

## **ACCEPTED MANUSCRIPT**

### **Active ageing and living condition of older persons across Italian Regions**

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#### **Abstract**

The ageing of the population is reshaping a large part of the economic and social order, with pervasive and transversal consequences that reflect on production, consumption, labour, and especially on welfare. To govern a development of this kind, it is essential to have an innovative approach, capable of stimulating targeted and systematic policies, and capable of facing the structural change of ageing, transforming it from a burden to a resource for our society. Since the beginning of the new millennium, there has been a gradual attention to the phenomenon of demographic ageing at an international level, which has prompted the European Union to proclaim 2012 as the European Year for Active Ageing and Solidarity between Generations. Recommendations from the international organizations to individual countries on adopting active ageing policies led to the creation of the *Active Ageing Index* (AAI). Istat has extensively contributed to the AAI interacting with its international partners (UNECE and the European Commission). There is no doubt that AAI is a useful tool, both for measuring achieved progress in the area of active ageing, and for promoting the implementation and the evaluation of policies aimed at improving any potential aspect that does not show satisfactory results. AAI consists of four dimensions and 22 indicators. Using nationally representative data, it was first disseminated in Italy as the product of an experiment focused on the subnational level to provide overall and individual domain values, placing Istat at the forefront among European statistical institutes.

**Keywords:** Active Ageing Index, older persons, active participation, subnational level, gender gap, welfare, policy intervention.

#### **Overall of AAI in Italy and its regions**

The AAI results<sup>6</sup> are affected not only by the different ageing experiences matured at an individual level (life course approach), but also by local differences

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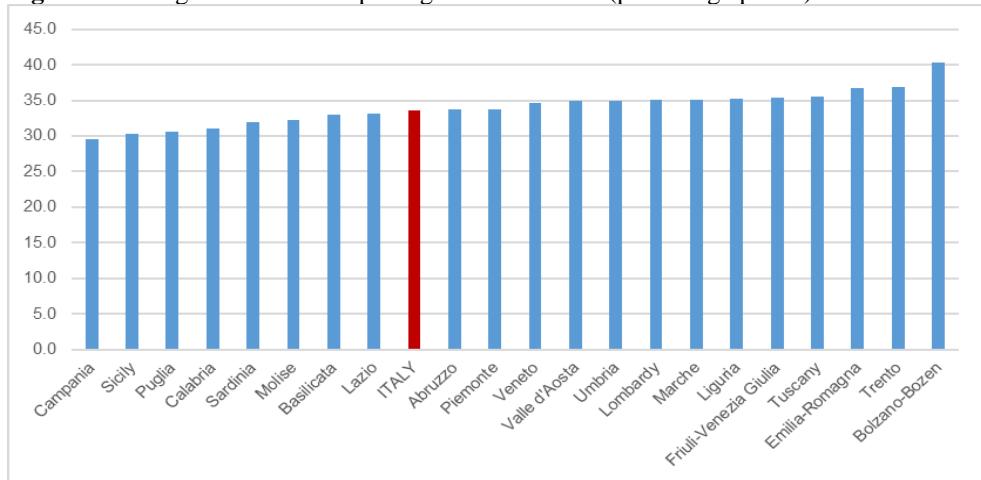
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<sup>6</sup> The experimentation and subsequent application of AAI in Italy on a subnational level was carried out replicating the methodology consolidated by a group of experts on AAI with which Istat has extensively collaborated interacting with its international partners (Unece e the European Commission Commission), but in some cases it has meant choosing different statistical sources from those adopted at a European level. There is a twofold reason for this. The first concerns the statistical significance of the results in the context of a subnational analyses. The European surveys, in fact, provide for a limited sample of interviews for each country, in proportion to their demographic size, sufficient to give reliable estimates on a national level, but not on a regional level. For Italy, we move from hundreds of interviews for the European surveys on social aspects (Ess) to about 2 thousand 250 for the European survey on quality of life (Eqols). The other factor concerns the continuous availability of data and thus the replicability in time of AAI to monitor the results. The European survey on social aspects, the most frequent one, takes place every two

due to both the different level of economic development, which conditions material life and the level of poverty, investments in infrastructure, as well as public welfare policy (access to health care, social benefits and services for the older persons, etc.). In 2018, only the autonomous province of Bolzano exceeds 40 points (Figure 3.1).

