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# ON THE ISSUES OF STATISTICAL DATA RELIABILITY OF INTERNATIONAL TOURISM MOVEMENT

Resent years have been marked by a rapid development of tourism. To further stimulate it and direct it properly, a carefully designed policy is required, based on reliable statistical data. As has been shown in the paper, there are several inconsistencies in collecting data resulting from insufficient uniformity of tourism terminology and methodology of data collecting.

Key words:  tourism terminology, methodology of data collecting, reliability of statistical data.

## INTRODUCTION

Tourism has been frequently called "the miracle of the 20th century". The name is fully deserved considering its scale and the substantial revenue that reception countries derive from it. Its scale and importance was stressed by MacConnell[1] who said: "...tourism is the most important basis to develop new cultural forms on the global scale. On behalf of tourism, both the capital and masses of people were distributed in remote parts of the world, farther than any army has ever been sent". And then he continues "...to support that development many institutions have been set up, not only hotels, restaurants and transport systems, but also old temples renovated, local crafts developed to be sold to tourists and rituals performed to entertain tourists". To support that development and properly steer it a carefully designed policy is required on the governmental, regional and local level. Next, the basis to formulate the strategy of tourism development on the given area is to support it on reliable and trustworthy data describing the phenomenon course in time.

The scale of tourism development is described by the use of two kinds of data, i.e. the size of tourist movement and the revenue value derived from tourism, which is

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[1] MacConnell D., *Empty Meeting Ground: the tourist papers*, Routledge, London 1992, s.4

the difference between the receipts and the citizens', who travel abroad, own expenses. As the author's and other researches' experience shows (quoted further in the paper), many essential errors can be found in the published statistics. They result from two main reasons:

- firstly, insufficient uniformity of tourism terminology and that of a tourist,
- secondly, the lack of uniformity in the methodology of data collecting.

There is also the third factor resulting from those mentioned above, referring to incorrectness (errors) arising at the secondary stage of primary data processing. The incorrectness is caused by, e.g., errors while completing partial data, in the methodology of their processing , as well as editorial errors ( at the stage of printing the statistics).

All those inconsistencies have an impact both on scientific output and practice. It should be obvious that basing on unreliable data results in deformation of real phenomenon course in time, leads to false conclusions and formulations of wrong forecasting of the phenomenon development in future and, in consequence, to wrong decisions.

## 1. ERRORS RESULTING FROM TOURISM TERMINOLOGY

The growth of travel volume is accompanied by the growth of interest in the tourism issue, which is demonstrated by the growing number of scientific papers. Almost 'each author undertook and is still undertaking the effort of defining that phenomenon. The analysis of known literature definitions clearly shows their inability to present the complexity of the problem called tourism. The difficulty in defining the idea has been clearly presented by e.g., Mill and Morrison[2] "...tourism considers travel, but each travel needn't be tourism. Tourism considers leisure, but leisure needn't be tourism. Tourism is associated with free time but not all free time is spent on tourism." Similar considerations can also be found in Polish literature, e.g. Przecławski[3] maintains that "...many attempts have been undertaken to define tourism. Unfortunately no definition has been universally accepted and it is even supposed that no such definition is possible to be constructed".

The problems with defining tourism arise from its one basic feature which is movement, the development in time. This is not a static phenomenon, it undergoes continuous changes. It can be compared to a living organism, it experiences constant changes, evolves, assumes different forms. When this starting point is accepted, it is possible to agree with Przecławski's concept that it is impossible to formulate one generally binding, valid definition of tourism.

The definitions quoted in the literature evolve in the same way as does tourism itself. The following definitions can be distinguished among the definitions which

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[2] Mill R., and Morrison A., *The Tourism System: an introductory text*, Prentice Hall, New Jersey 1985, p. xvii
[3] Przecławski K., *Turystyka a świat współczesny*, Uniwersytet Warszawski, Warszawa 1994, s. 24

appear in the literature: partial, complete and tourism defined in the system formulation.

Partial definitions formulated within the frames of particular science branches and their specializations. Each discipline approaches the examined problem in a different way, studies different aspects of tourism.

