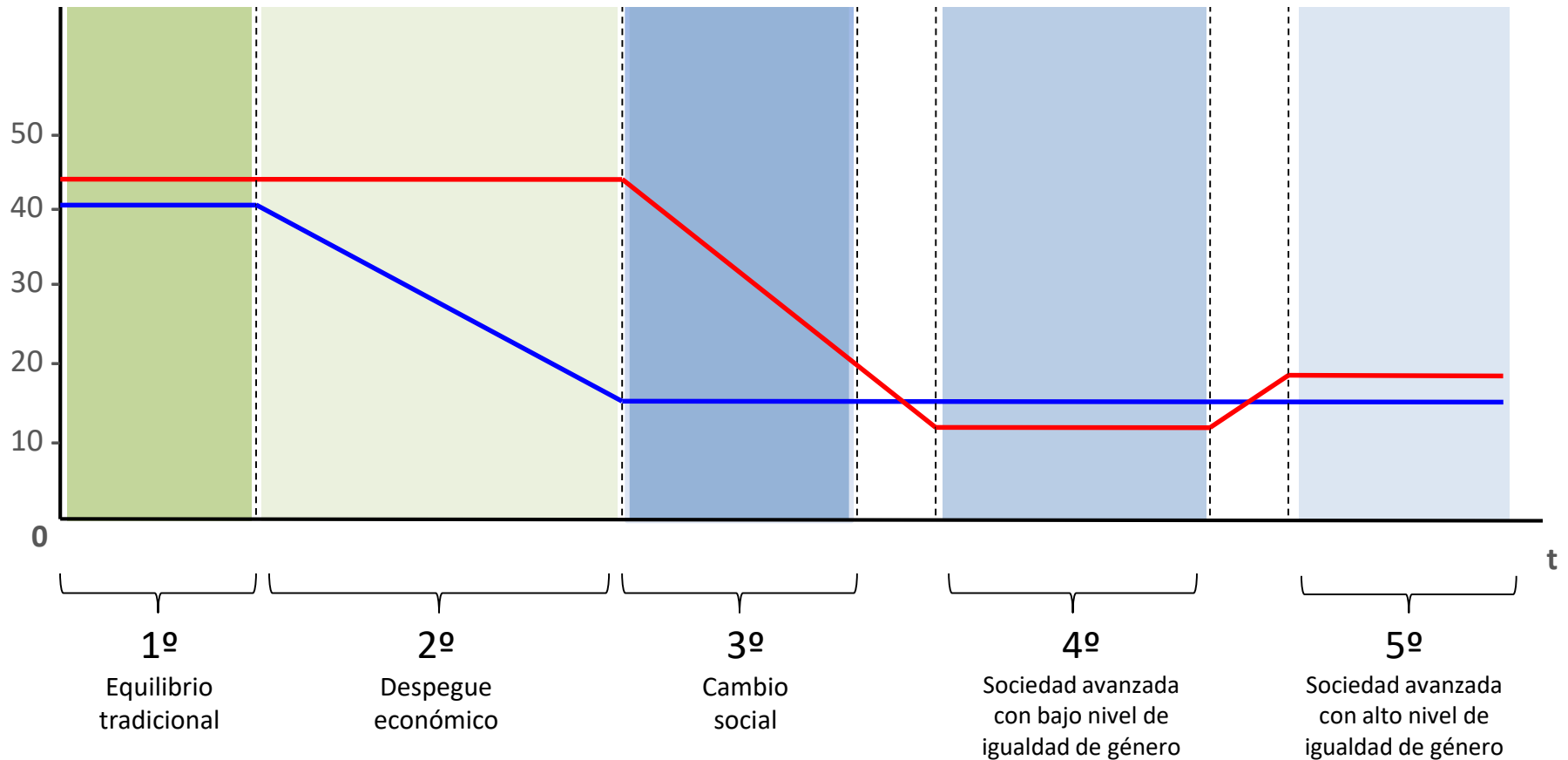
Tasa de mortalidad (muertes /1.000 hab.)



Ejemplo de etapas y transiciones demográficas...

Tasa de natalidad (nacimientos /1.000 hab.)

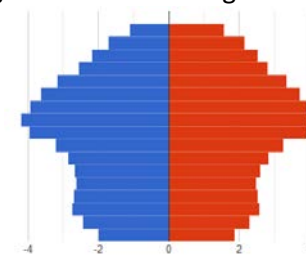
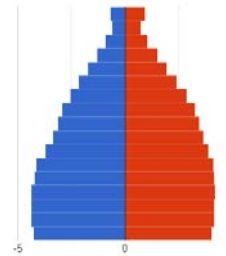
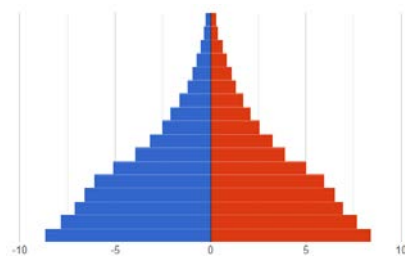
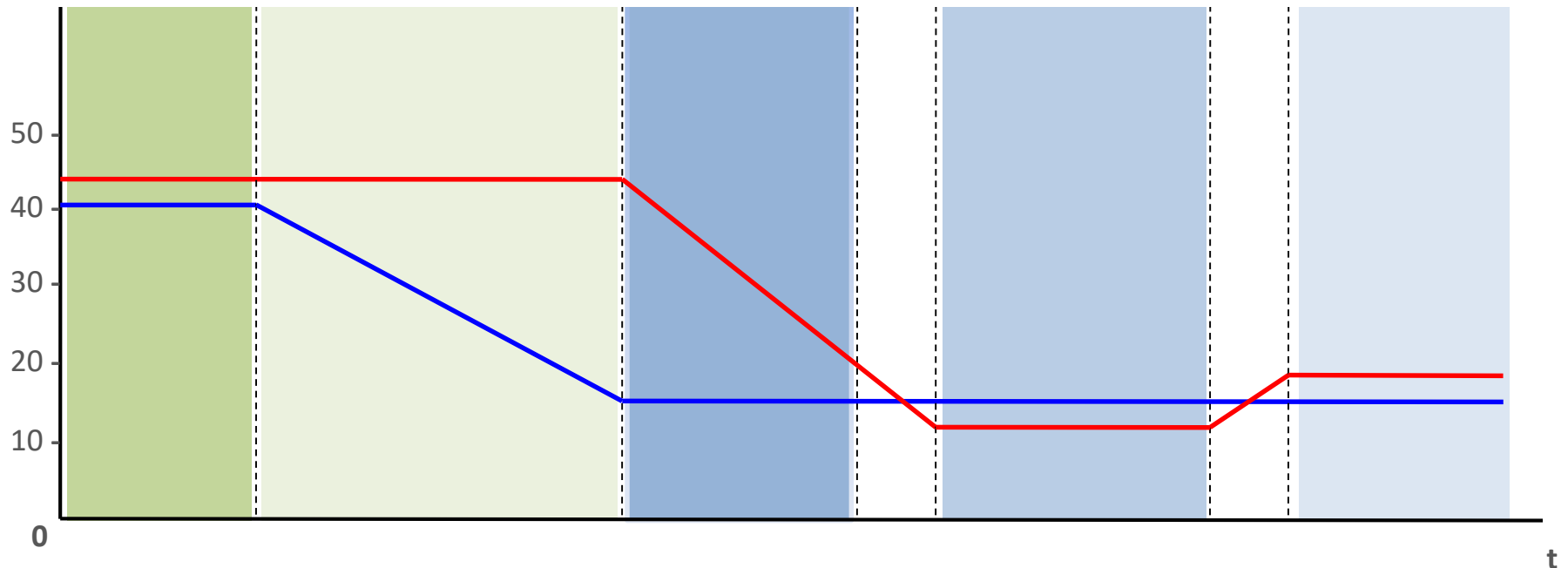
Tasa de mortalidad (muertes /1.000 hab.)



