

LAMPIRAN

Lampiran 1 Jurnal Penelitian Terdahulu

No	Peneliti (Tahun)	Judul penelitian	Variabel yang dikaji	Metode penelitian	Hasil utama	Relevansi dengan penelitian
1	Safitri & Satrianto (2019)	Pengaruh Kualitas Lingkungan terhadap Jumlah Kunjungan Wisatawan Mancanegara	Kualitas lingkungan, kunjungan wisatawan	Kuantitatif, regresi	Kualitas lingkungan berpengaruh positif meski tidak signifikan terhadap kunjungan wisatawan mancanegara	Menguji hubungan kualitas lingkungan dengan minat kunjungan wisatawan
2	Amin (2020)	Pengaruh Kualitas Lingkungan terhadap Minat Berkunjung Ulang	Kualitas lingkungan, minat berkunjung ulang	Survei, analisis regresi	Kualitas lingkungan berpengaruh signifikan terhadap minat berkunjung ulang wisatawan	Mendukung hubungan positif antara kualitas lingkungan dan minat berkunjung ulang
3	Handayani (2022)	Pengaruh Kualitas Lingkungan Fisik terhadap Minat Kunjungan Ulang	Kualitas lingkungan fisik, minat kunjungan ulang	Survei, SEM	Kualitas lingkungan fisik berpengaruh positif dan signifikan terhadap minat kunjungan ulang	Memperkuat pentingnya kualitas lingkungan fisik dalam pariwisata
4	Zamfir (2015), WTO (2003)	Sustainable Tourism Development	Pariwisata berkelanjutan	Studi literatur	Pariwisata berkelanjutan memperhatikan aspek ekonomi, sosial, budaya, dan lingkungan	Menjadi landasab teori keberlanjtan dalam pariwisata

No	Peneliti (Tahun)	Judul penelitian	Variabel yang dikaji	Metode penelitian	Hasil utama	Relevansi dengan penelitian
5	Nuraeni (2014)	Faktor-faktor yang Mempengaruhi Minat Berkunjung Wisatawan	Kualitas pelayanan, citra wisata, promosi, daya tarik	Survei, analisis regresi	Kualitas pelayanan, citra, promosi, dan daya tarik berpengaruh pada minat berkunjung	Mengidentifikasi faktor-faktor penentu minat berkunjung
6	Sondakh & Tumbel (2016)	Pengaruh Pelayanan, Keamanan, dan Daya Tarik terhadap Minat Wisatawan	Pelayanan, keamanan, daya tarik, minat wisatawan	Survei, analisis regresi	Pelayanan, keamanan, dan daya tarik berpengaruh secara simultan dan parsial terhadap minat wisatawan	Menunjukkan pentingnya keamanan dan daya tarik dalam menarik wisatawan
7	Somantri & Hariyanto (2015)	Pengaruh Fasilitas Wisata terhadap Minat Berkunjung	Fasilitas wisata, minat berkunjung	Survei, analisis regresi	Fasilitas wisata berpengaruh positif terhadap minat berkunjung	Fasilitas sebagai salah satu indikator kualitas lingkungan
8	Fanani & Kurniati (2022)	Faktor-faktor yang Memengaruhi Kenyamanan Wisatawan	Kebersihan, fasilitas, keamanan, kenyamanan wisatawan	Survei, analisis regresi	Kebersihan, fasilitas, dan keamanan memengaruhi kenyamanan wisatawan	Kebersihan dan fasilitas sebagai indikator kualitas lingkungan
9	Irwan et al. (2020)	Kelestarian Lingkungan sebagai Indikator Keberhasilan	Kelestarian lingkungan, pariwisata berkelanjutan	Studi kasus, deskriptif	Pengelolaan sampah dan pencemaran lingkungan menjadi indikator utama keberhasilan pariwisata berkelanjutan	Menjadi dasar indikator keberlanjutan dalam pariwisata

No	Peneliti (Tahun)	Judul penelitian	Variabel yang dikaji	Metode penelitian	Hasil utama	Relevansi dengan penelitian
		Pariwisata Berkelanjutan				
10	Maharani Amalia Rizki (2017)	Pengaruh Media Sosial terhadap Citra Destinasi dan Keputusan Berkunjung Wisatawan	Media sosial, citra destinasi, keputusan berkunjung	Survei, SEM	Media sosial berpengaruh signifikan terhadap citra destinasi dan keputusan berkunjung wisatawan	Rekomendasi wisatawan melalui media sosial memengaruhi minat kunjungan
11	Valentino (2019)	Pengaruh Electronic Word of Mouth terhadap Keputusan Berkunjung	e-WOM, keputusan berkunjung	Survei, analisis regresi	e-WOM berpengaruh signifikan terhadap keputusan berkunjung wisatawan	Mendukung peran rekomendasi wisatawan dalam menarik pengunjung
12	Gonzalez et al. (2005)	Environmental Quality and Tourist Experience	Kualitas lingkungan, pengalaman wisatawan	Survei, kuantitatif	Kualitas lingkungan fisik & sosial memengaruhi persepsi dan pengalaman wisatawan	Dasar indikator kualitas lingkungan
13	Kozak & Rimmington (2000)	Tourist Satisfaction with Mallorca, Spain, as an Off-Season Holiday Destination	Kualitas lingkungan, kepuasan, minat ulang	Survei, kuantitatif	Kualitas lingkungan berperan penting dalam menciptakan pengalaman positif dan minat kunjungan ulang	Hubungan kualitas lingkungan dan minat berkunjung
14	Petterson & Williams (2005)	The Value of Environmental	Kualitas lingkungan,	Survei, model ekonomi	Kualitas lingkungan mencakup elemen fisik	Memperluas konsep kualitas lingkungan

No	Peneliti (Tahun)	Judul penelitian	Variabel yang dikaji	Metode penelitian	Hasil utama	Relevansi dengan penelitian
		Quality in Recreation Demand Models	pengalaman emosional		dan emosional, memengaruhi pengalaman wisatawan	
15	Chen & Tsai (2007)	How Destination Image and Evaluative Factors Affect Behavioral Intentions	Kualitas lingkungan, minat berkunjung	Survei, SEM	Kebersihan, keamanan, keindahan, fasilitas, dan interaksi sosial memengaruhi minat berkunjung	Dasar indikator kualitas lingkungan dan minat berkunjung
16	Blancas et al. (2010)	A Sustainability Assessment Model for Tourism Destinations	Keberlanjutan lingkungan, sosial, ekonomi	Model evaluasi, studi kasus	Keberlanjutan diukur dari dampak lingkungan, sosial, dan ekonomi	Dasar indikator keberlanjutan
17	Gretzel et al. (2000)	Sustainable Tourism: A Global Perspective	Keberlanjutan pariwisata	Studi literatur	Keberlanjutan mencakup pengelolaan sumber daya ekonomi, sosial, dan lingkungan	Landasan teori keberlanjutan
18	Bramwell & Lane (2000)	Collaboration and Partnerships in Tourism Planning	Keberlanjutan, kolaborasi	Studi literatur	Keberlanjutan pariwisata memerlukan kolaborasi pemangku kepentingan	Kolaborasi dalam keberlanjutan pariwisata
19	Litvin et al. (2008)	Electronic Word-of- Mouth in Hospitality and	Rekomendasi wisatawan,	Survei, literatur	Rekomendasi wisatawan (mulut ke mulut & online) berdampak	Peran rekomendasi pada minat berkunjung

No	Peneliti (Tahun)	Judul penelitian	Variabel yang dikaji	Metode penelitian	Hasil utama	Relevansi dengan penelitian
		Tourism Management	keputusan perjalanan		signifikan pada keputusan perjalanan	
20	Bickart & Schindler (2001)	Internet Forums as Influential Sources of Consumer Information	Testimoni, rekomendasi, keputusan konsumen	Survei, eksperimen	Testimoni/ulasan wisatawan menjadi sumber informasi berharga dan memengaruhi keputusan kunjungan	Rekomendasi wisatawan sebagai faktor penentu
21	Kwortnik & Thompson (2009)	Unifying Service Quality and Customer Satisfaction	Pengalaman, kepuasan, rekomendasi	Survei	Pengalaman positif mendorong wisatawan untuk merekomendasikan destinasi	Peran kepuasan dalam rekomendasi wisatawan

Lampiran 2 Tabulasi Data

X1.1	X1.2	X1.3	X1.4	X1.5	X2.1	X2.2	X2.3	X2.4	X2.5	Z1.1	Z1.2	Z1.3	Z1.4	Y1.1	Y1.2	Y1.3
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Lampiran 3 Kuesioner Penelitian

Kepada Yth.
Bapak/Ibu/Saudara/i
Di tempat

Dengan hormat
Saya mahasiswa Ekonomi dan Bisnis- Manajemen universitas 17 Agustus 1945
program studi Magister Manajemen,
Nama: Regita Cahyani
Nim: 1262300057

Sedang mengadakan penelitian tentang “**pengaruh kualitas lingkungan dan keberlanjutan terhadap minat berkunjung dengan rekomendasi wisatawan sebagai variabel mediasi pada pengunjung wisata mangrove wonorejo disurabaya**” untuk mendukung penelitian ini diperlukan pendapat dari Bapak/Ibu/Saudara/I yang dituangkan dalam daftar kuesioner ini bawah ini

Mohon kesediaan Bpak/Ibu/Saudara/I dapat meluangkan waktu untuk memberikan jawaban terhadap sejumlah pertanyaan di bawah ini.

A. Data Umum Responden

1. Nama:
2. Usia :
 - 1) < 20 tahun2) 20 s.d 30 tahun
 - 3) > 30 s.d 40 tahun 4) > 40 tahun
3. jenis kelamin: 1) laki-laki2) perempuan
4. pekerjaan: 1) pelajar/Mhs2) Pegawai Negeri
 - 3) wiraswasta4) dan lain-lain
5. tingkat pendidikan : 1) SMA/SMK2) D1/D2/D3
 - 3) S1/S2/S3
6. Domisili: 1) gresik
 - 2) bangkalan
 - 3) Mojokerto
 - 4) Surabaya
 - 5) sidoarjo
 - 6) lamongan
7. Frekuensi kunjungan : 1) belum pernah
 - 2) 1 kali
 - 3) 3 kali
 - 4) > 3 kali

B. Petunjuk Umum Kuisioner

Kuisioner ini disajikan dalam bentuk pertanyaan, yang di dalamnya tidak ada jawaban yang benar atau salah, sehingga memungkinkan anda untuk secara bebas memilih alternatif jawaban sesuai dengan pendapat atau pengalaman anda.

