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# "Intergenerational transfers and aging in Spain, an analysis from 1970 to the present"

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## Introduction

This project intends to carry out an analysis of the effects of aging on the economy in Spain. For this, the period from 1970 to the present will be studied, and, in view of the results, simulations will be carried out on the possible future evolution. The methodology to be used are the so-called National Transfers Accounts (NTA for its acronym in English). It is a methodology developed since the early 2000s, in an international project led by the American Universities of Berkeley and Hawaii. Currently, more than forty countries around the world (including Spain), participate in this project. The method of estimating NTAs has been approved and published in a manual by the United Nations (Population Division).

## The NTA Methodology

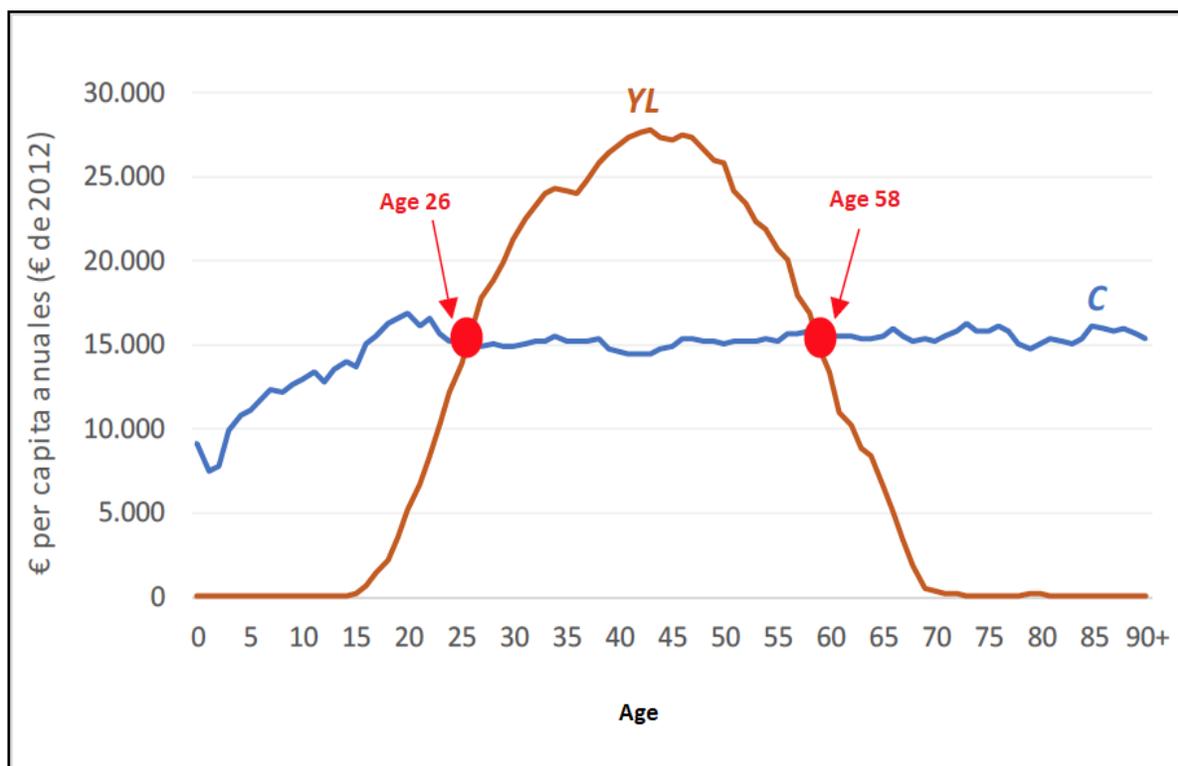
The NTA consists of estimating, for each moment of time and for a given economy (for the moment the analysis is done by countries), all the flows of resources that take place between the different age groups of the generations that live together. In strictly economic terms, the life cycle of people can be divided, in general terms, into three major stages that we will call: childhood-early youth, active age and retirement age. During the active age, individuals have the capacity to work that allows them to generate the necessary resources to cover their consumption needs, while in childhood and retirement, they lack such resources. Therefore, it is essential that there is some kind of mechanism that allows, at all times, the necessary intergenerational transfers so that children and the elderly can consume and satisfy their needs.