**Fig. 3.1** Ranking of overall AAI per region - Year 2018 (percentage points)



Source: Istat, processing various surveys

This highlights that even where the best performance, during the observation period, was observed, much remains to be done on the front of active ageing. The autonomous province of Trento is in second place and Emilia-Romagna in third. A large group of regions score immediately just above or just below the country's average (33.6 points). Puglia, Sicily, Campania are on the opposite side of the spectrum, with clearly very high unexploited potential when it comes to active ageing (higher than 70 percent of the achievable score), suggesting the need to initiate more policy intervention. To offer everyone, the concrete possibility of actively ageing, it would be necessary to make full use of the talents, skills and creativity of both men and women even in mature and older ages. In all regions, women show lower scores than men but with significant differences, also due to the impact that different local policies have on the way of ageing (Figure 3.2).

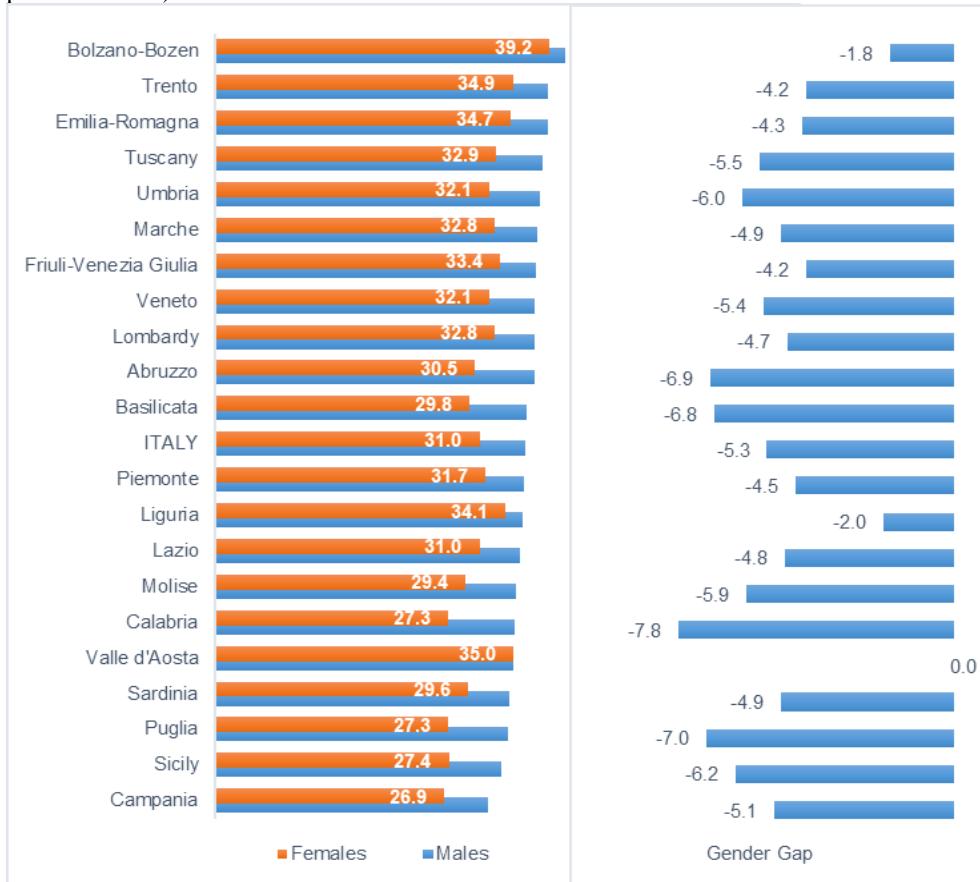
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years. The survey on quality of life is done every four years (the last one was in 2016), the Eurobarometre is an opinion survey on several issues which change for each edition. For Italy, the utmost care was taken in the choice of indicators taken from the national surveys, as similar as possible to the European ones to ensure robustness and replicability over time in the index. The majority of the indicators, therefore, coincide with the ones adopted for the construction of AAI, as they are taken for surveys harmonized at a European level: the survey on labour force (Lfs), the survey on income and life conditions (Eu-Silc), the mortality tables, the survey on health condition and use of health services (Ehis).

