

# The incorporation of Human Sigma within the Tourism Industry for Customer Satisfaction

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**Abstract:** The tourism sector has a service-oriented nature, where staff interaction with customers becomes crucial, and HumanSigma, a new philosophy, has become particularly significant. The purpose of this paper is to explore how HumanSigma can improve employee engagement and customer satisfaction in the tourism industry, enhancing the overall business performance.

It was realized that HumanSigma includes many aspects that are relevant and can be immediately applied to the tourism industry. Research has shown there is a direct correlation between employee engagement and customer satisfaction. Furthermore, it has been shown that organizations in the tourism sector that implement HumanSigma tend to perform better financially. The HumanSigma metric has been proven to be a valuable evaluation tool for measuring the level of engagement. A more quantitative methodology is required to implement in practice the metrics of HumanSigma in tourism organizations. The present research aims to focus on the aspects of HumanSigma that are critical to the Tourism Industry, with the primary objective of benefiting this sector.

**Keywords:** HumanSigma, Tourism industry, Engagement, Customer Satisfaction

## 1. Introduction

The tourism industry remains one of the fastest-growing sectors of the global economy despite the complaints and concerns about controlling its impacts and the massive influence it has on society, local communities, and the environment. In a continuously changing social and economic environment, organizations face a wide range of challenges. Among the most critical is ensuring long-term survival and sustainability. A key factor contributing to organizational sustainability is the development and maintenance of customer loyalty. Loyal customers not only exhibit a consistent preference for an organization's services but also play a significant role in attracting new clientele through positive word-of-mouth. Recognizing the strategic value of customer retention, many organizations prioritize the attraction and long-term engagement of loyal customers as a central component of their business strategies.

Hence, the next concern is how to be able to establish a loyal customer base. In the theory of service science, many factors contribute to the creation of a loyal

base. Quality provision (service quality), customer satisfaction, generation of value, creation of experiences, and customer loyalty seem to be the most important aspects of enhancing the connection between the customer and the organization. Following these aspects, many research attempts have been made to provide the appropriate information and guidelines to organizations in order to succeed in their efforts.

A rather new concept in the services industry is customer engagement, which measures the attachment of customers to the organizations that they have already tasted as customers. It is not irrelevant to loyalty, as it may be considered as a predecessor of it.

Moreover, another aspect seems to be more effective and important because it can intervene in all the above, and this is the human factor. The human factor includes not only customers but also the entire human workforce inside the organization. A new theory, called HumanSigma (HS), manages to include and analyse this factor in all functions of a tourism organization. Its main ideas include the engagement of both the workforce and customers while examining, at the same time, the interaction between them.

Nevertheless, in this paper, we examine only one side of this interaction, which is the side of the customers, where HS goes beyond their simple satisfaction and tries also to engage them, in order to become constantly loyal to the organization.

## **2. Theoretical framework and background**

### *2.1. Tourism industry*

The tourism industry represents a complex sector, encompassing a wide range of businesses and activities. Central to its operations is a consistent commitment to delivering high-quality services to customers (tourists). The provision of service quality is both a dominant and critical factor in the industry's success.

Certain specific sub-sectors in this industry are transportation, accommodation, food and beverage, attractions, travel services, and events.

The tourism industry has several unique characteristics that differentiate it from other sectors and shape its dynamic nature. Some of them are similar to the services industry, such as:

- **Intangibility:** Tourism services cannot be touched or owned by persons. Customers just experience them, but they cannot physically possess the service itself until they enjoy it.
- **Inseparability:** The service provider and the consumer are often present at the same time and in the same place during the delivery of tourism services.

- **Variability:** The quality of tourism services can vary significantly based on the provider, location, the persons involved, and the time frame. Even in the same organization, customer experiences may be different.
- **Perishability:** Tourism products or services cannot be stored or saved for later use.

Other special characteristics of the tourism sector as presented in Zhang et al. (2009), are coordination intensive, information-intensive, product complexity, and complex dynamics.