1. SP = Sangat Puas (diberi skor 5)
2. P = Puas (diberi skor 4)
3. CP = Cukup Puas (diberi skor 3)
4. TP = Tidak Puas (diberi skor 2)
5. STP = Sangat Tidak Puas (diberi skor 1)

C. Petunjuk Pengisian

- a. Isilah semua pernyataan yang ada di bawah ini dengan sebaiknya dan jangan ada yang terlewatkan.
- b. Pengisian jawaban cukup dengan member tanda (√) pada pernyataan yang dianggap sesuai dengan pendapat responden (satu jawaban dalam setiap nomor pernyataan).
- c. Setelah selesai mohon periksa kembali jawaban anda.

Atas kesediaan, dukungan, kerjasama dan partisipasi
Bapak/Ibu/Saudara/i saya ucapkan terima kasih.

Surabaya,

Peneliti,
Regita Cahyani

D. Pernyataan Kuesioner

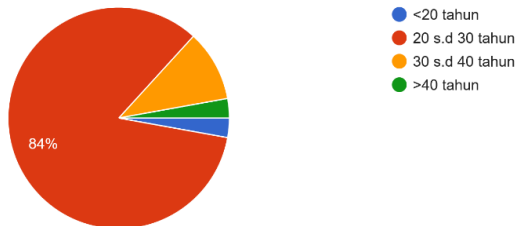
NO	Pernyataan	STS	TS	N	S	SS
		1	2	3	4	5
Kualitas lingkungan (X1)						
Indikator Kebersihan Lingkungan						
1	Kawasan wisata mangrove terlihat bersih dari sampah plastik					
2	Tempat sampah tersedia memadai di seluruh area wisata					
3	Petugas kebersihan aktif membersihkan lingkungan secara berkala					
Indikator Kelestarian ekosistem						
1	Vegetasi mangrove tumbuh subur dan terawat					
2	Tidak ada kerusakan ekosistem akibat aktivitas wisata					
3	Terdapat zona khusus konversi mangrove					
Indikator Kualitas udara dan air						
1	Udara di sekitar kawasan bebas polusi					
2	Air di sekitar mangrove tidak tercemar limbah					
3	Tidak terdapat bau tidak sedap dari perairan					
Indikator Kenyamanan visual						
1	Pemandangan alam mangrove tertata apik					
2	Jalur tracking memiliki view yang menarik					
3	Area wisata bebas dari visualisasi yang merusak alam					
Indikator Manajemen limbah						
1	Sistem pengelolaan limbah wisata berfungsi baik					
2	Tidak terdapat limbah industri di perairan					
3	Pengelola menerapkan konsep zero-waste					
Keberlanjutan (X2)						
Indikator Keberlanjutan Ekologis						
1	Vegetasi mangrove terus bertambah setiap tahun					
2	Terdapat program penanaman mangrove rutin					
3	Pengelola membatasi jumlah pengunjung harian					
Indikator Keberlanjutan sosial						
1	Masyarakat lokal terlibat aktif dalam pengelolaan					
2	Tidak terjadi konflik dengan masyarakat sekitar					
3	Wisata meningkatkan kesejahteraan lingkungan					
Indikator Keberlanjutan Ekonomi						
1	Pendapatan masyarakat meningkat melalui wisata					
2	Terdapat produk lokal yang dijual di kawasan					

3	Wisata menciptakan lapangan kerja baru					
Indikator Keterlibatan komunitas						
1	Masyarakat ikut menjaga kebersihan kawasan mangrove					
2	Terdapat kelompok sadar wisata binaan pengelola					
3	Warga lokal menjadi pemandu wisata					
Indikator Edukasi dan kampanye Lingkungan						
1	Terdapat informasi konservasi mangrove di area					
2	Pengelola menyelenggarakan workshop lingkungan					
3	Terdapat papan edukasi di sepanjang jalur					
Rekomendasi wisatawan (Z)						
Indikator Kesesuaian Harapan						
1	Pengalaman wisata sesuai iklan/promosi					
2	Fasilitas pendukung memadai untuk kebutuhan					
3	Durasi kunjungan cukup untuk mengeksplorasi					
Indikator Kualitas pengalaman wisata						
1	Aktivitas wisata memberikan pengalaman unik					
2	Fasilitas pendukung memadai untuk kebutuhan					
3	Durasi kunjungan cukup untuk mengeksplorasi					
Indikator Emosi positif						
1	Merasa puas dengan seluruh aspek wisata					
2	Pengalaman meningkatkan kecintaan pada alam					
3	Merasa termotivasi untuk menjaga lingkungan					
Indikator Ketersediaan untuk kembali						
1	Bersedia mengulangi pengalaman wisata					
2	Akan datang kembali jika fasilitas baru					
3	Merekomendasikan ke teman/keluarga					
MINAT BERKUNJUNG (Y)						
Indikator Kertarikan untuk berkunjung						
1	Tertarik mengunjungi destinasi serupa					
2	Ingin menjelajahi area mangrove					
3	Berminat ikut paket wisata edukasi mangrove					
Indikator Niat mengunjungi kembali						
1	Merencanakan kunjungan ulang tahun depan					
2	Akan kembali jika ada event khusus					
3	Ingin mengeksplorasi area yang belum terjamah					
Indikator Rekomendasi kepada orang lain						
1	Sudah merekomendasikan ke 3 orang					
2	Akan membagikan pengalaman di media sosial					
3	Menyarankan sebagai destinasi wajib dikunjungi					

Lampiran 4 Karakteristik Responden

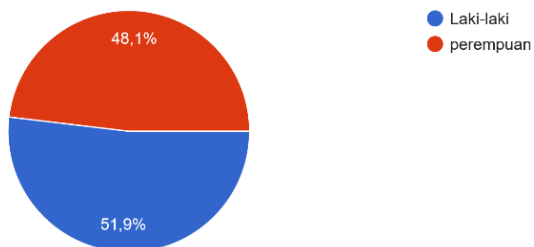
a. Usia

Usia
106 jawaban



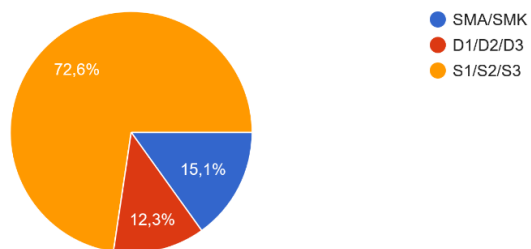
b. Jenis Kelamin

Jenis Kelamin
106 jawaban



c. Tingkat Pendidikan

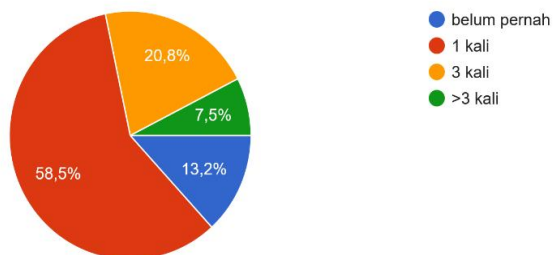
Tingkat pendidikan
106 jawaban



d. Frekuensi Kunjungan

Frekuensi Kunjungan

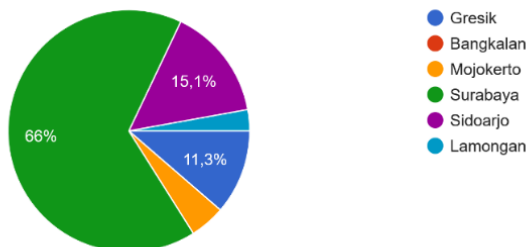
106 jawaban



e. Domisili

Domisili

106 jawaban

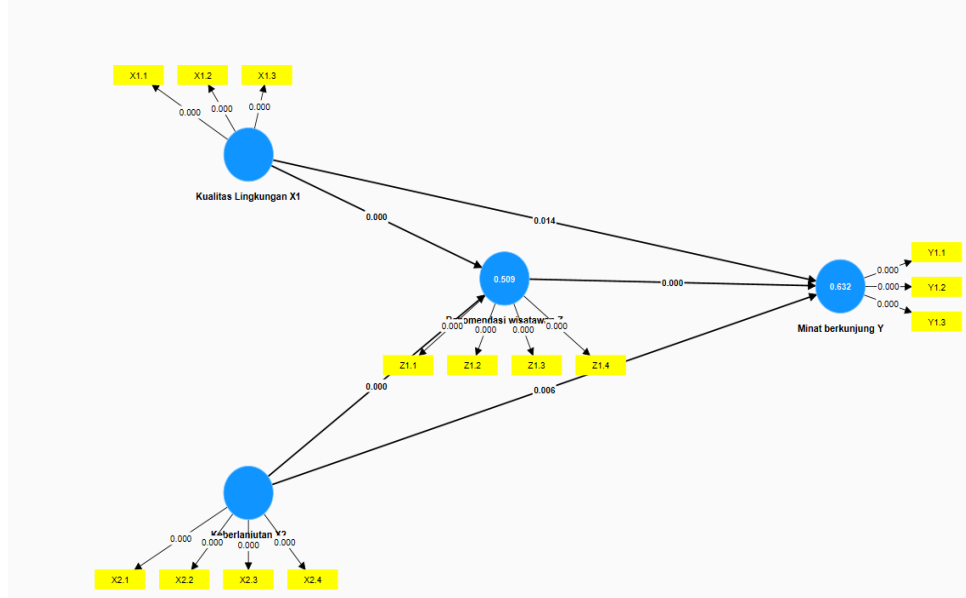


Lampiran 5 Olah Data SEM PLS

Efek tidak langsung spesifik - Rata-rata, STDEV, Nilai-T, Nilai-p						Salin ke Excel
	Sampel asli (O)	Rata-rata sampel (M)	Standar deviasi (STDEV)	T statistik (O /STDEV)	Nilai P (P values)	
Keberlanjutan X2 -> Rekomendasi wisatawan Z -> Minat berkunjung Y	0.243	0.246	0.064	3.799	0.000	
Kualitas Lingkungan X1 -> Rekomendasi wisatawan Z -> Minat berkunjung Y	0.258	0.260	0.073	3.525	0.000	