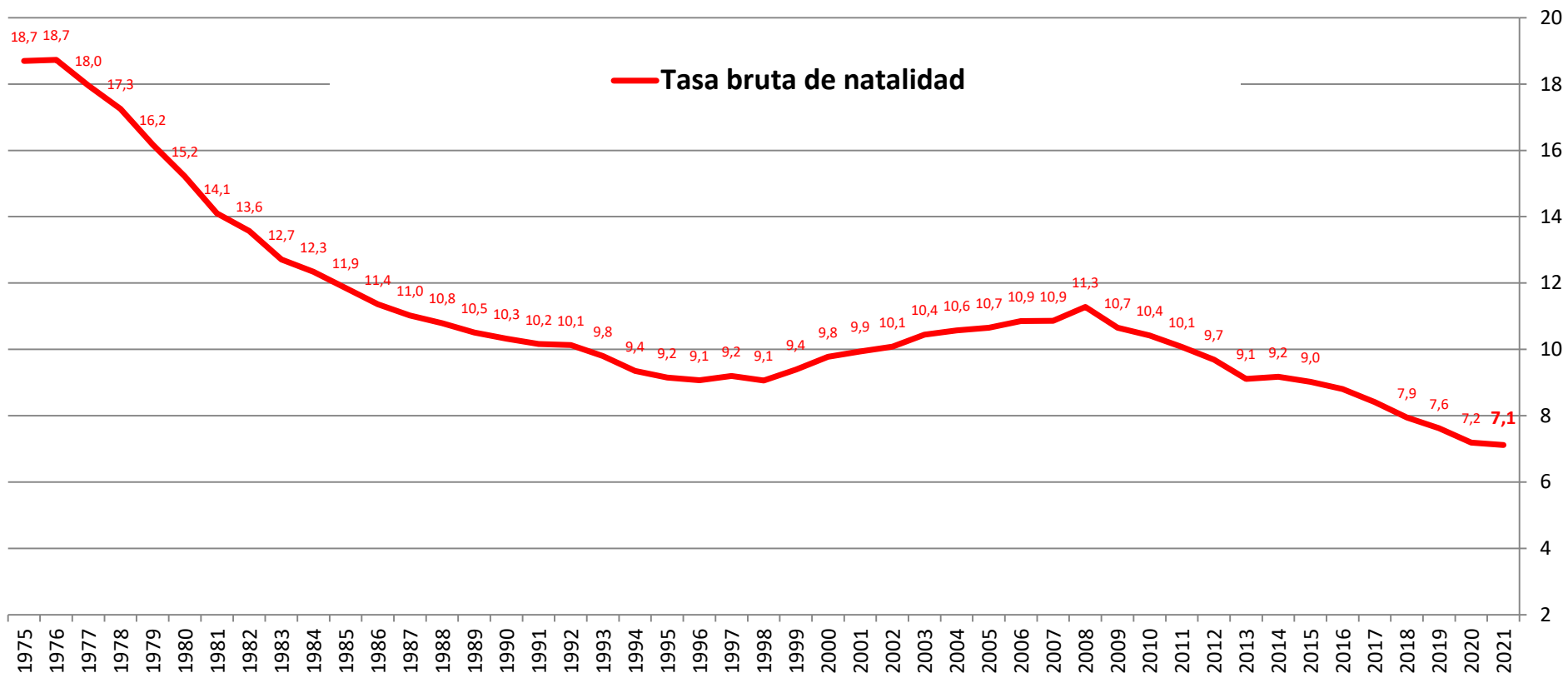
Ejemplo de etapas y transiciones demográficas...

Tasa de natalidad (nacimientos /1.000 hab.)

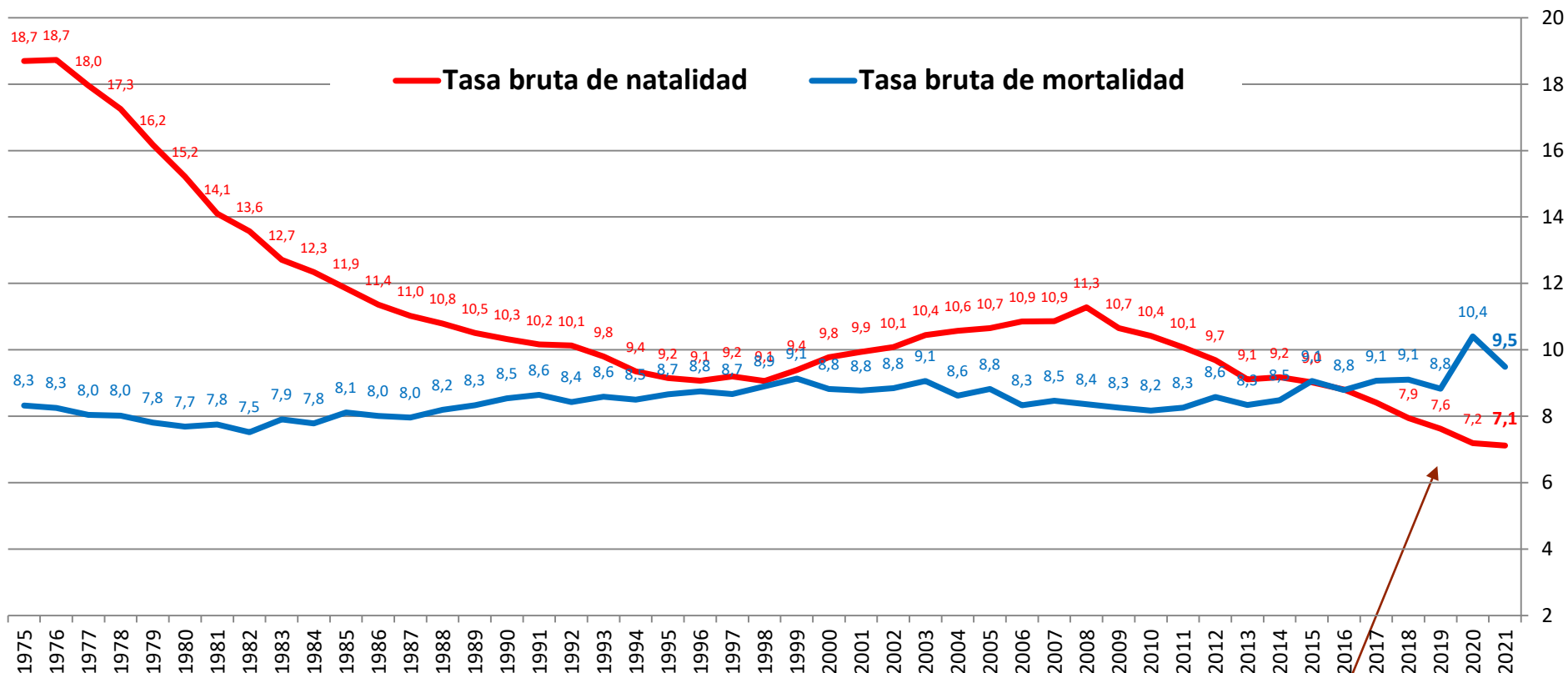
Tasa de mortalidad (muertes /1.000 hab.)



España. Tasas brutas de natalidad y mortalidad (por cada mil habitantes)