Finally, considering many more parameters and the rapid change in economy and society, we must also consider the following characteristics of the tourism industry:

- **Seasonality:** Tourism demand can fluctuate based on seasons, holidays, and special events.
- **Cultural Exchange:** Tourism encourages interaction between different cultures, allowing travellers to experience local customs, traditions, and lifestyles while at the same time bringing fresh perspectives to the host communities.
- **Economic Impact:** The tourism industry significantly influences local economies, frequently serving as a primary source of income and employment in various regions.
- **Environmental Impact:** Tourism can impact natural and cultural environments, making sustainable practices essential to manage resources and preserve destinations for the future.
- **Technological Advancements:** Advances in technology, particularly in online booking, mobile applications, and targeted marketing, have reshaped how tourism is promoted and experienced.
- **Vulnerability to Risk:** The tourism industry is highly sensitive to global events such as natural disasters, political instability, health crises (like pandemics), and economic downturns, all of which can significantly affect travel behaviour and industry stability.

Another important aspect of the tourism industry is that employees and customers have a close and unique interaction that can generate strong relationships. This service encounter is being viewed as highly complex and multidimensional (Laing and McKee, 2001). Fleming and Asplund (2007) have studied and discovered that the engagement between customers and employees varies from location to location, even inside the same organization. They claim that the measurement of this engagement should be realized at a local level. It is one of the issues that HumanSigma is concerned with, and it is analysed later in this article.

## *2.2 Customer satisfaction and more*

Service quality and customer satisfaction remain major topics in tourism and hospitality research and they have been extensively researched in recent years.

Customer satisfaction research includes examining the satisfaction level, the critical factors that lead to it, and suggestions of ways to improve it. Moreover, customer satisfaction plays a significant role in certain aspects of organizational success, such as customer loyalty, market share, and organizational profits (Nunkoo et al., 2025). Therefore, many organizations from the tourism sector make serious attempts to enhance it (Maher and Kamar, 2007).

Of course, service quality is one major factor that leads to customer satisfaction (Shyju et al., 2023). A quality service provided, service, as assessed by users, it creates satisfied people/customers. Therefore, customer satisfaction is a construct related and similar to service quality, and many researchers have used SERVQUAL dimensions to study customer satisfaction (Narayan et al. 2009). SERVQUAL is a 22-item scale for measuring service quality and was introduced by Parasuraman et al. (1988). Regarding this aspect, customer satisfaction is evaluated as the difference between expectations and the real experience of the clients. Customer satisfaction can express an emotional response that is derived from an individual experience after comparing the actual performance of a service to its expected performance (Bayih and Singh, 2020). It was also stated that customer satisfaction of service quality has a mediating role between customer experience and customer loyalty (Lemy et al. 2019).

A bibliometric analysis conducted by Shyju et al. (2023), exposed the trending topics in service quality and customer satisfaction research and concluded that customer satisfaction remains one of the prolific themes in 2016 and continued to be such, until 2020. In another literature review by Nunkoo et al. (2025), it was concluded that tourism and hospitality has remained a key source of knowledge on customer satisfaction. In the article of Bowden (2009) about customer engagement, it was concluded that organizations insist on gather data about satisfaction metrics, in the belief that high levels of satisfaction may lead to increased customer loyalty, intention to purchase, word-of-mouth recommendation, and other financial gains.

Regarding the outcomes of customer satisfaction, it seems that consumer and brand loyalty remain the most important outcomes (Prayag et al. 2019). However, as the same authors stated, researchers should also investigate the influence of other determinants of loyalty. In the same study, which was a systematic analysis in the tourism and hospitality fields literature, it was suggested that higher satisfaction levels are strongly associated with stronger repurchase and revisit intentions. Being competitive is another advantage provided to the organizations when ensuring customer satisfaction (Nunkoo et al. 2025).

Generally, it is crucial for managers in the tourism industry to gather information from customer satisfaction metrics in order to understand and identify the real needs and requirements of customers (Kim, 2008).

Except the customer satisfaction, there are many concepts that seem to be important in the tourism industry, as customer experience and customer engagement, which are presented in the next section.

Pine and Gilmore (1998) highlighted that we have already been transferred from a service economy to an experience one. Customer experience should be referred to as the creation of unforgettable experiences for customers, which attracts them back to the destinations they have visited. It could be an essential antecedent to behavioral choices of tourists like revisit intention (Wei et al. 2019). Human emotions are considered crucial in affecting and enhancing customer experiences (Bastiaansen et al. 2019).

