# The **importance-performance** analysis model of **dark immersive theatre experiences**

## O modelo **importance**-**performance** analysis das **experiências de teatro imersivo de terror**

MIGUEL BELO * [miguel.belo@eshte.pt]

NUNO GUSTAVO ** [nuno.gustavo@eshte.pt]

**Abstract** | Despite Dark Immersive Theatre Experiences (DITE) growing in popularity in recent years, little research has addressed tourists' satisfaction with such experiences. The aim of this research is to understand the motivations and satisfaction levels of DITE participants in Portugal in order to assess the success of these experiences in meeting customer expectations. DITE participants were provided with a list of attributes and asked to rate the importance of and satisfaction with each feature. Importance-Performance Analysis (IPA), which has been extensively used in tourism studies to examine tourists' satisfaction, was used to compare these scores and identify areas of management concern. The results obtained in this study highlight eight items for DITE managers to focus their future resource allocation on: "hyper-realistic experience", "scary experience", "adrenaline rushes", "intense emotions", "testing limits", "self-discovery", "coparticipation", and "unique experience". Furthermore, "atmospheric suspense", "captivating plot", and "having fun"were reported as important and performing positively. "Overcoming adversity"was found to have no need for additional resource reinforcement, and "quality of the cast"was suggested as performing positively despite not being as important. These findings can be used by DITE managers to allocate future resources effectively and enhance participants' satisfaction.

**Keywords** | Dark Immersive Theatre Experiences, dark tourism, Importance-Performance Analysis (IPA), Portugal

**Resumo** | O modelo Importance-Performance Analysis (IPA) tem sido amplamente utilizado por estudos na área do turismo e da hotelaria para examinar a satisfação de turistas. Apesar do recente crescimento global de popularidade das Dark Immersive Theatre Experiences (DITE), poucos estudos abordaram a satisfação de turistas nestas ofertas. O presente artigo pretende utilizar o modelo IPA para examinar em

* **PhD** in tourism. Estoril Higher Institute for Tourism and Hotel Studies. CiTUR - Centro de Investigação, Desenvolvimento e Inovação em Turismo
** **PhD** in tourism. Estoril Higher Institute for Tourism and Hotel Studies. CiTUR - Centro de Investigação, Desenvolvimento e Inovação em Turismo

que medida estas ofertas de dark tourism conseguem ir ao encontro das expectativas dos seus partici-pantes. Os resultados obtidos neste estudo destacam um total de oito itens para os gestores de DITE se concentrarem na futura alocação estratégica de recursos: hiper-realismo", "experiência assustadora", "descargas de adrenalina", "fortes emoções", "testar limites", "autodescoberta", "coparticipação" e "experiência inovadora". Além do mais, os itens "ambiente de suspense", "história cativante" e "experiência divertida" foram reportados como importantes com um desempenho positivo, "ultrapassar situações adversas" como item sem necessidade de reforço adicional de recursos e no item "elenco de alta qualidade" foi sugerido um desempenho positivo apesar de não ser tão importante. Os resultados desta investigação podem ser utilizados pelos gestores de DITE para alocar recursos de forma mais eficiente tendo em vista o aumento da satisfação dos seus participantes.

**Palavras-chave** | Dark Immersive Theatre Experiences, dark tourism, Importance-Performance Analysis (IPA), Portugal

## 1. Introduction

The immersive entertainment industry has made significant strides in recent years. Simultaneously, as dark themes continue to gain popularity, producers are well-positioned to create immersive experiences that captivate and engage audiences. With a focus on tourism integration, immersive entertainment is poised to become an integral part of the global entertainment landscape, offering unique and memorable experiences (Brigante & Elger, 2020).

DITE have experienced a significant surge in popularity globally, particularly in recent years. This growth can be attributed to the production of innovative DITEs that continue to captivate an increasing number of individuals. Notably, the demand for immersive entertainment has propelled immersive theatre experiences, often set in darkness, to the forefront of consumer preferences. Furthermore, DITEs hold great potential as dark tourism products. This assertion is supported not only by their expanding global popularity but also by the intriguing fact that a substantial portion of DITE enthusiasts are frequent travelers who actively seek out these experiences during their journeys. As a result, there is a compelling argument that DITEs should be thoughtfully designed to ca-

ter to the demands of tourist markets (Belo & Gustavo, 2023).

The IPA model is extensively used in tourism studies to evaluate the alignment between customer expectations and product or service attributes. In fact, looking at satisfaction and importance values separately is ineffective in assessing a particular tourism site's success in meeting participant needs (Ziegler et al., 2012). Therefore, the IPA model empowers decision-makers to make informed choices aimed at enhancing customer satisfaction and optimizing resource allocation. With a commitment to ongoing refinement and adaptation, the IPA model remains a valuable asset for businesses seeking not only to thrive in competitive markets but also to address the ever-evolving needs and preferences of their customers (Lai & Hitchcock; Sever, 2015).

In this line of thought, the IPA model is, in essence, based on the Expectation-Confirmation Theory (ECT). Oliver (1980) introduced the ECT, proposing that satisfaction is formed through the comparative assessment between the perceived performance of a particular product or service and the initial expectations that the consumer held before making the purchase. In the ECT, after the consumption of a given product or service, the degree of expectations becomes the reference point

upon which performance is judged. Therefore, the theory implies that the consumer compares the outcome of the experience against their initial expectations to assess their satisfaction (Zehrer et al., 2011). When a customer judges an outcome as equal to or better than expected, the customer is satisfied (Chen et al., 2022). Consequently, there are three possible outcomes. When the degree of performance exceeds the initial expectations, satisfaction is generated, leading to positive confirmation. When the degree of performance falls short of the initial expectations, dissatisfaction is produced, resulting in negative confirmation. When the degree of performance neither exceeds nor falls short of the initial expectations, neither satisfaction nor dissatisfaction is generated (Chen, 2014).