Koefisien jalur - Rata-rata, STDEV, Nilai-T, Nilai-p						Salin ke Excel	Salin ke R
	Sampel asli (O)	Rata-rata sampel (M)	Standar deviasi (STDEV)	T statistik (O /STDEV)	Nilai P (P values)		
Keberlanjutan X2 -> Minat berkunjung Y	0.212	0.214	0.077	2.742	0.006		
Keberlanjutan X2 -> Rekomendasi wisatawan Z	0.470	0.475	0.075	6.236	0.000		
Kualitas Lingkungan X1 -> Minat berkunjung Y	0.246	0.243	0.100	2.459	0.014		
Kualitas Lingkungan X1 -> Rekomendasi wisatawan Z	0.498	0.497	0.069	7.199	0.000		
Rekomendasi wisatawan Z -> Minat berkunjung Y	0.517	0.519	0.108	4.794	0.000		

PLS-SEM: PLS13 >> Bootstrapping Hasil



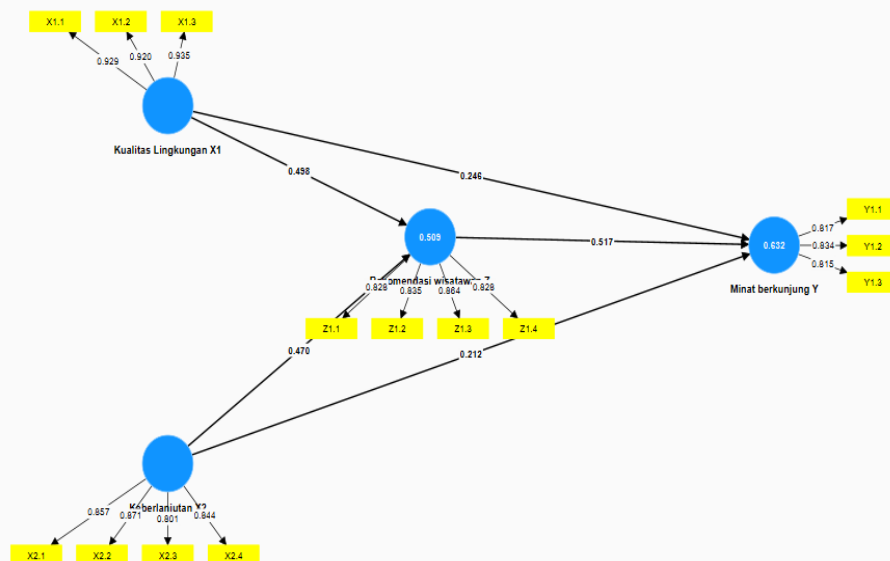
Validitas dan reliabilitas konstruk - Ringkasan

Salin ke

	Cronbach's alpha	Keandalan komposit (rho_a)	Keandalan komposit (rho_c)	Rata-rata varians diekstraksi (AVE)
Keberlanjutan X2	0.865	0.873	0.908	0.712
Kualitas Lingkungan X1	0.919	0.920	0.949	0.861
Minat berkunjung Y	0.761	0.762	0.862	0.676
Rekomendasi wisatawan Z	0.860	0.860	0.905	0.704

R-square - Ringkasan

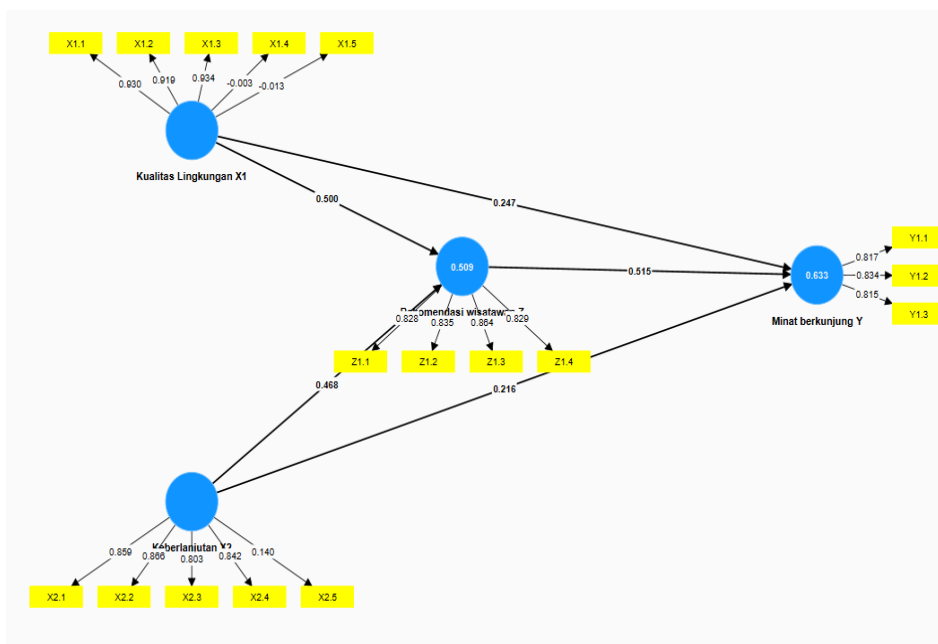
	R-square	Adjusted R-square
Minat berkunjung Y	0.632	0.620
Rekomendasi wisatawan Z	0.509	0.499

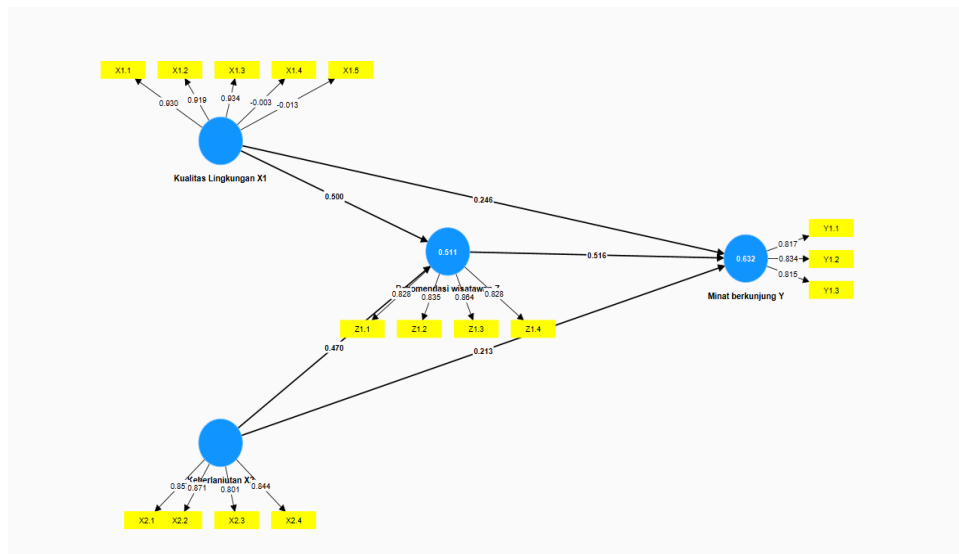


Pemuatan luar (Outer loadings) - Matriks

Salin ke Excel Salin ke R

	Keberlanjutan X2	Kualitas Lingkungan X1	Minat berkunjung Y	Rekomendasi wisatawan Z
X1.1		0.930		
X1.2		0.919		
X1.3		0.934		
X1.4		-0.003		
X1.5		-0.013		
X2.1	0.859			
X2.2	0.866			
X2.3	0.803			
X2.4	0.842			
X2.5	0.140			
Y1.1			0.817	
Y1.2			0.834	
Y1.3			0.815	
Z1.1				0.828
Z1.2				0.835
Z1.3				0.864
Z1.4				0.829





SmartPLS Ekspor

[Edit](#)
[Menyimpan](#)
[Excel](#)
[HTML](#)
[Membuat file data](#)
[Membandingkan](#)

Bootstrapping

Grafis
 Keluaran grafik
 Hasil akhir
 Koefisien jalur
 Rata-rata, STDEV, Nilai-T, Nilai-p
 Interval keyakinan
 Bias interval kepercayaan dikoreksi
 Konstanta
 Total efek tidak langsung
 Efek tidak langsung spesifik
 Total efek
 Pemuatan luar (Outer loadings)
 Bobot luar (Outer weights)
 Kriteria kualitas
 R-square
 Adjusted R-square
 f-square
 Rata-rata varians diekstraksi (AVE)
 Keandalan komposit (rho_c)

Koefisien jalur - Rata-rata, STDEV, Nilai-T, Nilai-p

	Sampel asli (O)	Rata-rata sampel (M)	Standar deviasi (STDEV)	T statistik (O/STDEV)	Nilai P (P values)
Kebertarikan X2 → Minat berkunjung Y	0.212	0.214	0.077	2.742	0.006
Kebertarikan X2 → Rekomendasi wisatawan Z	0.470	0.475	0.075	6.236	0.000
Kualitas Lingkungan X1 → Minat berkunjung Y	0.246	0.243	0.100	2.459	0.014
Kualitas Lingkungan X1 → Rekomendasi wisatawan Z	0.498	0.497	0.069	7.199	0.000
Rekomendasi wisatawan Z → Minat berkunjung Y	0.517	0.519	0.108	4.794	0.000

[Salin ke Excel](#)
[Salin ke R](#)

SmartPLS 4 Ekspor

Edit Menyimpan Excel HTML Membuat file data Membandingkan

Bootstrapping

Grafis

Keluaran grafik

Hasil akhir

Koefisien jalur

Konstanta

Total efek tidak langsung

Efek tidak langsung spesifik

Total efek

Pemuatan luar (Outer loadings)

☒ Rata-rata, STDEV, Nilai-T, Nilai-p

☐ Interval keyakinan

☐ Bias interval kepercayaan dikoreksi

Bobot luar (Outer weights)

☐ Rata-rata, STDEV, Nilai-T, Nilai-p

☐ Interval keyakinan

☐ Bias interval kepercayaan dikoreksi

Kriteria kualitas

R-square

Adjusted R-square

F-square

Rata-rata varians diekstraksi (AVE)

Keandalan komposit (rho_c)

Keandalan komposit (rho_a)

