

The transition barriers toward the circular economy for travel agencies in Egypt

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Abstract

This study investigates the transition barriers to the Circular Economy (CE) for travel agencies in Egypt. Drawing on a comprehensive literature review, the study develops a conceptual framework encompassing external and internal barriers to CE implementation. The research employs a quantitative approach with structured questionnaires distributed among managerial-level employees in Egyptian Travel Agencies. The study utilized Partial Least Squares Structural Equation Modelling (PLS-SEM) with SmartPLS 4 for analysis.

The study reveals that a significant majority (91.69%) of Egyptian travel agencies do not currently implement CE practices, with a prevalent representation of small and medium-sized enterprises. The analysis confirms that external and internal barriers significantly impact CE implementation. Notably, organization size moderates the relationship between external barriers and CE transition, while it shows no significant moderation for internal barriers.

This study pioneers a tested model for measuring CE barriers in the tourism industry of developing countries, offering original insights crucial for academia, practitioners, and policymakers. With a unique focus on Egypt, an underexplored region, it contributes to micro-level CE literature and sets the stage for similar studies. The introduction of the moderating effect of organizational size underscores the nuanced impact of organizational characteristics on overcoming challenges during the CE transition.

Keywords: circular economy, responsible consumption and production (SDG 12), travel agencies, developing countries, sustainability, Egypt

1. Introduction

In an era of uncertainty and global challenges, the pandemic, social unrest, and extreme weather events highlight the need to shift from business as usual (WBCSD, 2022). Projections indicate that by 2050, our linear economic model will require resources equivalent to three planets (Martinez-Cabrera and López-del-Pino, 2021). While initially profitable, linear business models expose companies to long-term market, operational, legal, and business risks (WBCSD, 2022). The COVID-19 crisis exacerbated these risks, prompting a reevaluation of the tourism industry's growth-centric model. Megatrends like digitalization, over-tourism, greenhouse gas emissions (GHG), and increased regulatory scrutiny challenged the sustainability of the status quo (UNWTO, 2020).

The Circular Economy (CE) prompts a mindset shift for businesses, allowing financial success while bolstering resilience and addressing sustainability challenges (WBCSD, 2022). Aryal (2020) finds that embracing CE practices can boost a country's workforce by 4%, reduce waste, and potentially cut carbon dioxide emissions by 70%. Therefore, many companies are adopting circular principles for cost reduction, increased revenues, and risk management. Around 70% of supply chain management companies invested in the circular economy in 2021. Governments in Finland, China, Chile, France, and the Netherlands are introducing regulations and policies, including the development of national CE roadmaps (Dawadi, 2022). However, the global economy is, so far, only 8.6% circular (WBCSD, 2022). Vatansever et al. (2021) assert that companies, despite incentives for a CE transition, often face substantial implementation barriers.

The literature on the circular economy predominantly concentrates on the manufacturing sector, with limited research available for the tourism sector (Khan et al., 2022; Vatansever et al., 2021). Moreover, according to Martinez-Cabrera and López-del-Pino (2021), the challenge of implementing the CE is an area that has received little attention. To date, only a limited number of studies (e.g., Khan et al., 2022; Martinez-Cabrera and López-del-Pino, 2021; Sorensen and Bærenholdt, 2020) have investigated CE barriers in the tourism industry. However, they were far from addressing this study's scope. The majority have adopted qualitative methods, characterized by their low sample size and limited generalization. However, at the initial stages of studying this relatively recent topic, the existence of these exploratory studies was necessary to establish a basis and guide for subsequent research.

Sorensen and Bærenholdt (2020) followed the Delphi Method to investigate barriers to the development of CE tourist practices and based their results on 32 Danish experts who were not only service providers but also bloggers, journalists, and public figures. Results indicated that the lack of political action to support CE innovations in tourism was the most frequently mentioned barrier. Martinez-Cabrera and López-del-Pino (2021) conducted a systematic review and semi-structured interviews with 33 tourism and CE experts, primarily from Spain and Europe. Stakeholders included policymakers, academics, consultants, and businesses. They identified macro-environmental challenges as the most pressing to circular tourism, such as insufficient government support and low social awareness. The study acknowledges potential regional bias in expert selection, emphasizing the need for future research to broaden perspectives beyond the current geographical scope. CEnTOUR (2020) notes that SMEs in the tourism sector, facing the challenges of transitioning from a linear to a CE model, lack the resources and skills needed for the shift. Khan et al. (2022) discovered that while tourism small and midsize enterprises (SMEs) express positive intentions towards the CE, many struggle to adopt circular practices. Financial pressures and a lack of skilled personnel and information on CE practices contribute to SMEs' hesitancy in implementation (Khan et al., 2022).

Kirchherr and van Santen's (2019) review of CE literature underscores a notable absence of empirical studies. Calls for more research emphasize the crucial need for a comprehensive understanding of the challenges impeding the CE transition (De Jesus and Mendonça, 2018; Martinez-Cabrera and López-del-Pino, 2021). Various studies highlight the significance of micro-level research on CE implementation to provide managers with insights into overcoming barriers and facilitating enterprises' transition to a CE (Kerstjens, 2021). According to CEnTOUR (2020), transitioning to a CE can be overwhelming for SMEs in the tourism sector. Beyond comprehending the principles and core strategies, questions arise: "How circular are my current operations? Which stakeholders should be involved to accelerate the process? What are the short-term benefits? Are there key barriers to overcome?"

A limited understanding of the CE concept contributes to the scarcity of academic resources in tourism (Vargas-Sánchez, 2018). There's a call for a robust theoretical foundation from CE literature, incorporating empirical data and context-specific models for the tourism sector.

Despite the above-mentioned pressing need to adopt CE, the investigation of CE aspects in Egypt is still in primitive stages, with no evidence yet of any endeavor to embed this concept in the tourism industry. Before this paper, there was no similar study on circularity in tourism in Egypt or any Arab country.

Given the gap in investigating CE in the tourism industry, the author seeks a more in-depth exploration of the topic. This study will encompass theoretical knowledge and an empirical investigation involving invited travel companies. Although the tourism industry is driven by demand-side customer experience, a supply-side perspective is essential in transitioning to a CE model (Economic Commission for Europe, 2022). Hence, this paper aims to evaluate the integration of CE measures in the operations of travel agencies in Egypt and explore any potential barriers preventing them from incorporating CE into their business model.

This study doesn't aim for final solutions but seeks insights into barriers affecting tourism service providers in developing countries. Addressing these barriers can ease the transition to a CE. Thus, the paper explores two main questions:

(RQ1) To what extent are travel agencies in Egypt implementing the CE concept?

(RQ2) What are the most impactful barriers travel agencies in Egypt face while implementing CE practices?

2. Literature review and model development

2.1 Conceptual supply-side perspectives on CE and tourism sustainability

Jones and Wynn (2019) suggest sustainability management is integral to the tourism and hospitality industry, encompassing circular economy concepts like water, waste, and energy management. The CE approach, designed to be regenerative, focuses on retaining the value of circulating resources through innovative business models (WBCSD, 2022). This approach, summarized as the 3R Strategy (Reuse, Recycle, Reduce) (Ghisellini et al., 2016), aims to extend a product's life cycle (Hernandez et al., 2020) to minimize waste. Expanded to 12 Rs, it includes repair, refurbish, repurpose, redesign, remanufacture, research and development, reskilled personnel, reverse supply chain management, and the re-industrial green revolution (Dawadi, 2022).

The CE concept is gaining attention globally, particularly among policymakers and businesses (CEnTOUR, 2020). Despite the predominant focus on production industries (Sorin and Einarsson, 2020), the tourism sector has been largely overlooked in CE initiatives and analyses (Manniche et

al., 2020). However, the tourism industry holds significant potential for achieving higher sustainability and profitability through CE practices (Manniche et al., 2020), emphasizing the need to recognize the role of travel and tourism in the global CE transition (UNWTO, 2020). Travel and tourism actors can play a crucial role in promoting circularity, benefiting from shared circular value creation within relevant value chains (UNWTO, 2020). The rapid rise of disruptive technologies, exemplified by platforms like Airbnb, Homestay, CouchSurfing, and Uber, has revolutionized the tourism industry, signifying its ongoing transformation (Dawadi, 2022). Manniche et al. (2020) assert that the CE is relevant for all tourism SMEs, irrespective of their self-perceived environmental stance.