Pearce[4], who approaches the problems of tourism from the geographic point of view, has identified six vast subjects which are the main components of tourism geography: spatial models of supply, spatial model of demand, geography of holiday resorts, the analysis of tourists movement and flow, the power of tourism influence and models of tourism space.

Economic approach towards tourism examination focuses on problems (Gałecki, 1980, Gray, 1982, Wodejko, 1997, Łazarek, 1999) of measurements, cost and profit analysis, allocation of stock and the use of public goods in tourism development or tourism influence on payment balance.

In the case of sociologists the tourism examinations focus on four areas (Cohen, 1984; Przecławski, 1997): tourists, relations between tourists and the local people, structure and functioning of tourism system and the effect of tourism on payment balance.

Similarly, anthropologists concentrated on (Pearce, 1982; Graburn, 1983) examining the influence of tourism on local society as well as on tourists themselves.

The examination of tourism development is an interdisciplinary subject but researched in different ways depending on who carries out the investigations. Each discipline (Pearce, 1989) has its own investigative problems in the area of tourism: geographers stress its spatial structure, sociologists and anthropologists its social relations, the economists, however, emphasize its remunerative character. According to Łobożewicz[5] "...they all define the phenomenon of people's participation in tourism regarding the needs of their own profession, without making a clear distinction between the concept of tourism phenomenon itself and its results: spatial, economic, cultural, social or educational". It should be added that the full definition will not result from the sum of partial definitions.

Similarly, the efforts to formulate full definitions have not given so far a satisfying effect to anybody. The most commonly quoted in the literature definition of tourism is now classic definition elaborated by Swiss scientists W. Hunziker and K. Krapf. According to them[6] "...tourism is the total of relationships and occurrences resulting from travel to and staying in a strange place, provided a permanent settlement does not result from them and they are not connected with any job activity". From that definition it appears that tourism is all kinds of relations, particularly economic, social,

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[4] Pearce D.G., *Tourism today: Geographical Analysis*, Longman, New York 1987.
[5] Łobożewicz T., *Propedeutyka turystyki*, AWF, Warszawa 1997, s. 9
[6] Krapf K., Od empirii do teorii ruchu turystycznego, *Ruch turystyczny*, nr 1, 1957, s. 18

cultural, appearing at the time of journey and staying in the place of destination, between the visitors representing demand and widely understood surrounding which represents supply. Strong emphasis is put on non-profit aspect excluding business or trade trips from tourism.

Przecławski[7] stresses other aspects and suggests understanding the concept of tourism as "...the whole of all phenomena of spatial mobility, connected with voluntary, temporary change of residence place, rhythm and life environment and getting into personal contact with visited environment (natural, cultural or social)". The definition signifies that tourism is, first of all , movement, but it is not only people who change place but also information, capital, things, etc., transfer.

In American statistics, calculation centre, e.g. the US Travel Data Center and the US Census Bureau (Van Harssel, 1994) assume that a trip is tourist in its character if its distance exceeds 100 miles. The distance criterion as well as that of staying time has been introduced mainly to discriminate between travellers whose staying is profitable for the visited area (tourists) and the rest (trip makers) whose staying does not bring much profit. In practice, however, such criteria become inappropriate. If the revenue that the tourists can bring to the given area is accepted as the condition for the above mentioned criteria it may appear that the distance is not essential on the borders between countries, regions. For example in Poland, the areas adjoining the border earn substantial revenue although the travellers cover only some or some ten kilometres. Similarly, the length of staying is not always the right criterion conditioning the amount of the revenue. The expenses of trip makers can often be relatively higher than those of tourists if they are calculated as a person per day.

The use of full definitions does not encompass the complexity of the phenomenon. One way to formulate full definitions is enumerating more and more features characteristic for tourism. However, this may lead according to Matczak[8] to the situation that "...introducing additional explanatory words can result in making the concept (tourism) very vague, not univocal and unclear".