Pemuatan luar (Outer loadings) - Rata-rata, STDEV, Nilai-T, Nilai-p

	Sampel asli (O)	Rata-rata sampel (M)	Standar deviasi (STDEV)	T statistik (O/STDEV)	Nilai P (P values)
X1.1 <- Kualitas Lingkungan X1	0.929	0.929	0.017	55.850	0.000
X1.2 <- Kualitas Lingkungan X1	0.920	0.920	0.022	42.268	0.000
X1.3 <- Kualitas Lingkungan X1	0.935	0.934	0.020	47.790	0.000
X2.1 <- Keberlanjutan X2	0.857	0.857	0.035	24.225	0.000
X2.2 <- Keberlanjutan X2	0.871	0.871	0.028	30.938	0.000
X2.3 <- Keberlanjutan X2	0.801	0.797	0.051	15.791	0.000
X2.4 <- Keberlanjutan X2	0.844	0.844	0.033	25.234	0.000
Y1.1 <- Minat berkunjung Y	0.817	0.815	0.048	17.174	0.000
Y1.2 <- Minat berkunjung Y	0.834	0.835	0.032	26.117	0.000
Y1.3 <- Minat berkunjung Y	0.815	0.813	0.039	20.743	0.000
Z1.1 <- Rekomendasi wisatawan Z	0.828	0.827	0.036	21.135	0.000
Z1.2 <- Rekomendasi wisatawan Z	0.835	0.835	0.040	20.900	0.000
Z1.3 <- Rekomendasi wisatawan Z	0.864	0.864	0.028	31.319	0.000
Z1.4 <- Rekomendasi wisatawan Z	0.828	0.828	0.034	24.421	0.000

SmartPLS 4 Ekspor

Edit Menyimpan Excel HTML Membuat file data Membandingkan

Algoritma PLS-SEM

Grafis

Keluaran grafik

Hasil akhir

☒ Matriks

☐ Daftar

☐ Diagram belah

Efek tidak langsung

☐ Total efek tidak langsung

☐ Efek tidak langsung spesifik

Total efek

Pemuatan luar (Outer loadings)

☐ Matriks

☐ Daftar

Bobot luar (Outer weights)

☐ Matriks

☐ Daftar

Variabel laten

Residual

Kriteria kualitas

R-square

F-square

Validitas dan reliabilitas konstruk

Pemuatan luar (Outer loadings) - Matriks

	Keberlanjutan X2	Kualitas Lingkungan X1	Minat berkunjung Y	Rekomendasi wisatawan Z
X1.1		0.929		
X1.2		0.920		
X1.3		0.935		
X2.1	0.857			
X2.2	0.871			
X2.3	0.801			
X2.4	0.844			
Y1.1			0.817	
Y1.2			0.834	
Y1.3			0.815	
Z1.1				0.828
Z1.2				0.835
Z1.3				0.864
Z1.4				0.828

Lampiran 6 Kartu Bimbingan


UNIVERSITAS 17 AGUSTUS 1945 (UNTAS) SURABAYA
FAKULTAS EKONOMI DAN BISNIS
 Kampus: Jl. Semolowaru 45 Surabaya 60118, Telp. (031) 5925289, E-mail: feb@untas-sby.ac.id

SEMESTER
Gasal / Genap

KARTU BIMBINGAN TESIS

Nama Mahasiswa / NBI : Regita Cahyani / 1202300051
 Nama Pembimbing : 1. Dr. Axtul Halik
 2. Dr. Ahmad Yanu Alif Franto, S.E., M.B.A.
 3. Pengaruh kualitas Ungkuran dan Rekomendasi
Judul TESIS : Terhadap Minat Berkunjung Dengan Rekomendasi
Sebagai Variabel Mediasi Pada Pengunjung Wisata Mangrove Di Sate Timur

Mulai Program Tesis : Semester Thn. Ak. Selesai Bimbingan Tanggal

No.	HARI / TANGGAL	KONSENTRASI		PARAF
		BAB / HAL	KETERANGAN REVISI	
1	20/3/2015		Bimbingan/konsultasi online terkait judul penelitian	
2	21/3/2015		Bimbingan offline terkait judul penelitian	
3	16/4/2015		Bimbingan Revisi bab 1-4 offline	
4	29/4/2015		Bimbingan offline hasil olah data 1	
5	30/4/2015		ACC Bab 1-4 offline	
6	30/4/2015		Bimbingan offline hasil olah data 2	
7	10/5/2015		Bimbingan hasil olah data online.	
8	17/5/2015		Bimbingan bab 5 offline.	
9	4/6/2015		ACC hasil olah data	
10	5/6/2015		Bimbingan revisi bab 5 offline.	

Lampiran 7 Turnitin

THE EFFECT OF
ENVIRONMENTAL QUALITY
AND SUSTAINABILITY ON
VISITING INTEREST WITH
TOURIST RECOMMENDATIONS
AS A MEDIATION VARIABLE ON
VISITORS TO WONOREJO
MANGROVE TOURISM IN

Submission date: 09-Jul-2025 12:56PM (UTC+0700)

Submission ID: 2712304234

File name: Ekonomi_Dan_Bisnis_1263200057_Regita_Cahyani.docx (173.91K)

Word count: 4520

Character count: 27854

SURABAYA

by Regita Cahyani

22
THE EFFECT OF ENVIRONMENTAL QUALITY AND SUSTAINABILITY ON VISITING INTEREST WITH TOURIST RECOMMENDATIONS AS A MEDIATION VARIABLE ON VISITORS TO WONOREJO MANGROVE TOURISM IN SURABAYA

Regita Cahyani , Abdul Halik, Achmad Yanu Alif Fianto

University of August 17, 1945, Surabaya

Corresponding Author: Regita Cahyani, 1262300057@surel.untag-sby.ac.id, halik@untag-sby.ac.id, achmadyanu@untag-sby.ac.id

ABSTRACT

This study aims to analyze the influence of environmental quality and sustainability on visit intention at the Mangrove Wonorejo tourism site in Surabaya, with tourist recommendation as a mediating variable. The background of this research is based on the high tourism potential of mangrove areas in coastal Surabaya, which still faces challenges in maintaining environmental quality and consistently applying sustainability principles. This research employs a quantitative approach using a survey method. Data were collected through questionnaires distributed to 100 respondents who had visited Mangrove Wonorejo, and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results show that both environmental quality and sustainability have a significant influence on visit intention. Additionally, these two variables also significantly affect tourist recommendations. Tourist recommendation is proven to significantly mediate the relationship between environmental quality and sustainability toward visit intention. These findings indicate that positive visitor experiences encourage tourists to recommend the destination to others, which in turn strengthens the intention to revisit. This research offers theoretical contributions to sustainable tourism marketing and practical recommendations for ecotourism managers to integrate conservation strategies with experience-based promotion.

Keywords: Environmental Quality, Sustainability, Tourist Recommendation, Visit Intention, Mangrove Tourism.

1. Background

Sustainable tourism has become a major focus in the development of the tourism sector in various countries, including Indonesia. As a country with a wealth of extensive mangrove ecosystems, Indonesia has a great opportunity to develop mangrove-based ecotourism. This ecosystem plays an important role not only in environmental aspects, such as preventing coastal abrasion and maintaining biodiversity, but also in social and economic aspects, especially through the development of ecotourism. The development of mangrove ecotourism is one of the strategic approaches in supporting sustainable tourism that can provide ecological, educational, and economic benefits simultaneously.

Surabaya as one of the big cities that also has a mangrove tourism area, offers great potential in this sector which is known as a center of trade while offering various interesting tourist destinations. The leading mangrove destination area is located in East Java. Along with the increasing interest of tourists in nature-based tourism and environmental education, the development of tourism in mangroves becomes relevant. Mangrove tourism offers a unique experience that combines recreation, education, and empowerment of the surrounding community.

However, the growth of the tourism sector also faces complex environmental challenges. Increasing visitor numbers have the potential to put pressure on mangrove ecosystems, and declining environmental quality can have a direct impact on tourist satisfaction and reduce future interest in visiting. Damage to mangrove ecosystems, declining water quality, and lack of innovation in management and promotion are often issues found in the field. This affects tourist perceptions and interests, as well as the sustainability of the destination itself.

Visiting interest refers to an individual's desire to visit or revisit a tourist destination. In the context of mangrove tourism, this interest is influenced by factors such as perceptions of environmental quality, tourist attractions, and previous experiences. Environmental quality, including physical aspects such as water cleanliness, mangrove vegetation conditions, and cleanliness of public facilities, is a crucial factor in attracting tourists, especially in ecotourism. Positive perceptions of a clean and natural environment will create a pleasant experience and increase visiting interest.

Sustainability in tourism focuses on efforts to maintain a balance between economic, social, and environmental aspects. Sustainable management includes the preservation of mangrove ecosystems, local community participation, and environmental education for visitors. Tourists who are aware of sustainability initiatives tend to respond positively, which can increase satisfaction and return visits.

Traveler recommendations, whether through direct testimonials or digital media, play a significant role in influencing travel interest. In the digital era, recommendations through social media and online reviews have become very effective promotional tools in increasing travel interest. Research shows that environmental quality and sustainability not only have a direct impact on travel interest, but also indirectly strengthen that interest through traveler perceptions and experiences that drive positive recommendations.

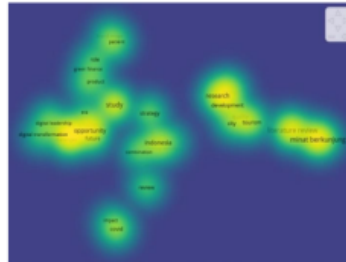


Figure 1.1 Literature Keyword Density Map

Source: Processed Data, 2025

Based on the keyword density map and empirical findings above, it can be seen that research on the influence of environmental quality and sustainability on visiting interest, with tourist recommendations as a mediating variable, is still very relevant and important to be studied further. Although visiting interest has become a widely discussed topic, exploration space remains open, especially in understanding how environmental quality and sustainability of tourist areas can trigger a domino effect in the form of positive recommendations that strengthen the attractiveness of mangrove destinations in Surabaya. Thus, this study is expected to contribute to the development of sustainable mangrove tourism management strategies, as well as enrich scientific literature in the fields of tourism and the environment.

This phenomenon is in line with the conditions in the field, where mangrove tourism in East Java such as in Surabaya, has become one of the leading destinations that offers educational, recreational, and conservation values. However, the development of mangrove ecotourism areas also presents its own challenges, especially related to the decline in environmental quality due to tourist activities, development, and less than optimal environmental management. Damage to mangrove ecosystems, declining water quality, and lack of innovation in management and promotion are issues that are still frequently encountered. This has an impact on tourists' perceptions and interest in visiting, which ultimately affects the sustainability of the tourist destination.