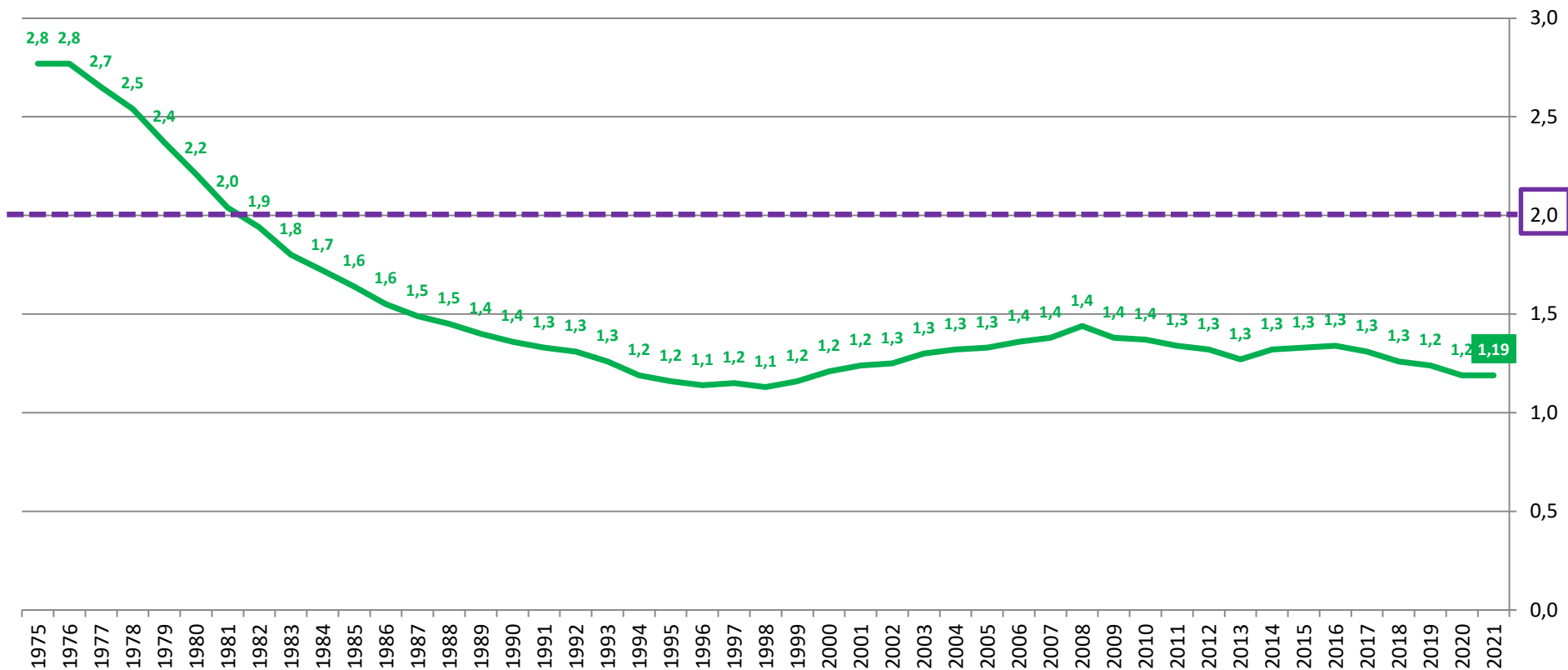


España. Tasas brutas de natalidad y mortalidad (por cada mil habitantes)

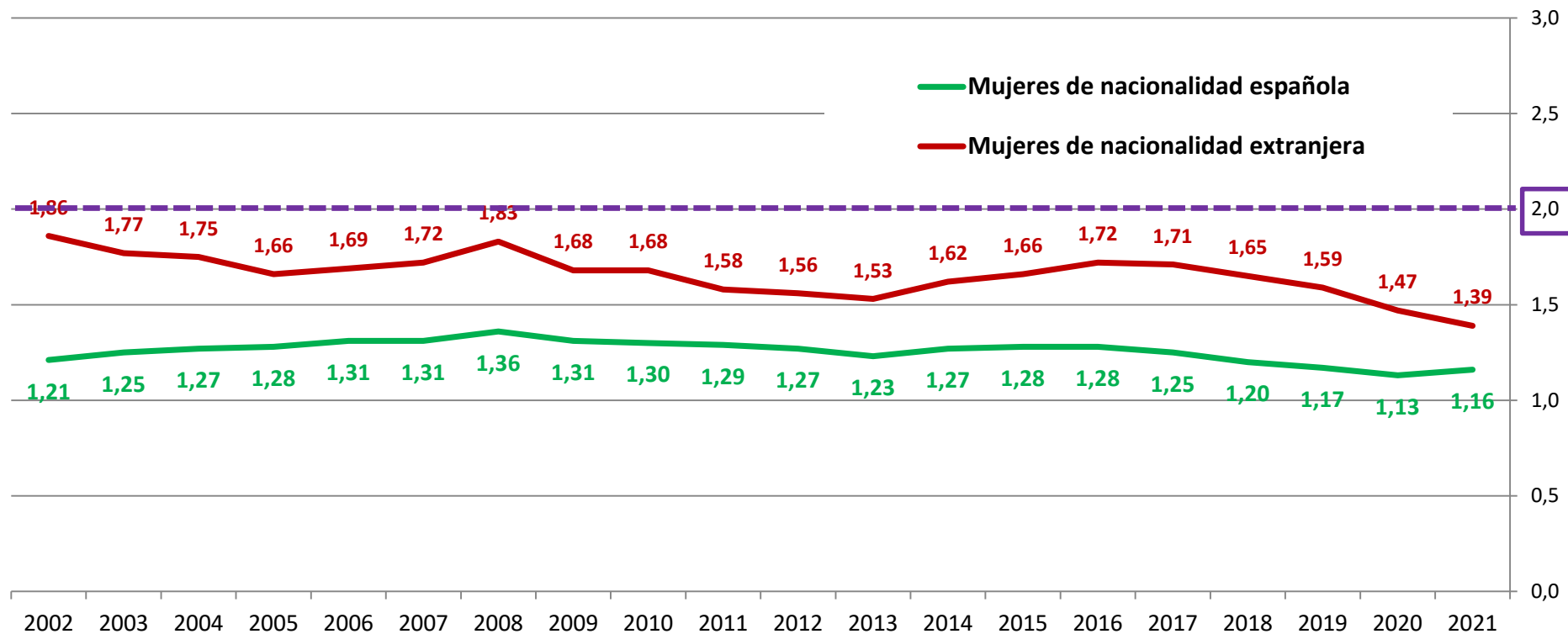


Crecimiento natural (o vegetativo) negativo

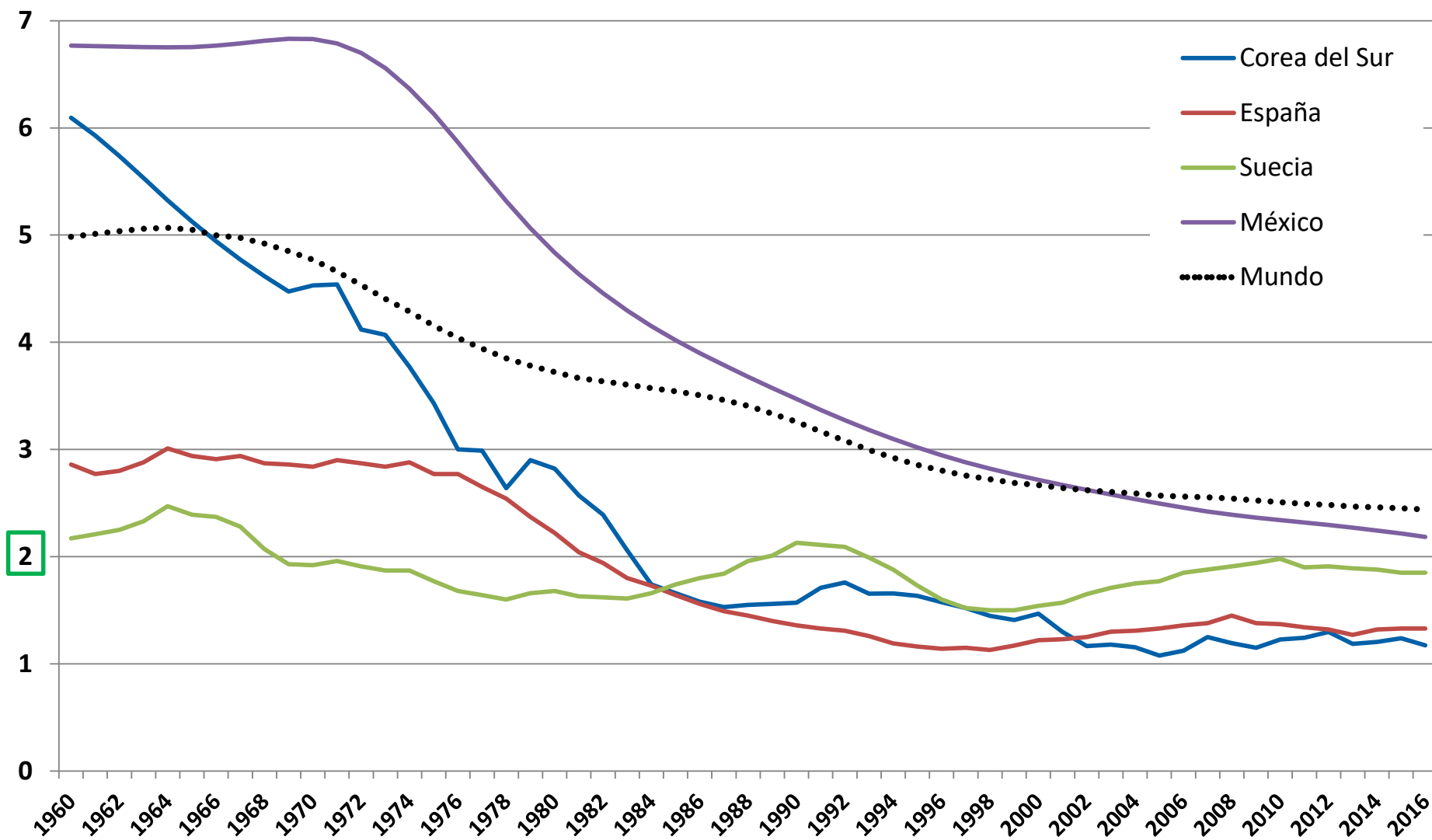
España. Número promedio de hijos por mujer (indicador coyuntural de fecundidad)



