Michał Żemła

The product quality of Polish ski-resorts: A case study of Silesian skiers' requirements, satisfaction and complaints[1]

Abstract

Product quality is an issue widely discussed with regard to tourism destinations. Among many different approaches to service quality measurement implemented into tourism destinations research ground, two were chosen to be utilised in the case of Polish ski resorts, which were importance-performance grid (IPA) and Kano's model of customer satisfaction. Strengths and weaknesses of chosen methods were discussed and results achieved with those methods are well complementary. Due to some limitations of IPA presented in the literature the method was partially modified to ensure higher reliability of results. Consistency of received results proved usefulness of this approach. The Polish ski resorts market is a promising subject for analysis of product quality as, this issue has been rather ignored so far, both by practitioners and researchers. This was also mirrored in results achieved as generally the level of product quality was estimated to be quite low. Respondents were especially not satisfied with the high level of congestion exercised in ski resorts which lead to long queues. However they appreciated good access to Polish ski resorts. Interestingly enough, this low level of product quality is not discouraging for Polish skiers who are used to poor quality, and interested more in good access rather than high standard. Achieved results are influenced by the fact that inhabitants of only one Polish province located close to the mountains were interviewed. This fact might have increased the understanding of access, and diminished importance of additional services like accommodation or aprés-ski offers.

Key words:
importance-performance grid; Kano's model; ski resort; Poland

Introduction

There are many approaches to measurement of product quality in service sector, which already have been or might be successfully implemented in tourism research. In a scientific debate on superiority of one method over another conducted among their supporters, those methods are usually not treated as complementary but, rather, as alternative tools. The presented paper aims to demonstrate potential benefits to be gained from the parallel analysis conducted with application of two methods.

Michał Żemła PhD, School of Economics, Tourism Department, Katowice, Poland
E-mail: turystyka@katedry.gwsh.edu.pl

Although there are examples in literature, including tourism literature, of simultaneous use of importance-performance grid and the Kano model (Bailom, Matzler, Hinterhuber & Sauerwein, 1996; Sauerwein, Bailom, Matzler & Hinterhuber, 1996) which were combined in the presented paper, this combination was conducted in a different way. In previous research, importance-performance grid played only a rather complementary role and helped to analyze Kano's model results. Here, both methods are conducted at the same time and treated equally, which is important as both methods need a different methodological approach. Due to their features discussed further, Kano's model is usually conducted on a smaller number of quality requirements, while importance-performance analysis (IPA) uses much higher number of those requirements. Bailom et al. (1996) used only 10 quality requirements, while comparison of 14 researches utilizing IPA made by Oh (2001) proves that in most of the cases the number of requirements is about 20 up to 117 used by Uysal, Howard and Jamrozy (1991). The results of IPA conducted on the same limited set of requirements as the Kano model, as in works cited above, cannot be as informative as those using multi requirement approaches.

The approach presented above was applied to product quality research of Polish ski-resorts. The topic seems to be especially interesting due to rather unique features of their current market. The most important is the quality improvement which has, so far, received very little attention by the ski-operators, what resulted in low expectation of Polish skiers. However, as Polish skiers are becoming more experienced and demanding, the situations began to change rapidly, calling for research into the Polish ski-resorts product quality.

The theoretical aim of this paper concerns simultaneous use of IPA and Kano's model, demonstrating that results achieved by using one of the methods may enhance conclusions reached thanks to the other. In order to do this, it was also necessary to investigate whether those results do not contradict one another. The practical aim of the paper is to provide Polish ski-areas operators with some guidelines on the best way of enhancing visitors' satisfaction.

Product quality of ski-resorts

"Ski-resort" is a term not defined in the literature on the subject and most commonly it is used to name a town or a village where infrastructure for skiers is located (Gill & Williams, 1994). Some authors use this term to define a set of lifts and slopes under common management and embraced with a common ticket (Tuppen, 2000). Less controversial are terms "ski area" and "ski field", which are used almost only in the second stated possible meaning of "ski-resort" (Williams, 1996).

In this paper, a ski resort is understood to be a tourist destination of a special kind, identified by the unique tourism infra-structure and the way in which visitors spend their time there. If it is agreed that a tourist destination is a place with physical, historical, and ethnographic features that differentiates it from others in a way that it can attract non-residents and develop one or more different kinds of tourism (Goncalves & Águas, 1997) the ski-resort (winter sports destination) may be defined as a geographical, economic and social unit consisting of all those firms, organizations, activities, areas and installations which are intended to serve the specific needs of winter sport tourists (Flagestad & Hope, 2001). This approach emphasizes the complex character of ski resort with clear indication of the role of supplementary services (hotels, gastronomy, entertainment) and environment, and allows to consider ski-resort's product quality wider than only quality of ski-services according to the concept of the tourism value chain (Weiermair, 1997).

Therefore, the ski-resort's product quality should be understood as an amalgam of the quality of services and the quality of the environment (Murphy, Pritchard & Smith, 2000) – where the quality of the environment consists of both the physical and social environment (Mihalic, 2000). Due to the complex nature of ski resort's product, the first step in a quality analysis is to evaluate the level of importance of particular factors. There are many definitions of product quality, which might be implemented into tourism research, as well as many research approaches to measurement of this phenomenon. According to a popular research approach introduced by Parasuraman, Berry and Zeithalm (1988), the service quality is to be measured as the difference between consumer expectations and services performance. Therefore, the importance of the particular components of ski-resort's product is reflected in the skiers' expectations and requirements. This approach introduced brand new elements to product evaluation in tourism, which are: 1) subjective element to service quality made the term 'quality' much closer to customer's 'satisfaction' (Parasuraman, Zeithaml & Berry 1994), the similarity consists in measurement being based on the concept of confirmation/no confirmation, developed by Oliver (1980); 2) dividing the researchers' population into advocates and critics of their approach made the term quality even more ambiguous as many authors use it in a different meaning. Subjective character of quality, measured as a difference between expectations and performance, encouraged some researchers to discuss "tourist judgment on service quality" (Weiermair & Fuchs, 1999), or "quality perception" (Parasuraman et al., 1988; Snoj & Mumel, 2002). All constructs mentioned here are also interconnected and interrelated with some similar constructs like customer experience, customer value or service adequacy.

Plurality of approaches also resulted in a rather wide range of methods used to measure quality and satisfaction. The most popular, created by Parasuraman et al. (1988), is the SEVQUAL scale. This scale is also frequently used in tourism product quality research (see, for example, Fick & Ritchie, 1991; Snoj & Mumel, 2002; Markovič, Horvat & Raspor, 2004). Critics of SERVQUAL, Cronin and Taylor (1994), created SERVPERF scale as an improved alternative to SERVQUAL. The SERVPERF scale is based on performance measurement only. SERVPERF was used in tourism product quality research by Tribe and Snaith (1998) and Hudson, Hudson and Miller (2004). In addition, other approaches have also been used in tourism product quality research, like importance-performance scale (Hudson et al., 2004; Zhang & Chow, 2004), Kano's model of satisfaction (Bailom et al., 1996; Woods & Deegan, 2003), European Foundation for Quality Management – EFQM (Go & Govers, 2000), Vavra's implicit/explicit importance model (Fuchs & Weiermair, 2003, 2004), Brandt's Penalty-Reward-Contrast Analysis (Fuchs & Weiermair, 2003) or purpose made scale like HOLSAT (Tribe & Snaith, 1998).