2. Theoretical basis

Sustainable Tourism Development

The theory of Sustainable Tourism Development (STD) is based on the principle of sustainable development as stated in the Brundtland Report (1987), namely development that meets current needs without sacrificing future generations. In the context of mangrove tourism, STD emphasizes the balance between environmental conservation, local community empowerment, and economic sustainability. According to UNWTO (2005), sustainable tourism considers economic, social, and environmental impacts as a whole, and ensures the welfare of local communities and the sustainability of natural resources.

Sustainable tourism development becomes the main framework because it is able to explain the relationship between environmental quality and sustainability towards visiting interest mediated by tourist recommendations. This theory is also flexible and can be applied

in various types of tourist destinations including mangrove ecotourism which is the focus of this study. In the Wonorejo mangrove tourism area in Surabaya is a real example of a natural destination (ecotourism) that requires sustainable management.

Environmental Perception Theory

According to Lindal et al. (2021), environmental perception is the result of the interaction between the physical characteristics of the environment and the psychological perception of individuals, which ultimately forms attitudes, aesthetic judgments, and behavior towards a place. In the context of tourism, how tourists perceive cleanliness, beauty, comfort, and environmental sustainability greatly influences their decision to visit or recommend a destination. Environmental perception is an important foundation for understanding how the quality and sustainability of the environment of tourist destinations such as mangrove ecotourism areas can influence tourists' interest in visiting through the dimensions of their subjective perceptions of environmental conditions experienced directly.

Environmental perception is a complex psychological process, involving the interaction between physical environmental stimuli and individual internal factors such as knowledge, experience, emotions, values, and expectations. In the context of tourism, environmental perception greatly determines how tourists assess, feel, and respond to a tourist destination. The environment in question includes everything that can be captured by the senses, both visual, auditory, and atmospheric elements of a place.

Theory of Planned Behavior (TPB)

The Theory of Planned Behavior is used as a theoretical framework to explain how tourists' interest in visiting the Wonorejo Mangrove ecotourism area in Surabaya is formed. Environmental quality and destination sustainability act as external factors that shape tourists' attitudes towards visiting, while encouragement from the social environment forms their subjective norms. In addition, perceptions of the ease or obstacles in visiting the mangrove area form the dimension of perceived behavioral control. These three components together form the intention to visit, which in many studies has been shown to be a strong predictor of actual behavior. Thus, the application of TPB in this study is expected to provide a strong theoretical and empirical understanding of the psychological factors that drive tourists to choose, visit, and recommend environmentally and sustainability-based destinations.

Place Attachment Theory

Place attachment is an affective bond between a person and their physical environment that is formed through experience, meaning, and social interaction. This bond is not only based on physical location, but is also influenced by personal values, past experiences, and symbols attached to the place.

Lewicka (2011) stated that place attachment can be formed through repeated interactions with a place, personal memories, and social participation in that place. This confirms that attachment is not instantaneous, but rather the result of consistent and meaningful experiences.

In the context of mangrove ecotourism, such as in Wonorejo Surabaya, *place attachment* can be created through:

1. Positive experiences with environmental quality (cleanliness, authenticity, coolness).
2. Conservation efforts that were successful and witnessed directly by visitors.
3. Interaction with local communities or education about the importance of protecting the area.

Place attachment acts as a middle theory that bridges the influence of environmental quality and sustainability on visiting intentions. When tourists feel emotionally attached to a tourist destination because of the memorable experiences it offers, they tend to have a higher intention to return or recommend the place.

Triple Bottom Line (TBL)

The TBL model emphasizes the balance between three main aspects of sustainable development: economic, social, and environmental. In mangrove tourism, this approach is used to evaluate the impact of sustainability practices on environmental quality and the welfare of local communities. The triple bottom line introduced by Elkington (1997) emphasizes that success is not only assessed from the economic aspect but also from its impact on humans. This model emphasizes that the success of an entity is not only measured by financial profit, but must also consider its contribution to community welfare and environmental sustainability.

Sustainable tourism, especially in mangrove ecotourism areas, the Triple Bottom Line approach is used to assess whether the tourism practices implemented actually provide positive impacts not only economically, but also socially and ecologically. This model requires a balance between these three aspects as a basis for planning, managing, and developing responsible and sustainable tourist destinations. According to Gunawan, Ramanditya, and Setiawan (2021) communities in managing mangrove ecosystem-based tourism, by adopting the *Triple Bottom Line* (TBL) approach as a framework for evaluating sustainable development. This study was conducted in coastal areas of Indonesia that develop mangrove tourism as a form of local ecotourism.

3. Research methods.

This study uses a quantitative approach with a survey method to test the causal relationship between environmental quality variables, sustainability, tourist recommendations, and visiting intentions. The study aims to test the hypotheses that have been formulated based on a theoretical framework built from the theory of Sustainable Tourism Development, Theory of Planned Behavior, and Place Attachment Theory.

The population in this study were tourists visiting mangrove tourist destinations in East Java, including areas in Surabaya, Lamongan, Gresik, and Pasuruan. The sampling technique used was **purposive sampling** with the respondent criteria being tourists who had visited mangrove tourist locations at least once. The number of samples used in this study was **100 respondents**. Data were collected through a closed questionnaire with a 5-point Likert scale. The questionnaire instrument was tested for validity and reliability before being used in the main study.

Environmental Quality Variable (X1) is measured through five indicators: environmental cleanliness, ecosystem sustainability, air and water quality, visual comfort, and waste management. **Sustainability** (X2) is measured through five indicators: ecological sustainability, social

sustainability, economic sustainability, community involvement, and environmental education. **Tourist Recommendation (Z)** as a mediating variable, includes indicators of satisfaction, service quality, tourism experience, positive emotions, and online reviews. **Visiting Intention (Y)** as a dependent variable, is measured through preferences, predictions of repeat visits, and future needs.

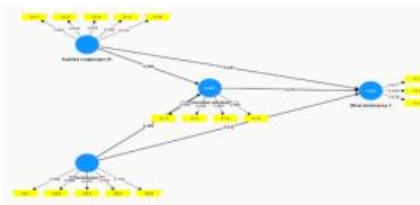
Data analysis was conducted using the **Structural Equation Modeling (SEM)** approach with **SmartPLS software**. The analysis stages consist of **Descriptive Analysis** to describe the respondent profile and distribution of answers. **Measurement Model Testing (Outer Model)** includes convergent validity test, indicator reliability, and AVE. **Structural Model Testing (Inner Model)** includes R-square test and influence test between variables. **Hypothesis testing** is conducted using bootstrapping technique to see the significance of direct and indirect relationships between variables. This method was chosen to obtain a deep empirical and quantitative understanding of the influence of environmental quality and sustainability on visiting interest, as well as the mediating role of tourist recommendations.

4. Results and Discussion

The results of the outer model analysis show that all indicators in each variable have a loading value > 0.7 and $AVE > 0.5$, so that the research instrument is declared valid and reliable. The inner model analysis shows that environmental quality has a positive and significant effect on visiting interest ($O = 0.246$; $T\text{-stat} = 2.774$). Sustainability also has a significant effect on visiting interest ($O = 0.212$; $T\text{-stat} = 2.742$).

In addition, environmental quality and sustainability each have a significant effect on tourist recommendations ($O = 0.273$ and 0.243). Tourist recommendations are proven to mediate the relationship between environmental quality and sustainability on visiting intentions, with a significant indirect effect ($p\text{-value} < 0.05$). These results are consistent with the TPB and Place Attachment theories, where pleasant experiences shape the intention to return or recommend to others.

The following are the results of the outer model in this study:



Based on the image above, it is known that before further algorithm data processing, there are still factor loading values (outer loading) whose values are less than 0.5. This indicates that several indicators have not met the recommended convergent validity criteria, namely having a loading value of more than 0.5.

Outer Model Algorithm Results Outer Loading Testing:

Variables	Dimensions	Loading factor	Information
X1_Environmental quality	X1.1	0.930	Valid
	X1.2	0.919	Valid
	X1.3	0.934	Valid
	X1.4	-0.003	Invalid
	X1.5	-0.013	Invalid
X2_Sustainability	X2.1	0.859	Valid
	X2.2	0.866	Valid
	X2.3	0.803	Valid
	X2.4	0.842	Valid
	X2.5	0.140	Invalid
Y_Interested in Visiting	Y1.1	0.817	Valid
	Y1.2	0.834	Valid
	Y1.3	0.815	Valid
Z_Traveler Recommendations	Z1.1	0.828	Valid
	Z1.2	0.835	Valid
	Z1.3	0.864	Valid
	Z1.4	0.829	Valid

The following are the results of the outer model after being modified in this study:

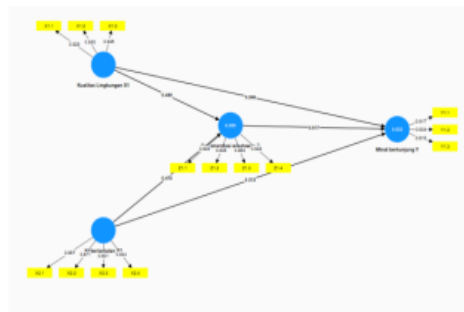


Figure 5.1 Outer Model Modification

Based on the image after elimination, it can be seen that all indicators in each latent variable have a factor loading value above 0.5. This indicates that the retained indicators are valid and reliable in measuring the intended construct.

5. Hypothesis Analysis

Direct Effect

Hypothesis	Original sample (O)	Tstatistics (O/STDEV)	P Value (P values)	Significance
Sustainability (X2) -> Interest in Visiting (Y)	0.212	0.077	0.006	ACCEPTED
Sustainability(X2) -> Traveler Recommendation(Z)	0.470	0.075	0.000	ACCEPTED
Environmental Quality(X1) -> Interest in Visiting(Y)	0.246	0.100	0.014	ACCEPTED
Environmental Quality(X1) -> Tourist Recommendation(Z)	0.498	0.069	0.000	ACCEPTED
Tourist Recommendation(Z) -> Interest in Visiting(Y)	0.517	0.108	0.000	ACCEPTED

H1. Sustainability X2 -> Visiting Interest Y

Original Sample (O): 0.212. This indicates that every one unit increase in Sustainability (X2) will increase Visiting Intention (Y) by 0.212 units, assuming other variables are constant. The direction of the relationship is positive. T statistic: 2.742. This value is greater than 1.96, indicating an initial indication of significance. P values: 0.006. The p value of 0.006 is smaller than 0.05 ($\alpha = 0.05$). Since the p value (0.006) is smaller than 0.05, it can be concluded that Sustainability (X2) has a positive and significant direct effect on Visiting Intention (Y). The better the Sustainability, the higher the Visiting Intention.