In this line of thought, the ECT highlights two major constructs: motivations and satisfaction (Han & Huyn, 2018). Motivations are the basis for behavior, being critical in explaining human behavior and elucidating the rationale behind individuals' actions (Ziegler et al., 2012). Motivation within tourism research seeks to explain why people travel, being a key component and driving force behind tourist behavior (Crompton, 1979). The role of tourist motivations as a fundamental prerequisite for achieving satisfaction has gained substantial recognition in the scholarly literature (Alexander et al., 2015). Crompton (1979) characterizes motivations as the intrinsic desires and needs of an individual. These motivations serve as a key variable that facilitates access to the factors that stimulate and direct behaviors of individuals (Mill & Morrison, 1998). In tourism, motivations occupy a vital position in the comprehensive understanding and predictive modeling of tourist behaviors (Yi et al., 2018). The extensive body of literature on this subject underscores that motivations function as the driving forces behind the choices, preferences, and actions of tourists, offering valuable insights into the decision-making processes and the subsequent experiences they seek to attain. Consequently, the study and analysis of

tourist motivations continue to be a cornerstone in the pursuit of a more profound comprehension of the multifaceted dynamics that underlie the tourism industry.

Satisfaction is the capacity of a certain tourist destination or activity to meet the needs and expectations of tourists: if participants' experience is understood, managers can provide answers to meet participants' expectations (Ziegler et al., 2012). Sato et al. (2018) define satisfaction as the ability of a product or service to effectively align with and fulfill the motivations of tourists. Consequently, the discourse on satisfaction leads to an exploration of the extent to which a product or a service can meet the expectations of the consumer (Joo, et al., 2020). Moreover, it is imperative to recognize that satisfaction is frequently conceived of as an emotional response (Han & Hyun, 2018). This viewpoint posits that satisfaction is intricately tied to the emotional well-being of the consumer, making it a multidimensional construct. In the work of Kotler and McDougall (1983), satisfaction was described as a profound sentiment of either pleasure or disappointment, arising from a comparative analysis between the initial expectations harbored by consumers and the ultimate outcome or experience provided by the offering. This comparison of expectations against realized experiences forms the core of the satisfaction paradigm and serves as a fundamental tenet in the examination of consumer behaviors and responses within the domain of tourism and beyond.

Despite the increasing popularity of DITE, little research has focused on the levels of tourist satisfaction associated with these experiences. This paper seeks to understand the motivations and satisfaction of DITE participants to assess the industry's success in meeting customer expectations. Through this analytical approach, the central aim is to discern the extent to which DITE, as a dark tourism product, succeed in meeting the expectations of their consumers. In doing so, this research aspires to shed light on the dynamics of custo-

mer satisfaction within the realm of DITE, thereby contributing valuable insights to the field of dark tourism.

## 2. Literature review

### 2.1. The Importance-Performance Analysis framework and its application in tourism research

The IPA model, a reference in the realm of management and strategic decision-making, was initially formulated and introduced by Martilla and James (1977). The primary purpose of this model was to serve as a diagnostic tool, offering businesses the means to evaluate and sustain managerial and strategic decisions with the ultimate goal of enhancing customer satisfaction. This model is based on the measurement of a set of items of a given product or service in two dimensions: importance attributed and perceived performance (Lai & Hitchcock, 2015). As suggested by Ziegler et al. (2012), the separate analysis of expectations or performance would be ineffective in improving products or services. For instance, the isolated examination of performance would imply that attributes associated with lower ratings would require intervention. However, if the attributed importance is even lower, it is suggested that consumers are actually satisfied with that specific attribute, so resource allocation could instead focus on other priorities.

The IPA plot classifies attributes into four categories or quadrants to set the priorities in allocating limited resources. In quadrant I (concentrate here), attributes associated with a higher level of dissatisfaction are contained. These attributes share the commonality of being assigned high importance by consumers but are concurrently characterized by low perceived performance. Therefore, this quadrant illuminates areas that

demand immediate attention and remediation to enhance the competitiveness of the product or service. Quadrant II (keep up the good work) encompasses items that exhibit positive performance and are thus deserving of continued investment. The rationale is that these attributes are accorded high importance by consumers. In quadrant III (low priority) are included attributes that, despite not demonstrating positive performance, do not warrant additional efforts due to their low importance. Lastly, quadrant IV (possible overkill) comprises items that perform exceptionally well, despite their relatively low importance. This quadrant hints at the possibility of an inefficient allocation of existing resources.
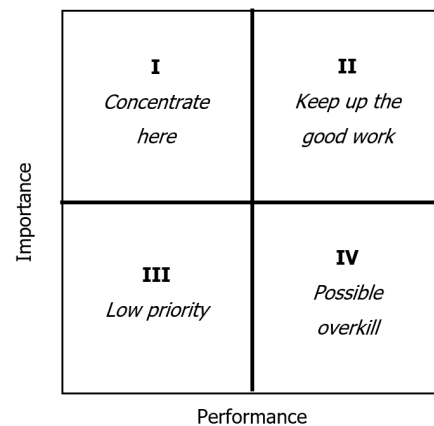


Figure 1 | The IPA basic structure (adapted from Martilla & James, 1977)

Therefore, the outcomes are translated into a graphical representation featuring four distinctive quadrants, with each quadrant indicating a different strategy for empowering managers and decision-makers to identify the areas of concern as well as the necessary actions for improving customer satisfaction (Dwyer et al., 2014). This, in turn, facilitates informed strategic planning for the future, efficient allocation of resources, and the minimization of potential disparities between attributes that are deemed important and those that may be underperforming (Zhang & Chan, 2016).