The issue of measuring the quality of tourism product in the context of ski-resorts is made even more complex due to the nature of the ski-resort and managerial problems involved in ensuring the ski-resort product quality. Similar to any tourism destinations, apart perhaps from the fully integrated tourism resorts built and managed by one entity, visitor's satisfaction cannot be achieved with effort only being made by one entity. Among the entities involved are local authorities, as well as internal or external entrepreneurs, local residents and local, regional or national organizations. The fragmentation of the ski resort's product set against the demand for the total quality of experience underlines the challenge facing managers in ensuring a seamless, hassle-free interface of all the elements of the total experience (Woods & Deegan, 2003).

Up till now, there have been just a few attempts to measure the product quality of winter sports destinations. Mazanec and Zins (1996) segmented the market of visitors to Austrian ski resorts with regard to the level of guest's satisfaction and main complaints. Similarly, Fuchs and Weiermair (2003, 2004), in the research conducted in Austrian ski resorts, used Vavra's model, Penalty-Reward-Contrast analysis and IPA, found that friendliness of personnel, hospitality of local people and the landscape are the performance factors of great importance for skiers visiting Austria, while customs and traditions, nostalgic atmosphere (among the others) were found to play the role of satisfiers. However, traffic management is believed to be an example of the basic requirement. The quality of Swiss ski destinations, particularly Verbier, was researched by Hudson and Shepard (1998). They implemented IPA method and found that visitors were rather disappointed by the offer of Verbier, given that 20% of the attributes investigated (for example, ski slopes services, tourism information, accommodation) fell into quadrant "Concentrate here".

Although there is a wide body of research devoted to the problems of winter sports, there is a shortage of research measuring product quality of ski resorts. Additionally, the results of research conducted in one country or even in a single destination are not relevant for many other ski destinations. This is especially true for Polish winter sports destinations being significantly different from those in Austria or Switzerland and also visited by tourists from different markets. Market for the Polish ski-resorts is mainly domestic visitors on a one day trip. Against this background, it was necessary to conduct the product quality research in winter sports destinations in Poland.

Ski industry in Poland

The general perception that Poland is a typical lowland country is a correct one as only about 3% of the country area is 500m above sea level. However, the 3% of the Polish territory above the 500m represents, in the absolute terms, a surface area of about 10,000 km^2, what is about half of the size of Slovenia. Although relatively small in size, one fifth of the Polish accommodation capacity, is concentrated in these mountainous districts. Demand for this area comes from domestic markets, as about 20% of Poles state that they go skiing at least once a year (TNS OBOP, 2004). With 2 million visits annually, Poland's share in the world ski market can be estimated at about 0.5% (Hudson, 2000). These statistics are significant and well illustrate the huge potential of the Polish ski market, as these 2 million visits are almost entirely domestic ones. The Polish ski market's closure to international tourism has resulted in specific attitudes of Polish skiers, who used to ski on Polish slopes, and of the owners of Polish ski areas, who used to cater only for the domestic market. Now, over 15 years after the fall of communism, the Polish ski market continues to be autocratic. Polish skiers, generally preferring one-day ski trips, usually ski in Poland, while foreign guests in Polish ski resorts are extremely rare.

Therefore, the Polish ski-operators have been, up till now, operating in a market characterized by the surplus of demand over supply. The opening of borders and the growing popularity of outbound tourism, especially after Poland's accession to the EU, may soon change the comfortable situation of Polish ski operators. Due to the huge quality gap between Polish and foreign ski-resorts, those in neighbouring Slovakia and the Czech Republic, as well as those in the Alpine regions are becoming more popular among Polish skiers. The key question now is how the owners of Polish ski areas can adapt their actions to become competitive internationally.

In total, there are almost 100 towns and villages in the Polish Carpathians and Sudety Mountains with some ski infrastructure, although these are mostly small and poorly equipped with facilities and ski-infrastructure expected in modern ski areas. Most of them are located in the Carpathian Mountains, where Szczyrk, Białka Tatrzańska, Wisła and Zakopane seem to be the most popular ones, although only Zakopane and Wisła have become recognizable names among international tourists due to the hall-mark ski-jumping competitions, and the Polish ski-jumping champion Adam Małysz. Although the Sudety Mountains have only fourteen ski areas, they have the two biggest one in Poland - Szklarska Poręba and Karpacz. In addition, the resorts in Zieleniec and Sienna are also very popular. Ski areas of the Sudety Mountains are also more modern as all but four areas are not equipped with the facilities for the production of artificial snow, in comparison to almost half not having the artificial snow making facilities in the Carpathians (Żemła, 2004).

Polish ski-resorts are exceedingly overcrowded and 30 minute queues for a ski lift are nothing out of the ordinary. This is due to the high population density in Poland where, statistically, 1300 Poles fall per 1 km^2 of the mountainous areas. In comparison this figure is 10 times lower in Austrian mountainous area. As a consequence, ski lift operators do not feel any need to improve their services as their profits are dependant almost entirely on weather conditions. Thus, Poland has many small ski-areas with appalling infrastructure and poor quality of service, which partly explain why there are almost no foreign tourists at Polish ski-resorts.

Up till now, Polish skiers nurtured on Polish resorts have not been very demanding and have accepted the local offer as long as it was sold at a reasonable price. However, since Polish ski resorts have become more expensive than their Czech and Slovak counter-parts, and Poles have started visiting the Alpine regions, Polish resorts are gradually facing very competitive market environment. To adjust appropriately is a challenging task for most of the Polish ski-operators who are used to having a guaranteed visitation as long as there are good snow conditions.