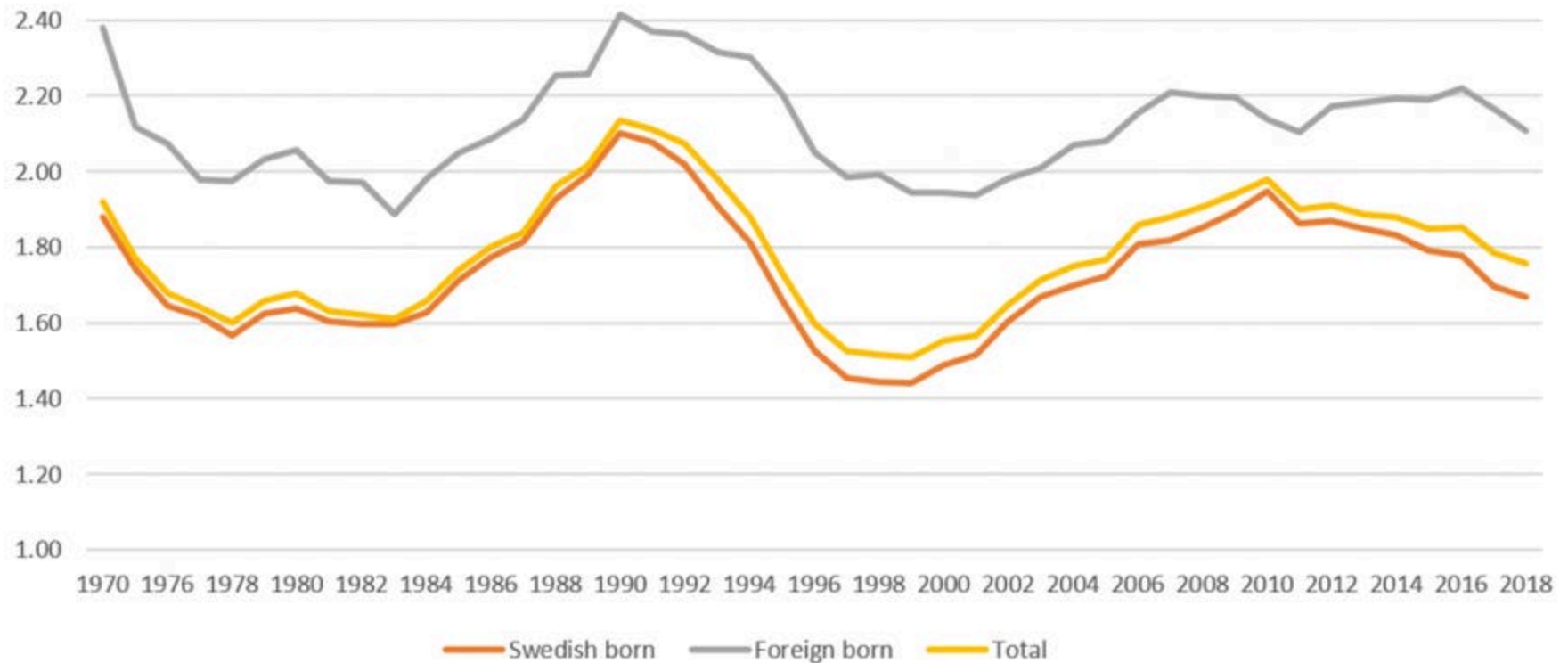
España. Número promedio de hijos por mujer (indicador coyuntural de fecundidad)



Tasas de fecundidad (nº promedio de hijos por mujer)



Fertility Rates In Sweden, 1970 - 2018



Is Sweden Our Fertility-Boosting Role Model?

<https://www.forbes.com/sites/ebauer/2019/08/09/is-sweden-our-fertility-boosting-role-model/?sh=3a94a1df13cb>

<https://www.norden.org/en/news/record-low-birth-rates-three-nordic-countries>

Ratio de masculinidad al nacimiento

- **Ratio de masculinidad** (varones por cada 100 mujeres):
 - En el momento de la concepción
 - **En el momento del nacimiento**
 - Entre la población infantil
 - Entre la población adulta

- **Ratio de masculinidad al nacimiento**

La ratio de masculinidad (en el nacimiento) que se considera normal es aproximadamente de **104 -106 niños por cada 100 niñas** (pág. 11 de Sex Imbalances...)

España. Ratio de masculinidad al nacimiento

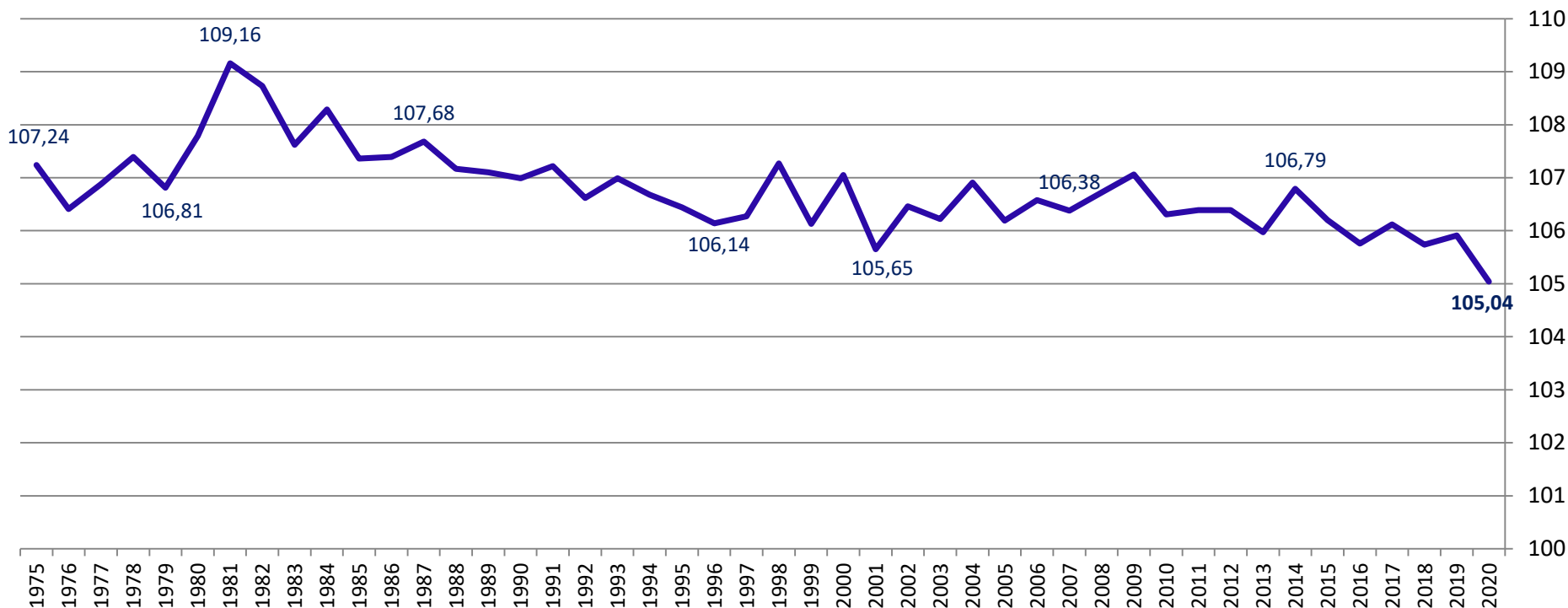


Table 1: Most recent estimates of the **sex ratio at birth** in various countries, 2007-2011