The index differs only partially from the original for a small number of calculated indicators with data from national surveys in which small differences in the definition and the reference period can be found. Subsequently, appropriate weights suggested by the AAI expert group were applied to obtain both the domain points and the overall index. Ultimately, the deviation in the results is minimized and does not in any way affect the analyses conducted.

There is no doubt that AAI represent a particularly useful tool, both for measuring the progress achieved on the front of active ageing, and for encouraging, through monitoring, the evaluation and implementation of policies aimed at improving any aspect which does not show satisfactory results. It is therefore an important contribution offered to policy makers so that they can make the necessary assessments – and the consequent actions – with a vision of the phenomenon, its manifestations and its problems, both at a national level, and above all, at a local level. (Istat 2020)

**Fig. 3.2 Overall AAI per region and gender - Year 2018 (percentage points and percentage point variation)**

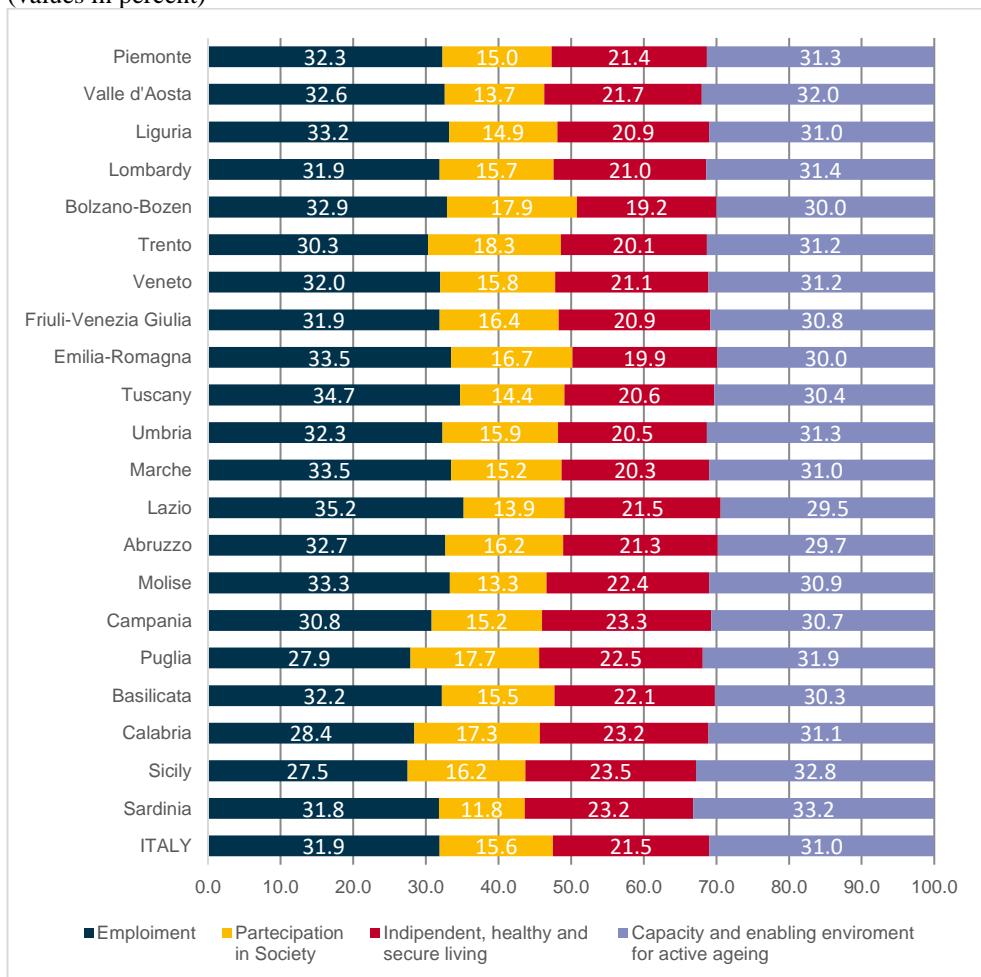


Source: Istat, processing various surveys

Women achieve lower active ageing results than their peers in Calabria, Puglia and Abruzzo. These differences are mainly due to a pronounced gender gap in the first domain “Employment” and the third “Independent and autonomous life”, due to the persistent inequalities in women’s access to the labour market, the wage gap, the overrepresentation of women only in certain sectors of activity and with certain types of contracts, in the difficulty for career advancement, a legacy that in old age strongly affects income and accentuates the greater exposure for women to be at risk of poverty. From this perspective, the removal of obstacles to achieve gender equality, especially in employment requires careful identification of the structural causes of inequality and the consequent adoption of social and economic measures capable, if not of eradicating them, of strongly attenuating them.