The Kano's model

One of the most popular tools for researching the role of several features of a given product for consumers' quality perception is Kano's model (Kano, 1984). Working with social science theories on satisfaction developed by Herzberg (1966), Kano concluded that the relationship between fulfilment of a need and the satisfaction or dissatisfaction experienced is not necessary linear (Bolster, 1993). Kano sorted require-ments into distinct classes in a way that each class would exhibit a different relationship with respect to satisfaction. Kano's method is based on the crucial presumption that customers' requirements may represent one of three given types: must-be requirements (analogical to Herzberg's hygiene factors), attractive requirements (analogical to Herzberg's motivators), and one-dimensional requirements (not having direct analogy in Herzberg's theory). The must-be requirements or the dissatisfiers are the basic requirements that a product must meet. If these requirements are not fulfilled, the customer will be extremely dissatisfied (Bailom et al., 1996). However, their fulfilment will not increase the customer's satisfaction. Meeting the must-be requirements will only lead to a state of being 'not dissatisfied' as the customer takes these requirements for granted. In opposition, attractive requirements lead to more satisfaction when present, yet no dissatisfaction occurs when not fulfilled. Fulfilling those requirements leads to a more than proportional satisfaction. Finally, the one-dimensional require-ments are those which, when fulfilled, lead to a proportional level of satisfaction. Analogically, when a one-dimensional requirement is not fulfilled proportional level of customer's dissatisfaction will occur. Apart from the main three categories, customer

requirements examined with this method may fall into two additional groups. The first situation occurs when customer's satisfaction or customer's dissatisfaction does not appear regardless of the fulfilment of the particular requirement. Such requirements are called indifferent. It is also possible that a customer, when examining a requirement, points that a high degree of achievement results in dissatisfaction, and vice versa. This situation introduces so- called reverse quality requirements.

Kano's model originated because of the lack of explanatory and diagnostic power of a one-dimensional recognition of quality (Löfgren & Wittell, 2005). The model gives a clear indication regarding actions taken to improve fulfilment of requirements of those three types. Improving the performance of the must-be requirement that is already at a satisfactory level is not as productive when compared to improving the performance of one-dimensional or attractive requirements. In general, the must-be requirements should be covered adequately, which is the basic condition, the set of one-dimensional requirements must be competitive and some attractive requirements are necessary for a tourist destination to remain competitive (Woods & Deagan, 2003). The Kano's model predicts that product attributes are dynamic, that is, over the time a requirement will change from being indifferent, to attractive, to one-dimensional to must-be (Löfgren & Wittell, 2005). This fact may cause some difficulties with providing definite classification for all quality requirements.

The theory of attractive quality, which is the base for Kano's model, rests on solid theoretical foundation (Wittel & Löfgren, 2007; Fuchs & Weiermair, 2003; Matzler, Fuchs & Schubert, 2004). However, recently, some alternative approaches to the traditional five-level questionnaire have been suggested. Resent research by Wittel and Löfgren (2007) demonstrated that plurality of approaches may lead to plurality of results, which suggests necessity for further research. The results, however, do not prove the superiority of tested alternative approaches over the traditional Kano questionnaire, which still may be treated as one of the well documented and efficient ways of classifying quality attributes.

The importance-performance grid

Kano's model, enabling detailed analysis of customer's requirements does not cover the measurement issue of how those requirements are met. This can be achieved by using the importance-performance scale. It is a procedure that shows the relative importance of various features and performance of entity under study in providing these features (Hudson et al., 2004). It gained popularity among researchers due to its ease of application and appealing methods of presenting both data and strategic suggestions (Oh, 2001). An importance-performance perception map (importance-performance grid) presenting features of the destination's product on a two-dimensional graph is a useful tool for constructing such a scale (Cieślikowski & Żemła, 2002).

The crucial point of the method is preparing a questionnaire, in which respondents are asked to give their opinion on importance of several product's attribute as well as on the performance level. Importance-performance analysis requires a very detailed list of the possible features of a destination's product to reduce the risk that customers may not expect some of the features or can't clearly express them (Tribe & Snaith, 1998). Regarding the complex character of ski-resort product, such a list should cover the basic services for skiers such as lifts and slopes, additional services for skiers such as ski rentals, schools etc, general services for visitors such as accommodation facilities, gastronomy, evening entertainment or recreation as well as environmental features – natural (scenic beauty, for example) and cultural environment (sense of safety, hospitality or congestion).

The most popular way of drawing conclusions is by putting attributes into a four - quadrant grid. Attribute's importance and performance are dimensions of the grid. The first quadrant called "Keep up the good work" embraces the attributes that are important for customers as well as those delivered on, at least, satisfactory level. These are the main strong points of a company/destination and the main sources of customer's satisfaction. The second quadrant entitled "Possible overkill" captures attributes which are less important, but the company or destination performs well on the attributes. Attributes that fall into the third quadrant "Low priority" are company's/destination's weaknesses as they are delivered below the average. Still they are not important for customers, and as such do not need decision makers' special attention. This is in opposition to attributes put in quadrant four "Concentrate here", which are of high importance for customers, and a company/destination performs badly on the attributes. In this situation, companies or destinations need to improve their performance on these attributes, as they are the main customers' dissatisfiers. The general idea of IPA grid interpretation is based on the assumption that a successful company or destination should perform well on the attributes that are important for customer, and does not pay too much attention and efforts to those which are perceived as less important. Introduced over 30 years ago by Martilla and James (1977), on the example of car retailing, IPA became one of the most popular tools for service quality measurement, which is willingly used by tourism researchers – when entering "importance-performance analysis" to the scholar.google search machine (entered 2007.05.17), 5 out of the first 10, and 12 out of the first 20 records received are connected with tourism and recreation research.

However, this relatively simple and not sophisticated method is also a subject of wide criticism. Oh (2000) points out that the term "importance" is not clearly defined what may lead to a potential source of misuse of IPA, and proves that interpretation of importance-performance grid depends on the way of calculating the crosshair. Furthermore, he then presents examples of previous research where those different methods were used. However, the strongest argument is given by Fuchs and Weiermair (2003), Oh (2000) and, recently, by Eskildsen and Kristensen (2006) who found that in many situations attribute's importance perception may be strongly influenced by performance. In spite of this criticism, carefully implemented IPA remains one of the most popular and powerful tools for quality measurement in tourism. There are numerous examples of successful implementation of this method (Hudson & Shephard, 1998; Chu & Choi, 2000; Go & Zhang, 1997; Zhang & Chow, 2003; Hudson et al., 2004). Hudson et al. (2004) proved also its validity in comparison of 4 tools. Hudson and Shephard (1997) argued that for tourism destinations with little market research experience (like Polish winter sports destinations) IPA, in its purest form, can be used as a powerful tool in marketing planning. Their research also demonstrates usefulness of this method for ski resorts evaluation.

Survey of requirements and satisfaction of users of Polish ski-resorts

Little competition on the Polish ski market is also reflected in the fact that, so far, there has been no single attempt to measure the satisfaction of Polish skiers visiting Polish ski-resorts. A visible increase in demand, the emergence of new, well-equipped ski-areas, together with increased foreign competition, have made some of ski operators and local authorities interested in market research concerning the attitudes of skiers. This present research is the first, initial attempt to define the level of satisfaction of Polish skiers and general image of Polish versus foreign resorts.

Research into the opinions of skiers was based on quota sampling. Between January 2004 and June 2004, 100 inhabitants of the Silesian province, aged 15-65 years, were interviewed. Care was taken to preserve correct proportions based on gender (50% male and 50% female), sub-region, age and place of residence (Table 1). Taking into account the fact that people from one group tend to participate in tourism movement more frequently than others, for example citizens of big cities versus citizens of villages or youth versus elderly people, such two criteria were adjusted, using the tourism activity index. The number of inhabitants belonging to a given partition of age was multiplied by tourism activity index and then new percentage proportions were scored. The same was done regarding the size of place of residence. Unfortunately, there is no detailed statistic data about participation in winter sports in Poland and, therefore, general tourism activity index had to be used.