Country / regions	SRB	Period	Data source
<i>East and Southeast Asia</i>			
China	117.8	2011	Annual estimate
Anhui Province	128.7	2010	2010 census
Fujian Province	125.6	2010	2010 census
Hainan Province	125.5	2010	2010 census
Hong Kong	116.2	2011	Birth registration*
Taiwan	108.4	2009	Birth registration
Singapore	107.5	2009	Birth registration
South Korea	106.7	2010	Birth registration
Viet Nam	111.2	2010	Annual demographic survey
Red River Delta Region	116.2	2010	Annual demographic survey
<i>South Asia</i>			
India	110.5	2008-10	Sample registration
Punjab State	120.3	2008-10	Sample registration
Haryana State	117.9	2008-10	Sample registration
Uttar Pradesh State	114.9	2008-10	Sample registration
Pakistan	109.9	2007	Population and demographic survey
<i>West Asia</i>			
Azerbaijan	116.5	2011	Birth registration
Armenia	114.9	2010	Birth registration
Georgia	113.6	2009-11	Birth registration*
<i>Southeast Europe</i>			
Albania	111.7	2008-10	Birth registration*
Montenegro	109.8	2009-11	Birth registration
Sources: national statistical offices, Eurostat			
* Provisional data			

United Nations Population Fund
 (2012). *Sex Imbalances at birth: Current Trends, Consequences and Policy Implications*
<https://www.unfpa.org/sites/default/files/pub-pdf/Sex%20Imbalances%20at%20Birth.%20PDF%20UNFPA%20APRO%20publication%202012.pdf>

- **Understanding prenatal sex selection**

The increase in prenatal sex selection is the joint product of three distinct factors:

1) Son preference

It constitutes the primary factor behind sex selection. It stems directly from the requirements of **patrilineal** and **patrilocal** household structures, in which girls and women have a marginal social, economic and symbolic position, and consequently enjoy fewer rights.

Old age security is an additional factor as sons, rather than daughters, are expected to provide support to their parents throughout their life.

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Old age security is an additional factor as sons, rather than daughters, are expected to provide support to their parents throughout their life.

2) The growth of prenatal diagnosis technology

It enables parents to know the sex of their unborn child. Coupled with abortion, legal or not, sex determination may lead to **pregnancy termination**.

The rise in sex ratio at birth in specific countries has indeed often been linked to the spread of ultrasound technology [**ecografías**] through the private healthcare system. The future may see newer technologies that make it even easier to select the sex of one's offspring.

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3) Low fertility

It exacerbates the potential need for sex selection – by reducing the probability of having a son in smaller families. Local fertility restrictions and spontaneous rapid fertility decline below replacement levels tend to compel parents who want both a son and a small family size to resort to sex selection.

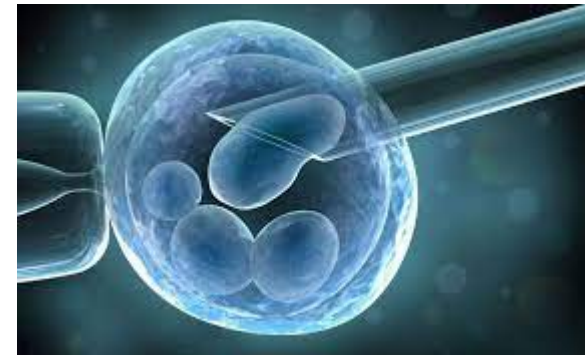
• Two mechanisms of sex selection

1. Excess female mortality In the past, the female biological advantage in survivorship has been negated by **active discrimination**, and the differential mortality between men and women has been the main driver behind sex imbalances. Women's lives were shorter than men's in many countries; excess female mortality is, in fact, a telling manifestation of the lower value of women and the corresponding preference for the male sex. Traces of such discriminatory attitudes and their impact on mortality risks are still clearly visible in many Asian societies.

2. Prenatal sex determination

○ Pre-conception selection.

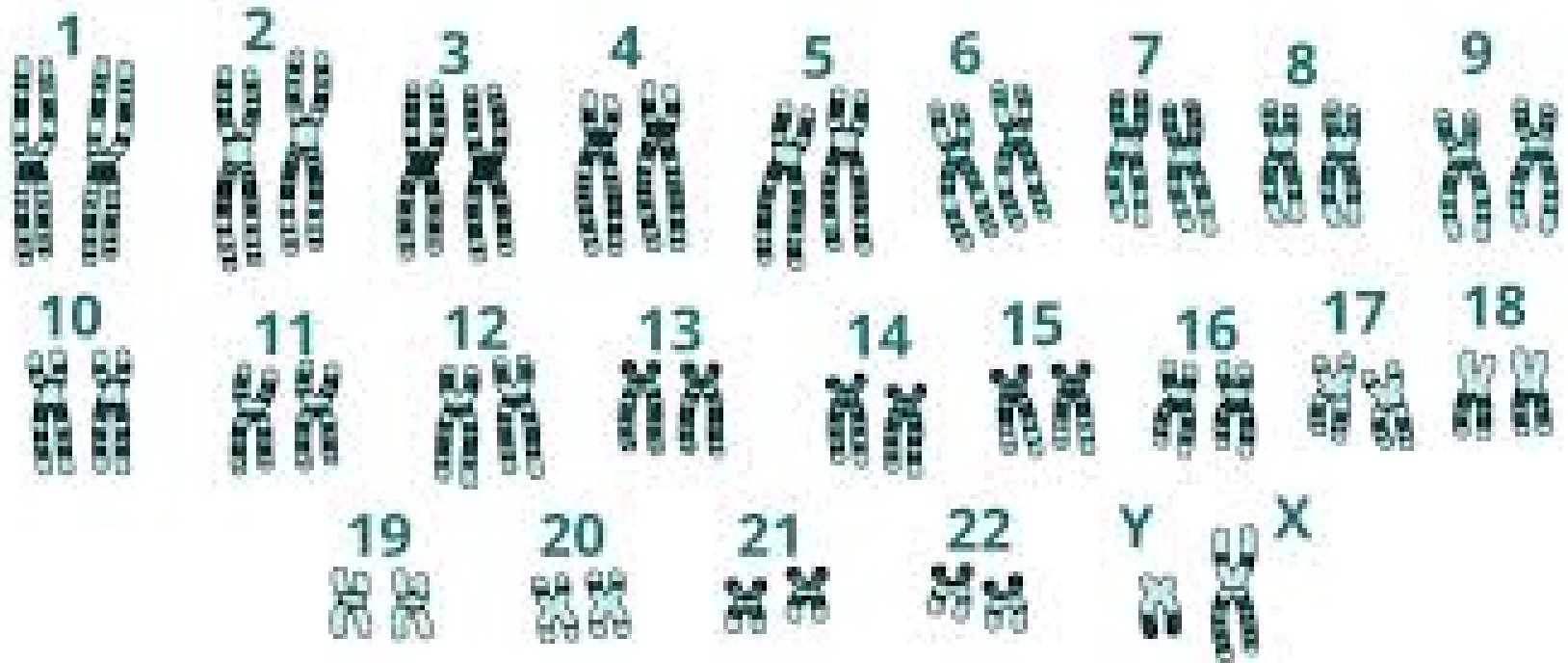
They require access to the elaborate equipment necessary to perform **sperm sorting**, **pre-implantation genetic diagnosis (PGD)** or **in-vitro fertilization (IVF)**. When used for sex selection, the techniques present many advantages to users, in particular the benefit of avoiding any unwanted pregnancy (or, more precisely, pregnancies of unwanted fetuses) and of complete confidentiality. Cost and accessibility factors, however, restrict these technologies to developed countries and to the most affluent populations.