There are basically three mechanisms of intergenerational redistribution. The first of these is the family itself, where parents act, for example, to care for and satisfy the needs of their children, or even grandparents. Second, the public sector also makes intergenerational transfers, since most social spending programs are aimed at some ages while they are financed with resources from others. For example, pensions and health benefits mainly the elderly, education for children, and in any case are financed with taxes that are mainly paid by the people who work. Finally, intergenerational transfers could also take place through the market: the elderly could have saved during their active life and recovered the investment during their old age. In the case of children, a similar reasoning would imply that they would be indebted at birth, and return this credit once incorporated into the labor market. However, while in the case of the elderly, temporary reallocations of income do exist (to a greater or lesser extent depending on the country), the same is not true for children, where the family plays a fundamental role.

The procedure for estimating NTAs is complex and requires a significant workload in terms of search and processing of statistical data at the micro level. The NTAs do not only provide profiles of consumption and labor income, but also of all the variables in which these can be decomposed, as well as of the different financing mechanisms of the consumption needs of the different ages. Thus, profiles of private transfers (both family and intra-family), and public transfers (all taxes, social contributions and all public expenditures) are built. On the other hand,

reallocations of assets, in the absence of appropriate statistical information to be able to estimate them directly, are obtained as a balance, using the basic NTA equation. All the profiles are obtained per capita and at the aggregate level (multiplying each profile by the population in each age group). The aggregates must match those provided by the National Accounts of each country, so that the NTAs are consistent with the National Accounts.

**Figure 1. Profiles of labor income (YL) and consumption (C) per capita by age in Spain (2000)**



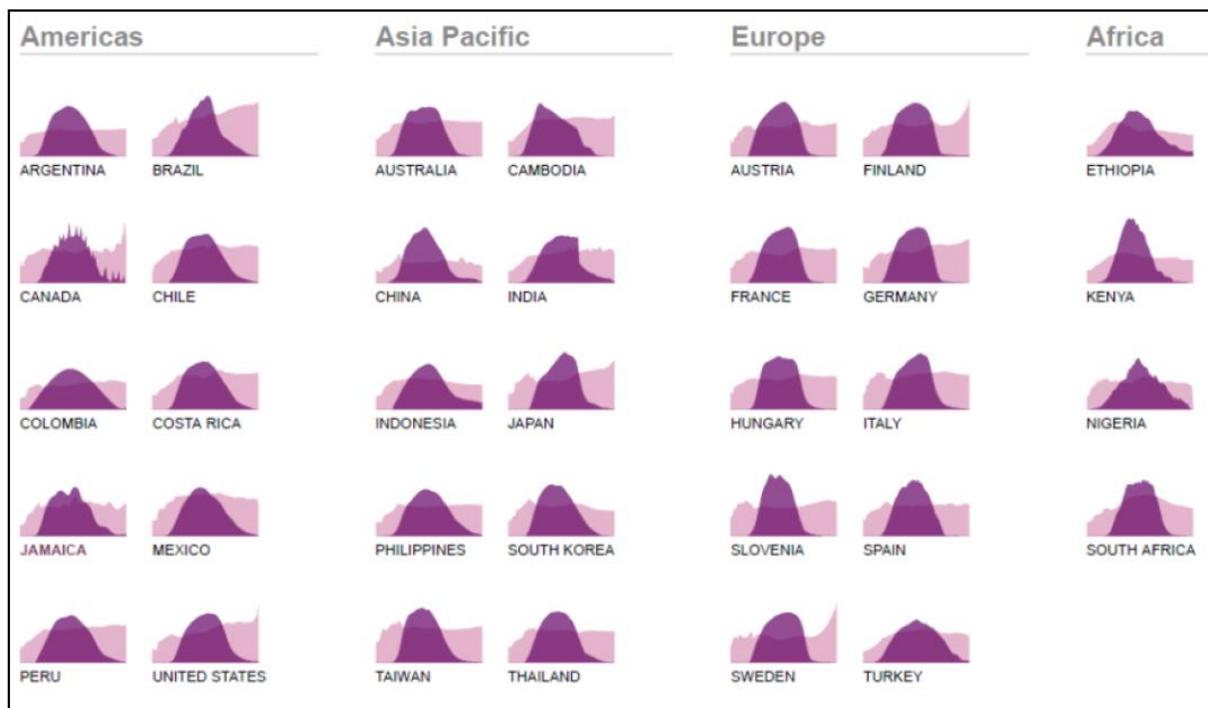
*Source: Own elaboration based on calculations of NTA for Spain in 2000*