Table 1

PROPORTIONS IN SAMPLING PROCESSES AMONG RESIDENTS OF SILESIA

BY SUBREGION			BY AGE					BY PLACE OF RESIDENCE				
Subregion	Number of inhabitants	% residents	Age	Number of residents	% residents	Tourism activity index	% responses	Place of residence	Number of residents	% residents	Tourism activity index	% respon ses
Często-chowski	540	11	15-19	325	11.7	76.2	15	Village	995	21	46.4	16
Bielsko-bialski	645	14	20-24	323	11.6	71.4	15	Town up to 20,000 inhabitants	283	6	60.9	6
Centralny śląski	2,890	61	25-29	284	10.2	71.4	10	Town 20,000 - 50,000	422	9	59.9	9
Rybnicko-jastrzębski	643.5	14	30-49	1,165	41.9	57.9	41	Town 50,000 - 100,000	754.5	16	65.5	17
			50-64	682	24.5	46.3	19	City bigger than 100,000	223.5	48	66.2	52

Source: Calculations based on GUS (www.stat.gov.pl) and Tourism Institute (www.intur.com.pl)

Most of the respondents were chosen randomly and, at the end of sampling process, respondents with desired features were identified and the questionnaire was handed directly to them. Respondents were not interviewed during their participation in skiing activity or their stay in a ski locality, which makes this research an example of research conducted at respondents' place of residence in contrast to research conducted at destination.

There are two main reasons for excluding conducting research at destination. The first and obvious one is the fact that this kind of research is rather not applicable when researching only a group of inhabitants of a specified area (Silesian province). However, one has to bear in mind also the fact that research conducted at destination may

lead to some overestimation of results, as people who had chosen a given place are interviewed, and their attitudes towards researched place may tend to be more positive than those of the population as a whole (Kozak & Bahar, 2005; Cropmton, 2001). In addition, the current situation at destination and traveller's satisfaction/dissatisfaction with certain elements of tourism product provided locally may influence their response (Fuchs & Weiermair, 2003).

The questionnaire included questions based on Kano's model, importance-performance questions and additional information. The main target of the study was to detect the features which are most important for skiers, the level of their fulfilment and domestic-outbound skiers' preferences.

Skiers' key requirements identification was conducted using Kano's method according to the questionnaire presented by Walden (1993). Functional and dysfunctional (Figure 1) questions concerning 8 features were considered: a) accommodation facilities; b) ski infrastructure; c) gastronomic outlets; d) non-ski attractions; e) accessibility; f) scenic beauty; h) prices and i) level of congestion.

Figure 1
**FUNCTIONAL AND DYSFUNCTIONAL QUESTION
IN THE KANO QUESTIONNAIRE**

Functional form of the question	
If the accommodation facilities in a ski resort are sufficient, how do you feel?	1. I like it that way
	2. It must be that way
	3. I am neutral
	4. I can live with it that way
	5. I dislike it very much

Dysfunctional form of the question	
If the accommodation facilities in a ski resort are not sufficient, how do you feel?	1. I like it that way
	2. It must be that way
	3. I am neutral
	4. I can live with it that way
	5. I dislike it very much

Source: Adapted from Bailom, Matzler, Hinterhuber and Sauerwein (1996)

Figure 2
KANO EVALUATION TABLE

Customer requirements		Dysfunctional question				
		1. I like it that way	2. It must be that way	3. I am neutral	4. I can live with it that way	5. I dislike it very much
Functional question	1. I like it that way	Q	A	A	A	O
	2. It must be that way	R	I	I	I	M
	3. I am neutral	R	I	I	I	M
	4. I can live with it that way	R	I	I	I	M
	5. I dislike it very much	R	R	R	R	Q

Source: Walden (1993)

Customer requirement is …

A – attractive   M – must-be   O – one-dimensional
R – reverse   Q – questionable   I – indifferent

The choice of requirements was made in order to underline complex character of ski-resort product, which comprises not only elements aimed at skiers, but also many other

With regard to the simple form of questioning and the need for a more detailed list of features for the importance-performance scale, the above group of 8 requirements was developed into 23 proposed features of an ideal ski resort as illustrated in Table 2. Respondents were asked to mark the three most important and three least important features followed by the three strongest points and the three weakest points of two chosen ski locality.[2]

Research findings and discussion

Kano's evaluation table (Table 2) indicated that accommodation facilities, non-ski attractions and gastronomic points are neutral requirements. Ski infrastructure, accessibility, low prices and a low level of congestion are one-dimensional requirements. Scenic beauty is the only attractive requirement. The results were very clear, and apart from the scenic beauty, in all cases the most commonly chosen answers were indicated by at least 50% of respondents.

Table 2
RESULTS USING KANO'S EVALUATION TABLE

Criteria	Number of responses						Customer satisfaction coefficient (CS)	Customer dissatisfaction coefficient (CD)
	Q	I	A	M	O	R		
Accommodation facilities	0	**67**	15	7	9	1	0,25	-0,16
Ski infrastructure	0	9	29	11	**49**	0	**0,80**	-0,61
Gastronomic outlets	0	**49**	15	16	15	3	0,32	-0,33
Non-ski attractions	0	**67**	12	6	11	2	0,24	-0,18
Accessibility	0	14	13	18	**55**	1	0,68	**-0,72**
Scenic beauty	0	**35**	42	2	19	2	0,63	-0,22
Prices	0	10	23	11	**55**	0	**0,78**	**-0,67**
Not congested	1	19	15	12	**51**	0	0,68	-0,65

The most commonly pointed answers and the highest levels of CS and CD are bold

Those results are also fully justified by the customer satisfaction coefficient (CS coefficient) showing the relation of requirements motivating positively to all requirements and customer dissatisfaction coefficient (CD coefficient) received in analogical way (Bailom et al., 1996):

$$CS = (A+O)/(A+O+I+M)$$

$$CD = (M+O)/(A+O+I+M) *(-1)$$

A high level of the CS coefficient allows for the identification of conditions that, when fulfilled, may result in a big increase of guests' satisfaction. A big negative value of CD coefficient points to criteria which, when not fulfilled, can bring a strong sense of dissatisfaction. Data in Table 2, indicates that ski infrastructure and low prices are strong positive motivating factors, but in the case of ski infrastructure, negative influence is evidently lower, while for the level of prices it is almost as strong as the positive one. Only ease of access and gastronomic outlets influence stronger negatively than positively. In the example of gastronomy, however, both values are small, as well as the difference between them. Accessibility has the strongest negative influence of all requirements. Scenic beauty has strong positive motivational power accompanied with a small negative influence, which makes it different from all other considered factors. In short, skiers living in Silesia expect excellent access to a ski resort, as well as low

prices, good ski infra-structure and a low level of congestion. They are generally not interested in any supporting services, such as accommodation, aprés-ski offers and gastronomy. Although they are satisfied when skiing in scenic areas, lack of it does not pose a problem for them.