More and more Polish authors (Matczak, 1992; Chudoba, 1998) as well as foreign ones (Leiper, 1990) seem to support the idea of systematic defining of tourism. It means treating tourism as a whole. Only in this way the particular elements assume a new meaning. Tourism as such is a certain entity, but as stated by Matczak (1992) "...it constitutes a part of a greater entity, i.e., present civilisation. Tourism treated as a system has to be considered not only from the point of view of its structural elements, but also through supersystems constituting its context and the links with other systems of those supersystems". Therefore the definition of tourism is composed of elements forming it and supersystems which are external surroundings to which it is subjected. Similarly, Chudoba[9] considers the definitions mentioned in the literature as well grounded and proper only in particular cases, in the aspect to which they refer, and they do not fully refer to the general theory of tourism. He agrees that"...tourism in its

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[7] Przecławski K., *Turystyka a świat współczesny*, Uniwersytet Warszawski, Warszawa 1994, s. 14

[8] Matczak A., Model badań ruchu turystycznego. Studium metodologiczne, Uniwersytet Łódzki, Łódź 1992, s. 14

[9] Chudoba T., *Wprowadzenie do teorii turystyki*, AWF, Warszawa 1998, s. 11

widest meaning can be treated as a system composed of parts arranged according to the defined rules".

Systematic description of tourism is a relatively new and interesting way of interpreting the phenomenon, which deserves further to be studied.

The problems with unification of tourism and tourist definition are strictly related to the quality and reliability of the data illustrating its scale in the world. The statistics of international tourist movement will be influenced by the fact who will be qualified as a tourist. Therefore the need for unification of definition and methodology of data collecting was called for.

The first work in this area was already started in 1934 by the League of Nations, which appointed a special Commission of Experts for this purpose. In 1937 the League of Nations Council accepted the first official definition of a foreign tourist in the following form[10]: "In order to achieve a greater comparability of international tourism statistics, the term tourist should be understood as signifying each person who travels for 24 hours or more in the country which is not his permanent place of habitation". According to the Council's assignations the people who were not tourists were all those who were staying for jobs, who intended to settle permanently in the visited country, those who worked in adjoining the border zones, people who crossed the countries in transit without stopping, students and young people who come to study. As Libera points out , although the purpose of  the definition was its unification with a view to statistics of tourism movement, it was not readily accepted by membership countries.

After the 2nd World War, International Union of Tourist Official Organizations (UIOOT), and later World Tourist Organization (WTO) which replaced, it carried on the work on the definition. In the years 1950 and 1957 two amendments were introduced (Gaworecki, 1993) The first one considered young people studying abroad and having accommodation in school boarding houses as tourists. The second one recognized as tourists all those who travelled in transit and stopped in the transit country although their stay did not last longer than 24 hours.

The next turning point in the area of development and unification of tourism terminology was United Nations Conference, which was held in Rome in 1963. The Conference issued many important resolutions and recommendations (Sprawozdanie, 1963) e.g. in the field of terminology, facilitation of formalities when crossing the border, freedom of travelling, tourism organization, promotion of tourist attractions, etc. A very important change was the introduction of the term "visiting" which covered all those who arrived on tourist purpose no matter how long was their stay. Next, in this visiting group a category of  "tourists" was distinguished which covered those who arrive and find accommodation for at least one day in the visited country, and a category of " trip makers" who arrive and stay shorter than 24 hours and do not need accommodation. In statistics practice in Poland and other countries this division created

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[10] Libera K., *Międzynarodowy ruch turystyczny*, PWE, Warszawa 1969, s. 187.

many problems, which often led to presenting a lower than real amount of the number of tourists visiting a given country. Many tourists find accommodations at their cousins', friends' places, unregistered lodgings, which is not reflected in the statistics of the hotels official register books.

The continued expansion of tourism in the world, and especially changes in the forms and trends of international tourism movement have called for the need of revaluation of existing definitions and methodology. It turned out that old systems of data collecting based on a state control became inefficient or unable to be used particularly in the developed countries as a result of great freedom of travel and reduced border formalities.

Apart from the data collected by the state administration there appeared other statistic materials developed by private institutions connected with tourist sector (Lickorish and Jenkins, 1997). This differentiation of the data resulted from their different usability for interested companies. .In practice, different kinds of data were required by governmental agencies deciding about tourist policy for the whole country, others were needed by tourist companies. The new problem was the consistency of the data and their accessibility.