Initially designed for marketing purposes, it has

proven to be highly flexible and easily applicable across a multitude of fields and sectors. Notably, this model has found resonance and utility in domains beyond marketing, including the ever-evolving contexts of tourism (Sever, 2015). Its enduring relevance is a testament to its effectiveness in addressing the multifaceted challenges faced by businesses in their pursuit of customer satisfaction. In recent years, several studies of a wide range of different contexts included in tourism research used the IPA model, namely in casino tourism (e.g. Huang & To, 2018), cruise tourism (e.g. Ramanathan & Ramanathan, 2016), ecotourism (e.g. Birendra et al., 2018), gastronomic tourism (e.g. Pratt et al., 2020), hospitality competitiveness (e.g. Chen, 2014), job satisfaction (e.g. Pan, 2015), hospitality smartphone apps (e.g. Chen et al., 2016), medical tourism (e.g. Junio et al., 2016), natural protected areas (e.g. Sheng et al., 2014), nature tourism (e.g. Marasinghe et al., 2021), scuba diving tourism (e.g. Coghlan, 2012), shark tourism (e.g. Ziegler et al., 2012), smart tourism (e.g. Wang et al., 2016), sustainable tourism (e.g. Babu et al., 2018), theme parks (e.g. Fotiadis & Vassiliadis, 2016), tourism destinations' competitiveness (e.g. Albayrak et al., 2018), tourism destinations' image (e.g. Hahm & Severt, 2018), tourism destinations' management (e.g. Rašovská et al., 2020), tourism destinations' marketing (e.g. Jeng et al., 2017), tourism destinations' social media (e.g. Chen et al., 2022), tourism guides (e.g. Sulaiman et al., 2016), tourism impacts (e.g. Moyle et al., 2013), tourist office (e.g. Draper, 2016), tourist websites (e.g. Buhalis et al., 2020), travel agencies (e.g. Caber et al., 2013), urban tourism (e.g. Yuan et al., 2018) or zoo (e.g. Lee, 2015). Moreover, IPA analysis has been predominantly demand-oriented within the tourism literature with an overwhelming majority focused on the importance tourists' place on a certain experience, service, or product and how well a business or destination is doing at meeting the tourists' expectations (Chen, 2014; Cogh-

lan, 2012; Deng, 2007; Taplin, 2012; Ziegler et al., 2012).

Considering relevant methodological aspects of the IPA model, two aspects seem noteworthy. First, it is ideal to measure the importance attributed to attributes before the actual consumption of the product or service occurs. This temporal alignment with the consumer's decision-making process is crucial, as it resonates with the fundamental objective of the IPA model—to grasp the significance of each attribute in the intricate dance of consumer choices. In contrast, perceived performance should be evaluated post-consumption, encompassing the same set of attributes (Oh, 2001). Second, assessing the importance of these attributes traditionally involved a direct approach, with the formulation of sentences focused on the individual (Deng, 2007).

While the IPA model has proven to be a valuable tool, it includes certain conceptual and methodological constraints. An important aspect is related to a tendency for participants to report high importance for most attributes, positioning them in the first two quartiles (concentrate here or keep up the good work) (Taplin, 2012). This inflation of importance was characterized as the ceiling effect (Oh, 2001). According to Boley et al. (2017), this ceiling effect can be justified because researchers tend to select the key attributes of the product or service they intend to analyze, which are already important a priori. To address the issues associated with the ceiling effect, most researchers tend to use a data-centered approach. By using means to define the model's boundary locations, this approach has the significant advantage of dispersing the attributes across the various quadrants, allowing for relative comparisons between attributes (Azzopardi & Nash, 2013; Taplin, 2012). On the other hand, in Sever's view (2015), this type of boundary positioning favored in the data-centered approach contradicts the conceptual nature of the IPA model itself because it does not take into account potential discrepancies

between performance and importance.

The optimized positioning of the boundaries also seems to be an important challenge of the IPA model. Oh (2001) demonstrated that different approaches tend to position attributes in different quadrants because the distinct boundary locations associated with each approach yield significantly disparate results. For Bacon (2003), this highlights a certain subjective nature of the model, which can result in the formulation of imprecise recommendations. To address this issue, Oh (2001) suggests using the scale-centered approach, as it appears to be the most transparent interpretation of results.

Another issue is related to the lack of differentiation among attributes within the same quadrant, interpreting them uniformly regardless of their position within the quadrant (Sever, 2015). This matter is particularly relevant for borderline attributes, i.e., attributes positioned close to the boundaries of the matrix, as even a slight change in the means will have significant implications for the corresponding strategic action recommendation (Bacon, 2003). Hence, it becomes imperative to evaluate the positioning of attributes within the quadrants, with particular emphasis on their proximity to the limits delineating these quadrants (Azzopardi & Nash, 2013).

Quadrant IV (possible overkill) has also raised some concerns. Attributes that exceed expectations are often linked to positive indicators and even overall consumer satisfaction. For this reason, one should not rush to eliminate the resources allocated to attributes positioned in the possible overkill quadrant (Boley et al., 2017).

Despite this array of methodological and conceptual constraints, according to Coghlan (2012), the IPA model retains its utility, particularly in enhancing communication among managers and its contribution to directing the efficient utilization of resources, rather than comparing specific investments or operational changes. In fact, due to IPA's great usefulness, several authors have

proposed modifications to enhance its utility. One notable improvement involves the introduction of a diagonal line, often referred to as the iso-rating line, rotated at a 45-degree angle to divide the graphical representation into two distinct areas. This adjustment introduces an additional and critical consideration. Items positioned above the iso-rating line are deemed satisfactory, as their performance exceeds their assigned importance. Conversely, items situated below the iso-rating line are characterized as unsatisfactory, as their importance surpasses their perceived performance (Sever, 2015).