Results presented in the importance-performance perception map (Figure 3) are very similar. Among the most important features there are those characterizing ski infra-structure, low congestion and easy access. Less important are features connected with non-ski attractions (local culture events, aprés-ski offers), accommodation and gastronomy.

When analysing the strengths and weaknesses of Polish ski areas, it is possible to notice that easy access by car (b), differentiated ski slopes (g), big number of slopes and lifts (h), scenic beauty (t) and additional services for skiers (l) were estimated to be particularly high. However, the last two of them are of minor importance to Polish skiers. The most important requirement is the guarantee of snow coverage (e). The level of having this expectation met by Polish ski villages is moderate, but this seems not to be reliable enough. A similar statement could be made regarding well prepared ski slopes (i). Easy access by car (b) also plays an important role but level of fulfilment is very high.

The high importance of guarantee of snow coverage is connected with probably the most important problem that ski resorts, not only in Poland, will have to face up – the global warming (Koenig & Abegg, 1997; UNEP 2003; Bürki, Elsasser & Abegg, 2003; Elsasser & Bürki, 2002; Nicholls, 2006). Polish resorts, located on much lower altitudes than their Alpine counterparts, may seem to be especially vulnerable to this threat. On the other hand, they are also located much further to the north, and unpredictable character of the climate of Polish mountains with, both, extremely cold and snowy winters followed by very hot ones observed for many years have prepared, in a way, operators of Polish ski areas to the threat of global warming. Additionally, the fact that Polish ski areas are relatively small plays an important role in such a way that some ski areas in Poland, especially the new ones, are prepared to cover with artificial snow the full length of their slopes, and majority of ski areas have at least one slope equipped with snow guns. According to even the most pessimistic forecasts, the lack of temperatures below 0 centigrade during nights seems not very probable, and short slopes are easier to maintain in good condition even when temperature is high during the day.

The main problem remains rather the cost of snow guns operating on such a big scale, as well as sufficient water supply and ecological damage (Pickering & Hill, 2003). The time spent in queues (f) is very important for skiers, and in Polish ski localities this feature is valued particularly negatively. Time wasted in queues was considered of high importance for customer satisfaction in the service sector, which was also found in earlier research (Bielen & Demoulin, 2007). The improvement of transportation facilities in ski resorts would be worth considering (j). Also the level of price was found to be unacceptable to Polish skiers (v). Scenic beauty (t) and additional services for skiers (l) were appreciated highly, but they were not found to be an important feature. The remaining features were estimated to be of moderate or low importance, and provided on rather a low level.

The findings presented above are highly influenced by the research sample. Silesia is a province located in Southern Poland, relatively close to the mountains. The southern part of Silesia boasts several very popular ski resorts. Over 60% of the province's inhabitants (due to the quota sampling this also means over 60% of respondents) live in its central part, in the huge agglomeration of Katowice located about 70 km from the

ski resorts in Szczyrk, Ustroń or Wisła with very good access by car and by train. This location encourages skiers to go for one-day ski trips. Only 17% of respondents go skiing for longer than a week at a time, and more than half do not go skiing coupled with a night stay at all. More than 60% of respondents go skiing for a day at least three times a year.

Figure 3
IMPORTANCE-PERFORMANCE PERCEPTION MAP
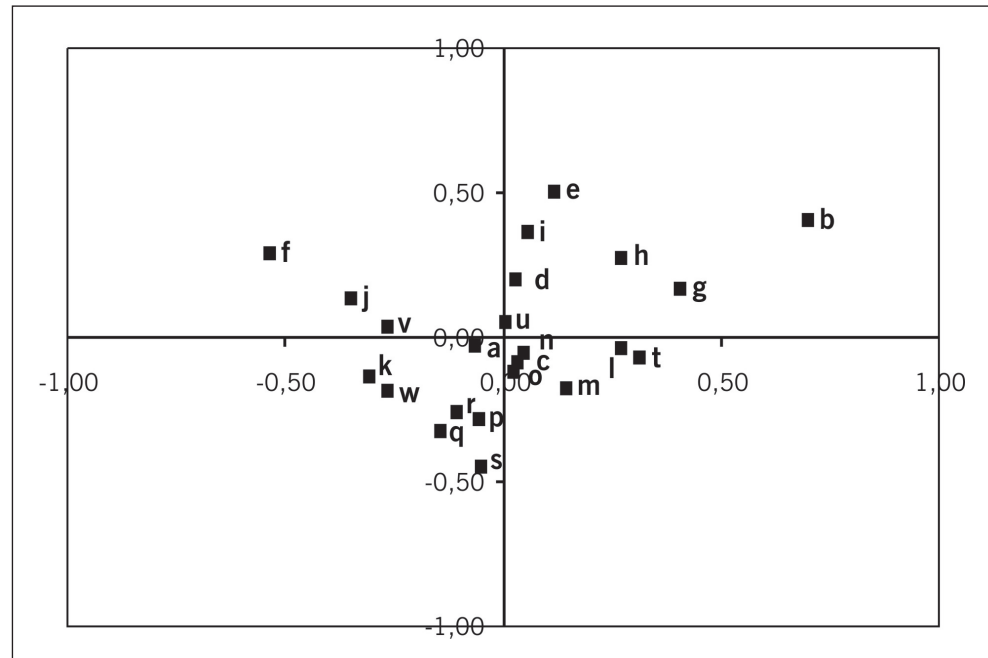
a - Easy access by the means of public transportation, **b** - Easy access by car and parking places, **c** - Information available, **d** - Sense of safety in village and on slope, **e** - Snow coverage guaranteed, **f** - No queues to lifts, **g** - Differentiated ski slopes, **h** - Big number of slopes and lifts, **i** - Well prepared ski slopes, **j** - Fast and comfortable lifts, **k** - Separated snowboarding infrastructure, **l** - Additional services for skiers, **m** - Large number of accommodation places, **n** - Accommodation places differentiated by prices and standard, **o** - Gastronomic outlets on the slopes, **p** - Differentiated gastronomic offer, **q** - Evening entertainment, **r** - Additional recreation offer, **s** - Local culture events, **t** - Scenic beauty, **u** - Ski ticket encompassing many lifts, **v** - Low prices of services, **w** - Calm

During their short trips, the Silesians also do not go very far. Among the 10 most popular ski villages visited by Silesians, as many as nine are located in Silesia (Żemła, Chudy-Hyski & Cieślikowski, 2004). This is reflected in their answers when respondents were asked to evaluate the strengths and weaknesses of chosen ski villages. Over 50% of respondents decided on Szczyrk as one of their two evaluated villages. Wisła and Korbielów were chosen by more than 20% of respondents, and Ustroń by another 10%. All of these villages are located in Silesia within a 1.5 hour drive from Katowice. The profile of respondents such as the one shown above explains the very little importance of accommodation and aprés-ski offers. During one-day trips skiers, trying to reduce costs as much as possible, often resign from gastronomic services, and are not interested in ski rentals or ski schools. Not having much free time, they want to spend as little time as possible travelling to a ski resort, which justifies the great need for easy access, especially by private transport. Road and train connections from Katowice to the southern part of the province, where ski resorts are located, are one of the best in Poland. Skiers particularly appreciate this as they are aware of difficulties with travelling in other directions. Easy access was not indicated as one of the strong points of a single

village apart from those located in Silesian province. This can be influenced not only by greater distance, but also by worse road infrastructure.