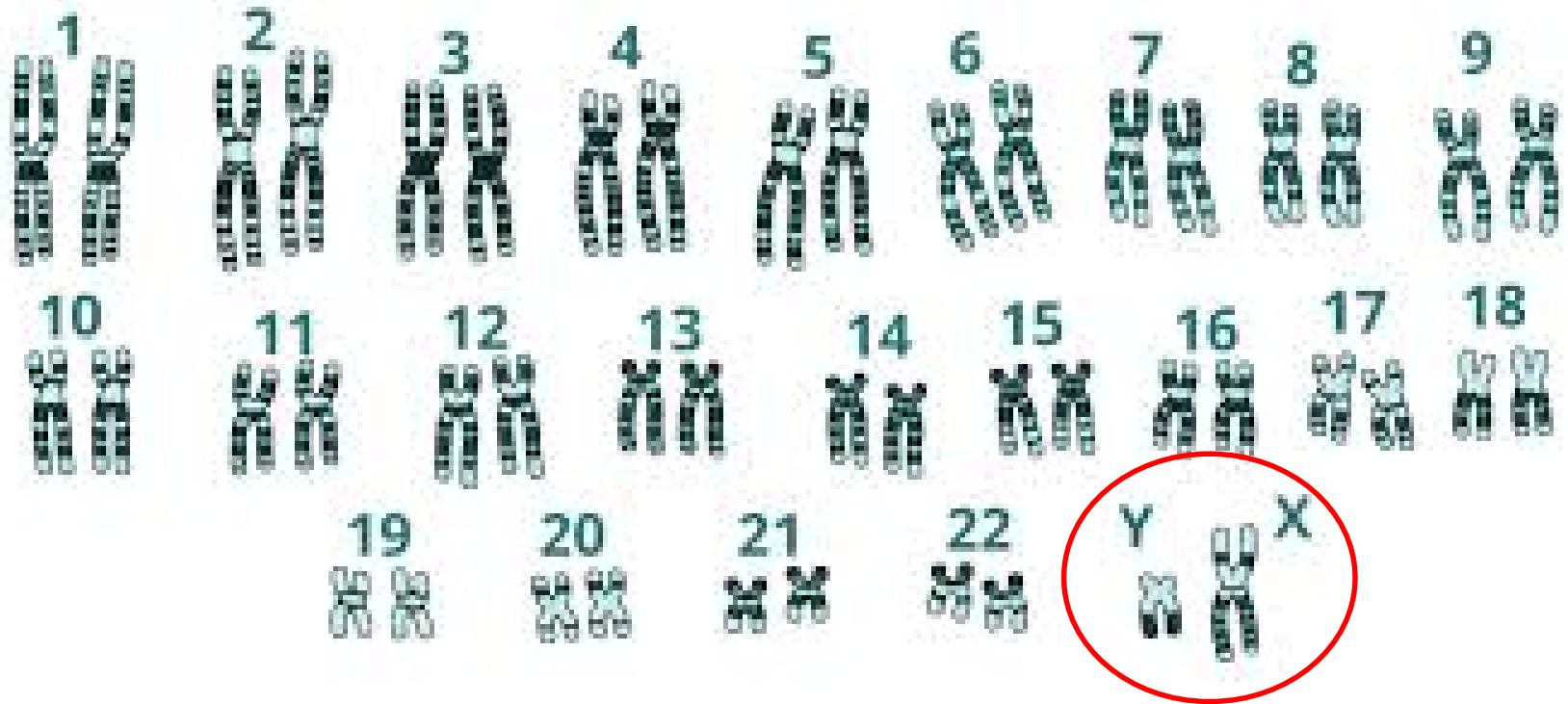
○ Prenatal diagnosis technologies [ecografías]

By far the most common methods used nowadays for sex selection derive from the gradual introduction of **prenatal diagnosis technologies [ecografías]** in the 1970s. Combined with **abortion**, whether legal or not, prenatal sex determination is the key to understanding how couples have become able to decide whether to continue or to interrupt a pregnancy on the basis of their gender objectives for their family.

Sperm sorting, pre-implantation genetic diagnosis (PGD) or in-vitro fertilization (IVF)



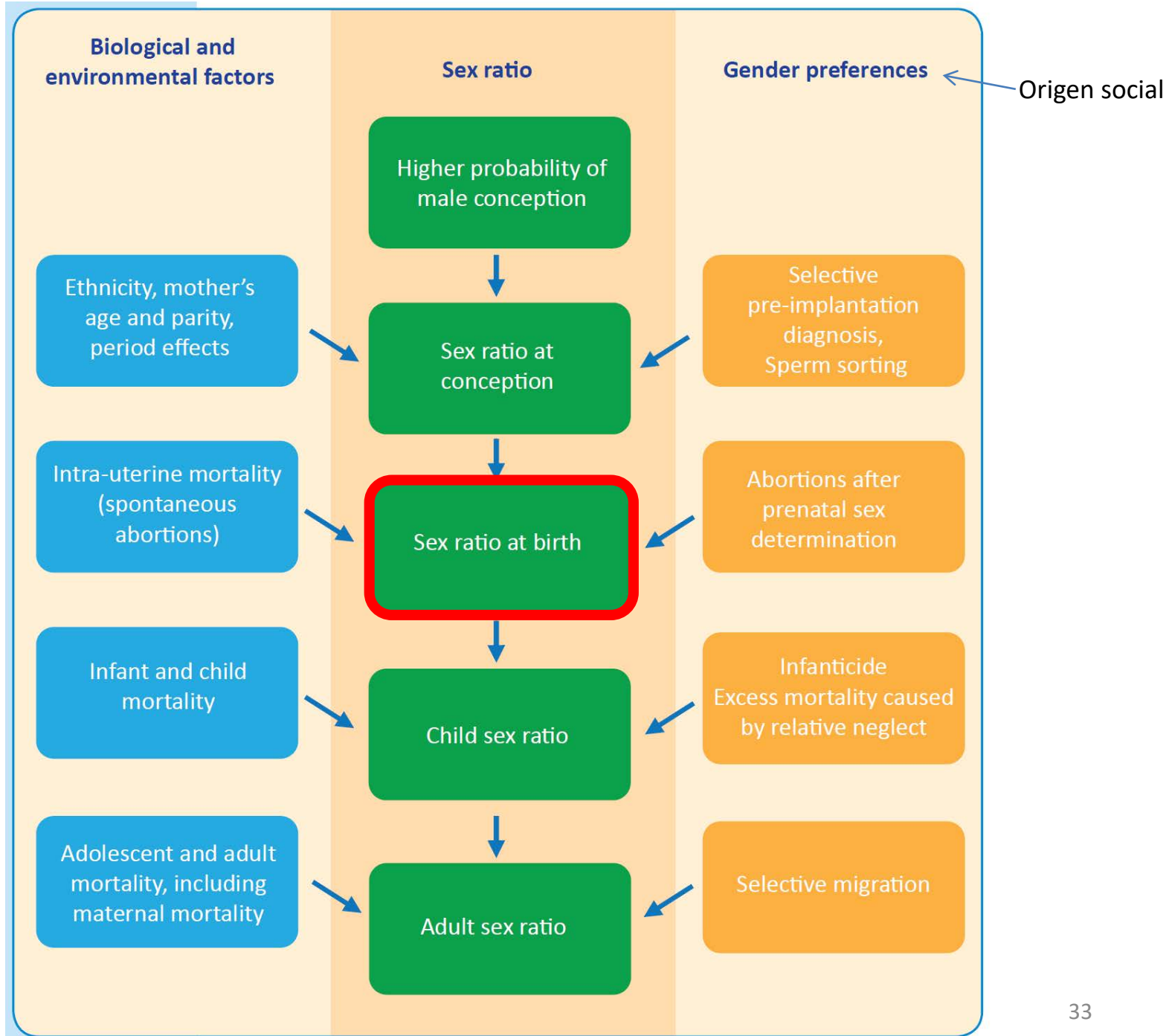
Sperm sorting, pre-implantation genetic diagnosis (PGD) or in-vitro fertilization (IVF)