Later, under the argument that previous models did not take into account the context of the company, including market positioning and the marketing strategy of products and services, Lai and Hitchcock (2015) offered further adjustments to the IPA model, customizing it to niche market strategies, particularly those associated with products or services in the early stages of their life cycle. Their proposed modification entails a counterclockwise diagonal rotation of the iso line. This strategic shift facilitates the judicious allocation of limited resources, directing them toward the most critical aspects of the product or service, as illustrated in Figure 2.
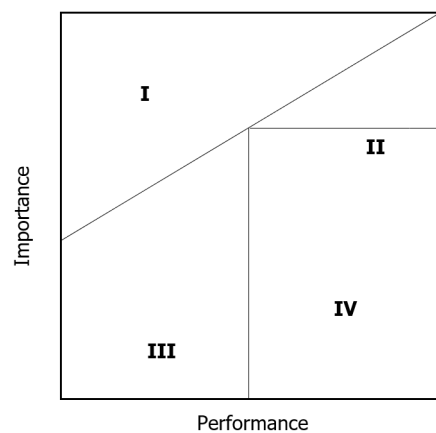


**Figure 2** | The niche market IPA structure (adapted from Lai & Hitchcock, 2015)

## 2.2. The global market of dark immersive theatre experiences

Tourism practices are undergoing diverse transformations, resulting in more specific patterns of production and consumption (World Tourism Organization, 2020). Despite dark tourism going back to the first steps of tourism activity itself (Krisjanous, 2016; Seaton, 1996), it seems to be one of the main current global trends (Stone & Sharpley, 2008). There seems to be a growth in popularity in the last decades, with emphasis in recent years, as tourists actively seek unique and enticing encounters (Cornell et al., 2019; Wright, 2018).

Dark tourism, as elucidated by Ashworth (2008), represents a niche within tourism, where the experiential dimension for tourists is fundamentally structured around the induction of emotive responses characterized as dark. These emotional responses encompass sensations such as pain, mortality, horror, and sorrow, many of which are generated by exposure to instances of violence or other distressing circumstances that typically fall outside of the conventional forms of voluntary entertainment-based experiences. This definition underscores the significance of comprehending the underlying motivations that drive individuals to deliberately expose themselves to experiences renowned for their capacity to evoke profound, dark emotions, all within the context of voluntary entertainment, particularly within the realm of emotional engagement. Furthermore, the concept of dark tourism itself is, in fact, wide and flexible, rather than being used as an umbrella term that integrates different subcategories (Light, 2017). One of these subcategories is DITE.

DITE can be described as a practice of voluntary entertainment that results from the compatible combination of the fundamentals of immersive theatre with the premise, topics, and effects of darkness (Belo & Gustavo, 2020). This unique genre offers participants an opportunity for voluntary engagement, placing them at the heart of the narrative, where their actions and choices influence the unfolding events. It's an experience that goes beyond traditional theater, blurring the lines between reality and fiction to create an unforgettable journey (Belo & Gustavo, 2023). DITE is notably reliant on the deliberate promotion of psychological horror and the elicitation of non-simulated fear. Engaging in such experiences, participants often report states of nervous excitement stemming from the inherent uncertainty regarding forthcoming events, which, in turn, serves to enhance the emotional responses they encounter throughout the course of the experience. This heightened emotional engagement tends to intensify the overall experiential impact (Biggin, 2017; Clasen et al., 2018; Clasen et al., 2019).

In recent years, DITE seems to have gained significant recognition and popularity, attracting both audiences and creators eager to explore this innovative form of entertainment. In 2019, the year preceding the COVID-19 pandemic, the "Immersive Entertainment Industry Annual Report"assessed the immersive entertainment market in the United States of America, estimating its value at approximately $10 billion dollars. Moreover, the immersive entertainment market experienced a remarkable 116% growth compared to the previous year, with the emergence of 775 new businesses (Brigante & Elger, 2020). In the United Kingdom, the "Immersive Economy in the UK 2019"report highlighted the presence of approximately 4.500 enterprises in the immersive entertainment sector, with 58% of them reporting increased revenues compared to the previous year (Kilkelly, 2020). This data reflects the industry's rapid expansion and dynamism.

In a recent study, Brigante and Elger (2020) surveyed North American individuals who identified as fans of immersive entertainment experiences. Their findings revealed that the majority of respondents selected immersive theater as their favorite form of entertainment (51.1%). This pre-

ference significantly outpaced other formats, with only 9.7% of participants selecting the next favorite option. Additionally, participants expressed a strong affinity for particular themes within immersive theater, such as mystery (14.5%), adventure (12.4%), drama (12.1%), fantasy (11.4%), and horror (11.2%). This data underscores the potential of immersive theater models, marked by surging popularity, the emergence of new businesses, and increased revenues. Furthermore, the study highlights the prominence of darkness as a prevailing trend, with participants selecting three dark themes (mystery, drama, and horror) among their top-five preferences in immersive theater.

In fact, DITE knows no geographical boundaries and can be experienced worldwide. While London, United Kingdom, and the United States, particularly New York and California, serve as key hubs for immersive experiences, other notable destinations include China, Australia, and various locations across Europe. Punchdrunk, a renowned production company, stands out as a trailblazer in the realm of DITE. Among their myriad productions, "Sleep No More"has been captivating audiences in New York since 2011, drawing over 2.3 million visitors. In 2016, they expanded their reach to Shanghai, where "Sleep No More"has attracted more than 400.000 visitors since its inception. Additionally, "The Drowned Man"garnered more than 170.000 visits during its run in London between 2013 and 2014. In Australia, Broad Encounters produced "A Midnight Visit", which has been captivating audiences since 2018 in Sydney, Perth, and Melbourne, attracting more than 10.000 visitors per season. However, its most notable success came in Brisbane, where it broke a 30-year-old record as the longest-standing theater season, previously held by "The Phantom of The Opera". Europe also boasts a host of popular immersive experiences. ShowSlot's "Zombie Inferno"has been a hit across Germany, while LETSGO's "Tacones Manoli"in Madrid and Teatro Reflexo's "Casa Assombrada"in Lisbon have

also garnered significant attention. These findings from different countries highlight the global reach and impact of the immersive entertainment industry. It appears clear that immersive experiences have resonated with audiences and have become a lucrative sector within the broader entertainment and creative industries. As such, the indicators suggest that the immersive entertainment industry remains poised for growth and innovation for the future.

Governments have also recognized the immense potential of the immersive entertainment market. In the United Kingdom, the epicenter of immersive entertainment experiences, the British government invested £2 million in projects within this domain in 2019 (JTB Tourism Research & Consulting, 2022). This financial support underscores the government's recognition of the sector's economic and cultural significance.