Both WTO and European Union, through their Eurostat agency devoted much time and effort on the betterment of statistic systems. WTO concentrated on definitions and concepts while Eurostat (Metodologia, 1998) carried out a thorough investigation into the needs of data users and methodology review which was used in particular countries. It was necessary to work out a common plane in the range of methodology of data collecting which appeared beneficial for both state sector and private one.

In order to unify the problem of tourism definition, WTO (World Tourism Organization) at the conference in Ottawa in 1991 worked out a new definition of tourism. The definition was accepted in 1993 by the Commission for Tourism in UNO as universally binding for the purpose of statistics. According to that definition (Terminologia, 1995) "tourism covers all activities of the people who travel and stay for relaxation, on business and for other purposes for not more than one year without break in the places which are situated outside their usual habitation".

Depending on the area under consideration three basic tourism forms can be distinguished (Metodologia, 1998):
- national tourism, which is understood as all the activities of the residents in a given area who travel to places situated within that area but do not belong to their usual habitation place;
- arrival tourism, which is understood as all the activities of non-residents who travel within a given area which is not their usual habitation place;
- departure tourism which is defined as all the activities of the residents of a given area travelling to and staying in the places outside that area.

In the definitions above there is a term resident. The term refers to the people who live on the territory of a given country not necessarily citizens of that country. The term was introduced due to often changes of the place to live mostly connected with the

change of workplace particularly within the European Union countries. For the purpose of tourism statistics, which examines spatial structure of movement, it is essential where the tourist arrived from, where his" usual habitation" is, whereas citizenship is not so important.

The Commission has kept the term "visiting person" as valid which should be understood as a person travelling to a place outside his usual habitation for the time not longer than 12 consecutive months, if the basic purpose of his travel is not getting a job which is remunerated in the currency connected with the visited place. Visiting people are further divided into tourists and one-day visiting people (without accommodation).

The concept of usual habitation has been introduced to exclude trips within the area of habitation and frequent, regular trips between their place of living and the workplace and other trips of routine character.

The analysis of the evolution of tourism and tourist definition for the purpose of statistics shows a continuous tendency to broaden the number of departure purposes treated as tourist. This results from permanent development of tourism, creating new forms and reasons for travelling which the definition should take into consideration. At present WTO's attitude is that practically each trip can be regarded as tourist, under certain conditions, and first of all that the visitor does not earn money in his temporary place of staying. From economic point of view, for the economy of a given country, the reason of arrival is not essential, it is important that the visitor leaves his money. This according to the above mentioned definition becomes the essence of a tourist arrival.

The authors of that terminology wanted to be pragmatic in order to simplify the methodology of collecting the data of the amount of international tourism movement. The introduction of a very general definition with a small number of criteria makes the registration of such massive and differentiated phenomenon easier. It would also be sensible as Wodejko (1997) suggests, to stop long-lasting arguments concerning terminology because there will never be a completely satisfying definition .It would be more sensible, however, to concentrate on implementing all the recommendations in all WTO membership countries.

## 2. ERRORS RESULTING FROM THE METHODOLOGY OF DATA COLLECTING

Methodology of data collecting is another sphere, which influences the reliability of statistical material. The problem is particularly significant because the quality and reliability of collected empirical material results in correctness of conducted analysis, its credibility, particularly in its practical aspect.

Collecting numerical data which refer to tourist movement may proceed in two ways (Baran, 1980; Ostrowski, 1975). The first way depends on the observation of the whole statistic population. These are so called full examinations. Very advantageous is the fact that they offer full (comprehensive) data about the community under investigation. Their disadvantage is that they require much work and costs.

The second way is based on partial investigations. Since they do not cover the whole community only estimated values are received. To make them reliable enough, partial examinations must be well prepared both methodologically and on the organizational level. They are theoretically cheaper and enable faster results receiving. This statement can be argued because, in practice, well prepared partial examinations require both a long period of time (proper preparation of the examinations, carrying out pilot examinations, carrying out the main examinations, assessing the collected empirical material) and substantial financial resources as well.

