BAB V

PENUTUP

Bagian ini adalah penutup dari seluruh bab, yang merangkum hasil penelitian yang telah dilaksanakan. Bab ini mencakup kesimpulan penelitian, implikasi manajerial, serta keterbatasan dan saran penelitian yang akan dibahas lebih rinci berikutnya.

5.1 Kesimpulan

Berdasarkan dari hasil analisis data yang diperoleh dalam penelitian ini dan telah dijelaskan pada bab IV, maka kesimpulan yang dapat diperoleh yaitu semua hipotesis pada penelitian ini diterima dan berpengaruh secara signifikan, hampir sebagian besar responden pada penelitian ini merupakan wanita yang sudah pernah melihat dan membeli pada *live streaming shopping di tiktok*, sehingga dapat diperoleh kesimpulan sebagai berikut:

1. Permintaan memiliki pengaruh terhadap kenikmatan yang dirasakan.
2. Kenyamanan memiliki pengaruh terhadap kenikmatan yang dirasakan.
3. Interaktivitas memiliki pengaruh terhadap kenikmatan yang dirasakan.
4. Keceriaan memiliki pengaruh terhadap kenikmatan yang dirasakan.
5. Kenikmatan memiliki pengaruh yang dirasakan terhadap niat beli secara impulsif.
6. Interaktivitas memiliki pengaruh terhadap niat beli secara impulsif.
7. Kenikmatan yang dirasakan sebagai variabel mediasi memiliki pengaruh antara interaktivitas terhadap niat beli secara impulsif.

5.2 Implikasi Manajerial

Berdasarkan dari hasil penelitian yang telah dilakukan, implikasi manajerial yang dapat diberikan sebagai berikut:

1. Implikasi manajerial dari pernyataan bahwa menonton *live streaming* di tiktok membuat konsumen ingin memiliki barang tersebut adalah bahwa toko *online* harus mengembangkan strategi pemasaran yang memanfaatkan

kekuatan *live streaming* untuk menciptakan dorongan pembelian impulsif. Hal ini dapat dicapai dengan memastikan presentasi produk yang menarik dan informatif, menyediakan penawaran khusus atau diskon eksklusif selama sesi *live streaming* untuk meningkatkan partisipasi *audiens*. Selain itu, toko *online* harus bekerja sama dengan *influencer* atau *streamer* yang memiliki kredibilitas tinggi dan basis pengikut yang relevan dengan target pasar. Dengan pendekatan ini, perusahaan dapat memanfaatkan potensi *live streaming* sebagai alat efektif untuk meningkatkan minat dan permintaan konsumen secara signifikan.

2. Proses pembayaran yang sederhana dalam *live streaming shopping* di TikTok memiliki implikasi manajerial yang signifikan. Kecepatan dan kemudahan dalam proses pembayaran dapat meningkatkan tingkat penjualan, karena mengurangi hambatan bagi konsumen untuk menyelesaikan transaksi. Toko *online* yang melakukan *live streaming* perlu memastikan infrastruktur pembayaran yang handal dan efisien untuk mengoptimalkan pengalaman pelanggan dan meminimalkan risiko potensial seperti kegagalan transaksi atau masalah keamanan. Selain itu, mempertimbangkan opsi pembayaran yang sesuai dengan preferensi global juga penting untuk menjangkau pasar yang lebih luas dan meningkatkan pertumbuhan bisnis secara keseluruhan.

3. Kemampuan untuk berinteraksi dengan orang lain melalui pesan memiliki implikasi manajerial yang penting dalam konteks komunikasi dan kolaborasi dalam bisnis. Memfasilitasi *platform* atau alat yang memungkinkan komunikasi yang efektif antara tim dan dengan pelanggan dapat meningkatkan efisiensi operasional dan kepuasan pelanggan. Toko *online* yang melakukan *live streaming* perlu mempertimbangkan keamanan dan privasi dalam pengelolaan komunikasi ini, serta memastikan bahwa pesan yang ditinggalkan memberikan nilai tambah yang jelas, memfasilitasi pemecahan masalah, pengambilan keputusan yang lebih cepat, dan kerjasama yang lebih baik antar individu dan tim.