Delving into the characteristics of immersive entertainment productions, Bennett and Murphy (2020) discovered that the majority of these companies are relatively new and small-scale enterprises. A staggering 73% of such businesses employ between one and ten individuals, while 73% are engaged in fewer than five projects. Intriguingly, 31% of these businesses reported having no prior experience in the field of immersive entertainment. Kilkelly's (2020) study also highlights that 25% of immersive entertainment businesses identify themselves as start-ups. Moreover, Kilkelly's research indicates a significant level of financial interest in immersive experiences, with 33% of businesses reporting incomes ranging from £100,000 to £1 million, 10% falling between £1 million and £5 million, and 6% exceeding £25 million. According to data from Brigante and Elger's (2020) research, the mean price of immersive entertainment in the United States market is approximately $50. This price point serves as a crucial reference for businesses operating in this sector. It strikes a balance between making the experiences accessible to a broad audience while still ensuring the quality of

the immersive experience. With the continuous evolution and development of immersive offerings, producers must carefully consider the price point to attract audiences without diminishing their expectations. Brigante and Elger (2020) note that even a deviation of $10 from the mean value of $50 can have significant implications for participants' expectations. For every $10 above the mean, participants tend to anticipate a higher level of quality, while prices $10 below the mean may lead to more lenient expectations.

For the future of immersive entertainment, the findings of Brigante and Elger (2020) emphasize the importance of developing strategies that cater to tourists, as a substantial proportion (86.3%) of self-identified fans of the Immersive Entertainment Industry are occasional or frequent travelers who actively seek out immersive experiences. This data suggests that producers should design their immersive works with tourists in mind, tailoring their experiences in a way that can attract and engage them. By aligning with tourism trends, immersive entertainment can further expand its reach.

## 3. Methodology

The aim of this study is to understand the motivations and satisfactions of DITE participants in Portugal to assess the success of these experiences in meeting customer expectations. Participants in this study are consumers of DITE in Portugal who were either traveling for this purpose or expressed a specific interest in traveling to participate in such experiences. Data collection employed a combination of self-reported pre- and post-experience questionnaires to collect data and gain insights into the motivations and perceived performance of DITE participants.

Data collection was conducted at two distinct DITEs: 'Muzeum' and 'O Matadouro' (The Slaughterhouse). For 'Muzeum,' data was collec-

ted during the months of June and July in 2019, while data collection for 'O Matadouro' occurred in September and October of 2020. Each participant was required to complete both pre- and post-experience questionnaires, with each questionnaire taking between 5 to 15 minutes to complete. To ensure accurate data matching between pre- and post-experience responses, each participant was assigned a unique code. This coding system was crucial in linking their pre- and post-experience data. Subsequently, the collected questionnaire data was input into a pre-structured database.

The pre-experience questionnaire was divided into two sections. Given the study's focus on understanding the motivations and perceived performance of DITE participants, the IPA (Importance-Performance Analysis) model was used. This model serves as a management tool that evaluates the extent to which a particular experience aligns with customer expectations. It does so by measuring the same set of items in terms of the importance attributed by participants and their corresponding perceived performance.

In a prior study conducted by Belo and Gustavo (2020), a netnography analysis of social media comments made by DITE participants was carried out to identify reported reasons for satisfaction. This was followed by a subsequent study conducted by Belo and Gustavo (2021), which tested these reported satisfaction factors as motivational components influencing future engagement with DITE. This research led to the identification of five motivational components, comprising a total of 13 items.

The first motivational component, labeled "dark intensity", encompassed five items: "atmospheric suspense", "adrenaline rushes", "intense emotions", "hyper-realistic experience", and "scaring experience". The "survival" motivation included three items: "testing limits", "overcoming adversity", and "self-discovery". The "immersion" motivation incorporated two features: "uni-

que experience"and "coparticipation". The "the-atre"motivation consisted of two items: "quality of the plot"and "quality of the cast". Finally, the "fun"motivation was represented by a single item with a similar description.

In the first section of the pre-experience questionnaire, participants were asked to rate the importance of each of the 13 items associated with the five motivational components identified in Belo and Gustavo's (2021) study. They used a 7-point Likert scale, ranging from 1 (not at all important) to 7 (extremely important), to indicate the degree of importance they attributed to each item. The second section of the questionnaire gathered basic sociodemographic information, such as age and gender, to provide contextual information about the participants.

The post-experience questionnaire was designed to measure participants' perceived performance of the same 13 items used in the pre-experience questionnaire's first section. This section aimed to assess the extent to which DITEs met customer expectations based on their actual experiences.

## 4. Results

### 4.1. Sample

A total of 610 participants were considered for analysis. Among these participants, 55.4% were engaged in the 'Muzeum' experience, while the remaining 44.6% participated in 'O Matadouro.' Subsequently, the post-experience questionnaire was also completed by 344 participants, with 75.6% of them originating from the 'Muzeum' experience and 24.4% from 'O Matadouro.'

In terms of the sociodemographic profile of the participants, 51.9% identified themselves as females, while 48.1% identified as males. The mean age of the participants was 32.0 years old, with a standard deviation of $\pm$ 8.3 years. The age range of participants spanned from 18 to 70 years old, showcasing a diverse representation of age groups within the study's sample (Table 1).

Table 1 | Sociodemographic variables

| Variable | N | % |
|---|---|---|
| Age | 428 | 100.0 |
| 18-30 years old | 198 | 46.3 |
| 31-40 years old | 181 | 42.3 |
| 41+ years old | 49 | 11.4 |
| Gender | 428 | 100.0 |
| Female | 222 | 51.9 |
| Male | 206 | 48.1 |

### 4.2. The Importance-Performance Analysis of Dark Immersive Theatre Experiences

As showed in the literature review, the IPA model has been widely used in tourism studies to understand the motivations and satisfactions in a given tourist product or service to assess the success of that tourist product or service in meeting customer expectations. To the best of our knowledge, this is the first time such method is implemented in DITE as follows.