### 2.1. Full examinations

Basically two kinds of full examinations, i.e. hotel registration and border registration are used in examining tourist movement (international in particular).

### Hotel registration

This form of examination is resolved by registration on the grounds of hotel form, the fact of admitting national traveller or a foreigner to the hotel or other lodgings. The information obtained in this way refers to the number of nights spent by a tourist in the hotel, as well as the length of stay in the given accommodation place and the country region. The analysis of the material collected will further show the locations and regions most often visited. When the character of the place is known (e.g. a spa, recreational, etc.,) it will be possible to define the purpose of arrivals, examine the volume of traffic in particular regions, define the existing trends in tourism, and which forms of tours are in fashion, etc.

In practice, hotel registration examination appears to have many faults. The collected statistical material will not include the days when the foreigners spend the nights at their families', friends' places, tents put up on the camping sites which do not register their visitors. Considering the global number of arrivals, the deviations from the real state can be considerable.

The problem was described in detail by Łazarek (1999) who illustrated this fact with a real example. It results from the accepted by UNO definition that the concept of a tourist covers the tourists who find accommodation in collective lodgings (generally included into registered lodging base) as well as people who use private hostels where only some part belongs to registered lodging base. In practice, some WTO membership countries quote the number of foreign tourists arrivals according to the data given by the registered accommodation, some part of them (e.g. Poland, Italy, Spain) send those data completed with the number received from unregistered base. The WTO statistics, however, do not take that differentiation into consideration which leads to a faulty assessment of particular countries' position in the ranking in the area of arrival tourism.

**Table 1.** Arrival tourism to some chosen countries in 1996 (in thousands)

| Countries | Total | Registered lodging base | Difference in percentage |
|-----------|-------|-------------------------|--------------------------|
| Italy | 32853 | 29324 | + 12,0 |
| Turkey | 7966 | 6449 | + 23,5 |
| Portugal | 9730 | 4567 | + 113,1 |
| Spain | 40541 | 18134 | + 123,6 |
| Poland | 19410 | 4088 | +374,0 |
| Hungary | 20674 | 2979 | + 594,2 |

Source: Łazarek R., (1999, p. 19)

As can be seen from the above, the differences can be significant, the example of Poland, and particularly Hungary. Their consequence is wrong assessment of a phenomenon scale, which is vital for the tourist policy of a given country and dishonestly carried ranking.

The next essential problem is the fact that a foreign tourist may during one stay change his lodgings several times (when visiting several towns). The information received by the statistics from the registration card can in this case point at several tourists instead of one.

Libera (1996) draws attention to the fact that not all tourists will carefully fill in the forms or the accommodation owners will not send statistics either because of their negligence or to avoid paying taxes.

In practice it often appears that because of many reasons, hotel registering does not fully reflect the tourist scale on both national and international level. Therefore, in many countries there is a parallel border registration, since each of them has a different role providing different data to measure tourism.

**Border registration**

Border registration consists in noting each crossing of the border by the citizens of a given country and the foreigners. Owing to that method we are capable to mark all crossings, together with one day visitors who do not need accommodation. The information is collected with the help of specially prepared border cards, which contain information on the visitor (the country of origin, age, sex, profession) and on their stay (the purpose of arrival, place and length of stay, means of transport, etc.).

In Poland, border examinations are conducted on all border passes (Zajentowska and Malesa, 1995). The examinations provide information as to the number of people who cross the border together with the country of origin and the destination. Unfortunately, they do not provide information about the length of stay1 (for that reason we are unable, according to WTO recommendations, to discriminate

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between the number of tourists and the number of one day visitors), the regions visited by foreigners, as well as social-demographic features of people visiting Poland. Similarly, in the case of Polish citizens the only received information refers to the number of people going abroad. No information is collected about the destination country and the length of stay. Complementary information refers to the kind and the number of the means of transport used while travelling abroad.