4. Berpartisipasi dalam *live streaming shopping* yang membuat keseharian anda lebih mempesona dan memiliki implikasi manajerial yang beragam. Aktivitas ini tidak hanya memperluas cakupan dan pengaruh personal dalam ranah digital, tetapi juga memberikan kesempatan untuk mengembangkan keterampilan komunikasi dan pemasaran langsung. Toko *online* yang melakukan *live streaming* dapat memanfaatkan fenomena ini untuk memperluas pangsa pasar, membangun kepercayaan pelanggan melalui interaksi langsung, serta mengumpulkan wawasan berharga tentang preferensi konsumen dan tren pasar secara *real-time*. Penting bagi manajer untuk mengelola reputasi dan citra merek secara hati-hati dalam konteks *live streaming shopping*, sambil memastikan bahwa setiap interaksi memberikan nilai tambah yang konsisten bagi pelanggan dan komunitas.

5. Suasana yang positif dan menyenangkan yang terbentuk dari *live streaming shopping* di tiktok memiliki implikasi manajerial yang menjadi prioritas dalam menjalin hubungan yang kuat bersama pelanggan dan meningkatkan loyalitas merek. Toko *online* yang melakukan *live streaming* perlu memanfaatkan suasana yang ramah dan menghibur ini untuk menciptakan pengalaman yang memikat bagi konsumen, yang dapat membawa dampak positif terhadap penjualan dan citra merek. Mengelola interaksi yang berlangsung dalam suasana yang menyenangkan juga memerlukan perhatian terhadap keamanan, etika, dan privasi, sambil memastikan bahwa setiap interaksi mendukung nilai-nilai merek dan tujuan bisnis secara keseluruhan.

6. Keinginan untuk segera membeli barang terbatas secara impulsif memiliki implikasi manajerial yang signifikan terutama dalam strategi pemasaran dan manajemen persediaan. Toko *online* yang melakukan *live streaming* perlu memanfaatkan kecenderungan ini dengan strategi yang cerdas untuk meningkatkan konversi penjualan dan mempengaruhi keputusan pembelian melalui ketersediaan yang terbatas. Penting untuk memastikan ketersediaan barang yang sesuai dengan permintaan serta mengelola

ekspektasi pelanggan terkait waktu dan proses pembelian. Selain itu, toko online harus mempertimbangkan strategi harga yang sesuai untuk mendorong pembelian impulsif. Bagi perrusahaan tiktok, kecenderungan konsumen untuk membeli barang terbatas secara impulsif membuka peluang besar untuk meningkatkan engagement dan pendapatan. Dengan memanfaatkan perilaku ini, tiktok dapat menarik lebih banyak bisnis untuk beriklan dan menggunakan fitur *live streaming* mereka, meningkatkan pendapatan iklan. Selain itu, tiktok dapat mengumpulkan data berharga tentang preferensi dan perilaku konsumen, yang dapat digunakan untuk mengoptimalkan algoritma dan meningkatkan personalisasi konten. Fitur baru seperti notifikasi stok terbatas dan integrasi pembayaran cepat dapat dikembangkan untuk meningkatkan pengalaman belanja pengguna. Sedangkan untuk konsumen yang menonton *live streaming shopping* di tiktok, disarankan untuk dapat lebih menahan emosi sesaat agar tidak melakukan pembelian impulsif yang dapat membuat konsumen menghabiskan uang lebih banyak

5.3 Keterbatasan dan Saran Penelitian

Penelitian ini juga terdapat keterbatasan dan saran sebagai berikut:

1. Pada penelitian ini tidak memiliki objek yang spesifik, dikarenakan tiktok merupakan aplikasi yang luas, sehingga banyak produk yang dipasarkan atau dipromosikan melalui *live streaming shopping* dan banyak produk yang menjadi *trand* dan dibeli secara tiba-tiba oleh konsumen. Sehingga diharapkan bagi peneliti selanjutnya agar dapat menentukan objek yang spesifik untuk penelitian selanjutnya.

