1. Introduction

Tourism is a very important economic activity for many nations and Italy is among those that particularly benefit from it. However, the economic effects determined by tourist flows depend also on their composition. For example, the distinction between international and domestic tourism is important to understand the pattern of the performed expenditure. Similarly, the distinction between tourism within the region and tourism from outside the region is important to improve the programming of certain services (in particular transport) or to evaluate the attractiveness of the area as a tourist destination.

In recent years, many believe that local tourism has increased; however, a precise estimate of the phenomenon is not easy to make. An indirect estimate, using statistical official sources, can be made using the tourist flows within the region, or by observing the trend of hikers as an indirect measure of the phenomenon. Finally, it would be useful to use new information sources (big data), even if their quality does not yet seem to be able to guarantee an adequate representation of the phenomenon.

However, the analysis of external tourist flows is also relevant, since they express the attractiveness of the territories, (in this case regions) as a tourist destination, which can increase or decrease over time, also due to the policies implemented at the territorial level.

The paper examines the tourism of Italians in Italy, in the various regions, from 2006 to 2020, using the origin-destination matrix produced by ISTAT, distinguishing external flows from those within the region. Particular attention will be given to the year 2020, for which economic information will be provided, showing that overall, the tourism sector in Italy has continued to play an important role, despite the pandemic crisis. The choice of arrivals, instead of night-spent, reduces the influence of the specific type of tourism in each region. The initial results appear interesting and have also been summarised using correspondence analysis.

2. The territory and tourist flow among regions: different approaches

The analysis of the measurement of tourism trends presents several problems since it can have very different objectives. On the other hand, whatever the variable considered, at territorial level the tourism phenomenon almost always presents a high degree of variability, even in contiguous areas. This inevitably raises the question of the real usefulness of an aggregate analysis of the tourism phenomenon. While the territorial variable is important, the choice of territorial detail is often conditioned by the availability of data and the sectoral policy competencies of the territories. In our analysis, the detail used is regional, since it is at this level that the prevalence of public policies on tourism is decided, but also because of the greater availability of data, especially economic and social data. On the other hand, there is still a lack of evaluation models at territorial level that can also be used in the monitoring phase of the various measures, using a simplified input-output scheme, in which the two subjects of the hypothetical function can be identified as public tourism expenditure (input) and arrivals or nights-spent (output). The latter two indicators, often used interchangeably, have a very different descriptive capacity (Antolini et al., 2017). For example, a territory that increases its nights-spent more than its arrivals is a territory that succeeds in retaining tourists. This may be because the services offered are competitively priced, or because the territory
has been able to exploit its many tourist destinations. On the other hand, as far as policy is concerned, two different approaches can be followed: one aimed at carrying out many small actions appropriately coordinated in different sectors; the other aimed at carrying out a small number of actions concentrated in sectors considered to be a priority on the scale of possible actions. Whichever approach is used, which must of course be identified only after an overall analysis of the territory's strengths and weaknesses, an analytical knowledge of tourist flows cannot be omitted.

If, as described above, the distinction between arrivals and nights-spent is important, for the purposes of analysing tourism flows it is very useful to distinguish between internal and external tourism flows. Reference is often made, especially when describing the impact of Covid-19 on the tourism sector, to proximity tourism. It is defined as that form of tourism characterised by trips relatively close to the place of residence of the visitors. One way to measure proximity tourism is to break down the analysis of regional tourism flows into internal and external. As we shall see, the two flows at regional level in the period considered (2006-2020) have not always shown similar trends. Another important tool for the measurement of movements is represented by big data that in the Covid-19 period represented a powerful tool for the analysis of people's movements on the territory. The reference is to Google Map (https://www.google.com/covid19/mobility/) as it provides information to assess movements in a specific territorial area. For example, in the metropolitan area of Rome in the period July 15th - August 26th, using these data we know that the attendance in the parks increased by 4% compared to the reference period. The use of data for the analysis of tourist flows still presents several critical issues, which could be resolved by better targeting the usability of the data. In fact, these data do not yet allow a comparison between geographical areas with certain tourist vocations (mountain, seaside, cultural, …).

3. The data employed and the descriptive analysis

The breakdown of flows into internal and external uses the data contained in the origin-destination matrix of arrivals at a regional level as recorded in the survey on the movement of accommodation facilities (ISTAT, 2020). This survey, as it is known, is a census survey (Petrei and Manente, 2018; Antolini and Grassini, 2020) which produces information down to the level of detail of individual municipality. The availability of the origin-destination matrix is only at the regional level, while it would be important for it to be available down to the provincial level. In this way, tourism within the region would be mapped very precisely and could also support regional transport planning. The analysis is carried out considering tourist arrivals, as we want to analyse tourist flows from origin to destination and highlight connectivity between regions. This analysis will be carried out at a later stage, however, compared the preliminary analysis which aims to break down regional tourist flows into external and internal.

In Figure 1, we have considered arrivals because our objective is initially to verify whether the two flows always record the same trend at the regional level and, subsequently, through correspondence analysis, to have a measure of the level of similarity existing between each region \(R_{ij}\). Over the years, the first consideration that can be made is that the tourist flows within the region are always lower than those from other regions, except for Sicily from 2016 to 2017 and Piedmont from 2008 to 2012. However, the difference between internal and external tourism remains the simplest index of attractiveness which in fact is particularly high in some of the regions shown in the figure above (Friuli, Trentino, Tuscany, Umbria, Aosta Valley, Marche).