Regarding the presented results, it would seem to be possible to state that Polish ski resorts, apart from good access and scenic beauty, not being themselves decisive features, do not meet or do not fully meet the expectations of Silesian skiers. Although skiers expect excellent slopes and lifts, they are provided with old, ruined facilities and poor slopes. These resorts offer sub-standard services at overrated prices in over-crowded ski areas. Taking all that into consideration, it is very surprising that respondents still prefer skiing in Poland to abroad (Table 3). The fact that skiers who prefer foreign slopes are generally younger and better skiers, and also tend to be bigger spenders and more interested in longer stays in a resort (Żemła et al., 2004), does not dramatically change this optimistic image for Polish ski resorts.

Table 3
DOMESTIC/FOREIGN SKI TRIPS PREFERENCES (%)

	Domestic	Rather domestic	Rather abroad	Abroad
% of indications	27	36	20	16

The factor of short travel time seems to be decisive for Silesian skiers preferring one-day trips, and therefore foreign resorts are not perceived to be good places for such trips. However, such a perception is not fully correct since there are three quite big ski areas and several small ones in the Czech Republic and in Slovakia within a 2- hour drive from Katowice. As a result of time saving smooth transitions at border crossings due to EU enlargement[3], these resorts may become tough competition for the domestic market.

Conclusions and research limitations

The most important conclusion of the paper is the indication that the use of Kano's model and IPA yield very similar results regarding importance of quality attributes. Also, comparison of results allowed for in-depth analysis of quality requirements in terms of their importance and the way of influencing overall satisfaction and performance. Attributes found in "Low priority" IPA quadrant mostly correspond with requirements found indifferent in Kano's model. The scenic beauty located in the "Possible overkill" quadrant appeared to be an attractive requirement, which indicates that winter sports destinations' managers in Poland should value this feature highly as it is supposed to enhance visitors' satisfaction, provided one-dimensional factors are secured firstly. Finally, attributes labelled as one-dimensional are found at the upper part of IPA grid.

The informative value of such a comparison of results could be even higher. However, in this study almost all researched attributes were classified as one-dimensional or indifferent, and no single requirement was detected to be a must-be requirement. The value obtained by implementing Kano' s results to IPA grid interpretation is clearly visible only in the already discussed example of the scenic beauty, being a single attractive requirement. In a situation where linear relationship between fulfilment of a need and the satisfaction or dissatisfaction experienced is detected, Kano's model does not enhance results in a meaningful way. However, it has to be used in order to detect such a situation.

The most important practical conclusions are, however, mostly based on the IPA grid interpretation, which might be pointed out as the research main limitation, since IPA has been recently strongly criticized. Vavra's model of implicit/explicit importance (Vavra, 1997) and Brandt's penalty-reward model (Brandt, 1987) were presented as much more reliable tools for destination quality measurement (Fuchs & Weiermair, 2003). However, in this paper care was taken to ensure the maximum reliability of IPA results, and many arguments of its critiques might be responded to or, at least, weakened.

In order to reduce any possible influence of performance perception on validity of a given factor, the research was conducted at skiers' place of residence. Current conditions, therefore, could not have influenced visitors' perception of performance or importance of a given requirement. Moreover, not having direct contact with the product during the research, respondents were supposed to present their regular attitudes, which actually might have been influenced by their previous experiences with ski resorts' product. However, those experiences could influence their decisions as well, and as such they should be measured. In order to diminish the possibility that customers' experiences with a single destination would determine their statements on attributes importance, the questionnaire was constructed in such a way that each respondent answered first the question about attribute importance than they were to choose any two of Polish ski destinations to evaluate their performance on researched attributes. The risk that performance perception will determine importance rates is the highest when a respondent is aware which product/destination they are going to evaluate, and much lower in cases like in the presented research.

Another argument against IPA presented by Fuchs and Weiermair is that requirements classified as attractors or attractive quality requirements, which might greatly influence the overall satisfaction of visitors, were classified in their research as "Low priority" attributes in IPA grid. That presents a strong threat of misleading interpretation of IPA results. However, presented example of scenic beauty requirement illustrates that combining IPA with Kano's model diminishes this risk significantly. Here, some remarks to the context of research have to be presented. Fuchs and Weiermair (2003) researched Austrian well developed ski destinations with basic factors (must-be requirements) and one-dimensional requirements offered in resorts at very high and similar levels. In such a situation, the role of attractive quality factors can be decisive. However, the same cannot be said about ski destinations in Poland. Basic and one-dimensional factors, especially those connected with queuing time and ski lifts quality, are delivered at low, unsatisfactory level. Competing by adding attractors when basic factors are poor, will not bring expected results.

Finally, Likert scale, traditionally used in IPA, was replaced by another one aimed at indicating only the three most and least fulfilled attributes, as well as the most and least important ones, which diminished problems with calculating IPA grid crosshair. In the presented case, it should be at (0,0) point. However, this exchange may be treated also as a limitation of presented research as such an approach has not been tested in previous research. Only several researched factors accumulated majority of answers, so it is easy and possible to identify those of highest/lowest importance/performance. However, it is not known much about remaining features, whether they are only of lower importance (performance) yet still important or just unimportant.

Another limitation of presented research results from utilization of only two methods of service quality measurement. It was showed that those methods correspond with one

another well, however, results reached by use of SERVQUAL, Vavra's model or Brandt's model might have introduced new value to the results. Especially Vavra's model of implicit/explicit importance recently tested with good results (Fuchs & Weiermair, 2003; Matzler & Sauerwein, 2002) seems to be a tempting alternative to criticized IPA. However, this method, similar to Kano's model, originated in an attractive quality theory, and a combination of those could have given less informative results than the combination presented in this paper.

The results reached in presented research might be also of great importance for Polish ski areas operators and other entities managing tourism development in mountainous areas. The conclusion to be drawn is that the Silesians are typical one day-skiers who are not fully satisfied with the skiing possibilities they are offered. The most frequent complaint is the long queues to ski lifts, which can be solved only by investing in new lifts. Several new ski areas should also be built and located in places enabling easy and quick access, which should provide a high standard of services, including particularly snow coverage and reasonable prices. New ski areas would also mean increasing the number of new skiing places, thus fulfilling the strong sightseeing need. Paradoxically, the existence of such a ski area would not satisfy Silesian skiers since being much better than its competitors, it would probably be chosen more often than others, and this in turn would lead to even more congestion. Therefore, Silesian skiers need both: an expansion of the ski-offer and an improvement in the quality of existing ski areas.