2. Pada penelitian ini menggunakan teori SOR namun hanya menjelaskan sampai pada niat beli secara impulsif. Maka diharapkan bagi peneliti selanjutnya agar dapat menambahkan variabel pembelian impulsif untuk menjelaskan bagian R dalam teori SOR tersebut.

3. Pada penelitian ini bagian kuesioner untuk pernyataan keceriaan dan kenikmatan yang dirasakan hampir mirip dan sulit untuk dibedakan.

Maka diharapkan untuk peneliti selanjutnya dapat memperjelas pernyataan untuk variabel keceriaan dan kenikmatan yang dirasakan.

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LAMPIRAN I
KUISONER PENELITIAN

KUESIONER PENELITIAN

"Pengaruh Faktor Stimulus Lingkungan Eksternal Terhadap Niat Beli Secara Impulsif Dengan Kenikmatan Yang Dirasakan Sebagai Mediasi (Studi Pada *Live Streaming Shopping* Di Tiktok)"

Yth. Bapak/Ibu Responden
Di tempat

Dengan hormat,

Perkenalkan, saya adalah mahasiswa Program Studi Magister Manajemen Fakultas Bisnis dan Ekonomika Universitas Atma Jaya Yogyakarta dengan konsentrasi Marketing. Saat ini saya sedang melakukan penelitian untuk menyelesaikan tugas akhir/tesis.

Nama : Anna Maria Leonard
Dosen Pembimbing : Wenefrida Mahestu N.Krisjanti, SE., M.Sc., Ph.D.

Sehubungan dengan pemenuhan kelengkapan penyusunan tesis, saya bermaksud untuk mengadakan penelitian bertujuan untuk membahas Pengaruh Faktor Stimulus Lingkungan Eksternal Terhadap Niat Beli Secara Impulsif Dengan Kenikmatan Yang Dirasakan Sebagai Mediasi (Studi Pada *Live Streaming Shopping* Di Tiktok)"

Segala informasi yang Bapak/Ibu berikan di dalam kuesioner ini akan sepenuhnya dijaga **kerahasiaaannya** dan hanya digunakan untuk keperluan penelitian. Penelitian ini sudah mendapat persetujuan dari Universitas Atma Jaya Yogyakarta. Oleh karena itu, dengan ini saya memohon bantuan dari Bapak/Ibu untuk meluangkan waktu untuk ikut berpartisipasi dalam mengisi kuesioner ini.

Apabila ada hal yang ingin saudara/i tanyakan lebih lanjut, silahkan menghubungi saya melalui email: annaleonard092@gmail.com atau 225027214@students.uajy.ac.id
Demikian surat permohonan izin ini, saya ucapkan terima kasih atas perhatian Bapak/Ibu.

Hormat saya,
Anna Maria Leonard

PETUNJUK PENGISIAN

1. Silahkan isi biodata singkat terlebih dahulu

2. Kuesioner terdiri dari 29 butir pernyataan dengan lima butir pilihan jawaban

3. Pilihlah salah satu jawaban pada pilihan yang sesuai

4. Terdapat lima alternative pilihan jawaban dengan keterangan sebagai berikut:

    1 = Sangat Tidak Setuju (STS)

    2 = Tidak Setuju (TS)

    3 = Netral (N)

    4 = Setuju (S)

    5 = Sangat Setuju (SS)