Tourism industry sectors and actors vary in asset and material use, servitization level, customer engagement, and circularity potential (Sorin and Einarsson, 2020). As a result, CE transformation pathways will differ between sectors and market contexts (UNWTO, 2020). "Asset-light" businesses providing non-tangible services, like travel agencies, significantly shape circular business models, processes, and supplier selection (Economic Commission for Europe, 2022). They play a central role in building the circular narrative, providing resources, and fostering change capacity through solutions or dialogues with customers, destinations, and key stakeholders (Sorin and Einarsson, 2020). Prioritizing sustainable CE initiatives in tourism, alongside transparent storytelling, serves as a crucial differentiator. This not only drives cost reductions but also fuels innovation in products and services. As the demand for sustainability and purpose shifts from a 'nice to have' to a 'need to have,' aligning with consumers' growing expectations, early adopters in the tourism industry gain a distinct edge (Sorin and Einarsson, 2020). The CE provides a compelling paradigm and tools to guide the industry towards a more sustainable future (UNWTO, 2020).

Sorin and Einarsson (2020) stress long-term supply-side trends influencing the travel and tourism industry, emphasizing innovation, sustainability, health and safety, and cost optimization for competitiveness. A central challenge for tourism operators is to provide highly memorable experiences while significantly reducing environmental impact. Concurrently, the industry must innovate in services and products to add customer value. The CE, as a holistic concept and a pathway to sustainable development goals, presents a promising strategy to meet these challenges (CEnTOUR, 2020).

2.2 Tourism SMEs' transition barriers to the CE

The transition from the Linear Economy (LE) to the CE poses challenges for businesses (Vatansever et al., 2021). With most of the focus on manufacturing SMEs, a growing body of literature has emerged to address the diverse challenges faced by businesses that influence the transition to a CE (e.g., Dey et al., 2020; Kerstjens, 2021; Ormazabal et al., 2018; Mura et al., 2020).

According to the literature, CE barriers can include a variety of factors. (1) lack of financial resources (Rizos et al., 2016; Vatansever et al., 2021; De Jesus and Mendonca, 2018; Farooque et al., 2019). Robaina's (2022) study identifies high implementation costs and financing challenges as the primary barriers to implementing CE practices in hotels. Securing funding for the necessary CE innovations, especially for SMEs, is a notable challenge (Ranta et al., 2018; Rizos et al., 2016). (2) inadequate engagement and support from supply chain actors (Farooque et al., 2019; Rizos et al., 2016; Vatansever et al., 2021). Robaina (2022) asserts that the effectiveness of efforts in the CE transition relies on tourists' circular behavior. Furthermore, the attitude of SME managers is a pivotal factor influencing the CE transition of SMEs (Rizos et al., 2016). (3) lack of awareness of

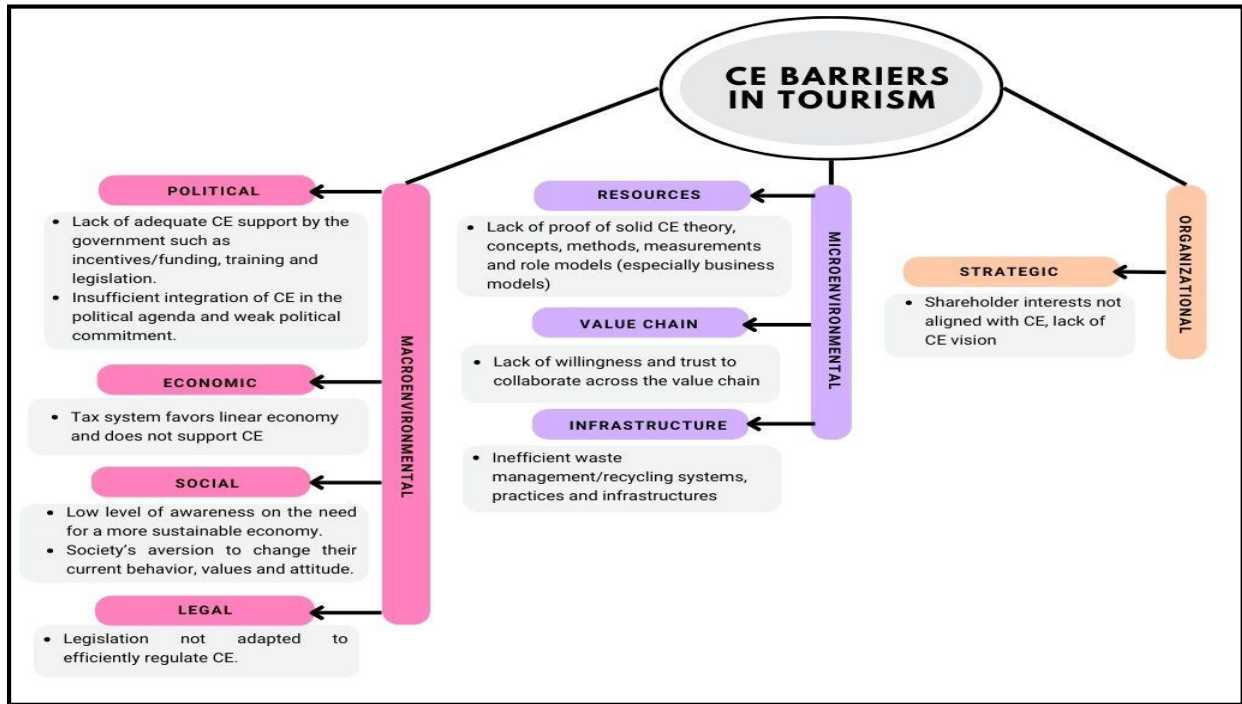
CE (Govindan and Hasanagic, 2018; Rizos et al., 2016; Vatansever et al., 2021). Karam (2020) noted that Egyptians' limited awareness of CE confines its application to clean energy production, clean water, and solid waste management. (4) technology barriers (Farooque et al., 2019; Govindan and Hasanagic, 2018; Kirchherr et al., 2018; Vatansever et al., 2021). Martínez-Cabrera and López-del-Pino (2021) argued that a lack of technology is one of the external CE transition barriers.

Studies categorize barriers to CE differently. Farooque et al. (2019) list barriers such as "lack of economies of scale," "organizational culture and management," "weak environmental regulations and enforcement," "uncertainty about benefits," and "lack of market preference or pressure." Govindan and Hasanagic (2018) discuss "economic issues," "governmental issues," "management issues," "market issues," "culture and social issues," while Kirchherr et al. (2018) suggest "market," "cultural," and "regulatory" barriers. Notably, cultural barriers, specifically "hesitant company culture" and "lack of consumer interest and awareness," emerge as the most significant hindrances (Cantú et al., 2021). Cantú et al. (2021) define culture as shared values, goals, and attitudes within a company. A hesitant company culture is linked to a rigid organizational structure, hindering information sharing and the development of circular business models.

Organization size correlates with environmental and circular practices (Fernández-Robin et al., 2019; Sinha and Fukey, 2021). Chain affiliation impacts environmental practices, with chain-affiliated businesses showing greater knowledge of environmentally friendly initiatives than independent establishments (Mensah and Blankson, 2013; Jacob, Florido, and Aguiló, 2010). However, some research challenges the notion that small size hinders CE implementation for tourism SMEs (e.g., Manniche et al., 2021).

De Jesus and Mendonca (2018) classify economic, technical, market, and financial barriers as "hard barriers," while regulatory, institutional, cultural, and social barriers are categorized as "soft barriers." However, the most holistic framework for CE implementation challenges in tourism was introduced by Martínez-Cabrera and López-del-Pino (2021). The study highlighted urgent barriers to transitioning to a circular tourism model at the macro (12 challenges), micro (7 challenges), and organizational (15 challenges) levels. The top 10 crucial CE Challenge Patterns (CECPs) for the tourism industry were identified. Six macro-environmental aspects, focusing on political, economic, social, and legal aspects, carry the highest weight. Three challenges on the microenvironmental scale involve resources, the value chain, and infrastructure. One challenge on the organizational scale addresses the strategic aspect (see Figure 1).

Figure 1 – The Most Crucial CE Barriers Facing the Travel and Tourism Sector



Designed by the author, based on insights from Martínez-Cabrera and López-del-Pino, 2021.