The NTAs provide invaluable information that allows us to observe how intergenerational transfers occur in a given period. Thus, first, there is a profile by age of consumption and labor income. The difference between the two produces the so-called Vital Cycle Deficit or LCD. In Figure 1 we represent those profiles for Spain estimated for the year 2000. As can be seen, while consumption is fairly regular throughout the life cycle, the same does not occur with labor income, which is clearly concentrated in the central stage. This results in a surplus life cycle

(labor income is greater than consumption) between 26 and 58 years. On the contrary, at younger and older ages, there is a life cycle deficit, that is, individuals need transfers in order to satisfy their consumption needs. These transfers will have to occur through one of the three mechanisms indicated above.

Figure 2 shows a comparison of labor income and consumption profiles for different member countries of the NTA project classified by geographical areas. Although the shape of the NTA profiles presents, in general, very similar trends between countries, some interesting differences can be seen. For example, the Nordic countries (Sweden, Finland), Germany and the USA present a profile of consumption that grows significantly in the most advanced ages. This is mainly explained by public consumption that grows considerably in these age groups (in programs such as care for dependence). However, in other European countries such as Austria, France, Italy or Spain, this phenomenon is not observed. Regarding labor income, it can be seen that in the countries with the highest economic development, this is mainly concentrated in the central ages. In countries such as Turkey, India, Colombia or African countries, labor income can be more important at a very young age.

Graph 2. Profiles by age of consumption and per capita labor income in different NTA countries



Notes: the lilac area represents labor income, which is concentrated in the central ages of the life cycle. The pink areas represent consumption per capita, which exists throughout life, although with important differences between countries

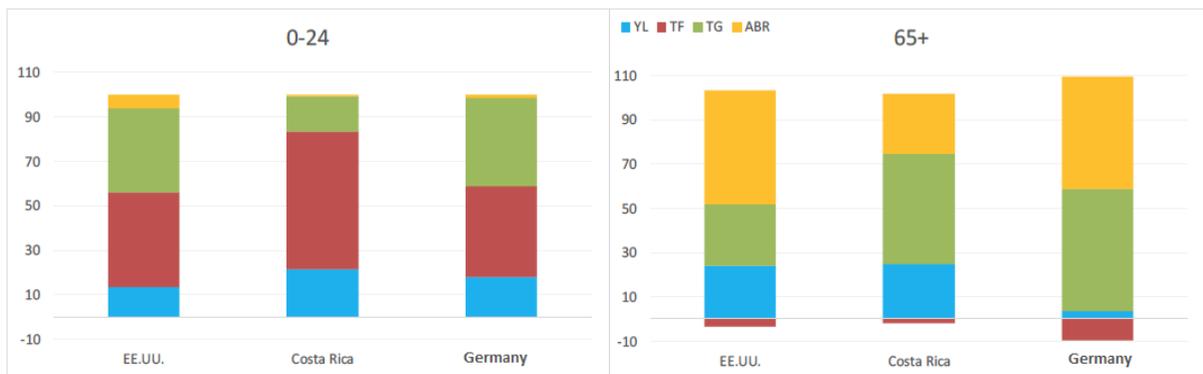
Source: NTA Interactive Data Explorer, [www.ntaccounts.org](http://www.ntaccounts.org)

The life cycle deficit that people inevitably have to face during their childhood and once they lose the ability to work, could be financed with the three mechanisms of intergenerational transfers mentioned above: family transfers, public transfers or reallocations through the markets themselves. The importance of these three mechanisms is different in each country and, we suspect, has undergone important changes throughout history.

Figure 3 shows the relative importance of labor income (YL), private transfers (TF), public transfers (TG) and temporary reallocation of income (ABR) in financing the consumption of young people and the elderly in three NTA countries, USA, Costa Rica and Germany. In the first place, it can be seen that for young people, the main source of financing for their consumption is private transfers (TF), basically from their families, followed by public transfers, mainly education (although the importance of these differs in a different way). notable among countries). On the

contrary, for those over 65 years of age, their main source of financing comes from public transfers (pensions, health), followed by intertemporal income allocations (dissaving). It is worth noting the difference observed between the US and Germany (a difference that also occurs with the rest of European countries) in terms of labor income. For the older Americans, labor income finances around 24% of their consumption, while in Germany it is reduced to barely 3%. It is only a consequence of the greater labor participation of the elderly in the North American economy, whose average retirement age is higher than the European one.