The findings of the study in relation to the IPA model and its application to DITE have been graphically represented in figure 3. The results indicate that the various items associated with DITE have been categorized into IPA's four quadrants. On an initial analysis, it is noticeable that eight out of thirteen items have been categorized into the first quadrant (concentrate here). The second quadrant (keep up the good work) includes three items, quadrant III (low priority) contains one item and, lastly, one single item falls into quadrant IV (possible overkill).

The upcoming analysis will specifically analyze each attribute. To this end, the five motivational components serve as reference for the interpretation of data.
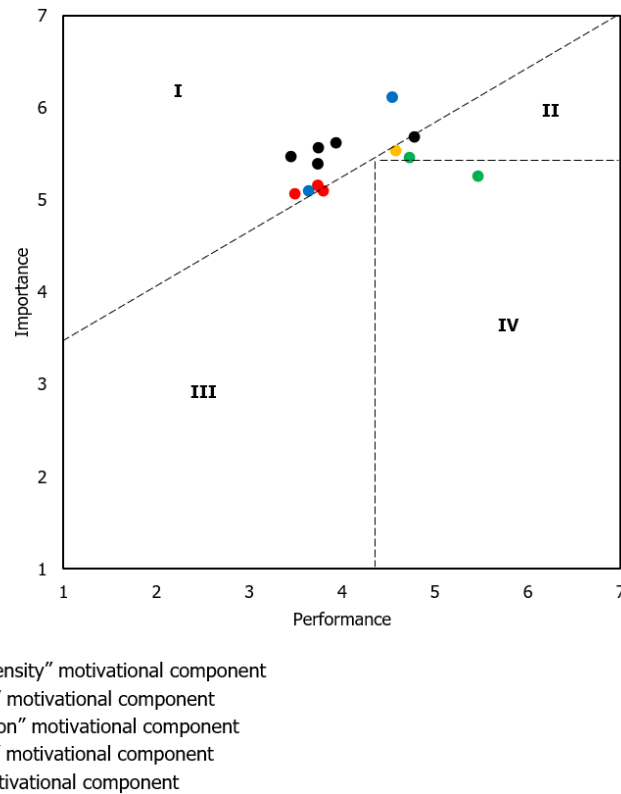
Figure 3 | The Importance-Performance Analysis of Dark Immersive Theatre Experiences

## 4.2.1. "Dark intensity" motivational component

Figure 4 shows the four items included in the "dark intensity" motivational component fall in two quadrants. Quadrant I ("concentrate here") comprises the items "hyper-realistic experience", "scaring experience", "adrenaline rushes" and "intense emotions". In its turn, quadrant II ("keep up the good work") integrates the item "atmospheric suspense".

DITE managers seem to be able to provide an overall atmosphere of suspense, which can include several elements such as scheduling the experiences during nighttime, in remote locations, with participants being discourteous, rude, or even aggressively treated at the moment they step into the experience. On the other hand, it seems that additional efforts should be made to provide experiences that can fully immerse participants to

the point that they forget they are in a context of entertainment (Belo & Gustavo, 2020), while delivering adrenaline rushes, inducing fear, and intense emotions.

These results emphasize the great importance given by DITE participants to dark elements, which contribute to reinforcing the growth of dark practices as a tourism trend (Brigante & Elger, 2020; Cornell et al., 2019; Stone & Sharpley, 2008). Furthermore, the idea posed by Wright (2018) about tourists actively seeking enticing experiences seems to occur in DITE, with participants attributing high importance to features such as "intense emotions," "scary experiences," or "adrenaline rushes." This also relates to the experiential dimension of the contemporary tourist experience and the induction of emotive responses (Ashworth, 2008).
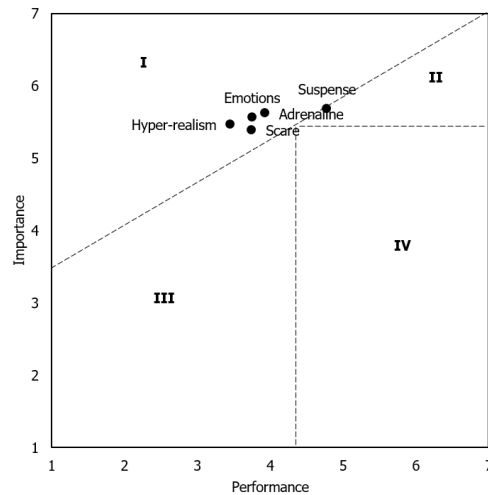
**Figure 4** | The Importance-Performance Analysis of the "dark intensity" motivational component

### 4.2.2. "Survival" motivational component

As demonstrated in the following figure 5, the three items associated with the "survival"motivational component are distributed across two quadrants. Quadrant I ("concentrate here") includes the items "test limits"and "self-discovery", while quadrant III ("low priority") contains the item "overcome adversity".

The results obtained highlight that DITE participants engage in such experiences on a journey of self-discovery, aiming to overcome the physical and mental challenges posed by the experience (Cla-sen et al., 2019). Participants seek to deal with darkness as a means to heighten emotional responses, which poses several challenges. By overcoming them, they improve their coping skills and ultimately learn more about their own reactions in situations they are not used to dealing with in their daily lives (Clasen et al., 2018).

It seems that DITE managers are able to provide physical and mental challenges to participants. However, this does not necessarily mean that participants feel they are testing their own limits and embarking on a journey of self-discovery.
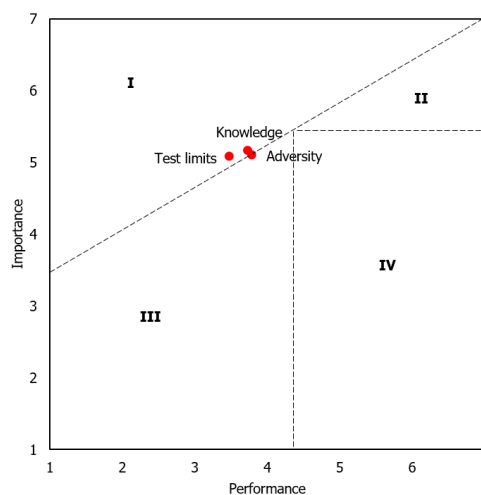


**Figure 5** | The Importance-Performance Analysis of the "survival" motivational component

### 4.2.3. "Immersion" motivational component

As exhibited in Figure 6, both items "copartici-pation"and "unique experience", which are part of the "immersion"motivational component, are categorized in quadrant I ("concentrate here"). As such, DITE managers should restructure the experiences in a way that reinforces the active role of participants, ultimately contributing to the perception of participating in a completely personalized and unique experience.