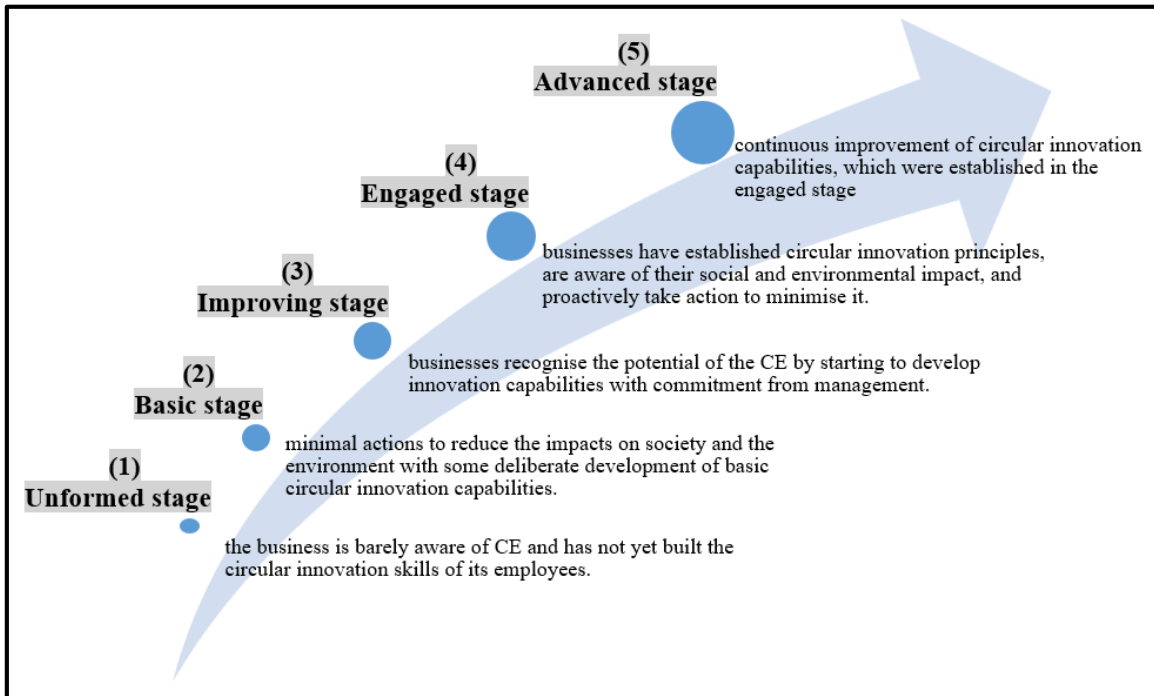
At both the macro-environmental and micro-environmental scales, these are external variables that tourism businesses cannot control. The difference is that the micro-environmental variables are part of the industry (Martínez-Cabrera and López-del-Pino, 2021). The organizational scale contains the internal variables of the businesses (Martínez-Cabrera and López-del-Pino, 2021).

Accordingly, several perspectives exist to categorize the CE barriers (Kerstjens, 2021). In the current study, the author builds on the categorizations of Kirchherr et al. (2018), De Jesus and Mendonça (2018), and the CE challenge patterns for the tourism industry of Martínez-Cabrera and López-del-Pino (2021). These studies are among a few that discuss the categorization of CE barriers by adopting a clear and comprehensive framework (Kerstjens, 2021).

2.3 The transition stages toward CE

An organization's circular transformation is an iterative process involving trial and error (Sorin and Einarsson, 2020). Kerstjens (2021) emphasizes the importance of considering various stages of circular implementation when studying CE barriers. These stages include unformed, basic, improving, engaged, and advanced (Kerstjens, 2021).

Figure 2 – The Stages of Transition Towards CE



Designed by the author, based on insights from Kerstjens, 2021.

Organizations face distinct barriers and enablers at different stages of circular implementation (Russell et al., 2019). Some barriers can transform into enablers in later stages, emphasizing the need to identify the implementation stage of specific challenges (Kerstjens, 2021). Notably, culture and management barriers surface in the initial stages (1 & 2), while later stages (3 & 4) introduce other challenges like collaboration in the value network and regulatory issues such as lacking standards (Kerstjens, 2021).

De Jesus and Mendonça (2018) and Kirchherr et al. (2018) suggest potential interaction effects among different CE barriers. Kirchherr et al. (2018) point out that 'lacking consumer interest and awareness' can lead to a 'hesitant company culture,' and 'high upfront investment costs' may be a symptom of this culture.

2.4 CE and the tourism industry in Egypt

The Middle East's tourism industry lags in the sustainability transition, evident in high resource consumption, significant waste generation, and the absence of industry sustainability mandates (Economist Impact, 2022).

Egypt, renowned for its ancient civilization, holds a central position in Middle Eastern politics (Karam, 2020). Despite being a popular tourist destination, the country grapples with environmental challenges typical of developing nations. Ghanem (2016) contends that population growth in Egypt hampers sustainable development by negatively impacting the environment, leading to adverse effects on public health. This, in turn, lowers labor productivity, hindering the state's development and sustainability. According to a World Bank report, in 2017, ambient air pollution in Greater Cairo resulted in 19,200 premature deaths and over 3 billion people suffering

from illness in Egypt. The estimated cost of these health effects was equivalent to 2.5% of Egypt's GDP in 2016–17 (The World Bank, 2019).

Ghanem (2016) urges Egypt to intensify efforts for a sustainable development transition, considering the current economic, social, and environmental challenges. Egypt's population growth, limited fertile land, vast desert, and concentrated population in the narrow Nile valley and northern coastal zones make environmental degradation potentially devastating for the country's future. Economist Impact (2022) suggests that a more sustainable tourism industry through circularity can address broader economic challenges in the Middle East. Hence, the adoption and implementation of CE strategies in all sectors in Egypt are imperative, not a luxury.

In Egypt, no specific regulatory or institutional framework addresses CE in tourism. However, various broader policies and entities include sections that may support CE initiatives.

The Supreme Energy Council (SEC), led by the Prime Minister, is the central authority overseeing national and sectoral energy strategies. Responding to SEC decree No. 14/8/10/5, prompting ministers to create energy efficiency units, the Ministry of Tourism formed the Green Tourism Unit to promote sustainability (UNEP, 2016).

The New and Renewable Energy Authority (NREA), under the Ministry of Electricity and Renewable Energy, implements government strategies for renewable resources. It oversees projects, promotes renewable energy use, and collaborates with the private sector. The NREA has a research center in collaboration with the European Union and Italy. Ongoing cooperation with the tourism sector aims to increase the use of solar heaters in hotels and surrounding villages (UNEP, 2016).

The Green Star Hotel (GSH) is a national certification program managed by the Egyptian Hotel Association (EHA) under the Ministry of Tourism. It allows Egyptian hotels to gain international recognition for enhancing environmental and social standards while cutting operational costs. Certified experts guide hotels through training and support, leading to field audits for compliance before awarding GSH certification (GSH, 2022), aligned with Global Sustainable Tourism Council (GSTC, 2012) standards.

In 2015, Egypt launched its Sustainable Development Strategy: Vision 2030 (Karam, 2020). While its impact is debated, Vision 2030 is a rare framework with clear environmental targets for the next decade (Karam, 2020). Within Vision 2030, Egypt developed its Sustainable Consumption and Production (SCP) National Action Plan, focusing on key sectors: energy, agriculture, water, and waste management (MOF, 2015).

Despite these numerous initiatives and programs related to CE and sustainable strategies, a quick look will reveal that SME tourism businesses in Egypt are not in good shape, according to the CE implementation stages proposed by Kerstjens (2021). This slow progress is due to the substantial societal transformations required, spanning dominant business models, financing, communication, education systems, and energy provision. These changes extend beyond technology to include alterations in regulations, laws, infrastructures, industrial networks, and consumption cultures (Manniche et al., 2020).

Karam (2020) argued that businesses in Egypt, in their pursuit of transit towards CE, could suffer from potential weaknesses and threats. Weaknesses include bureaucracy, in addition to the fact that the main cities such as Cairo and Alexandria differ from other cities in literacy rates, culture,

infrastructure, and technology; hence, the capacity to implement CE. Threats include a lack of social awareness of CE, which may restrict initiatives to support it or limit it to clean energy production and waste management. According to Economist Impact (2022), Egypt's recycling industry, which is still in its infancy, faces capacity restrictions.

Grounding on the previous literature analysis, the author proposes the following hypotheses:

H1: The following external factors are negatively impacting the Egyptian travel agencies in their transition toward CE:

H1.1: Political factors are a barrier to the transition of travel agencies toward a circular economy.

H1.2: Economic factors are a barrier to the transition of travel agencies toward a circular economy.

H1.3: Social factors are a barrier to the transition of travel agencies toward a circular economy.

H1.4: Technological factors are a barrier to the transition of travel agencies toward a circular economy.

H1.5: Legal factors are a barrier to the transition of travel agencies toward a circular economy.

H1.6: External resource factors are a barrier to the transition of travel agencies toward a circular economy.