This is confirmed by observing the contribution of each domain to the overall AAI in Italy and between the various regions of the country (Figure 3.3). In 2018, at level Italy, the relative contribution of the domain “Employment” was the highest (31.9 percent), followed closely by “Independent, healthy and secure life” (21.5 percent) while “Social Participation of older people” was significantly lower (15.6 percent).

**Fig. 3.3** Relative contribution of the four domains of the Overall AAI per region - Year 2018  
(values in percent)



Source: Istat, processing various surveys

Although these results refer to the relative contribution of the four domains considered in the overall AAI, this does not mean that the regions with the highest relative contribution of a domain are also those who have the best results within it (Table 3.1). The last three regions which relatively performed the worst for “Employment” are in fact the ones with the lowest contribution in this domain to the overall AAI value. Likewise, Bolzano ranks first in the overall index ranking and is also in the lead in all four specific domain indexes. However, there are regions like Lazio and Sardinia which, although not presenting one of the least flattering results in the AAI, occupy the first place in the domain “Employment” and one of the last places in the ranking for “Independent, healthy and secure life” and “Social participation”.

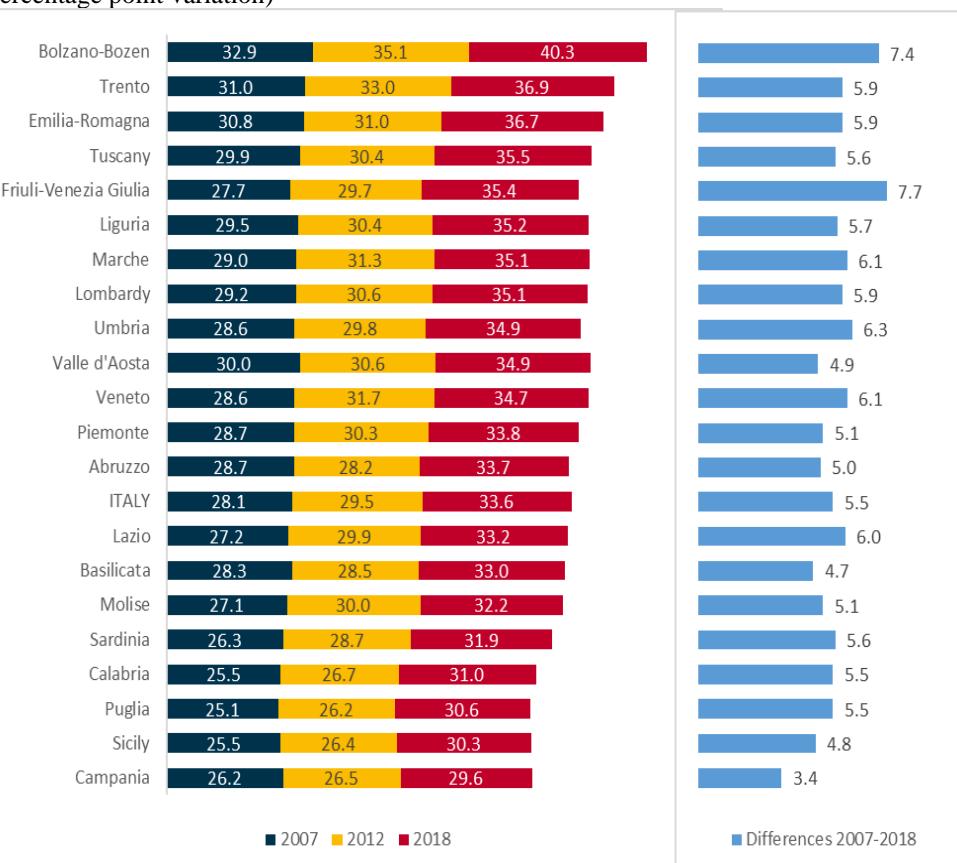
**Table 3.1** Ranking overall AAI and the four domains per region - Year 2018 (percentage points and ranking)