### *2.3 Six Sigma, HumanSigma and engagement*

HumanSigma is a concept that originated from the Six Sigma methodology and, unlike its predecessor, is applicable mainly in the service industry.

Six Sigma is a quality-driven methodology that attempts to reduce errors in the field, and, therefore, process variability. Its basic approach is that all business processes can be measured and optimized. One organization can achieve Six Sigma quality when in all processes the faults are below 3.4 per million opportunities.

It was first introduced in the manufacturing industry, where it seems to be more appropriate and applicable. However, services industry, with its rapid development, created many more needs and demands, and it managed to incorporate Six Sigma in many of its applications. Six Sigma managed to enter into services industry, by improving the quality of services provided, and therefore making customers more satisfied, and attached to specific organizations. It has become very popular in service organizations such as: banks, hospitals, and financial services (Antony et al. 2007).

Services industry remains a field with many peculiarities, and Six Sigma cannot cover all of them.

For example, we cannot capture and present all activities of an organization in process terms.

Some other potential difficulties are (Antony et al. 2007):

- Data are not readily available for analysis
- The accuracy and completeness of the data are often problematic
- The source of the data are the customers, and the organization has low bargaining power.

Another aspect of services industry is the existence of human behavioural interaction, which is directly associated with the delivery of service. This human aspect seems to be difficult to manage and evaluate, and many times it is unpredictable. A major issue in HumanSigma theory is the engagement of both customers and employees, which can be derived from the employee-customer encounter that HumanSigma measures and manages.

Customer engagement is a measure of the extent to which customers are committed to an organization, a brand, and/or the employees of an organization (Buckingham and Coffman, 2003). Customer engagement is considered a precursor to experiences, given that customers must be engaged with a brand to

create positive experiences and that customer engagement occurs as a micro experience within a customer's broader experience (Islam et al. 2016).

Hence, having studied many aspects of the services industry and with a need to create a methodology that can produce not only satisfied customers but also engaged ones, HumanSigma has emerged.

It was initially created by Fleming and Asplund (2007), who were executives in Gallup Consulting organization. This theory examines employee and customer engagement and their interaction and how these aspects could be pursued by the organisations. In other words, it is a methodology that deals with the human factors inside organizations. Namely, it is a more strategic approach of examining the customer and stakeholders' relationships (Fleming and Asplund, 2007). It positions front-line workers and customers to the center of management focus (Sutton, 2013).

It produces specific metrics in the form of questionnaires to examine human aspects regarding employees and customers' interaction and attitudes towards a specific organization. More specifically, it utilizes a metric (called HumanSigma metric, or HS) that measures all types of engagement and connects them directly with better organizational performance. This ranking is called HumanSigma 1-6, and it classifies companies in this ranking (1 to 6), where 6 is the optimum level. This theoretical construct has been tested and affirmed empirically in hundreds of companies through the contribution of Gallup Consulting. More specifically, for the examination of the customers' engagement, it applies 11 key questions (called CE11), that serve as an indicator of the organization's level of customer engagement.

This theory considers customer satisfaction to be quite important; however, it goes one step beyond, and by examining emotional aspects, it claims that the customer should also be emotionally satisfied to create an emotional attachment to the organizations. This emotional aspect can produce a deeper framework, containing issues such as loyalty, which could convert the customers to advocates of organizations.

As previously referred to, an important aspect of the theory is the engagement of both employees and customers, which is considered as an emotional construct. Hence, the measurement and management of the employee-customer encounter must acknowledge the critical emotional infrastructure of human behavior (Sutton 2014a). The assessment of both employees and customers engagement levels and the engagement scores are leading indicators of the financial performance that a business hopes to achieve (Fleming and Asplund, 2007).

More especially, in the tourism and hospitality sector, value is created when an employee of an organization meets and interacts with a customer (Fleming and Asplund, 2007). As stated by Fleming et al. (2005) each employee-customer encounter, every sale, and every call-center or other type of conversation creates or erodes value for a company.

HumanSigma functions in an organization and focuses on accepting human nature and capitalizing on it to manage employees, motivate them, and accelerate development to ultimately engage the emotions of the organization customers (Sutton 2014a).