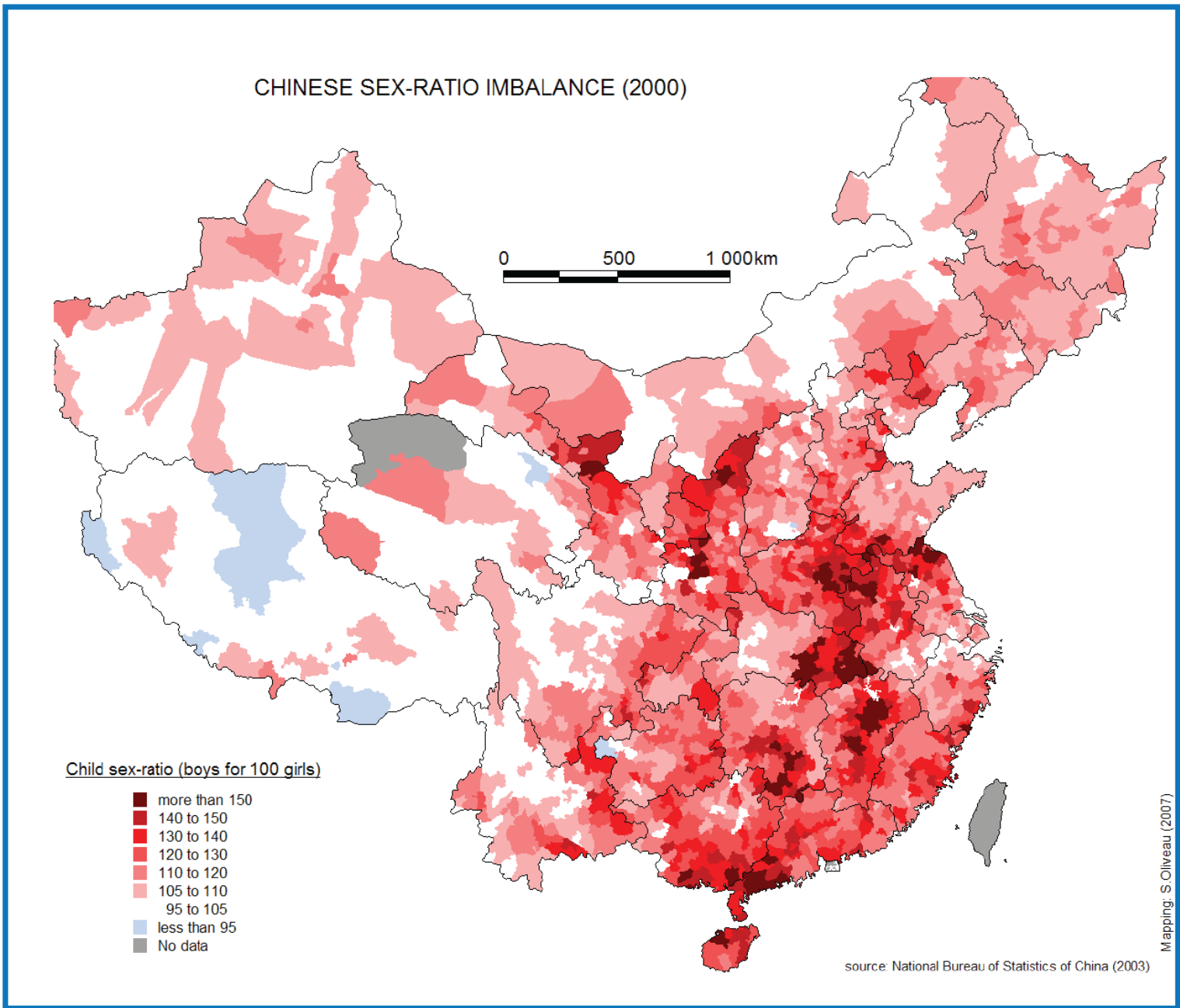
• Ratios de masculinidad en

- concepción
- nacimiento
- infancia
- edad adulta

y factores biológicos y sociales

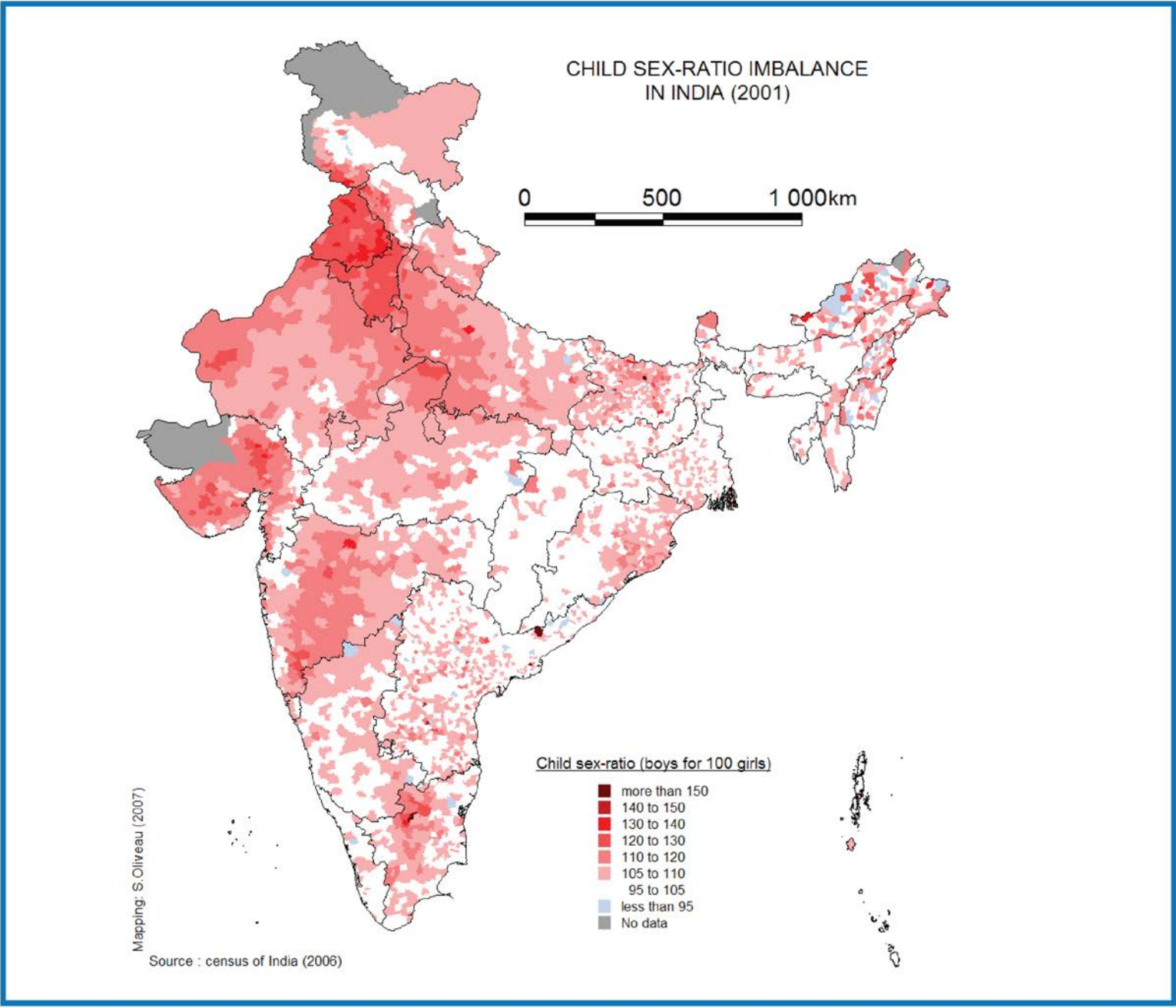


Child sex ratio



Child sex ratio, Chinese counties, 2000

Child sex
ratio



Child sex ratio, Indian sub-district units, 2001

Orden del nacimiento...

Table 3: Sex ratio by birth order, South Korea, Armenia, China and Viet Nam, 2000-2009

	Birth order 1
Armenia (2001-08)	106.8
China (2010)	113.8
Republic of Korea (2000)	106.2
Viet Nam (2009)	110.2
*: Birth order 3 and above	

Sources: South Korea: Kim (2004); China: 2010 census; Armenia Statistical Office; Vietnam (UNFPA 2010).