Unfortunately many countries give up the idea of this kind of getting information, or their border cards are reduced to only several questions. This refers particularly to those countries where the majority of arrivals take place via roads or railway where it would be impossible to conduct registration with the help of cards at the peak of tourist season which would result in long queues on the borders. Therefore, the registration resolves itself to noting the number of people crossing the border.

The resolution, at least a partial one, of that problem is the introduction by some countries the so called landing cards (the UK, Malta). Before entering a country, the tourist is asked to fill in that card and hand it in to the customs officer. Unfortunately, since tourists are reluctant to do it and many of them do not know the language in which they are written, they are not always filled carefully.

The method based on border examinations cannot be used in most EU membership countries because the border crossings have practically disappeared.

The two above mentioned methods, as full methods, because of many limitations are more and more often complemented by more perfect representing methods which enable the verification and supplementing of the collected statistics.

### 2.2. Partial examinations

As the name shows, these are statistical data directed at a part, a group of the whole community. As has been shown above, full examinations are inadequate with reference to their reliability of statistical material and they do not give answers to all interesting questions. Because of that more and more emphasis is put on developing partial methods.

A widely used method in partial examinations is a representing method. It consists in choosing a part (called a sample) from the whole community representing the same features as that whole. In theory, there are several arguments for the efficiency of that method. Here, one should quote Pawłowski[11] who mentioned four arguments for the use of partial methods, and representing method in particular:

- they enable faster than by full examinations achieving the image of the community we are interested in,

- they assure the right exactness of results which allow ( on condition that the sampling and the choice of the number of tourists to be examined are

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[11] Pawłowski Z., Wstęp do statystycznej metody reprezentatywnej, PWN, Warszawa 1972, s. 10

correct) getting practical certainty that the error of the examined parameter assessment will not exceed the assumed, allowable level,

− they are generally cheaper than full examinations,

− they enable carrying out significantly deeper and many-sided examinations of the chosen participants of tourist movement than in the case of examining all participants.

The representing methods, depending on what information we intend to achieve and from whom, may be realized in different places:

1. The examination in the places of tourism movement emission.

This group of examinations involves interviewing people in their houses and less frequently used queries. The examinations help to obtain information on the size and structure of national tourism and travelling abroad. In particular, it is possible to assess the degree of tourist activity of the inhabitants of the country, its forms, the motives of travelling, or the reasons for not participating in the tourist movement. The frequency of examinations depends on how long trips they refer to. In the case of long trips (lasting at least 4 days) it is recommended to carry them once in a year. For the purpose of detailed description of short, one day trips it is indispensable to carry out examinations several times a year, so that the respondends could still remember them well. The interview is conducted with the help of a questionnaire with one or all members of the house or by post and telephone.

The second method of examinations in the place of emission query, is less and less frequently used. It consists in the analysis of tourist movement based on the information acquired from the institutions which participate in the organization of that movement, e.g. travel agencies, companies, insurance companies, etc. The method was more popular in Poland at the time where social tourism was more developed, and package tours were organized for schoolchildren, workers of a company, etc. At present individual movement, organized by the traveller himself or with the help of travel office dominates.

2. Examinations at the arrival departure points of international transport.

The examinations provide information on the size and structure of international tourism (arrival and departure).With their help it is possible to assess from among all those who cross the border, the number of tourists and the number of one day travellers, define the seasonal character of the movement, its intensity during the week, the directions of departures, means of transport, etc..

3. Examinations in the area of tourist reception.

They are used to define the amount of intra-national tourism (i.e. foreign arrival and national). They are carried out on a local scale, in particular towns, regions of particular intensity of tourist movement, often directed at investigating some specific forms of tourist movement (e.g. pilgrimage tourism, tourism in the rural areas). Because of small space range of investigations, these examinations are often carried out

by smaller research centres or private companies interested in the possibility of investing in the region.

All in all, the representing examinations of tourism movement, depending where they are carried, permit the following: The assessment of tourism movement amount, the length of tourist trips, their forms (kinds), space range, their seasonal character and the structure of travellers. This type of data collecting has become more and more popular recently. They are generally treated as the supplementary source of information, although sometimes also as the basic source of information, particularly in the countries where the possibility of carrying out full examinations is difficult or impossible. Constant improvements of the method yield more and more exact results. It should be remembered that apart from properly prepared questionnaire, reliability of interviewers, the size of sample being tested and the frequency of examinations are of particular importance. This in turn, is connected with higher costs.