**Figure 3. Financing mechanisms for youth (0-24 years) and older (65+) consumption**

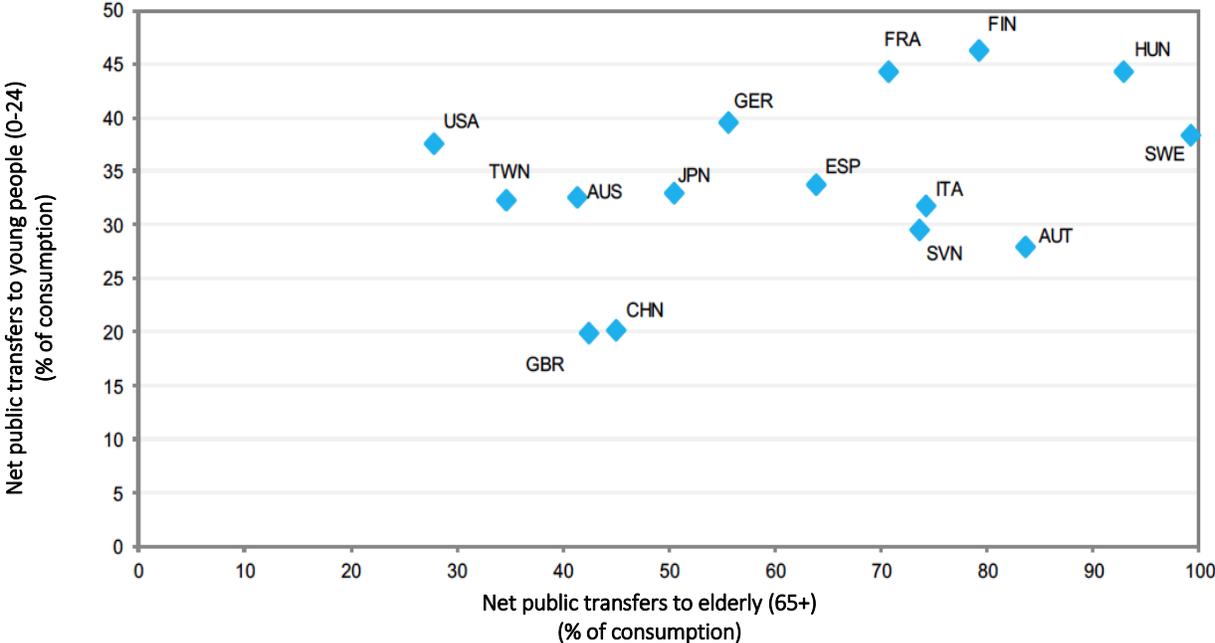


*Source: Own elaboration based on the data contained in the NTA 2016 Database*

If we focus on the importance of public transfers, that is, on the role of the welfare state, we find interesting results. In Figure 4 we have represented the percentage of public transfers received by young people (0-24 years old) and older people (65 and over) in different NTA countries, in relation to their own consumption. Note the differences between countries such as the United Kingdom or Sweden, for example. In the United Kingdom, older people receive only 45% of their total consumption in public transfers, while in the case of children the proportion is reduced to 20%. In the case of Sweden, on the other hand, the elderly receive public transfers equivalent to 100% of their consumption, and children close to 40%. So, we observe two interesting features. In the first place, even when comparing countries with consolidated welfare states, there are important differences in terms of their level of protection. Secondly, and no less interesting, there is a clear bias in favor of the elderly in all the countries analyzed. Although it

is two stages equally dependent in economic terms, the welfare state has been developed with the protection of the elderly, leaving the children basically in the hands of families.