H1.7: Value chain factors are a barrier to the transition of travel agencies toward a circular economy.

H1.8: Infrastructure factors are a barrier to the transition of travel agencies toward a circular economy.

H2: The following internal factors are negatively impacting the Egyptian travel agencies in their transition toward CE:

H2.1: Organizations' cultural factors are a barrier to the transition of travel agencies towards a circular economy.

H2.2: Internal resource factors are a barrier to the transition of travel agencies toward a circular economy.

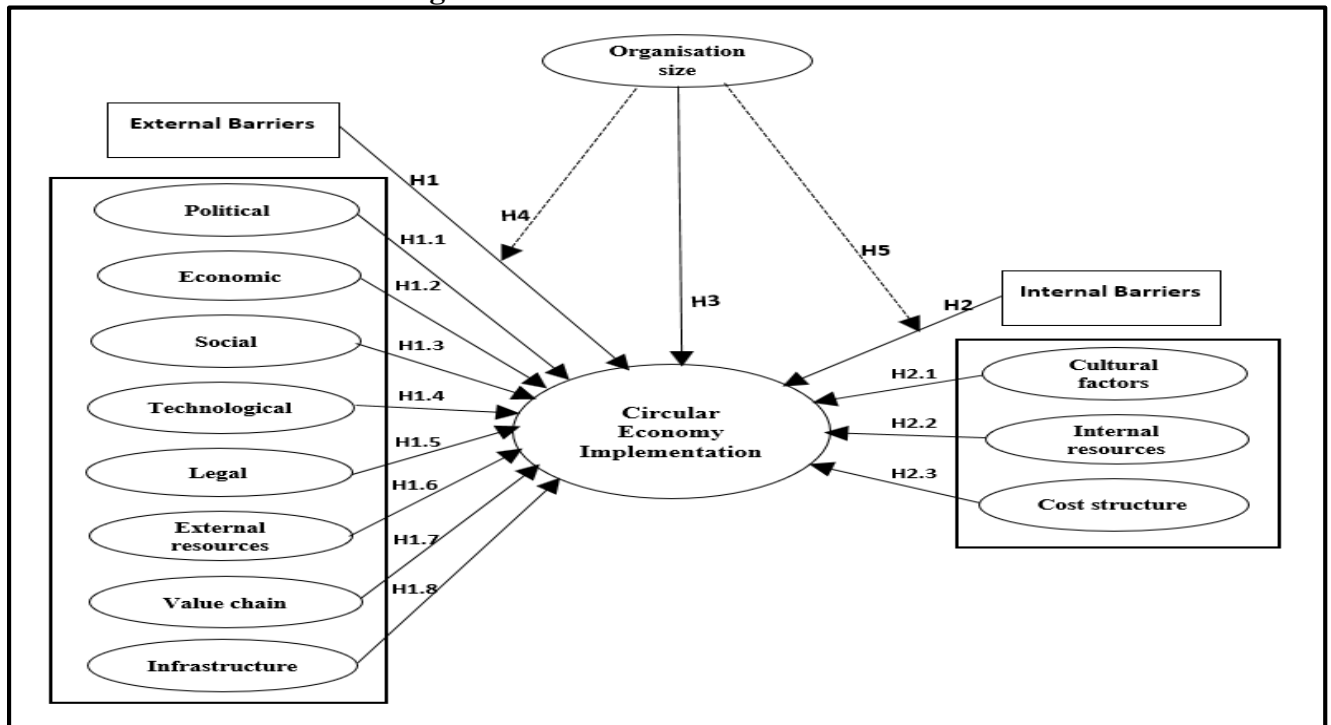
H3.3: Cost structure factors are a barrier to the transition of travel agencies toward a circular economy.

H3: Organization size is positively impacting Egyptian travel agencies in their transition towards CE.

H4: The size of an organization moderates the relationship between external barriers and the transition of Egyptian travel agencies towards CE.

H5: The size of an organization moderates the relationship between internal barriers and the transition of Egyptian travel agencies towards CE.

Figure 3 – The Theoretical Model



Notes: A straight line refers to a direct effect; a dotted line refers to a moderating effect.

3. Methodology

3.1 Study Measures and Data Collection

This study adopted a quantitative method to examine the transition barriers to the circular economy for travel agencies in Egypt. In this analysis, twelve independent variables reflect the barriers and are divided into external and internal groups, whereas circular economy implementation acts as a dependent variable.

Structured questionnaires were used during the data collection, and the items were gathered from the previous studies (see Table 1) as the result of an operationalization analysis, following Peters et al. (2018). The respondents answered on a 5-point scale as the ideal form of scale (Chen et al., 2015), with "1" representing "strongly disagree" and "5" representing "strongly agree." The questionnaires are divided into four parts. Part A represents a demographic profile of the respondents and company information (see Table), Part B represents external CE transition barriers (8 variables consisting of 18 items), Part C represents internal CE transition barriers (3 variables consisting of 11 items), and Part D represents CE implementation (13 items). To acquaint those respondents who were unaware of the CE concept, the author started the survey with a brief explanation of the term and some examples of its application in travel agencies.

Questionnaires underwent pre-testing to ensure suitability for this research, covering both content and face validity (Sekaran and Bougie, 2016). Pre-testers identified redundant questions for removal in line with the guidance of Hair et al. (2017a). Amendments were applied before launching the survey.

Table 1 – The Questionnaire Design Operationalization Analysis

Subject	Variable	Adapted from	Indicator	Scale
External CE transition barriers	Social	Martínez-Cabrera and López-del-Pino (2021); Karam (2020); Kerstjens (2021);	EX-S1: Society is not sufficiently aware of the need for a more sustainable economy. EX-S2: Society's resistance to changing its current attitudes, values, and actions.	Likert (5)
	Technological	Martínez-Cabrera and López-del-Pino (2021); Vatansever et al. (2021); Farooque et al. (2019); Govindan and Hasanagic (2018); Kirchherr et al. (2018)	EX-T1: Lack of proven technology to support the implementation of CE. EX-T2: Lack of skilled manpower to use and develop CE technologies.	Likert (5)
	Political	Martínez-Cabrera and López-del-Pino (2021); Kerstjens (2021); CEnTOUR (2021);	EX-P1: Government incentives, funding, training, and regulation for CE are insufficient. EX-P2: Political commitment is lacking and there is insufficient integration of CE into the political agenda.	Likert (5)
	Economic	Martínez-Cabrera and López-del-Pino (2021); De Jesus and Mendonca (2018); Rizos et al. (2016);	EX-E1: The tax system discourages CE and supports linear economies. EX-E2: Lack of funds opportunities for the innovation required for a CE transition	Likert (5)
	Legal	Martínez-Cabrera and López-del-Pino (2021); Kirchherr et al. (2018); Mura et al. (2020);	EX-L1: lack of CE-supporting policies EX-L2: A transition to CE is hindered by existing policies. EX-L3: The absence of standards for CE procedures, activities, and materials.	Likert (5)
	External resources	Martínez-Cabrera and López-del-Pino (2021);	EX-R1: Inadequate CE theory, concepts, techniques, and proven business models EX-R2: Not enough CE training offerings or CE experts available for hire.	Likert (5)
	Value chain	Martínez-Cabrera and López-del-Pino (2021); Rizos et al. (2016); Vatansever et al. (2021); Farooque et al. (2019); Kerstjens (2021);	EX-V1: Lack of trust and willingness prevents collaboration across the value chain. EX-V2: Dependency on other businesses operating according to a linear economic system.	Likert (5)