On the other hand, however, as one-day visitors not using any additional services, Silesian skiers are not big spenders, which make the Silesian market not very profitable for ski villages. Due to both limited capacity of ski infra-structure and rather little capabilities of building new facilities, local authorities of the ski villages prefer to improve the standard and implement other services in a bid to encourage skiers from other areas, who wish to stay in a ski resort for a longer time and spend more money.

The most visible limitation of presented research from a practical point of view seems to be the fact of conducting it only in the Silesian region, which can be justified by the key role its inhabitants play in the Polish ski - market. Silesia, Lower Silesia and Małopolska are the three Southern Poland provinces, in which the most attractive Polish ski areas are located. Also the agglomerations of Katowice, Wrocław and Krakow located there are perceived to be the areas generating the majority of Polish ski demand. Due to geographical, social and economic similarities, it is highly probable that research findings received for Silesia are also true for both Lower Silesia and Małopolska.

However, current research does not cover the study of similar attitudes in people living in other regions of Poland, particularly Warsaw, as there are no possibilities of one-day ski trips, and the preferences of skiers from those areas differ greatly from those included in the study. Moreover, there is no evidence that the quality of services of Silesian ski resorts is similar to the quality provided by those located in other provinces. Presented research is highly influenced by ranks given to Silesian resorts and villages. Although it can be expected that evaluations of other ski-resorts would be similar, as ski infra-structure is not much differentiated in various mountainous regions of Poland , it cannot be taken for granted.

Further research needs to be conducted in order to acquire a complete knowledge of preferences of Polish skiers. The present study is an initial part of a wider project, planned for three years. One of the directions of further thorough studies results from

that fact that the mean scores in presented research have been calculated from rates given to various villages, while there is a high probability that some other ski-resorts may be perceived differently than those means suggest. The main aim of presented research was to present an outlook of quality perception of Polish ski resorts treated as a whole, without direct indications for particular resorts. Nevertheless, such indications are needed for managerial purposes

A relatively low sample of respondents can be justified since it is being used as the first step of a series of studies. Detailed quota sampling makes the results of this research much more reliable, however, further research needs to be conducted on a much bigger sample.

Notes:

[1] The earlier and not published version of this paper was presented at the International Conference 'Theoretical Advances in Tourism Economics' 18-19.03.2005, Evora, Portugal

[2] The definition of a ski resort as accepted in this paper could be misleading for respondents so it was decided to ask about a perfect ski locality.

[3] Research concerned winter 2004 – the last winter before Poland's accession to EU.

References

Bailom, F., Matzler, K., Hinterhuber, H. H., & Sauerwein, E. (1996). Must-be Quality and Attractive Quality. In K. Weiermair (ed.), *Alpine Tourism. Sustainability Reconsidered and Redesigned* (pp. 336-349). University of Innsbruck.

Bielen, F., & Demoulin, N. (2007). Waiting Time Influence on the Satisfaction Relationship in Services. *Managing Service Quality*, *17*(2), 174-193.

Bolster, C. (1993). Theoretical Parallels Between Kano's and Herzberg's Theories. *Center for Quality of Management Journal*, *2*(4), 23-25.

Brandt, R. D. (1987). A Procedure for Identifying Value-Enhancing Service Components Using Customer Satisfaction Survey Data. In C. Surpenant (ed.), Add Value to Your Service (pp. 61-65). Chicago: American Marketing Association..

Bürki, R., Elsasser, H., & Abegg, B. (2003). Climate Change and Winter Sports: Environmental and Economic Threats. Proceedings of 5th World Conference on Sport and Environment, 2-3 December 2003, Turin, Italy (IOC/UNEP).

Chu, R. K. S, & Choi, T. (2000). An Importance-Performance Analysis oh Hotel Selection Factors in the Hong-Kong Hotel Industry: A Comparison of Business and Leisure Travellers. *Tourism Management*, *21*(4), 363-377.

Cieślikowski, K., & Żemła, M. (2002). Pozycjonowanie obszaru recepcji turystycznej z wykorzystaniem map percepcji. *Marketing i Rynek*, *12*, 20-26.

Crompton, J. (2001). On-site Sampling: A Potential Source of Overestimating Visitor Use. *Journal of Travel Research*, *39*(3), 321-322.

Cronin J., & Taylor, S. (1994). SERVPERF versus SERVQUAL: Reconciling Performance-Based and Perception-Minus-Expectation Measurement of Service Quality. *Journal of Marketing*, *58*, 125-131.

Elsasser, H., & Bürki, R. (2002). Climate Change as a Threat to Tourism in the Alps. *Climate Research, 20*, 253-257.

Eskildsen, J. K., & Kristensen, K. (2006). Enhancing Importance-Performance Analysis. *International Journal of Productivity and Performance Management*, *55*(1), 40-60.

Fick, G. R., & Ritchie, B. R. (1991). Measuring Service Quality in the Travel and Tourism Industry. *Journal of Travel Research*, *29*(fall), 2-9.

Flagestad, A., & Hope, C. A. (2001). Strategic Success in Winter Sports Destinations: A Sustainable Value Creation Perspective. *Tourism Management*, *22*, 445-461.

Fuchs, M., & Weiermair, K. (2003). New Perspectives of Satisfaction Research in Tourism Destinations. *Tourism Review*, *58*(3), 6-14.

Fuchs, M., & Weiermair, K. (2004). Destination Benchmarking: An Indicator-System's Potential for Exploring Guest Satisfaction. *Journal of Travel Research*, *42*(1), 212-225.

Gill, A., & Williams, P. (1994). Managing Growth in Mountain Tourism Communities. *Tourism Management*, *15*(3), 212-220.

Go, F., & Govers, R. (2000). Integrated Quality Management for Tourist Destination: A European Perspective on Achieving Competitiveness. *Tourism Management*, *21*(1), 79-88.

Go, F., & Zhang, W. (1997). Applying Importance-Performance Analysis to Beijing as an International Meeting Destination. *Journal of Travel Research,* 35(4), *42*-49.

Goncalves, V. F. C., & Águas, P. M. R. (1997). The Concept of Life Cycle: An Application to the Tourism Product. *Journal of Travel Research*, *35*(fall), 12-22.

Herzberg, F. (1966). *Work and the Nature of Man*. Cleveland: World Publishing Co.

Hudson, S. (2000). *Snow Business. A Study of the International Ski Industry*. London: Cassel.

Hudson, S., Hudson, P., & Miller, G. (2004). The Measurement of Service Quality in the Tour Operating Sector: A Methodological Comparison. *Journal of Travel Research, 42*(February), 305-312.