H2. Sustainability X2 -> Traveler Recommendation Z

Original Sample (O): 0.470. This indicates that every one unit increase in Sustainability (X2) will increase Tourist Recommendation (Z) by 0.470 units, assuming other variables remain constant. The direction of the relationship is positive. T statistic: 6.236. This value is much greater than 1.96, indicating a strong indication of significance. P values: 0.000. The p value of 0.000 (close to zero) is clearly smaller than 0.05 ($\alpha = 0.05$). Since the p value (0.000) is smaller than 0.05, it can be concluded that Sustainability (X2) has a positive and significant direct effect on Tourist Recommendation (Z). Good sustainability plays a major role in encouraging tourists to recommend a destination.

H3. Environmental Quality X1 -> Visiting Interest Y

Original Sample (O): 0.246. This shows that every one unit increase in Environmental Quality (X1) will increase Visiting Interest (Y) by 0.246 units, assuming other variables are constant. The direction of the relationship is positive. T statistic: 2.459. This value is greater than 1.96, indicating an indication of significance. P values: 0.014. The p value of 0.014 is smaller than 0.05 ($\alpha = 0.05$). Because the p value (0.014) is smaller than 0.05, it can be concluded that Environmental Quality (X1) has a positive and significant direct effect on Visiting Interest (Y). The higher the Environmental Quality, the greater the Tourist Visiting Interest.

H4. Environmental Quality X1 -> Tourist Recommendation Z

Original Sample (O): 0.498. This indicates that every one unit increase in Environmental Quality (X1) will increase Tourist Recommendation (Z) by 0.498 units, assuming other variables remain constant. The direction of the relationship is positive. T statistic: 7.199. This value is much greater than 1.96, indicating a very strong indication of significance. P values: 0.000. The p value of 0.000 is clearly smaller than 0.05 ($\alpha = 0.05$). Since the p value (0.000) is smaller than 0.05, it can be concluded that Environmental Quality (X1) has a positive and significant direct effect on Tourist Recommendation (Z). Good environmental quality is a crucial factor that encourages tourists to recommend a place.

H5. Tourist Recommendation Z -> Visiting Interest Y

Original Sample (O): 0.517. This indicates that every one unit increase in Tourist Recommendation (Z) will increase Visiting Intention (Y) by 0.517 units, assuming other variables are constant. The direction of the relationship is positive. T-statistic: 4.794. This value is much greater than 1.96, indicating a very strong indication of significance. P values: 0.000. The p value of 0.000 is clearly smaller than 0.05 ($\alpha = 0.05$). Since the p value (0.000) is smaller than 0.05, it can be concluded that Tourist Recommendation (Z) has a positive and significant direct effect on Visiting Intention (Y). The more positive recommendations from other tourists, the higher the Visiting Intention of potential tourists.

Indirect Effect

Hypothesis	Original sample (O)	T statistic (IO/STDEV)	P values	SIGNIFICANCE
Environmental Sustainability(X2) -> Tourist Recommendation(Z) -> Interest in Visiting(Y)	0.243	0.064	0.000	Accepted
Environmental Quality(X1) -> Tourist Recommendations(Z) -> Interest in Visiting(Y)	0.258	0.073	0.000	Accepted

From the hypothesis test using the bootstrap technique on SmartPLS, the following were found:

H6. Environmental Quality X1 -> Tourist Recommendation Z -> Visiting Interest Y

Original Sample (O): 0.258. This value indicates the magnitude of the indirect effect of Environmental Quality (X1) on Visiting Intention (Y) mediated by Tourist Recommendations (Z). A positive number of 0.258 indicates that an increase in Environmental Quality (X1) will indirectly increase Visiting Intention (Y) through its role in increasing Tourist Recommendations (Z). T statistic: 3.525. The T statistic value of 3.525 is also much greater than the critical limit of 1.96, indicating a strong indication of statistical significance. P value (P values): 0.000. The p value of 0.000 (approaching zero) is significantly smaller than 0.05 ($\alpha = 0.05$). Based on the very small p value (0.000), it can be concluded that Environmental Quality (X1) indirectly has a positive and significant effect on Visiting Intention (Y) through the mediation of Tourist Recommendations (Z). This implies that superior environmental quality not only attracts visitors directly, but also substantially increases that interest by encouraging tourists to provide positive recommendations. Thus, Tourist Recommendation (Z) acts as a crucial mediator in the relationship between Environmental Quality (X1) and Visiting Intention (Y). A well-maintained and attractive environmental quality will encourage tourists to recommend the place, which in turn will attract more visitors.

H7. Sustainability X2 -> Tourist Recommendation Z -> Visiting Interest Y

Original Sample (O): 0.243. This value represents the magnitude of the indirect effect of Sustainability (X2) on Visiting Intention (Y) mediated by Tourist Recommendations (Z). The positive number 0.243 indicates that an increase in Sustainability (X2) will indirectly increase Visiting Intention (Y) through its role in increasing Tourist Recommendations (Z). T statistic: 3.799. The T statistic value of 3.799 is much greater than the critical limit of 1.96, indicating strong statistical significance. P values: 0.000. The p value of 0.000 (approaching zero) is significantly smaller than 0.05 ($\alpha = 0.05$). Based on the very small p value (0.000), it can be concluded that Sustainability (X2) indirectly has a positive and significant effect on Visiting Intention (Y) through the mediation of Tourist Recommendations (Z). This means that Sustainability enhancement efforts not only have a direct effect on visitor interest, but also substantially promote that interest by encouraging tourists to provide positive recommendations. In other words, Tourist Recommendation (Z) serves as an effective mediator in the relationship between Sustainability (X2) and Visiting Intention (Y). The better the sustainability aspect of a destination, the more likely tourists are to recommend it, which in turn will increase the visiting interest of other potential tourists.

6. Conclusion

Based on the research results and discussions that have been explained previously, the conclusions from the results of this research can be described as follows:

1. Environmental quality has a significant effect on interest in visiting the mangrove tourism area in Wonorejo Surabaya mangrove tourism in Surabaya. This finding shows that a clean, natural, and well-maintained environment can increase tourist interest in coming, because it provides a meaningful, healthy, and educational tourism experience.
2. Environmental quality has a significant effect on tourist recommendations in the mangrove tourism area in Wonorejo Surabaya . This indicates that tourists tend to give positive recommendations to tourist destinations that have good environmental quality, such as cleanliness, comfort, and authenticity of the ecosystem.
3. Sustainability has a significant effect on interest in visiting the mangrove tourism area in Wonorejo Surabaya mangrove tourism. This shows that tourists increasingly appreciate the environmental and social sustainability aspects in choosing a destination, especially when they see efforts to preserve and empower local communities.
4. Sustainability has a positive and significant effect on tourist recommendations in the mangrove tourism area in Wonorejo Surabaya . Tourists are more likely to recommend destinations that are committed to sustainability because they feel that the tourism experience they get contributes to moral values and social responsibility.
5. Tourist recommendations have a significant influence on interest in visiting the mangrove tourism area in Wonorejo Surabaya . Positive recommendations or testimonials from previous tourists are important factors in attracting potential tourists, both verbally and through digital media.
6. Environmental quality has a significant effect on visiting interest through tourist recommendations as a mediating variable in the mangrove tourism area in Wonorejo Surabaya . This shows that environmental quality not only has a direct impact, but also indirectly strengthens visiting interest through tourist perceptions and experiences that drive recommendations.
7. Sustainability has a significant effect on visiting interest through tourist recommendations as a mediating variable in the mangrove tourism area in Wonorejo Surabaya . This implies that sustainable practices implemented in tourist destinations encourage tourists to provide recommendations, which then increase the interest of other visitors to visit.

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THE EFFECT OF ENVIRONMENTAL QUALITY AND
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(Research/ Review) Article

Effect of Environmental Quality and Sustainability on Visiting Interest Mediated by Tourist Recommendations in Wonorejo

Regita Cahyani ^{1*}, Abdul Halik ², Achmad Yanu Alif Fianto ³

¹ Universitas 17 Agustus 1945 Surabaya ; e-mail : 1262300057@untag-sby.ac.id

² Universitas 17 Agustus 1945 Surabaya ; e-mail : halik@untag-sby.ac.id

³ Universitas 17 Agustus 1945 Surabaya ; e-mail : achmadyanu@untag-sby.ac.id

* Corresponding Author: Regita Cahyani

Abstract: This study aims to analyze the influence of environmental quality and sustainability on visit intention at the Mangrove Wonorejo tourism site in Surabaya, with tourist recommendation as a mediating variable. The background of this research is based on the high tourism potential of mangrove areas in coastal Surabaya, which still faces challenges in maintaining environmental quality and consistently applying sustainability principles. This research employs a quantitative approach using a survey method. Data were collected through questionnaires distributed to 100 respondents who had visited Mangrove Wonorejo, and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results show that both environmental quality and sustainability have a significant influence on visit intention. Additionally, these two variables also significantly affect tourist recommendations. Tourist recommendation is proven to significantly mediate the relationship between environmental quality and sustainability toward visit intention. These findings indicate that positive visitor experiences encourage tourists to recommend the destination to others, which in turn strengthens the intention to revisit. This research offers theoretical contributions to sustainable tourism marketing and practical recommendations for ecotourism managers to integrate conservation strategies with experience-based promotion.

Keywords: Environmental Quality, Sustainability, Tourist Recommendation, Visit Intention, Mangrove Tourism.

1. Introduction

Sustainable tourism has become a major focus in the development of the tourism sector in various countries, including Indonesia. As a country with a wealth of extensive mangrove ecosystems, Indonesia has a great opportunity to develop mangrove-based ecotourism. This ecosystem plays an important role not only in environmental aspects, such as preventing coastal abrasion and maintaining biodiversity, but also in social and economic aspects, especially through the development of ecotourism. The development of mangrove ecotourism is one of the strategic approaches in supporting sustainable tourism that can provide ecological, educational, and economic benefits simultaneously.