Territory	Overall Index	Ranking	Territory	Ranking Employment	Ranking Partecipation in Society	Ranking Indipendent, healthy and secure living	Ranking Capacity and enabling enviroment for active ageing
Piemonte	33.8	12	Piemonte	14	16	12	13
Valle d'Aosta	34.9	9	Aosta Valley	7	18	2	3
Liguria	35.2	6	Liguria	5	12	7	7
Lombardy	35.1	8	Lombardy	11	6	6	4
Bolzano-Bozen	40.3	1	Bolzano-Bozen	1	1	1	1
Trento	36.9	2	Trento	10	2	3	2
Veneto	34.7	11	Veneto	12	8	8	10
Friuli-Venezia Giulia	35.4	5	Friuli-Venezia Giulia	8	4	5	8
Emilia-Romagna	36.7	3	Emilia-Romagna	2	3	11	5
Tuscany	35.5	4	Tuscany	3	15	10	11
Umbria	34.9	10	Umbria	9	5	18	6
Marche	35.1	7	Marche	4	11	17	9
Lazio	33.2	15	Lazio	6	19	20	19
Abruzzo	33.7	13	Abruzzo	13	7	16	15
Molise	32.2	17	Molise	15	21	13	17
Campania	29.6	22	Campania	19	20	21	22
Puglia	30.6	20	Puglia	21	9	22	20
Basilicata	33.0	16	Basilicata	17	14	9	16
Calabria	31.0	19	Calabria	20	10	15	21
Sicily	30.3	21	Sicily	22	17	19	18
Sardinia	31.9	18	Sardinia	18	22	4	12
<b>ITALY</b>	<b>33.6</b>	<b>14</b>	<b>ITALY</b>	<b>16</b>	<b>12</b>	<b>14</b>	<b>14</b>
North	35.2	1	North	2	1	1	1
Center	34.3	2	Center	1	2	2	2
South	30.8	3	South	3	3	3	3

Source: Istat, processing various surveys

Between 2007 and 2012 the effects of the economic crisis are evident: the overall AAI index moves from a score of 28.1 to 29.5 with an increase of just 1.4 percentage points (Figure 3.4). On the other hand, the evolution of the overall ageing index between 2002 and 2018 shows a consistent increase for all regions. Consequently, together with the general growing trend, the national average also reports an improvement, passing from 29.5 points to 33.6 points.

**Fig. 3.4** Overall AAI per region – Years 2007, 2012 and 2018 (percentage points and percentage point variation)



Source: Istat, processing various surveys

The geography of active ageing reveals the presence of the well-known North-South gradient. In the observed period, the overall index grew by 5.9 points in the North and by 4.8 points in the South, causing this gap to increase from 3.3 points to 4.4 points in 2018. The most significant fact is that between 2007 and 2018 the region with the highest progress of its overall index was Friuli-Venezia-Giulia (+7.7 percentage points), which in 2014 passed an ad hoc<sup>7</sup> law on active ageing, aimed at promoting the enhancement of older people through concrete rules and interventions designed to impact society. The autonomous province of Bolzano (+7.4 points), Umbria (+6.3 points), Veneto and Marche (both +6.1 points), Lazio (+6.0 points) follow in the ranking.