The high relevance attributed to immersive elements clearly underlines the relationship between darkness and immersive theatre (Belo & Gustavo, 2020), with participants engaging in an experience where they are placed at its center, even influencing unfolding events based on their own actions and decisions (Belo & Gustavo, 2023). Participants seem to feel very strongly about the concept of co-creation in DITE contexts, ultimately participating in an experience perceived as completely personalized and individual.
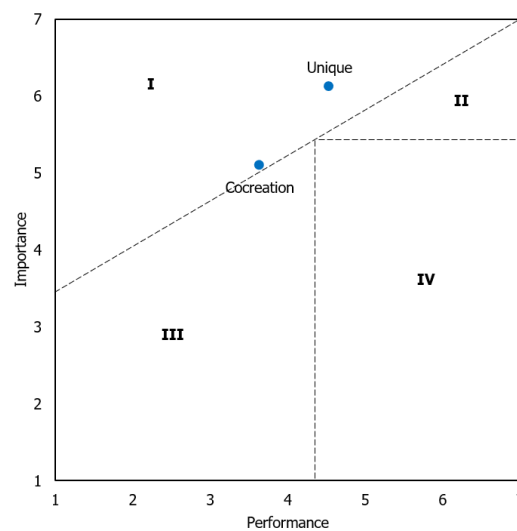


**Figure 6** | The Importance-Performance Analysis of the "immersion" motivational component

### 4.2.4. "Theatre" motivational component

As presented in figure 7, the two items included in the "theatre"motivational component fall into different quadrants. Specifically, "quality of the plot"is placed in quadrant II ("keep up the good work"), while "quality of the cast"falls within quadrant IV ("possible overkill"). Participants in this study report that DITE managers are successfully delivering on both attributes.

If DITE corresponds to the compatible combination of the fundamentals of immersive theatre with the premise, topics, and effects of darkness (Belo & Gustavo, 2020), participants in this study clearly identify two aspects on which theatre itself is based: the quality of the plot and the cast. Without these elements, the validity of the overall experience is compromised.
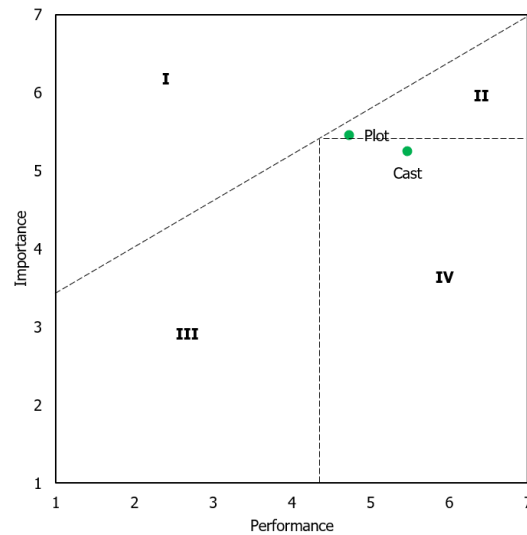
**Figure 7** | The Importance-Performance Analysis of the "theatre" motivational component

### 4.2.5. "Fun" motivational component

As displayed in figure 8, the item "to have fun"falls within quadrant II ("keep up the good work"). DITEs in Portugal are allowing participants to have fun.

Participants are drawn to dark experiences for the purpose of having fun. This highlights the subjective and plural nature of the contemporary tourist experience (World Tourism Organization, 2020). Individuals seek contexts where they can experience emotive and intense emotions, regardless of their nature (Biggin, 2017; Clasen et al., 2018; Clasen et al., 2019, 2008). Moreover, it is not clear that darkness is consumed negatively (Belo & Gustavo, 2023). Darkness is consumed for the purpose of entertainment (Ashworth, 2008).
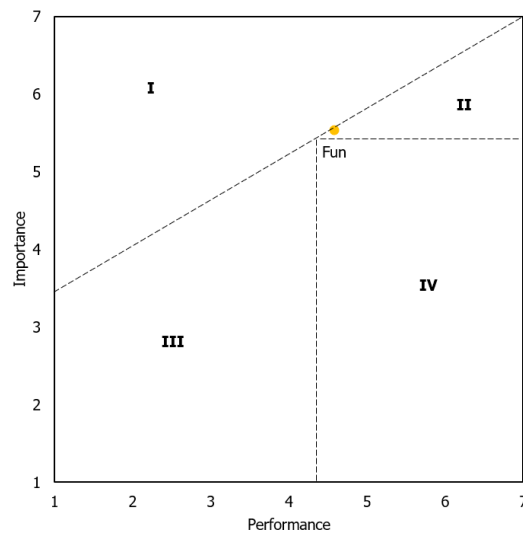


**Figure 8** | The Importance-Performance Analysis of the "fun" motivational component

## 5. Conclusion

This article employed the IPA model to examine the motivations and perceived performance of DITE participants in order to assess the success of this dark tourism product in meeting customer expectations. The analysis categorized the thirteen items considered into different regions of the model, suggesting various strategic actions for different items.

The results obtained in this study highlight a total of eight items for DITE managers to focus their allocation of future resources, as these items seem to perform poorly despite being reported as important: "hyper-realistic experience", "scaring experience", "adrenaline rushes", "intense emotions", "test limits", "self-discovery", "coparticipation", and "unique experience".