Surabaya as one of the big cities that also has a mangrove tourism area, offers great potential in this sector which is known as a center of trade while offering various interesting tourist destinations. The leading mangrove destination area is located in East Java. Along with the increasing interest of tourists in nature-based tourism and environmental education, the development of tourism in mangroves becomes relevant. Mangrove tourism offers a unique experience that combines recreation, education, and empowerment of the surrounding community.

However, the growth of the tourism sector also faces complex environmental challenges. Increasing visitor numbers have the potential to put pressure on mangrove ecosystems, and declining environmental quality can have a direct impact on tourist satisfaction and reduce future interest in visiting. Damage to mangrove ecosystems, declining

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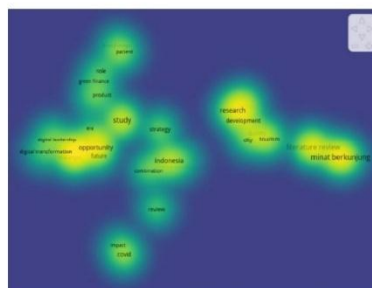
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Traveler recommendations, whether through direct testimonials or digital media, play a significant role in influencing travel interest. In the digital era, recommendations through social media and online reviews have become very effective promotional tools in increasing travel interest. Research shows that environmental quality and sustainability not only have a direct impact on travel interest, but also indirectly strengthen that interest through traveler perceptions and experiences that drive positive recommendations.



Source: Processed Data, 2025

This phenomenon is in line with the conditions in the field, where mangrove tourism in East Java such as in Surabaya, has become one of the leading destinations that offers educational, recreational, and conservation values. However, the development of mangrove ecotourism areas also presents its own challenges, especially related to the decline in environmental quality due to tourist activities, development, and less than optimal environmental management. Damage to mangrove ecosystems, declining water quality, and lack of innovation in management and promotion are issues that are still frequently encountered. This has an impact on tourists' perceptions and interest in visiting, which ultimately affects the sustainability of the tourist destination.

2. Literature Review

Sustainable Tourism Development

The theory of Sustainable Tourism Development (STD) is based on the principle of sustainable development as stated in the Brundtland Report (1987), namely development that meets current needs without sacrificing future generations. In the context of mangrove tourism, STD emphasizes the balance between environmental conservation, local community empowerment, and economic sustainability. According to UNWTO (2005), sustainable tourism considers economic, social, and environmental impacts as a whole, and ensures the welfare of local communities and the sustainability of natural resources.

Sustainable tourism development becomes the main framework because it is able to explain the relationship between environmental quality and sustainability towards visiting interest mediated by tourist recommendations. This theory is also flexible and can be applied in various types of tourist destinations including mangrove ecotourism which is the focus of this study. In the Wonorejo mangrove tourism area in Surabaya is a real example of a natural destination (ecotourism) that requires sustainable management.

Environmental Perception Theory

According to Lindal et al. (2021), environmental perception is the result of the interaction between the physical characteristics of the environment and the psychological perception of individuals, which ultimately forms attitudes, aesthetic judgments, and behavior towards a place. In the context of tourism, how tourists perceive cleanliness, beauty, comfort, and environmental sustainability greatly influences their decision to visit or recommend a destination. Environmental perception is an important foundation for understanding how the quality and sustainability of the environment of tourist destinations such as mangrove ecotourism areas can influence tourists' interest in visiting through the dimensions of their subjective perceptions of environmental conditions experienced directly.

Environmental perception is a complex psychological process, involving the interaction between physical environmental stimuli and individual internal factors such as knowledge, experience, emotions, values, and expectations. In the context of tourism, environmental perception greatly determines how tourists assess, feel, and respond to a tourist destination. The environment in question includes everything that can be captured by the senses, both visual, auditory, and atmospheric elements of a place.

Theory of Planned Behavior (TPB)

The Theory of Planned Behavior is used as a theoretical framework to explain how tourists' interest in visiting the Wonorejo Mangrove ecotourism area in Surabaya is formed. Environmental quality and destination sustainability act as external factors that shape tourists' attitudes towards visiting, while encouragement from the social environment forms their subjective norms. In addition, perceptions of the ease or obstacles in visiting the mangrove area form the dimension of perceived behavioral control. These three components together form the intention to visit, which in many studies has been shown to be a strong predictor of actual behavior. Thus, the application of TPB in this study is expected to provide a strong theoretical and empirical understanding of the psychological factors that drive tourists to choose, visit, and recommend environmentally and sustainability-based destinations.

Place Attachment Theory

Place attachment is an affective bond between a person and their physical environment that is formed through experience, meaning, and social interaction. This bond is not only based on physical location, but is also influenced by personal values, past experiences, and symbols attached to the place.

Lewicka (2011) stated that place attachment can be formed through repeated interactions with a place, personal memories, and social participation in that place. This confirms that attachment is not instantaneous, but rather the result of consistent and meaningful experiences.

In the context of mangrove ecotourism, such as in Wonorejo Surabaya, place attachment can be created through:

- Positive experiences with environmental quality (cleanliness, authenticity, coolness).
- Conservation efforts that were successful and witnessed directly by visitors.
- Interaction with local communities or education about the importance of protecting the area.

Place attachment acts as a middle theory that bridges the influence of environmental quality and sustainability on visiting intentions. When tourists feel emotionally attached to a tourist destination because of the memorable experiences it offers, they tend to have a higher intention to return or recommend the place.

Triple Bottom Line (TBL)

The TBL model emphasizes the balance between three main aspects of sustainable development: economic, social, and environmental. In mangrove tourism, this approach is used to evaluate the impact of sustainability practices on environmental quality and the welfare of local communities. The triple bottom line introduced by Elkington (1997) emphasizes that success is not only assessed from the economic aspect but also from its impact on humans. This model emphasizes that the success of an entity is not only measured by financial profit, but must also consider its contribution to community welfare and environmental sustainability.

Sustainable tourism, especially in mangrove ecotourism areas, the Triple Bottom Line approach is used to assess whether the tourism practices implemented actually provide positive impacts not only economically, but also socially and ecologically. This model requires a balance between these three aspects as a basis for planning, managing, and developing responsible and sustainable tourist destinations. According to Gunawan, Ramanditya, and Setiawan (2021) communities in managing mangrove ecosystem-based tourism, by adopting the Triple Bottom Line (TBL) approach as a framework for evaluating sustainable development. This study was conducted in coastal areas of Indonesia that develop mangrove tourism as a form of local ecotourism.

3. Research Method

This study uses a quantitative approach with a survey method to test the causal relationship between environmental quality variables, sustainability, tourist recommendations, and visiting intentions. The study aims to test the hypotheses that have been formulated based on a theoretical framework built from the theory of Sustainable Tourism Development, Theory of Planned Behavior, and Place Attachment Theory.

The population in this study were tourists visiting mangrove tourist destinations in East Java, including areas in Surabaya, Lamongan, Gresik, and Pasuruan. The sampling technique used was purposive sampling with the respondent criteria being tourists who had visited mangrove tourist locations at least once. The number of samples used in this study was 100 respondents. Data were collected through a closed questionnaire with a 5-point Likert scale. The questionnaire instrument was tested for validity and reliability before being used in the main study.

Environmental Quality Variable (X1) is measured through five indicators: environmental cleanliness, ecosystem sustainability, air and water quality, visual comfort, and waste management. Sustainability (X2) is measured through five indicators: ecological sustainability, social sustainability, economic sustainability, community involvement, and environmental education. Tourist Recommendation (Z) as a mediating variable, includes indicators of satisfaction, service quality, tourism experience, positive emotions, and online reviews. Visiting Intention (Y) as a dependent variable, is measured through preferences, predictions of repeat visits, and future needs.

Data analysis was conducted using the Structural Equation Modeling (SEM) approach with SmartPLS software. The analysis stages consist of Descriptive Analysis to describe the respondent profile and distribution of answers. Measurement Model Testing (Outer Model) includes convergent validity test, indicator reliability, and AVE. Structural Model Testing (Inner Model) includes R-square test and influence test between variables. Hypothesis testing is conducted using bootstrapping technique to see the significance of direct and indirect relationships between variables. This method was chosen to obtain a deep empirical and quantitative understanding of the influence of environmental quality and sustainability on visiting interest, as well as the mediating role of tourist recommendations.

4. Results and Discussion

The results of the outer model analysis show that all indicators in each variable have a loading value > 0.7 and AVE > 0.5 , so that the research instrument is declared valid and reliable. The inner model analysis shows that environmental quality has a positive and

significant effect on visiting interest ($O = 0.246$; $T\text{-stat} = 2.774$). Sustainability also has a significant effect on visiting interest ($O = 0.212$; $T\text{-stat} = 2.742$).

In addition, environmental quality and sustainability each have a significant effect on tourist recommendations ($O = 0.273$ and 0.243). Tourist recommendations are proven to mediate the relationship between environmental quality and sustainability on visiting intentions, with a significant indirect effect ($p\text{-value} < 0.05$). These results are consistent with the TPB and Place Attachment theories, where pleasant experiences shape the intention to return or recommend to others.

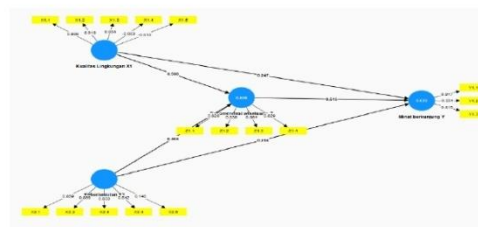


Figure 2. Outer Model

The following are the results of the outer model in this study:

Based on the image above, it is known that before further algorithm data processing, there are still factor loading values (outer loading) whose values are less than 0.5. This indicates that several indicators have not met the recommended convergent validity criteria, namely having a loading value of more than 0.5.