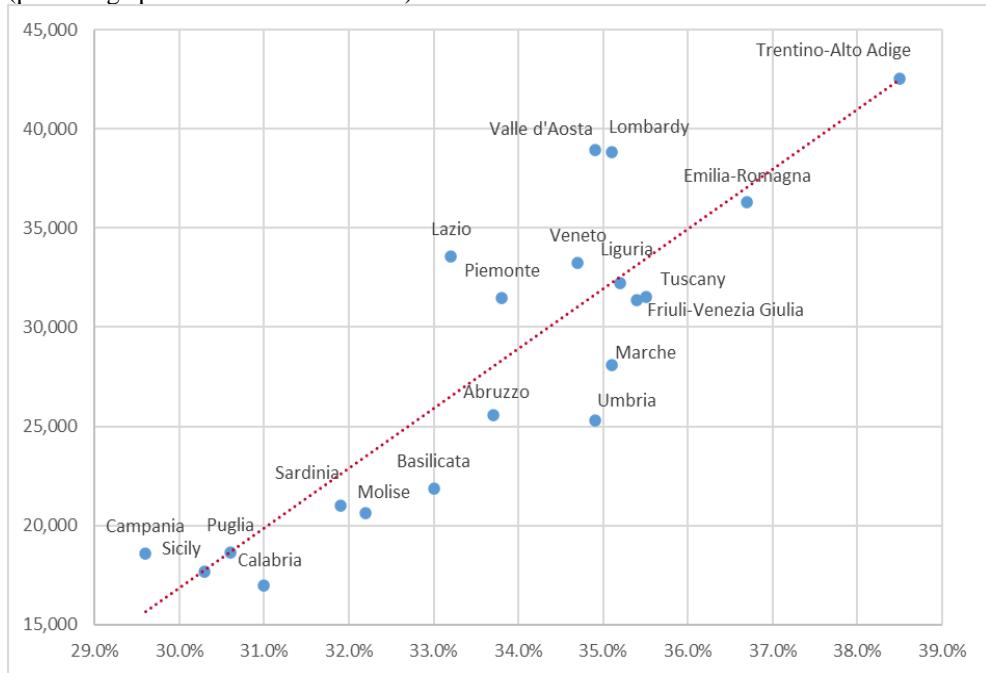
In the decade considered, a more unfavourable situation with minor increases was registered in three regions, Sicily (+4.8 percentage points), Basilicata (+4.7 points), Campania (+3.4 points). This is the result of a positive trend registered for most of the considered domains, except that of “Social participation” which has remained essentially stable over time.

From the above analysis active ageing cannot exist without the removal of those obstacles which influence the economic, social, cultural, and healthcare situation, not allowing seniors to fully live their citizenship. In this regard, the role of changes at a macroeconomic and social policy level, especially those linked to welfare, should be emphasized. These are determining factors for active ageing of

<sup>7</sup> Regional Law 22/2014 on the promotion of active ageing.

the population, and it is up to the political decision-makers to create a solid regulatory framework. This would allow the definition of medium and long-term objectives jointly with strategies and interventions. For a country like Italy, characterized by a society with a high average aged population, these are of considerable importance. Since the process of population active ageing feels the complexity of the society in which it is immersed, we have tried to provide a quantification of its influence. More specifically, we wanted to analyze how this is associated to variables linked to local development, both in terms of economic well-being and the supply of services. Regarding the first component, the proxy considered was the GDP per capita. This is due to the role attributed in literature to this indicator in expressing wealth per habitant. Figure 3.5 shows a Cartesian representation of the values of GDP per capita and AAI for the Italian regions.

**Fig. 3.5** Scatterplot Active Ageing Index and GDP per capita at regional level - Year 2018 (percentage points and values in euro)



Source: processing Istat various surveys

The analysis refers to 2018 and highlights a positive correlation between two variables (0.87). It can be observed how the differences present a geographical gradient from North to South, with higher values in the North. Puglia, Sicily, Calabria register situations of disadvantage, and subsequently Sardinia and Molise.

The opposite situation can be found in Trentino-Alto Adige<sup>8</sup>, which presents the best results for both indicators, followed by Emilia-Romagna. It is reasonable to think that there might be a dependent relationship between AAI and GDP per capita, as greater wealth certainly allows better opportunities for active ageing.