	Infrastructure	Martínez-Cabrera and López-del-Pino (2021); Mont et al. (2017); CEnTOUR (2021);	<p>EX-I1: Platforms for information sharing and information collection are either absent or insufficiently effective.</p> <p>EX-I2: The waste management and recycling techniques and systems are inefficient.</p> <p>EX-I3: The current infrastructure of Egypt does not support circular activities and products.</p>	Likert (5)
Internal CE transition barriers	Cultural	Martínez-Cabrera and López-del-Pino (2021); Rizos et al. (2016); Vatansever et al. (2021); Govindan and Hasanagic (2018); Kirchherr et al. (2018); Cantú et al. (2021); Martins (2021); Kerstjens (2021);	<p>IN-C1: There's no managerial commitment towards CE adoption and implementation</p> <p>IN-C2: CE concept is not a part of our organization's strategy, mission, goals and KPI</p> <p>IN-C3: No incentives system for employees to implement CE</p> <p>IN-C4: Circular Economy was not a familiar and understandable term for me</p> <p>IN-C5: We didn't participate in training activities linked to CE or sustainability approaches</p>	Likert (5)
	Internal resources	Martínez-Cabrera and López-del-Pino (2021); Cantú et al. (2021); Cantú et al. (2021);	<p>IN-R1: lack of technical resources for CE implementation.</p> <p>IN-R2: Lack of financial resources to create a circular business model.</p> <p>IN-R3: Lack of CE-skilled and knowledgeable staff within the organization.</p>	Likert (5)
	Cost structure	Martínez-Cabrera and López-del-Pino (2021); Robaina (2022); CEnTOUR (2021);	<p>IN-Co1: The high cost of training and staff capacity building for CE purposes</p> <p>IN-Co2: The high cost of CE implementing</p> <p>IN-Co3: High prices for products with longer lifespans</p>	Likert (5)
	Organization size	Fernández-Robin et al. (2019); Sinha and Fukey (2021); Lutikhuis (2020); CEnTOUR (2020); Khan et al. (2022)	<p>IN-Os1: Number of employees</p> <ul style="list-style-type: none"> - Less than 20 - From 20 to 39 - 40 or above <p>IN-Os2: Number of branches</p> <ul style="list-style-type: none"> - 0 (Only the head office) - From 1 to 3 - 4 or above 	Ratio
CE implementation	Martins (2021); CEnTOUR (2021); Lutikhuis (2020); Robaina (2022);	<p>Imp1: We have an activated waste management strategy</p> <p>Imp2: We are conscious of our energy and water consumption and take measures to reduce it</p>	Likert (5)	

		<p>Imp3: We have a system for receiving feedback, suggestions, and complaints from our clients concerning our sustainable practices</p> <p>Imp4: We advise our clients about sustainable practices or environmentally preferred options (e.g., modes of transportation)</p> <p>Imp5: In our operation, we only use equipment with the "green" label</p> <p>Imp6: We choose for our guests those accommodations that follow circular practices in waste management and resource use reduction.</p> <p>Imp7: We measure the carbon footprint of each tour and announce this information, allowing our clients to make environmentally informed decisions</p> <p>Imp8: We don't buy or support products or suppliers that cause environmental damage</p> <p>Imp9: We are eager to use locally-made services and products</p> <p>Imp10: Whenever possible, we recycle items rather than buy new ones</p> <p>Imp11: We take active steps to make our surrounding environment better</p> <p>Imp12: We think about how an object might be reused, repaired, or donated before discarding it</p> <p>Imp13: We adopt a circular business model (leasing, pay-per-use, pay-per-performance, etc.)</p>	
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448 travel agencies were targeted, resulted in collecting valid online questionnaires from 409 out of 1168 travel agencies (category A) in Egypt, with a 91.3% response rate (a complete list is available on the Egyptian Travel Agents Association website: www.etaa-egypt.org). The minimum sample size is 290 travel agencies, based on the Thompson (2012) formula. The study sample was selected using a simple random sampling technique (random draws). The author utilized social media messages (Facebook and LinkedIn), in addition to direct emails to collect data from the randomly selected travel agencies in Egypt from July 27th to September 20th, 2022. The survey targeted employees who work in Egyptian travel agencies and hold managerial positions (one representative for each organization), driven by the belief that they should be well aware of the business operation and related practices (Elsawy, 2023). Besides, they are involved in decision-making processes surrounding circular economy adoption and usage.

3.2 Data analysis techniques

This study employs Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4 to analyze the collected data. PLS-SEM, a widely used technique in management, provides reliable outcomes by exploiting explained variance in latent dimensions that are not directly observable (Sobaih and Elshaer, 2022). SmartPLS-SEM is suitable for analyzing complex

research models incorporating related theories and empirical data (Hair et al., 2019). PLS-SEM is robust in estimating models with data exhibiting both normal and extremely non-normal skewness and/or kurtosis (Hair et al., 2017a). Following Leguina's (2015) suggestion, a two-step approach was adopted, first testing the outer model for convergent and discriminant validity and then evaluating the inner model for hypothesis testing.

4. Findings and analysis

Addressing the research questions and hypotheses, the results are categorized into three sections: descriptive analysis, outer measurement model evaluation, and structural inner model assessment and hypothesis testing.

4.1 Descriptive Analysis

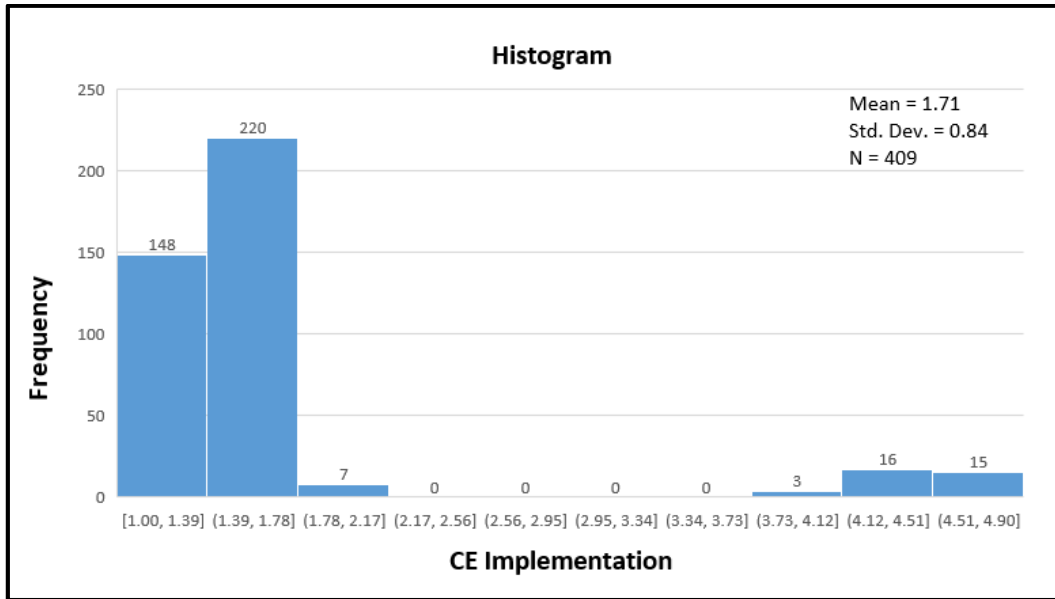
The respondent's demographic profile shows that 64% were male and 36% were female. The majority are between 36 and 45 years old and have a first-level managerial position. Cairo (33%), Giza (14.67%), and Alexandria (11%) are the top three governates regarding the number of respondents, and that is a reasonable reflection of the actual number of travel agencies in every location (see Table 2).

Table 2 – Respondents Demographic Profile

Demographic	Frequency	Percentage	Demographic	Frequency	Percentage
1. Gender			4. Location:		
- Male	262	64.1	- Alexandria	45	11
- Female	147	35.9	- Aswan	13	3.18
2. Age			- Cairo	135	33.01
- Below 25	17	4.16	- Eldakahlia	15	3.67
- 26-35	104	25.43	- Elgharbiya	13	3.18
- 36-45	179	43.77	- Elsharqia	15	3.67
- 46-55	73	17.85	- Giza	60	14.67
- 56 and above	36	8.8	- Kafr El-Sheikh	16	3.91
3. Position:			- Luxor	28	6.85
- Top Management	77	18.83	- Port Said	31	7.58
- Middle Management	105	25.67	- South Sinai	13	3.18
- First Level Manager	227	55.5	- The Red Sea	25	6.11
5. Organization size:			b. Number of branches:		
a. Number of employees:			- 0 (head office only)	62	15.16
- Less than 20	221	54.03	- From 1 to 3	295	72.13
- From 20 to 39	157	38.39	- 4 and above	52	12.71
- 40 or above	31	7.58			
Total				409	100%

The findings indicate that approximately 90% of travel agencies in Egypt are small and medium-sized enterprises, aligning with previous studies (e.g., Elsayy, 2023).