Orden del nacimiento...

Table 3: Sex ratio by birth order, South Korea, Armenia, China and Viet Nam, 2000-2009

	Birth order 1	Birth order 2
Armenia (2001-08)	106.8	110.4
China (2010)	113.8	130.3
Republic of Korea (2000)	106.2	107.4
Viet Nam (2009)	110.2	109.0
*: Birth order 3 and above		

Sources: South Korea: Kim (2004); China: 2010 census; Armenia Statistical Office; Vietnam (UNFPA 2010).

Orden del nacimiento...

Table 3: Sex ratio by birth order, South Korea, Armenia, China and Viet Nam, 2000-2009

	Birth order 1	Birth order 2	Birth order 3
Armenia (2001-08)	106.8	110.4	176.9
China (2010)	113.8	130.3	161.6
Republic of Korea (2000)	106.2	107.4	141.7
Viet Nam (2009)	110.2	109.0	115.5*
*: Birth order 3 and above			

Sources: South Korea: Kim (2004); China: 2010 census; Armenia Statistical Office; Vietnam (UNFPA 2010).

Orden del nacimiento...

Table 3: Sex ratio by birth order, South Korea, Armenia, China and Viet Nam, 2000-2009

	Birth order 1	Birth order 2	Birth order 3	Birth order 4
Armenia (2001-08)	106.8	110.4	176.9	177.4
China (2010)	113.8	130.3	161.6	145.9
Republic of Korea (2000)	106.2	107.4	141.7	154.9
Viet Nam (2009)	110.2	109.0	115.5*	
*: Birth order 3 and above				

Sources: South Korea: Kim (2004); China: 2010 census; Armenia Statistical Office; Vietnam (UNFPA 2010).

Table 4: Social, demographic and economic factors affecting prenatal sex selection

	Impact on sex ratio at birth or child sex ratio	Country
Birth order	• Sex ratio increases rapidly with higher birth order • Sex ratio highest among final births	All countries, diaspora populations
Reproductive health	• Sex ratio normal among women who have not performed an ultrasound test • Sex ratio normal among women who did not know the sex of their child in advance	Viet Nam, India
Gender composition	• Sex ratio highest in families with no previous son • Normal sex ratio among families with a son	All countries, diaspora populations
Rural/urban	• Moderate variations, with opposite trends across countries	All countries except Viet Nam
Region	• Geography is the strongest source of sex ratio variations within the country	All countries
Ethnicity	• Ethnic groups exhibit very distinct sex ratio levels • Most minority groups have lower sex ratio levels	Viet Nam, China, India, Singapore
Religion	• Hindus, Sikhs, Buddhists, and Jains have comparatively higher sex ratio levels than Muslims or Christians	India, South Korea
Socioeconomic status	• Lower sex ratio among the poorest households • Highest among the most affluent in several countries • Decreases among the most affluent in China • Lower sex ratio among women with social insurance in China	China, India, Viet Nam
Educational level	• Sex ratio increasing with educational level	China, India, Viet Nam

Sources: studies of sex ratio differentials in China, India, South Korea and Viet Nam, and on Asian diasporas mentioned in the text

Selección prenatal del sexo (en Australia) y estereotipos de género

<https://www.youtube.com/watch?v=eZg-GgToBEE>

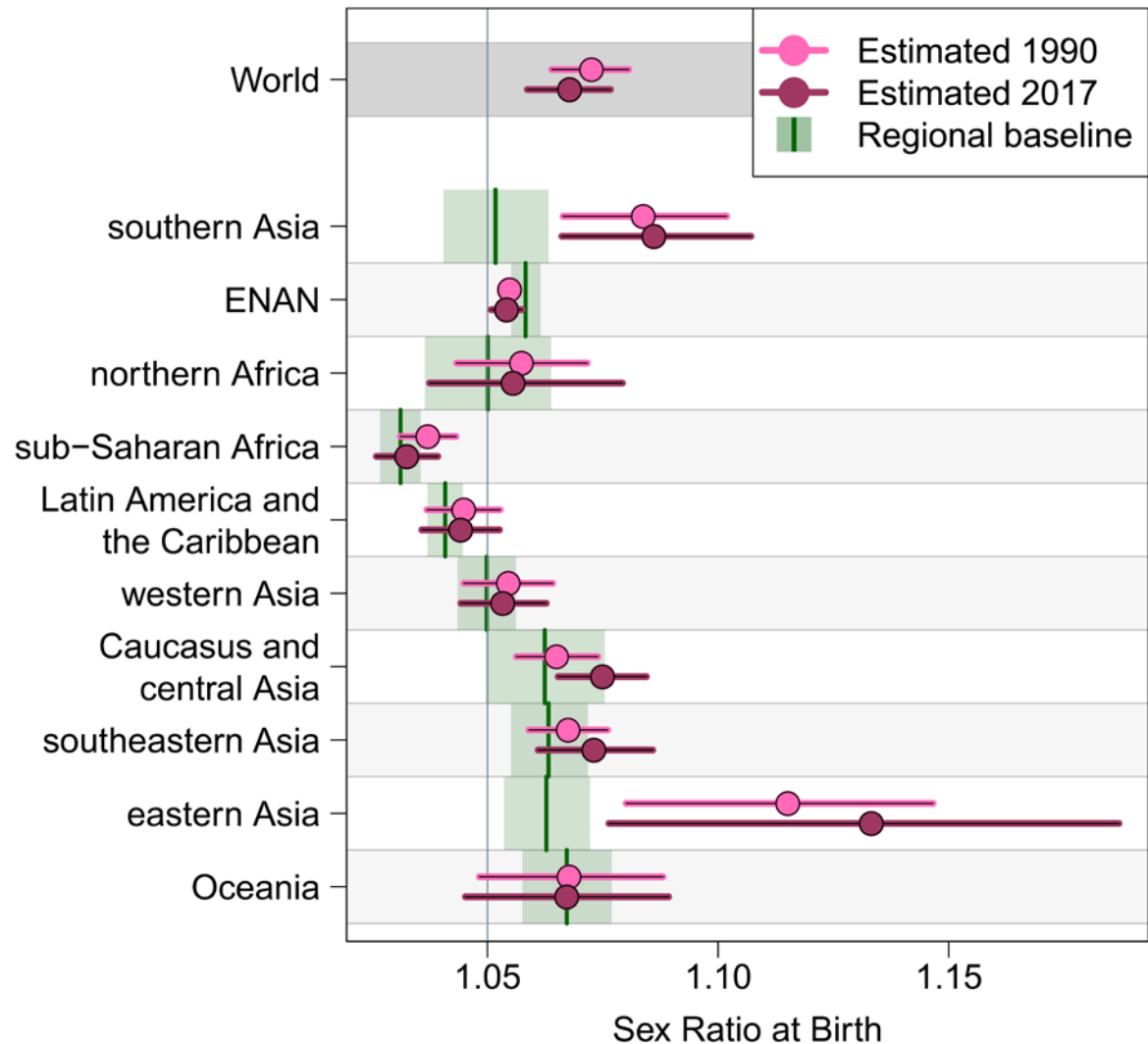
Estudio llevado a cabo en Armenia

<https://eeca.unfpa.org/en/tags/prenatal-sex-selection?page=1>

Fengqing Chao, Patrick Gerland, Alex R. Cook, y Leontine Alkema (2019). **“Systematic assessment of the sex ratio at birth for all countries and estimation of national imbalances and regional reference levels”**, *PNAS*, May 7, 2019 116 (19) 9303-9311

<https://www.pnas.org/content/116/19/9303>

https://www.abc.es/sociedad/abci-aborto-selectivo-ninas-desequilibra-relacion-sexos-nacer-doce-paises-201904170200_noticia.html



<https://www.pnas.org/content/116/19/9303>

ENAN: the combination of countries in Europe, North America, Australia, and New Zealand

Fig. 1. Global and regional SRB estimates in 1990 and 2017, and regional baseline values of SRB. Dots indicate median estimates, and horizontal lines refer to 95% uncertainty intervals. Regional baseline values are in dark green, where the vertical line segments refer to median estimates, and green shaded areas are 95% uncertainty intervals.