Considering that high levels of AAI subtend a greater participation in working life, economic prosperity, and a better state of health, they can only affect the community's economic well-being.

<sup>8</sup> The preponderant relative weight of the values associated with the autonomous province of Bolzano, together with the low sample size, leads to a leverage effect in the regressive model which generates estimates characterized by distorting components. The solution adopted was that of merging the autonomous provinces of Trento and Bolzano into the Trentino-Alto Adige region.

Subordinating active ageing only to an economic factor is to be considered, as already pointed out, reductive. It was decided to use a synthetic indicator, already used in Bes<sup>9</sup> related to the demand and quality of services in the territory. Such an indicator considers the heterogeneity<sup>10</sup> and other factors not normally captured by economic indicators, as they are more linked to the quality of the social fabric and the public welfare systems.

The correlation between the overall of *Active Ageing Index* (AAI) and the synthetic index on the quality of services was positive (0.88). The cartesian representation of the values from the two indicators for the regions is shown in Figure 3.6.

**Fig. 3.6** Scatterplot Active ageing and Bes synthetic indicator for the quality of service at regional level – Year 2018 (percentage points)



Source: processing Istat various surveys

From this representation a better coverage of the services offered correspond to higher levels of AAI. In particular, the highest values are found in Trentino-Alto Adige, Friuli-Venezia Giulia, Lombardy. The situation among the regions of the South appears more critical, especially in Campania, Sicily, Puglia, Calabria, regions which, moreover, express the lowest values for both indicators.

A multiple linear regression model was used to quantify the connection between the indicators, considering active ageing as a dependent variable and GDP per capita and the Bes indicator on the quality of services offered (Qs) as independent variables. Table 3.2 shows the main descriptive statistics relating to the variables considered.

<sup>9</sup> Istat has developed a multidimensional approach to measure “Fair and sustainable wellbeing” (Bes) with the aim of integrating the information provided by indicators on economic activities with the fundamental dimensions to inequalities and sustainability. Numerous indicators have been identified in 12 fundamental domains, corresponding to the dimensions of well-being, of which a synthesis through composite indicators is offered with the publication of an annual report. (*Rapporto Bes Istat 2019*)

<sup>10</sup> The indicator considers three macro areas, social services, infrastructure, mobility and two dimensions of reference, equipment/accessibility and effectiveness/satisfaction. <https://www.istat.it/files/2018/04/12-domini-commissione-scientifica.pdf>

**Table 3.2** Principal descriptive statistics of the considered variables

Variables	Minimum	Media	Maximum	Standard Deviation
AAI	29.6	34	38.50	2
PIL	17.0	28	42.54	8
QS	75.7	99	118.6	11

Source: processing Istat various survey

The main result of the regression model is reported in Table 3.3. Despite the intrinsic limit linked to the low number of observations, there is a positive and significant association of the AAI with respect to both GDP per capita and the quality of services index. The adaption of the model to the data appears good, expressing a value relating to the correct R<sup>2</sup> index of 0.81.

**Table 3.3** Multiple linear regression model on territorial factors which influence active ageing - Year 2018

Number of obs. = 20
F(2, 17) = 42,13
Prob > F = 2,587e-07
R-squared = 0,8321
Root MSE = 0,9864
Adj. R-squared = 0,8124
Coef., Std. Err., t P> t
Intercepts 20.028 2.681 7.471 9.14E-07
PIL 0.128 0.056 2.291 0.035
QS 0.103 0.039 2.604 0.019

Source: processing Istat various survey

In conclusion, an assessment on how the growth of economic well-being and the improvement of the quality of service can affect active ageing was done. In this perspective, the results obtained can offer interesting elements for policy makers, both nationally and locally, to pursue specific objectives of social well-being.

Managing the rapid ageing of the Italian population is in fact not only a challenge but a clear responsibility to which all institutions are called to respond. The maintenance of an active role on the part of this segment of the population implies a level of economic well-being adequate for a dignified life, the use of better forms of support and the promotion of greater levels of prosperity and social cohesion (Zaidi 2015).

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