Hudson, S., & Shephard, G. W. H. (1998). Measuring Service Quality at Tourist Destinations: An Application of Importance-Performance Analysis to an Alpine Ski Resort. *Journal of Travel and Tourism Marketing*, *7*(3), 61-77.

Kano, N. (1984). Attractive Quality and Must-be Quality. Hinshitsu. *The Journal of the Japanese Society for Quality Control*, *14*(2), 39-49.

Koenig, U., & Abegg, B. (1997). Impacts of Climate Change on Winter Tourism in the Swiss Alps. *Journal of Sustainable Tourism*, *5*(1), 46-58.

Kozak, M., & Bahar, O. (2005). Perceived Determinants of Destination Competitiveness: Comparison Between Tourists and Industry People. Paper read at the International Conference "Theoretical Advances in Tourism Economics", 18-19 March 2005, Evora, Portugal.

Löfgren, M., & Wittell, L. (2005). Kano's Theory of Attractive Quality and Packaging. *Quality Management Journal*, *12*(3), 7-20.

Markovič, S., Horvat, J., & Raspor, S. (2004). An Application of SERVQUAL Scale in Health Tourism Sector: An Exploratory Study, Paper presented on the International Conference "Strategic Partnerships for The Development of Tourist Destinations", 18-19.03.2004, Portorož, Slovenia.

Martilla, J. A., & James, J. C. (1977). Importance-Performance Analysis. *Journal of Marketing*, *41*(1), 77-79.

Matzler, K., Fuchs, M., & Schubert, A. (2004). Employee Satisfaction: Does Kano's Model Apply? *Total Quality Management and Business Excellence*, *15*(9-10), 1179-1198.

Matzler, K., & Sauerwein, E. (2002). The Factor Structure of Customer Satisfaction: An Empirical Test of the Importance Grid and the Penalty-Reward-Contrast Analysis. *International Journal of Service Industry Management*, *13*(4), 314-332.

Mazanec, J. A., & Zins, A. (1996). Alpine Winter Tourists and Guests Satisfaction - An Exploration of the Typological Relationships. In K. Weiermair (ed.), *Alpine Tourism. Sustainability Reconsidered and Redesigned* (pp. 262-289). University of Innsbruck.

Mihalič, T. (2000). Environmental Management of a Tourism Destination. A Factor of Tourism Competitiveness. *Tourism Management*, *21*(1), 65-78.

Murphy, P., Pritchard, M. F., & Smith B. (2001). The Destination Product and Its Impact on Traveller Perception. *Tourism Management*, *21*(1), 43-52.

Nicholls, S. (2006). Climate Change, Tourism and Outdoor Recreation in Europe. *Managing Leisure*, *11*(3), 151-163.

Oh, H. (2001). Revisiting Importance-Performance Analysis. *Tourism Management, 22*, 617-627.

Oliver, R. (1980). A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions. *Journal of Marketing Research, 17*, 460-469.

Parasuraman, A., Zeithaml, V., & Berry, L. (1988). SERVQUAL: A Multiple-Item Scale for Measuring Consumers Perception of Service Quality. *Journal of Retailing*, *64*(spring), 12-40.

Parasuraman, A., Zeithaml, V., & Berry, L. (1994). Reassessment of Expectations as a Comparison Standard in Measuring Service Quality: Implication for Further Research. *Journal of Marketing, 49*(4), 119-128.

Pickering, C., &Hill, W. (2003). Ecological Change as a Result of Winter Tourism: Sow Manipulation in the Australian Alps. In R. Buckley,, C. Pickering, & D. B. Weaver (eds.), *Nature-Based Tourism Environment and Land Management* (pp. 137-149). Willingford: CABI Publishing.

Sauerwein, E., Bailom, F., Matzler, K., & Hinterhuber, H. H. (1996). The Kano Model: How to Delight Your Customer. Preprints Vol. 1 of the IX International Working Seminar on Production Economics. Innsbruck/Igls Austria, 19-23.2.1996, 313-327.

Snoj, B., & Mumel, D. (2002). The Measurement of Perceived Differences in Service Quality – The Case of Health Spas in Slovenia. *Journal of Vacation Marketing, 8*(4), 362-379.

TNS OBOP (06.01.2004). Białe szaleństwo po polsku. Paper Online. Retrieved January 6, 2004, from http://www.tns-global pl/centrum/zal/news/TNSOBOP_narty.doc.

Tribe, J., &Snaith, T. (1998). From SERVQUAL to HOLSAT: Holiday Satisfaction in Varadero, Cuba. *Tourism Management*, *19*(1), 25-34.

Tuppen, J. (2000). The Restructuring of Winter Sports Resorts in The French Alps: Problems, Processes and Policies. *International Journal of Tourism Research*, *2*, 327-344.

UNEP (2003). Many Ski Resorts Heading Downhill as a Result of Global Warming. UNEP News Release 2003/66.

Uysal, M., Howard, G., & Jamrozy, U. (1991). An Application of Importance-Performance Analysis to a Ski Resort: A Case Study in North Carolina. *Visions in Leisure and Business*, *10*, 16-25.

Vavra, T. G. (1997). *Improving Your Measurement of Customer Satisfaction: A Guide to Creating, Conducting, Analyzing and Repotting Customer Satisfaction Measurement Program*. Milwaukee: WIS.

Walden, D. (1993). Introduction to Kano's Methods. *Center for Quality of Management Journal*, *2*(4), 3-7.

Weiermair, K. (1997). On the Concepts and Definition of Quality in Tourism. In *Quality Management in Tourism*. St. Gallen: AIEST.

Weiermair, K., & Fuchs, M. (1999). Measuring Tourist Judgment on Service Quality. *Annals of Tourism Research, 26*(4), 1004-1021.

Williams, P. (1996). Sustainable Alpine Tourism Development: Towards a Self Improvement Approach. In K. Weiermair (ed.), *Alpine Tourism. Sustainability Reconsidered and Redesigned* (pp. 112-134). University of Innsbruck.

Wittel, L., & Löfgren, M. (2007) Classification of Quality Attributes. *Managing Service Quality*, *17*(1), 54-73

Woods, M., & Deegan, J. (2003). A Warm Welcome for Destination Quality Brands: the Example of the Pays Cathare Region. *International Journal of Tourism Research*, *5*, 269-282.

Zhang, H. Q., & Chow, I. (2004). Application of Importance-Performance Model in Tour Guides' Performance: The Evidence from Mainland Chinese Outbound Visitors in Hong-Kong. *Tourism Management, 25*(1), 24-36.

Żemła, M. (2004). Product Quality Policy of Polish Ski Resorts. *Hotellink*, 4, 275-284.

Żemła, M., Chudy-Hyski, D., & Cieślikowski, K. (2004). *Ski Resorts in Poland. Marketing Research Final Report*. Katowice: Katowice School of Economics.