Overall, internal tourism is less variable than external tourism, partly because it is a more habitual flow of tourists. There is also a statistical measurement problem that affects the level of internal tourism (but not its performance). In fact, only rented houses managed in an entrepreneurial way or those rented with a registered contract for tourism purposes are recorded, while second-owned houses escape the survey. Finally, the level of internal tourism is also conditioned by the large number of the resident population. The combination of these aspects explains both the lower level and the lower variability of the internal tourist flow compared to the external one.

However, some regions show variability regarding internal flows, for example, Lazio,
Campania, Apulia, Calabria (only from 2016) and Sardinia. Among these, Campania is the only region to have an extremely irregular trend as regards internal flows, in particular decreasing from 2008 to 2016 and increasing from 2016 to 2019, but in any case not far from the level of flows recorded in 2006 and 2007. The trend can be explained by the economic crisis that was particularly incisive at a regional level, and in fact the trend of internal tourist flows takes on the same trend as GDP, particularly over the years 2012-2013 where GDP fell by 0.8 and 1.3 percent. Sicily is the only region where internal tourism exceeds external tourism in 2015 and 2016. This is due to the decrease in external flows while the internal flow, although slightly growing, remains substantially stable. The dynamics of external flows appear to be conditioned by the lack of infrastructure, which makes it difficult to reach and physically move around the territory.

Figure 1 – Arrivals of residents in Italy (from the region or from other regions)
In addition, the small and sometimes negative difference (2016-2017) between flows from outside and inside the region indicates Sicily's low attractiveness. Finally, it should be noted that in years when there is a decrease in the external tourist flow in Sicily (e.g., 2016-2017), those from neighbouring regions increase in Basilicata, Apulia, and Calabria. Finally, the decrease in external flows in 2012 can be traced back to the country's recessionary crisis at that time.

A special analysis deserves the year 2020 where, due to the pandemic, there was a change in the levels and composition of tourist flows. If we analyse the summer period (July-September 2020), the number of visitors to establishments decreased in trend terms by 36.1 per cent. This was due to the sharp drop in foreign visitors, who fell by 39.7 per cent, even though the overall flow
was made up of the lower outflow of residents who poured into the country. Italian tourists accounted for 86.2 per cent of the total (ISTAT, 2020). Moreover, again analysing the tourist flows, with reference to the overall data just mentioned, it must be remembered that the motivation is almost entirely due to leisure travel, while the missing part is due to business travel, although in the July-September period it usually has a lower impact. Regarding the impact of Covid-19 on the productive sectors, an important proxy is the indicator related to the opening of VAT numbers. Compared to 2019 in the section of economic activity relating to accommodation and catering and sports and entertainment activities, the contraction was 34.1 per cent and 33.5 per cent respectively. As is well known, both activities represent an important part of the tourism industry. The situation remains difficult in 2021 and in the period January-March, considering the same economic activities, the contraction was 25.3% and 4.7% respectively (Ministry of Economy and Finance, 2021).

5. Some first results with the correspondence analysis

To get a synthetic picture of the dynamics we are considering, we decided to use the correspondence analysis (Benzécri, 1973), a technique of multivariate statistical analysis of an exploratory nature, which allows us to analyze the existence of association patterns between qualitative variables. As is known, this technique considers each modality of the qualitative variables as an element of analysis; therefore, we will have 20 regions as destination and 20 regions as origin. We have only analyzed four years: 2008 which reflects the recessive economic crisis, 2014 which is the moment of recovery after the second economic crisis occurred in 2012, 2019 because it is an extremely positive year for Italian tourism, and 2020 which represents the time of the pandemic.

In figure 2, we have the projection of the 20 Italian regions in a graph with two factorial axes. In particular, the regions as origins, in blue with the indication of the year, and the region as destination, in red. In this first reading we will only look at the regions as destination.

In 2008, a year of relative crisis for tourism, the graph shows three alignments, which allow us to identify three different groups of regions, which, limiting ourselves to the destinations, are: 1) Calabria, Basilicata, Campania, Molise, Apulia, Abruzzo, Umbria, and Lazio; 2) Piedmont, Aosta Valley and Liguria; 3) Friuli-Venezia Giulia, Trentino Alto Adige and Veneto. Marche, Tuscany and Lombardy are close to the center of gravity.

In 2014, a year of recovery after the previous crises, the graph is more compact. Campania moves away from the center of gravity, followed at a distance by Calabria, Molise, Basilicata, and Apulia; while Piedmont, Aosta Valley and Liguria show another alignment.

Figure 2 – Some results of the correspondence analysis
We can consider 2019 a year of development that could mark a real growth of our tourism. Campania, Calabria, Basilicata, Molise, with Apulia, Abruzzo, Umbria, and Lazio reconstitute an alignment already seen, as do Piedmont, Aosta Valley and Liguria.

Finally, 2020, with the health crisis, brings us back to a situation like that of 2008 with three alignments, made up almost as much as then. On this aspect, the analysis is still in progress and will require evaluating the significance of the factorial axes.

6. A final remark

The work is still in progress and will require a careful analysis of the reasons that have led to a different role for the Italian regions in the context of domestic tourism.

As we have mentioned, the choice of domestic tourism was made considering it more stable than international tourism, which is more easily affected by positive or negative conditions (health, economic, political, etc.).

The choice of arrivals, rather than nights-spent, was done to make the analysis less dependent on the type of tourism, considering the variability of the average stay based on the type of destination (sea, mountains, countryside, tourist cities, etc.).

References