## CONCLUSIONS

If tourism is to develop dynamically it requires constant investments on the part of reception countries and various private companies directly or indirectly connected with tourism. The scale of those investments and the demand for them are immense. Before the capital is invested, however, both state and private institutions require reliable statistical data which will make accurate forecasting of future demand possible, to enable the assessment of chances of returning the invested capital. The governments of particular countries require data to shape the tourist policy properly and effectively both on national and regional level.

BarOn[12] mentions several decisions in the range of which it is indispensable to possess reliable data describing the size and the structure of tourist movement. The most important are:

–   decisions connected with investing into the development of tourism, particularly in the range of infrastructure, i.e., facilitation of transport in the way of building new roads or modernization of the old ones, airports, etc., improvements in accommodation, including new hotels, camping sites, etc., and tourist attractions including recreational facilities, museums, thematic parks, etc.,

–   recommendations for legislative purposes, setting new legal frames for the development of tourism, making trip arrangements easier, improving employment conditions in tourism, natural environment, etc.,

–   decisions referring to promotion activities in the area of e.g. selecting geographical markets to be promoted, demographic structure of tourists, the choice of media to be used for sending information and optimal synchronization of promotion campaign.

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[12] BarOn R., *Travel & Tourism Data*, Euromonitor, London 1989, p. 3

Apart from the above mentioned examples of the importance of the data for the tourism practice, their vital importance for the science should not be forgotten. Data analysis leads to interesting conclusions, formulating innovatory generalizations which influence the development of tourism science.

In this paper it has been shown that the large scale character and the complexity of present tourist movement result in the problems with their reliable recording. Statistical practice and theory have elaborated a series of methods of movement registration which, as has been shown above, are more or less faulty. There are of course several other problems connected with data collecting which would deserve further discussion.

Inaccuracies result from different time of defining the concept of a tourist. What follows is accepting different criteria as to who can be qualified as a tourist. In 1993 two categories of travellers were introduced: tourists and one day visitors, which are used by all WTO membership countries. Nevertheless, the definitions were implemented in different periods of time. As a result a problem arises with comparing the data over a long period of time both between membership countries and within particular countries as well. Besides, there are still many countries which are not WTO members and which use their own definition of a tourist.

Many divergences can be observed in the presented data within the particular countries. In Poland, for instance, two kinds of statistics are in fact published, one received from statistics system of GUS (Chief Census Bureau) and the second collected by The Institute of Tourism in Warsaw. The analysis of the data from both sources shows many discrepancies although they are based on the same definition of a tourist and the methodology of data collecting.

The problem of inaccuracy of the data connected with the number foreign tourists arrivals can also be traced in WTO statistics. WTO issues their statistics at time intervals, which cover the periods, e.g. 1990-1995, 1995-2000. Therefore the year 1995 is repeated in two consecutive periods. Unfortunately, not all data are repeated, as the author has found out himself. The question arises where those inaccuracies come from and, first of all, the problem, which value should be accepted.

The presented above problems referring to the reliability of collected material are reflected in the quality of conducted analytical work particularly in the aspect of their practical utilization in the tourist policy of particular countries.

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Sažetak

# O POUZDANOSTI STATISTIČKIH PODATAKA U MEĐUNARODNOM TURISTIČKOM KRETANJU

*Protekle godine obilježio je ubrzani razvoj turizma . Da bi se taj Razvoj dalje stimulirao i pravilno usmjerio, potrebna je pažljivo osmišljena politika, temeljena na pouzdanim statističkim podacima. Kako je u radu pokazano, postoje određeni nerazmjeri u prikupljanju podataka koji proizlaze iz nedostatne uniformiranosti (standardiziranosti) terminologije u turizmu i metodologije prikupljanja podataka.*

*Ključne riječi:  turistička terminologija, metodologija prikupljanja podataka, pouzdanost statističkih podataka.*