Figure 4. Public transfers received by young people (0-24) and older people (65+) in NTA countries, as a percentage of the total consumption of the same age group

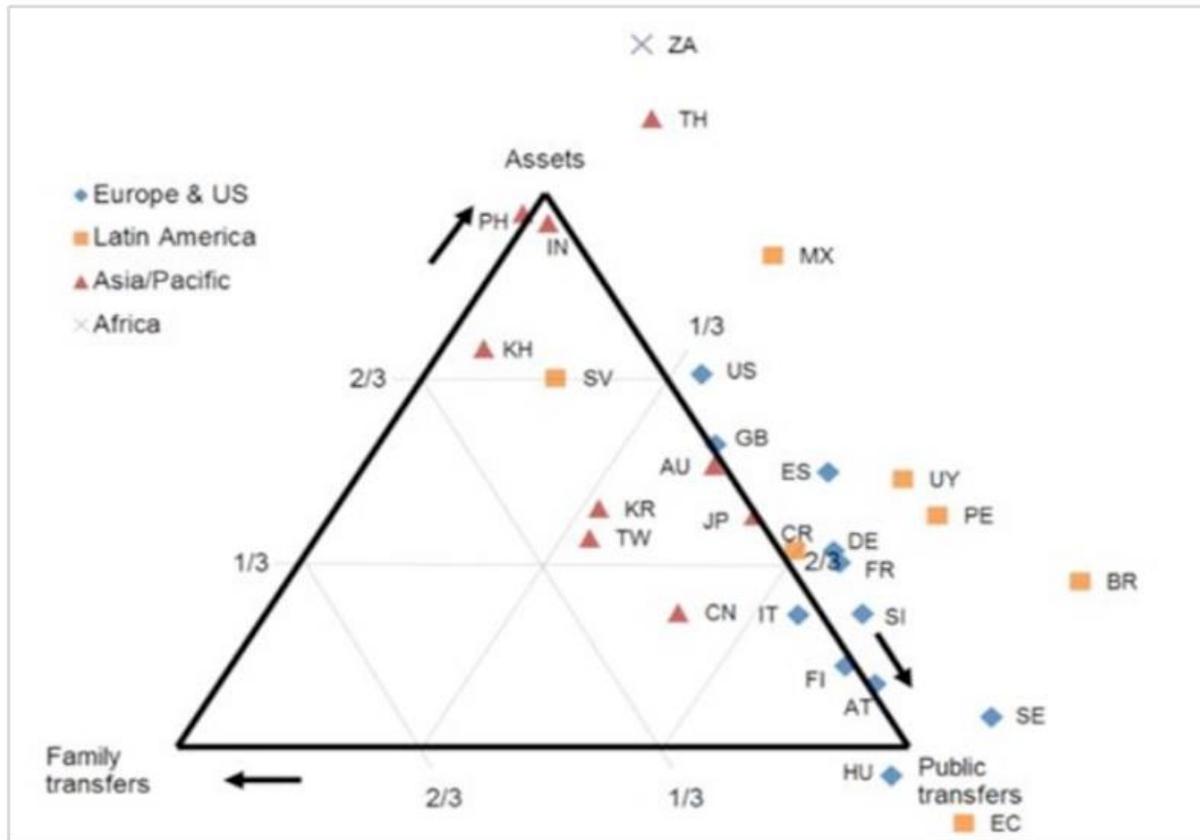


Source: Own elaboration based on the data contained in the 2016 NTA Database

percentage of public transfers received by young people (0-24 years old) and older people (65 and over) in different NTA countries, in relation to their own consumption.

Figure 5 presents a comparative graphical representation among the NTA countries of the importance of the three financing mechanisms of the life cycle deficit of those over 65 years of age. As can be seen, the main ones are public transfers and intertemporal redistributions of assets, while the importance of family transfers in this age group is much lower.

Figure 5. Representation of financing mechanisms for the life cycle deficit of people over 65 in NTA countries



Source: NTA, [www.ntaccounts.org](http://www.ntaccounts.org)

### Objective of the project

The objective of this project is to analyze the evolution of the welfare state and its interaction with intergenerational transfers in Spain from 1970 to the present. With this we intend to study the effects of age composition of the population, and to draw lessons on what will be the economic effects of aging. It is difficult to find research papers in which the development of the welfare state is studied from a historical perspective relating it to demographic evolution. This will be the main contribution of this project.

Since at this moment we already have NTA estimates for Spain for the year 2000 and 2012, it will be necessary to build the ones from the 1970-2000 period. The methodology to be followed will be the NTA standard, using the family budget

surveys available for 1970, 1980 and 1990, as well as other sources of data from public agencies and the National Accounts.

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