Figure 4 – Circular Economy Concept Implementation Level by the Egyptian Travel Agencies

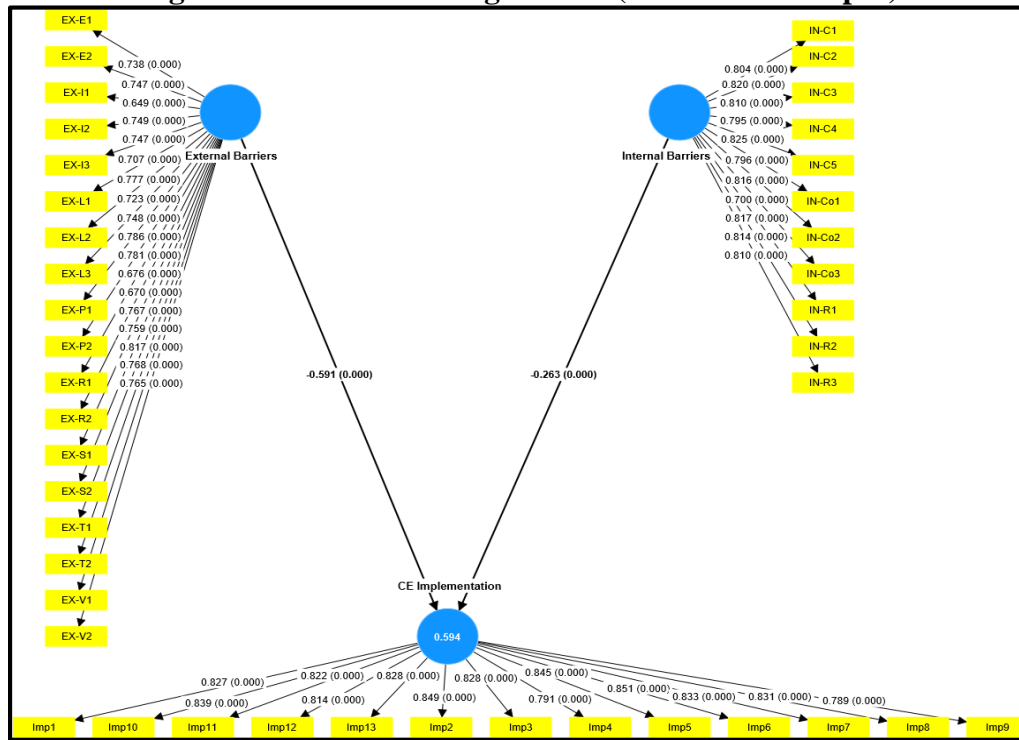


According to the study’s findings, 91.69% of travel agencies do not employ circular economy practices in their operations (see Figure 4). This indicates that a sizable portion of Egyptian travel agencies do not implement CE. Only 8.31% employ a CE in their daily operations. This answers the study’s first question.

4.2 Evaluation of the Outer Measurement Model

Various statistics were used to assess the reliability and validity of the study's outer model, and all items were retained. These statistics encompass "composite reliability" (CR), "internal consistency reliability" (Cronbach's alpha), "convergent validity," and "discriminant validity." All retained constructs met the specified threshold values for loadings (≥ 0.6), Cronbach's α (≥ 0.7), composite reliability (CR) (≥ 0.7), and average variance extracted (AVE) (≥ 0.5) (Table 3).

Figure 5 – Factor Loading Results (Smart-PLS Output)



4.2.1 Convergent validity (testing model’s performance)

The PLS algorithm’s execution involves testing the measurement model for convergent validity and individual item reliability, criteria that are interrelated (Hair et al., 2021). Convergent validity is the positive relationship between a measure and another measuring the same constructs (Hair et al., 2021). To assess convergent validity, three parameters must be met: average variance extracted (AVE) over 0.5, composite reliability (CR) exceeding 0.7 (Hair et al., 2021; Gamiljj and Abd Rahman, 2023), and internal consistency (Cronbach’s alpha) surpassing 0.7 (for exploratory research, 0.60 to 0.70 is acceptable) (Hair et al., 2021; Gamiljj and Abd Rahman, 2023). Table 3 displays the convergent validity of the measurement model. All constructs exhibit a Cronbach’s alpha exceeding 0.7, CR surpasses 0.7, and AVE is above 0.5, satisfying the criteria for convergent validity.

Table 3 – Evaluation of the Outer Measurement Model and VIF for Multicollinearity

Construct	Item	Outer loadings	Cronbach h (above 0.70)	CR (above 0.70)	AVE (above 0.50)	Convergent validity CR > AVE AVE > 0.50	VIF
External Barriers (VIF 1.463)	EX-E1	0.738	0.952	0.954	0.554	Yes	1.373
	EX-E2	0.747					1.378
	EX-I1	0.649					1.428
	EX-I2	0.749					1.704
	EX-I3	0.747					1.491
	EX-L1	0.707					1.319
	EX-L2	0.777					1.832

	EX-L3	0.723					1.755
	EX-P1	0.748					1.425
	EX-P2	0.786					1.421
	EX-R1	0.781					1.733
	EX-R2	0.676					1.732
	EX-S1	0.670					1.253
	EX-S2	0.767					1.250
	EX-T1	0.759					1.881
	EX-T2	0.817					1.882
	EX-V1	0.768					1.437
	EX-V2	0.765					1.430
Internal Barriers (VIF 1.461)	IN-C1	0.804	0.944	0.945	0.642	Yes	1.461
	IN-C2	0.820					1.726
	IN-C3	0.810					1.748
	IN-C4	0.795					1.912
	IN-C5	0.825					1.972
	IN-Co1	0.796					1.618
	IN-Co2	0.816					1.728
	IN-Co3	0.700					1.809
	IN-R1	0.817					1.827
	IN-R2	0.814					1.725
	IN-R3	0.81					1.513
CE Implementation	Imp1	0.827	0.961	0.962	0.684	Yes	2.340
	Imp10	0.839					2.522
	Imp11	0.822					2.284
	Imp12	0.814					2.008
	Imp13	0.828					2.625
	Imp2	0.849					2.475
	Imp3	0.828					2.335
	Imp4	0.791					2.080
	Imp5	0.845					2.622
	Imp6	0.851					2.657
	Imp7	0.833					2.201
	Imp8	0.831					2.517
	Imp9	0.789					1.987

4.2.2 Discriminant Validity

Two tests were employed to ensure discriminant validity: the Fornell and Larcker criterion and the HTMT ratio. The Fornell and Larcker criterion compares the square root of AVE with latent variable correlations, ensuring it exceeds the highest correlation with other constructs (Hair et al., 2021; Gamiljj and Abd Rahman, 2023). For the HTMT ratio, following Awang et al. (2015) and Hair et al. (2021), a correlation below 0.85 indicates validity.

In Table 4, the HTMT values are all below the 0.85 threshold, indicating discriminant validity even with reflective constructs (Hair et al., 2017a). The Fornell and Larcker criterion results show that the diagonal bold values surpass those preceding them horizontally, establishing discriminant

validity for each construct, as the loading on its respective construct is consistently higher than all cross-loadings with other constructs.

The preceding results affirm scale reliability, discriminant validity, and convergent validity, as validated in the study's measurement outer model. Consequently, we can proceed with the structural outer model to assess the study hypotheses.

Table 4 – Discriminant Validity

Discriminant Validity - Heterotrait-Monotrait Ratio (HTMT)			
<i>Latent constructs</i>	<i>CE Implementation</i>	<i>External Barriers</i>	<i>Internal Barriers</i>
CE Implementation			
External Barriers	0.770		
Internal Barriers	0.622	0.590	
Discriminant Validity - Fronell-Larcker Criterion			
CE Implementation	0.827		
External Barriers	-0.739	0.744	
Internal Barriers	-0.596	0.562	0.801

4.3 Assessment of the Structural Inner Model

4.3.1 Coefficient of determination (R2) and model fit

In PLS-SEM, the coefficient of determination measures how well regression predictions align with the data, indicating the variation in dependent variables described by predictor variables (Hair et al., 2021). It assesses the ability of independent variables to measure dependent variables, with an R2 value of 0.10 considered the minimum for a satisfactory model fit. Additionally, an R2 value of 0.5 suggests a moderate correlation (Gamiljj and Abd Rahman, 2023; Tabachnick and Fidell, 2007).

In the current study, the calculated value of R2 is 0.594; accordingly, the independent variables (external and internal barriers) are good predictors of the dependent variable (CE implementation), and the study model sufficiently represents the collected data.

According to Hair et al. (2017b), for a good model fit to data, the SRMR value should be less than 0.08, and the NFI value should be more than 0.90. In this study, the SRMR value is 0.036, and the NFI value is 0.976, surpassing the recommended threshold values, confirming a good fit.

4.3.2 Hypotheses testing

Hypothesis testing assesses the hypothesized relationship between constructs, where the causes (IV) significantly impact the effect factors (DV). A relationship is considered significant if the T-value exceeds 1.96 or the P-value is less than 0.05 (Gamiljj and Abd Rahman, 2023; Hair et al., 2021). Bootstrapping in smart PLS4 with 5000 subsamples ensures result stability (Gamiljj and Abd Rahman, 2023; Hair et al., 2021).