Fleming and Asplund (2007) base the development of their theories in five principles:

- The employee and customer experiences cannot be managed and measured as separate entities
- Emotion frames the employee-customer encounter
- The employee-customer encounter should be measured and managed at the local level
- HumanSigma metric is related to financial performance by quantifying the effectiveness of the employee-customer encounter
- Deliberate and active intervention is required to improve HumanSigma performance through a combination of transactional and transformational activities.

The same authors suggest that there are four filters through which customers evaluate organisations:

- Confidence: Is this organisation reliable?
- Trust: Can I trust the employees of the organisation?
- Integrity: Am I treated the way I deserve?
- Service recovery: Can the organization fix the possible problems quickly?

As Batra (2017) reported, the salient features of HumanSigma are that it is an emotional theory (construct) and it focuses on raising the quality of employee and customer engagement, while ensuring that each employee-customer encounter is almost perfect.

However, the salient features of Human Sigma are provided first and are stated below.

### **3. Findings (the importance of HS in organizational performance)**

Many studies have already presented the values of HS in creating not only customer satisfaction, but also better financial performance. As mentioned, HumanSigma is a methodology that focuses on people and measures certain characteristics in order to optimize business performance.

As Maher and Kamar (2017) stated, HumanSigma is a continuous improvement technique that seems to be able to properly measure and manage employee-customer engagement in tourism and hotel industry.

In a study by Sutton (2014a) realized in the hotel industry, it was stated that the employee-customer encounter becomes even more vital in terms of service

excellence and business improvement, and over half of the customers strongly agreed or agreed that having a connection with the staff improves their service experience. The findings of the same study propose that self-employee congruence has an impact on customer interactions, relationships, satisfaction, loyalty and trust. Most of the customers who were satisfied with a specific hotel/brand, stated that it is extremely likely to continue to choose this brand, and most of them were extremely likely to recommend it to others. Moreover, most of the clients agreed that the hotel was a name they could trust. Therefore, there is a positive relationship between customer-employee identification and satisfaction, loyalty and trust. For example, employee identification has a stronger impact on customer satisfaction. Satisfaction has been defined primarily an affective construct (Oliver, 1996), hence the impact on employee identification upon satisfaction is strong.

The concept of engagement has been explored in the organisational behaviour literature and could be considered as a means of predicting financial performance (Saks, 2006). Increased customer engagement can produce increased retention, increased productivity, increased customer loyalty and increased profit (Buckingham and Coffman, 1999). Customers who are fully engaged represent a great percentage in terms of profitability, revenue, as compared to the average customer (Fleming and Asplund, 2007).

Fleming and Asplund (2007) have produced many meta-analyses studies, where it was evident that the organizations implementing a HumanSigma management system outperformed all other companies in gross margin and sales. As stated in (Sutton 2014b), the enhanced customer and employee engagement accelerated the financial performance of organizations. Fleming and Asplund (2007) highlighted that organizations at a better level of HS, are much more effective financially than others functioning in lower levels.

The findings of research referred to in (Harter et al. 2004), indicated that management focused on engaging employees and customers will maximize its financial return in terms of the human aspects it can directly influence.

#### **4. Conclusion**

HS seems to be the appropriate methodology to enhance customer satisfaction in the services industry and more specifically, in the tourism industry, where human interactions are dominant. By creating an environment that engages both customers and employees, it establishes a stable, human-centered framework. The framework concerns the human aspects in an organization, and it seems to be crucial for producing better performance in many fields.

Customer satisfaction can be a major indicator of organizations' success in the tourism industry; however more human aspects should be analyzed. One of them is the passion that can be created and spread among the customers. Passionate customers are attached to the organization they prefer most and can also be advocates for them.

The most important aspect of the theory is that through the enhancement of customer and employee engagement, loyal customers can be created. The concept of engagement is a major subject in HumanSigma theory and could be the main goal of the organizations. However, most organizations value other achievements more than financial ones and do not consider engagement as a serious aspect (Marr, 2012).

Many more studies are needed to test HumanSigma metrics in the whole spectrum of the tourism industry. However, it has been proved that it is a valid instrument, and it examines crucial factors of services provision, which is human interactions.

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