The findings emphasize that participants seek intense emotions, adrenaline rushes, and experiences designed to induce fear. Managers of DITE should craft immersive encounters capable of blurring the boundaries between fiction and reality, fully absorbing participants. Moreover, participants expressed the importance of engaging individuals in a manner that allows them to push their own boundaries, fostering a meaningful experience conducive to genuine self-discovery. Such experiences should be exceptionally innovative, affording participants the opportunity to engage in novel and previously unexplored activities. Notably, DITEs should emphasize the active involvement of participants, casting them as co-creators of their personal narratives. Therefore, future resource allocation strategies should be oriented towards enhancing these aspects.

In contrast, it is noteworthy that DITE managers in Portugal seem to have consistently created encounters that absorb participants entirely. They have been successful in creating an atmosphere submerged with suspense, delivering narratives of high quality, and ensuring that participants thoroughly enjoy their experiences. These aspects

emerged as central components, garnering positive ratings from participants.

Furthermore, our analysis revealed that the component of "overcoming adversity" occupies quadrant III, characterized as "low priority". This finding suggests that there might be no immediate imperative to allocate additional resources or attention to fortify this particular element in DITE. The relatively lower emphasis on overcoming adversity might indicate that participants in these experiences do not prioritize or expect such challenges, implying that the current approach adequately meets their preferences and desires.

Additionally, it is essential to underscore that participants consistently expressed a high degree of satisfaction with the caliber of the cast members involved in DITEs. Although this specific component was situated in the "possible overkill" quadrant, where there is a potential perception of excess, it is crucial to be prudent when contemplating any reduction in the resources allocated to this dimension. This caution is relevant as attributes that surpass preconceived expectations often play a pivotal role in shaping overall satisfaction levels. Consequently, any decision to reduce resources dedicated to the cast should be reflected upon, as these individuals contribute significantly to the overall immersive nature of DITE and may be integral to participants' overall satisfaction.

This study does present certain limitations. One noteworthy limitation pertains to the study's exclusive focus on two specific DITE experiences in Portugal, which may raise concerns about the generalizability of the findings. However, it is crucial to recognize that this limitation is an inherent characteristic of the phenomenon under investigation. DITE offerings are often marked by their restricted availability, typically limited to specific time frames, which unavoidably constrains the range of experiences that can be included in a study. It is noteworthy that, within this constraint, the study did encompass all available DITE productions during the specified data collection period.

Additionally, it is worth acknowledging that the post-experience phase of the study featured a smaller sample size compared to the pre-experience phase. Consequently, the full extent of potential bias in the study's results cannot be definitively ascertained. However, it is imperative to recognize that this reduction in observed cases is an inherent consequence of the longitudinal research methodology that was adopted.

The findings of the current research have significant implications for the strategic resource allocation practices among DITE managers within the Portuguese context. These outcomes allow managers to justify the allocation of future resources with a view to enhancing customer satisfaction through the alignment of offerings with their discerned expectations. In essence, the empirical results derived from this study serve as a valuable reservoir of knowledge, facilitating the dissemination of crucial information pertaining to the discernment of constituent factors that underpin the allocation of resources by the progenitors of these experiences. This dissemination is underpinned by a central aim: the refinement and reconfiguration of DITE to enhance their satisfaction levels among participants while considering the motivations that drive these individuals.

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## Appendix

**Appendix 1** | Descriptive statistics (pre-questionnaire)

| Variable | N | Mean score | Standard deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| To engage on a hyper-realistic experience. | 610 | 5.47 | 1.42 | 1 | 7 |
| To have fun. | 610 | 5.54 | 1.68 | 1 | 7 |
| For the quality of the plot. | 610 | 5.46 | 1.51 | 1 | 7 |
| To test my own limits. | 610 | 5.07 | 1.69 | 1 | 7 |
| To be scared. | 610 | 5.39 | 1.68 | 1 | 7 |
| For the quality of the cast. | 610 | 5.25 | 1.77 | 1 | 7 |
| To experience something unique. | 610 | 6.11 | 1.07 | 1 | 7 |
| To play a cocreator role. | 610 | 5.10 | 1.49 | 1 | 7 |
| To intensely experience emotions. | 610 | 5.57 | 1.47 | 1 | 7 |
| To be absorbed on an environment of suspense. | 610 | 5.69 | 1.46 | 1 | 7 |
| To overcome adverse situations. | 610 | 5.10 | 1.53 | 1 | 7 |
| To learn more about myself in contexts that I'm not to deal with daily. | 610 | 5.16 | 1.57 | 1 | 7 |
| To experience adrenaline rushes. | 610 | 5.62 | 1.53 | 1 | 7 |

**Appendix 2** | Descriptive statistics (post-questionnaire)

| Variable | N | Mean score | Standard deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| I engaged on a hyper-realistic experience. | 344 | 3.45 | 1.67 | 1 | 7 |
| I had fun. | 344 | 4.58 | 1.87 | 1 | 7 |
| The plot was high quality. | 344 | 4.73 | 1.49 | 1 | 7 |
| I tested my own limits. | 344 | 3.49 | 1.97 | 1 | 7 |
| I was scared. | 344 | 3.75 | 1.85 | 1 | 7 |
| The cast was high quality. | 344 | 5.47 | 1.48 | 1 | 7 |
| I experienced something unique. | 344 | 4.54 | 1.76 | 1 | 7 |
| I played a cocreator role. | 344 | 3.64 | 1.76 | 1 | 7 |
| I intensely experienced emotions. | 344 | 3.75 | 1.81 | 1 | 7 |
| I felt absorbed on an environment of suspense. | 344 | 4.78 | 1.69 | 1 | 7 |
| I overcame adverse situations. | 344 | 3.80 | 1.79 | 1 | 7 |
| I learned more about myself in contexts that I'm not to deal with daily. | 344 | 3.75 | 1.92 | 1 | 7 |
| I experienced adrenaline rushes | 344 | 3.93 | 2.02 | 1 | 7 |