Table 5 - Hypothesis Testing – Moderating (Bootstrapping)

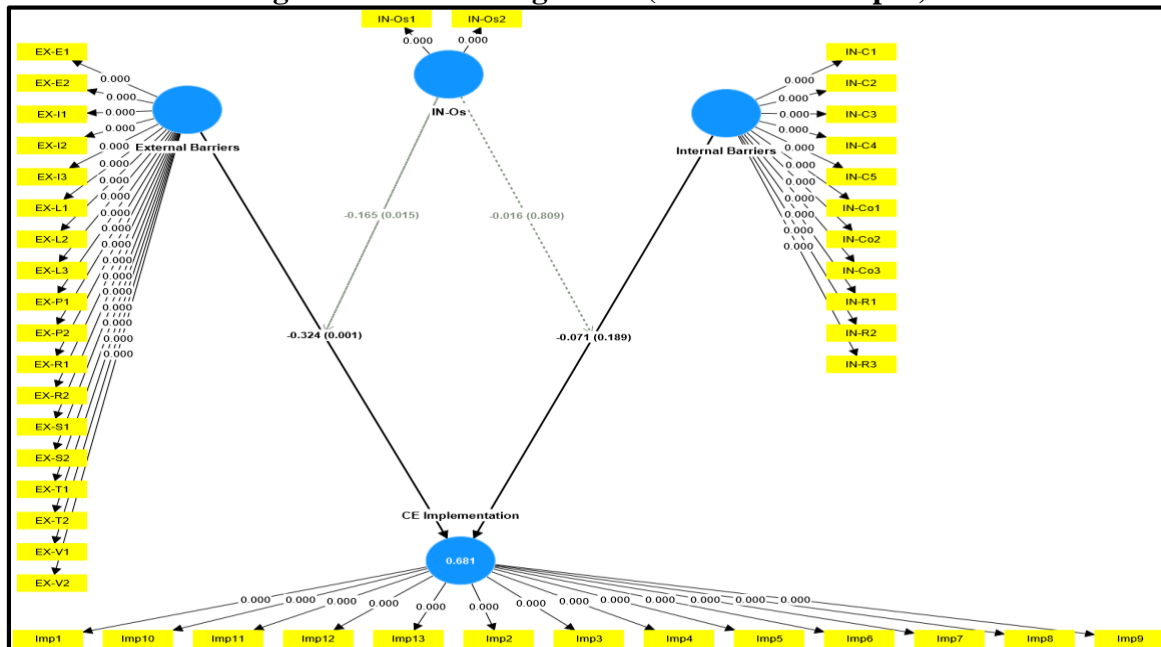
Hypothesis	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	Decision
(H1) External Barriers -> CE Implementation	-0.591	-0.591	0.076	7.785	0.000	Supported
(H1.1) EX-P -> CE Implementation	-0.081	-0.081	0.025	3.232	0.001	Supported
(H1.2) EX-E -> CE Implementation	-0.064	-0.065	0.025	2.544	0.011	Supported
(H1.3) EX-S -> CE Implementation	-0.083	-0.082	0.026	3.236	0.001	Supported
(H1.4) EX-T -> CE Implementation	-0.045	-0.045	0.025	1.818	0.069	Not supported
(H1.5) EX-L -> CE Implementation	-0.090	-0.090	0.028	3.200	0.001	Supported
(H1.6) EX-R -> CE Implementation	-0.062	-0.062	0.023	2.692	0.007	Supported
(H1.7) EX-V -> CE Implementation	-0.059	-0.060	0.029	2.005	0.045	Supported
(H1.8) EX-I -> CE Implementation	-0.120	-0.120	0.029	4.107	0.000	Supported
(H2) Internal Barriers -> CE Implementation	-0.263	-0.263	0.064	4.139	0.000	Supported
(H.2.1) IN-C -> CE Implementation	-0.132	-0.130	0.032	4.088	0.000	Supported
(H.2.2) IN-R -> CE Implementation	-0.180	-0.180	0.032	5.596	0.000	Supported
(H.2.3) IN-Co -> CE Implementation	-0.118	-0.118	0.027	4.308	0.000	Supported
(H3) IN-Os -> CE Implementation	0.100	0.102	0.031	3.266	0.001	Supported
(H4) IN-Os x External Barriers -> CE Implementation	-0.165	-0.163	0.067	2.443	0.015	Supported
(H5) IN-Os x Internal Barriers -> CE Implementation	-0.016	-0.017	0.064	0.241	0.809	Not supported

Table 5 indicates that thirteen out of fourteen hypotheses in the pre-assigned path model are significant, meeting the criteria of a T-value higher than 1.96 and a P-value less than 0.05. Consequently, hypotheses H1, H1.1, H1.2, H1.3, H1.5, H1.6, H1.7, H1.8, H2, H2.1, H2.2, H2.3, and H3 were supported, while hypothesis H1.4 was not supported ($\beta = -0.045$, t -value = 1.818, $p = 0.069$).

4.3.3 Moderating effect testing

Table 5's moderation testing shows that organization size has a negative and significant moderating effect on the relationship between external barriers and the transition of Egyptian travel agencies towards CE ($\beta = -0.165$, $t = 2.443$, $p \leq 0.015$). This implies that the influence of external barriers on CE implementation is negatively moderated by organization size, confirming H4. However, the results indicate that the size of an organization has a negative but not significant moderating effect on the relationship between internal barriers and the transition of Egyptian travel agencies towards CE ($\beta = -0.016$, $t = 0.241$, $p = 0.809$), leading to the non-support of H5.

Figure 6 - Moderating Effect (Smart-PLS Output)



4.3.4 Effect size (f2)

Effect size (f2) quantifies the proportion of variance in the dependent variable explained by independent variables. It gauges the strength of the relationship between variables. Values less than 0.02 indicate no effect, 0.02 to 0.15 signify a small effect, 0.15 to 0.35 suggest a medium effect size, and values exceeding 0.35 represent a large effect for the endogenous latent variables (Hair et al., 2017a). Table 6 displays the f2 values from the model algorithm, revealing diverse effects.

Table 6 – The Effect Size of the Study’s Variables

Construct /Latent Variable	f-square	Effect size
External Barriers -> CE Implementation	0.40	Large effect
EX-E -> CE Implementation	0.02	Small effect
EX-I -> CE Implementation	0.05	Small effect
EX-L -> CE Implementation	0.02	Small effect
EX-P -> CE Implementation	0.02	Small effect
EX-R -> CE Implementation	0.02	Small effect
EX-S -> CE Implementation	0.03	Small effect
EX-T -> CE Implementation	0.01	No effect
EX-V -> CE Implementation	0.02	Small effect
Internal Barriers -> CE Implementation	0.34	Medium effect
IN-C -> CE Implementation	0.04	Small effect
IN-Co -> CE Implementation	0.06	Small effect
IN-Os -> CE Implementation	0.04	Small effect
IN-R -> CE Implementation	0.09	Small effect

The results revealed that the construct "external factors" has a large effect ($f^2 = 0.40$) on the Egyptian travel agencies in their transition towards CE and that all its latent variables (political, economic, social, legal, external resource, value chain, and infrastructure factors) have a small effect, except for the technological factors, which have no effect. In addition, the results revealed that the construct "internal factors" has a medium effect ($f^2 = 0.34$) on the Egyptian travel agencies' transition towards CE and that all its latent variables (organizations' culture, internal resource, cost structure, and size) have a small effect on the Egyptian travel agencies' transition towards CE.

Within the external barriers, the insufficient infrastructure to support circular economy activities and products has the highest effect on CE implementation ($f^2 = 0.05$), followed by social factors ($f^2 = 0.03$) in second place regarding the weight of the effect. Whereas in the context of internal barriers, the internal resources have the highest effect on CE implementation ($f^2 = 0.09$), then comes the cost structure associated with CE implementation ($f^2 = 0.06$). These findings will help answer the second question of the current study.

5. Discussion

The study focuses on Egyptian travel agencies, uncovering barriers to CE adoption. Demographically, the sector is predominantly led by males (64%), aged 36 to 45, with 90% being small to medium-sized enterprises, a significant finding for understanding the industry's structure, aligning with previous research (e.g., Elsayy, 2023).

Another significant revelation is that 91.69% of agencies currently lack CE practices, placing SME tourism businesses in Egypt at the initial and least mature CE implementation stage. This aligns with the global economy's 8.6% circular status (WBCSD, 2022) and reflects challenges despite incentives (Vatansever et al., 2021). The low CE adoption in Egypt echoes Martinez-Cabrera and López-del-Pino's (2021) observation of insufficient attention to CE implementation challenges. Notably, while no business exhibits substantial CE practices, some circular activities exist in Egyptian tourism businesses.