Table 1. Outer Model Algorithm Results Outer Loading Testing:

Variables	Dimensions	Loading factor	Information
X1_Environmental quality	X1.1	0.930	Valid
	X1.2	0.919	Valid
	X1.3	0.934	Valid
	X1.4	-0.003	Invalid
	X1.5	-0.013	Invalid
X2_Sustainability	X2.1	0.859	Valid
	X2.2	0.866	Valid
	X2.3	0.803	Valid
	X2.4	0.842	Valid
	X2.5	0.140	Invalid
Y_Interested in Visiting	Y1.1	0.817	Valid
	Y1.2	0.834	Valid
	Y1.3	0.815	Valid
Z_Traveler Recommendations	Z1.1	0.828	Valid
	Z1.2	0.835	Valid
	Z1.3	0.864	Valid
	Z1.4	0.829	Valid

The following are the results of the outer model after being modified in this study:

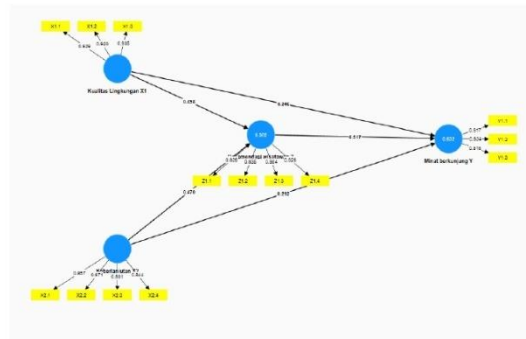


Figure 3. Outer Model Modification

Based on the image after elimination, it can be seen that all indicators in each latent variable have a factor loading value above 0.5. This indicates that the retained indicators are valid and reliable in measuring the intended construct.

5. Hypothesis Analysis

Table 2. Direct Effect

Hypothesis	Original sample (O)	Tstatistics (O/STDEV)	P Value (P values)	Significance
Sustainability (X2) -> Interest in Visiting (Y)	0.212	0.077	0.006	ACCEPTED
Sustainability(X2) -> Traveler Recommendation(Z)	0.470	0.075	0.000	ACCEPTED
Environmental Quality(X1) -> Interest in Visiting(Y)	0.246	0.100	0.014	ACCEPTED
Environmental Quality(X1) -> Tourist Recommendation(Z)	0.498	0.069	0.000	ACCEPTED
Tourist Recommendation(Z) -> Interest in Visiting(Y)	0.517	0.108	0.000	ACCEPTED

H1. Sustainability X2 -> Visiting Interest Y

Original Sample (O): 0.212. This indicates that every one unit increase in Sustainability (X2) will increase Visiting Intention (Y) by 0.212 units, assuming other variables are constant. The direction of the relationship is positive. T statistic: 2.742. This value is greater than 1.96, indicating an initial indication of significance. P values: 0.006. The p value of 0.006 is smaller than 0.05 ($\alpha = 0.05$). Since the p value (0.006) is smaller than 0.05, it can be concluded that Sustainability (X2) has a positive and significant direct effect on Visiting Intention (Y). The better the Sustainability, the higher the Visiting Intention.

H2. Sustainability X2 -> Traveler Recommendation Z

Original Sample (O): 0.470. This indicates that every one unit increase in Sustainability (X2) will increase Tourist Recommendation (Z) by 0.470 units, assuming other variables remain constant. The direction of the relationship is positive. T statistic: 6.236. This

value is much greater than 1.96, indicating a strong indication of significance. P values: 0.000. The p value of 0.000 (close to zero) is clearly smaller than 0.05 ($\alpha = 0.05$). Since the p value (0.000) is smaller than 0.05, it can be concluded that Sustainability (X2) has a positive and significant direct effect on Tourist Recommendation (Z). Good sustainability plays a major role in encouraging tourists to recommend a destination.

H3. Environmental Quality X1 -> Visiting Interest Y

Original Sample (O): 0.246. This shows that every one unit increase in Environmental Quality (X1) will increase Visiting Interest (Y) by 0.246 units, assuming other variables are constant. The direction of the relationship is positive. T statistic: 2.459. This value is greater than 1.96, indicating an indication of significance. P values: 0.014. The p value of 0.014 is smaller than 0.05 ($\alpha = 0.05$). Because the p value (0.014) is smaller than 0.05, it can be concluded that Environmental Quality (X1) has a positive and significant direct effect on Visiting Interest (Y). The higher the Environmental Quality, the greater the Tourist Visiting Interest.

H4. Environmental Quality X1 -> Tourist Recommendation Z

Original Sample (O): 0.498. This indicates that every one unit increase in Environmental Quality (X1) will increase Tourist Recommendation (Z) by 0.498 units, assuming other variables remain constant. The direction of the relationship is positive. T statistic: 7.199. This value is much greater than 1.96, indicating a very strong indication of significance. P values: 0.000. The p value of 0.000 is clearly smaller than 0.05 ($\alpha = 0.05$). Since the p value (0.000) is smaller than 0.05, it can be concluded that Environmental Quality (X1) has a positive and significant direct effect on Tourist Recommendation (Z). Good environmental quality is a crucial factor that encourages tourists to recommend a place.

H5. Tourist Recommendation Z -> Visiting Interest Y

Original Sample (O): 0.517. This indicates that every one unit increase in Tourist Recommendation (Z) will increase Visiting Intention (Y) by 0.517 units, assuming other variables are constant. The direction of the relationship is positive. T-statistic: 4.794. This value is much greater than 1.96, indicating a very strong indication of significance. P values: 0.000. The p value of 0.000 is clearly smaller than 0.05 ($\alpha = 0.05$). Since the p value (0.000) is smaller than 0.05, it can be concluded that Tourist Recommendation (Z) has a positive and significant direct effect on Visiting Intention (Y). The more positive recommendations from other tourists, the higher the Visiting Intention of potential tourists.

Table 3. Indirect Effect

Hypothesis	Original sample (O)	T statistic (O/STDEV)	P values	SIGNIFICANCE
Environmental Sustainability(X2) -> Tourist Recommendation(Z) -> Interest in Visiting(Y)	0.243	0.064	0.000	Accepted
Environmental Quality(X1) -> Tourist Recommendations(Z) -> Interest in Visiting(Y)	0.258	0.073	0.000	Accepted

From the hypothesis test using the bootstrap technique on SmartPLS, the following were found:

H6. Environmental Quality X1 -> Tourist Recommendation Z -> Visiting Interest Y

Original Sample (O): 0.258. This value indicates the magnitude of the indirect effect of Environmental Quality (X1) on Visiting Intention (Y) mediated by Tourist Recommendations

(Z). A positive number of 0.258 indicates that an increase in Environmental Quality (X1) will indirectly increase Visiting Intention (Y) through its role in increasing Tourist Recommendations (Z). T statistic: 3.525. The T statistic value of 3.525 is also much greater than the critical limit of 1.96, indicating a strong indication of statistical significance. P value (P values): 0.000. The p value of 0.000 (approaching zero) is significantly smaller than 0.05 ($\alpha = 0.05$). Based on the very small p value (0.000), it can be concluded that Environmental Quality (X1) indirectly has a positive and significant effect on Visiting Intention (Y) through the mediation of Tourist Recommendations (Z). This implies that superior environmental quality not only attracts visitors directly, but also substantially increases that interest by encouraging tourists to provide positive recommendations. Thus, Tourist Recommendation (Z) acts as a crucial mediator in the relationship between Environmental Quality (X1) and Visiting Intention (Y). A well-maintained and attractive environmental quality will encourage tourists to recommend the place, which in turn will attract more visitors.

H7. Sustainability X2 -> Tourist Recommendation Z -> Visiting Interest Y

Original Sample (O): 0.243. This value represents the magnitude of the indirect effect of Sustainability (X2) on Visiting Intention (Y) mediated by Tourist Recommendations (Z). The positive number 0.243 indicates that an increase in Sustainability (X2) will indirectly increase Visiting Intention (Y) through its role in increasing Tourist Recommendations (Z). T statistic: 3.799. The T statistic value of 3.799 is much greater than the critical limit of 1.96, indicating strong statistical significance. P values: 0.000. The p value of 0.000 (approaching zero) is significantly smaller than 0.05 ($\alpha = 0.05$). Based on the very small p value (0.000), it can be concluded that Sustainability (X2) indirectly has a positive and significant effect on Visiting Intention (Y) through the mediation of Tourist Recommendations (Z). This means that Sustainability enhancement efforts not only have a direct effect on visitor interest, but also substantially promote that interest by encouraging tourists to provide positive recommendations. In other words, Tourist Recommendation (Z) serves as an effective mediator in the relationship between Sustainability (X2) and Visiting Intention (Y). The better the sustainability aspect of a destination, the more likely tourists are to recommend it, which in turn will increase the visiting interest of other potential tourists.

5. Conclusions

Based on the research results and discussions that have been explained previously, the conclusions from the results of this research can be described as follows:

- Environmental quality has a significant effect on interest in visiting the mangrove tourism area in Wonorejo Surabaya mangrove tourism in Surabaya. This finding shows that a clean, natural, and well-maintained environment can increase tourist interest in coming, because it provides a meaningful, healthy, and educational tourism experience.
- Environmental quality has a significant effect on tourist recommendations in the mangrove tourism area in Wonorejo Surabaya. This indicates that tourists tend to give positive recommendations to tourist destinations that have good environmental quality, such as cleanliness, comfort, and authenticity of the ecosystem.
- Sustainability has a significant effect on interest in visiting the mangrove tourism area in Wonorejo Surabaya mangrove tourism. This shows that tourists increasingly appreciate the environmental and social sustainability aspects in choosing a destination, especially when they see efforts to preserve and empower local communities.
- Sustainability has a positive and significant effect on tourist recommendations in the mangrove tourism area in Wonorejo Surabaya. Tourists are more likely to recommend destinations that are committed to sustainability because they feel that the tourism experience they get contributes to moral values and social responsibility.
- Tourist recommendations have a significant influence on interest in visiting the mangrove tourism area in Wonorejo Surabaya. Positive recommendations or testimonials from previous tourists are important factors in attracting potential tourists, both verbally and through digital media.
- Environmental quality has a significant effect on visiting interest through tourist recommendations as a mediating variable in the mangrove tourism area in Wonorejo Surabaya. This shows that environmental quality not only has a direct impact, but also

indirectly strengthens visiting interest through tourist perceptions and experiences that drive recommendations.

- Sustainability has a significant effect on visiting interest through tourist recommendations as a mediating variable in the mangrove tourism area in Wonorejo Surabaya. This implies that sustainable practices implemented in tourist destinations encourage tourists to provide recommendations, which then increase the interest of other visitors to visit.

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