The R^2 value confirms the model's robust predictive ability for external and internal barriers to circular economy (CE) implementation, with 13 supported hypotheses. External and internal barriers were scrutinized, with political, economic, social, legal, external resource, value chain, and infrastructure factors identified as significant external challenges, and factors such as organizational culture, internal resources, cost structure, and size identified as internal impediments. These findings echo existing literature on political inaction as a primary CE barrier in tourism (Sorensen and Bærenholdt, 2020). Inadequate supply chain engagement, low CE awareness (Farooque et al., 2019; Rizos et al., 2016; Vatansever et al., 2021), and high implementation costs and financing challenges (De Jesus and Mendonça, 2018; Ranta et al., 2018; Rizos et al., 2016; Robaina, 2022) align with prior studies. The literature consensus on financial constraints as significant hurdles to circular practices is reinforced by this study's findings.

External factors exerted a larger effect on agencies' transition towards CE, particularly concerning insufficient infrastructure and social factors. Martinez-Cabrera and López-del-Pino (2021) stress key challenges in the circular tourism transition, citing macro-environmental issues like inadequate government support (incentives, funding, training, and legislation) and low social awareness for sustainable economies.

Internally, internal resources played a pivotal role in influencing CE adoption. This corroborates the literature emphasizing that SMEs in the tourism sector lack the necessary resources and skills

for the transition from a linear to a CE model (CEnTOUR, 2020; De Jesus and Mendonca, 2018; Farooque et al., 2019; Khan et al., 2022; Rizos et al., 2016; Vatansever et al., 2021).

The study confirms a positive relationship ($\beta = 0.100$, t -value = 3.266, $p = 0.001$) between organizational size and CE adoption. Larger organizations exhibit greater CE inclination, aligning with findings from prior studies (e.g., Fernández-Robin et al., 2019; Sinha and Fukey, 2021). However, conflicting studies, such as Manniche et al. (2021), challenge the notion that small size hampers CE practices in SMEs within the tourism sector. Additionally, the study found a negative moderating effect of organizational size between external factors and CE implementation. This means that the influence of external barriers on the adoption of CE practices varies based on the organization's size. In this context, as the organizational size decreases (e.g., in smaller travel agencies), the impact of external barriers on implementing CE practices becomes more pronounced or challenging. This could justify the finding that external factors exerted a higher effect on agencies' transition to CE in Egypt, given that the majority (90%) are SMEs.

5.1 Theoretical implications

This study fills a crucial gap by statistically testing a model measuring CE barriers in developing countries tourism. It contributes to micro-level CE literature by understanding barriers in Egypt, an underexplored region, and laying the groundwork for similar studies. Uniquely, no prior research has tested a model for barriers to CE in developing countries' tourism. It also introduces the moderating effect of organizational size on the relationship between external barriers and CE implementation, emphasizing the nuanced impact of organizational characteristics on overcoming external challenges during the transition to a CE.

5.2 Managerial implications

With 91.69% of Egyptian travel agencies yet to adopt CE practices, this study provides essential managerial guidance. External and internal factors like insufficient infrastructure, social considerations, organizational culture, resources, cost, and size impact CE adoption. Managers are advised to tailor strategies to address these challenges, considering the influence of organizational size on the relationship between external barriers and CE implementation. Understanding this dynamic allows for nuanced and targeted interventions. Managers should figure out their organization's current CE transition stage, foster a CE-conducive culture, and strategically allocate necessary resources for effective barrier tackling. These insights empower travel agency managers to lead their organizations towards sustainable practices and navigate the complexities of the CE transition.

5.3 Policy implications

The transition to circular tourism grapples with a demand-supply challenge resembling a chicken-egg problem. To entice tourists to adopt a sustainable model, providing attractive circular tourism experiences is essential. Yet, tourism players await strong demand before investing in the circular transition. Policymakers should play a role in overcoming this challenge to facilitate the transition (Economic Commission for Europe, 2022).

The study's findings hold several crucial policy implications for fostering CE practices in the travel agency sector in Egypt. With 91.69% of travel agencies in Egypt not employing CE, urgent policy interventions are needed. Identifying external and internal barriers to CE implementation provides

policymakers with a clear agenda for targeted interventions facilitating CE adoption, such as financial incentives, training programs, awareness campaigns, and infrastructure development.

6. Conclusions

This study illuminates the intricate landscape of CE adoption in Egyptian travel agencies, which is revealed to be limited, offering comprehensive insights into the barriers hindering its implementation. As the world strives towards responsible consumption and production (SDG 12), addressing the identified barriers becomes imperative for the sustainable evolution of the travel industry in Egypt and beyond. The research not only identifies these barriers but also assesses their specific impacts, providing a nuanced understanding crucial for academics, practitioners, and policymakers.

For agencies, addressing internal resource constraints and fostering a culture conducive to CE emerge as critical strategies. Policymakers, armed with insights into both external and internal barriers, can formulate specific interventions, financial incentives, and training programs to promote CE practices. Furthermore, the emphasis on insufficient infrastructure highlights a clear agenda for targeted infrastructure development.

Theoretical contributions include statistically testing a model to measure barriers in the transition to CE in the tourism industry of developing countries. The unique focus on Egypt fills a theoretical void and sets a foundation for future research.

Despite its contributions, this study has some limitations that warrant acknowledgement. The study focused on travel agencies, and as CE implementation is a concept that needs a collaborative effort, the perspectives of other tourism actors (e.g., hotels, tourists, policymakers, etc.) need investigation for a more comprehensive understanding of facilitating CE implementation. Moreover, the study's quantitative approach, while valuable for statistical analysis, may overlook the depth and context that qualitative methods could provide. Lastly, the study did not explore potential interactions between different barriers, which could influence their overall impact on CE implementation. These limitations suggest avenues for future research to address gaps and enhance the depth and breadth of knowledge in the field of CE adoption in the tourism sector.

Building on insights from this study, future research could also delve into assessing the effectiveness of specific interventions aimed at overcoming identified barriers to CE adoption in travel agencies. Additionally, exploring the barriers facing tourism SMEs in different cultural contexts could contribute to a more nuanced understanding of the challenges to sustainable practices in the global tourism industry.

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معوقات التحول نحو الاقتصاد الدائري لشركات السياحة ووكالات السفر في مصر

المستخلص

تتناول هذه الدراسة معوقات التحول نحو الاقتصاد الدائري بالنسبة لشركات السياحة ووكالات السفر في مصر. وبالاعتماد علىمراجعة شاملة للأدبيات، طورت الدراسة إطارًا مفاهيميًا يشمل العوائق الخارجية والداخلية التي تحول دون تطبيق مبادئ الاقتصاد الدائري. يستخدم البحث منهجًا كميًا من خلال استبيانات منظمة تم توزيعها على الموظفين على المستوى الإداري في وكالات السفر المصرية. استخدمت الدراسة نمذجة المعادلات الهيكلية بالمربعات الصغرى الجزئية (PLS-SEM) مع برنامج Smarts 4 للتحليل.

وتكشف الدراسة أن أغلبية كبيرة (91.69%) من وكالات السفر المصرية لا تطبق حاليًا ممارسات الاقتصاد الدائري، مع وجود تمثيل سائد للشركات الصغيرة والمتوسطة. ويؤكد التحليل أن العوائق الخارجية والداخلية تؤثر بشكل كبير على تطبيق ممارسات الاقتصاد الدائري. ومن الجدير بالذكر أن حجم المنظمة قد عدل من العلاقة بين الحواجز الخارجية والانتقال إلى الاقتصاد الدائري، في حين لا يظهر حجم المنظمة أي تأثير في الحواجز الداخلية.

تعد هذه الدراسة رائدة حيث قدمت نموذج تم اختباره لقياس عوائق الاقتصاد الدائري في صناعة السياحة في البلدان النامية، حيث تقدم رؤى أصلية حاسمة للأوساط الأكاديمية والممارسين وصانعي السياسات. مع التركيز بشكل فريد على مصر، وهي منطقة غير مستكشفة، فإنه يساهم في أدبيات الاقتصاد الدائري ويمهد الطريق لدراسات مماثلة. ويؤكد اختبار التأثير المعدل للحجم التنظيمي على التأثير الدقيق للخصائص التنظيمية في التغلب على التحديات أثناء التحول نحو الاقتصاد الدائري.

الكلمات الدالة: الاقتصاد الدائري، الاستهلاك والإنتاج المسؤولان (هدف التنمية المستدامة 12)، وكالات السفر، البلدان النامية، الاستدامة، مصر