Bagian I. Karakteristik Responden

1. Jenis kelamin
    a) Pria
    b) Wanita

Bagian II. Filter

1. Apakah anda sudah pernah melihat *live streaming* di tiktok?
    a. Pria
    b. Wanita

2. Apakah anda sudah pernah melakukan pembelian pada *live streaming* di tiktok?
    a. Pria
    b. Wanita

Bagian III. Kuesioner

No.	Variabel	Pernyataan	STS (1)	TS (2)	N (3)	S (4)	SS (5)
1.	Permintaan	Saat melihat *live streaming* di tiktok membuat saya ingin membeli produk.					
		Saat menonton *live streaming* di tiktok membuat saya ingin memiliki barang tersebut.					
		Saya dapat melihat apa yang saya inginkan dalam *live streaming* di tiktok.					
		Saya dapat melihat apa yang saya perlukan dalam *live streaming* di tiktok.					
		Saya sering merasa bahwa produk yang ditampilkan adalah apa yang saya butuhkan saat menonton *live streaming* di tiktok.					
2.	Kenyamanan	Saya merasa nyaman berbelanja melalui *live streaming* di tiktok.					
		Saya merasa *live streaming shopping* di tiktok dapat menghemat waktu.					
		Live streaming shopping ditiktok mengurangi kesulitan saya dalam membeli produk karena tersedia beragam metode pengiriman.					
		Saya membeli produk sambil menonton *live streaming* di tiktok.					

		Proses pembayarannya sederhana dalam *live streaming shopping* di tiktok.					
3.	Interaktivitas	Saya dapat berkomunikasi langsung dengan *streamer online*.					
		Saya dapat berkomunikasi langsung dengan peserta lain.					
		Saya dapat berinteraksi dengan orang lain dengan meninggalkan pesan.					
		Saya merasa terlibat saat membaca tanggapan orang lain.					
4.	Keceriaan	Saya berbagi konten menarik dengan teman-teman tentang *live streaming shopping* di tiktok.					
		Saya mengamati *live streaming shopping* di tiktok yang menarik.					
		Menonton *live streaming shopping* di tiktok membuat saya gembira.					
		Mengikuti *live streaming shopping* di tiktok merupakan kegiatan yang menarik bagi saya.					
		Berpartisipasi dalam *live streaming shopping* di tiktok membuat hidup saya menarik.					

5.	Kenikmatan yang Dirasakan	Menonton *live streaming shopping* di tiktok membuat saya senang.					
		Saya bisa merasakan suasana bahagia saat berbelanja secara *live streaming* di tiktok.					
		Suasana yang tercipta dari *live streaming* di tiktok membuat saya merrasa senang.					
		Saya senang bisa berinteraksi lagsung dengan *streamer online*.					
		Saya menikmati saat menonton *live streaming shopping* di tiktok.					
6.	Niat Beli secara Impulsif	Ketika suatu barang yang ingin saya beli mempunyai batas waktu, hal itu membuat saya ingin memilikinya secara impulsif.					
		Ketika barang yang ingin saya beli terbatas saya ingin segera untuk membeli secara impulsif.					
		Suasana yang diperkenalkan oleh *streamer online* meningkatkan keinginan saya untuk segera membeli.					
		Meskipun banyak konsumen yang menyatakan kesediaanya untuk membeli, saya lebih memilih untuk membelinya dengan cepat.					
		Promosi dalam *live*					

		streaming shopping di tiktok membuat saya ingin membeli barang secara instan.					

LAMPIRAN II
KARAKTERISTIK, FILTER, DAN DATA RESPONDEN

1. Karakteristik dan filter

Jenis Kelamin	Apakah anda sudah pernah melihat live streaming di tiktok?	Apakah anda sudah pernah melakukan pembelian pada live streaming di tiktok?
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya

Jenis Kelamin	Apakah anda sudah pernah melihat live streaming di tiktok?	Apakah anda sudah pernah melakukan pembelian pada live streaming di tiktok?
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya

Jenis Kelamin	Apakah anda sudah pernah melihat live streaming di tiktok?	Apakah anda sudah pernah melakukan pembelian pada live streaming di tiktok?
Pria	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Pria	Ya	Ya
Pria	Ya	Ya
Pria	Ya	Ya
Pria	Ya	Ya
Pria	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Pria	Ya	Ya
Pria	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Pria	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Pria	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya

Jenis Kelamin	Apakah anda sudah pernah melihat live streaming di tiktok?	Apakah anda sudah pernah melakukan pembelian pada live streaming di tiktok?
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Pria	Ya	Ya
Pria	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya

Jenis Kelamin	Apakah anda sudah pernah melihat live streaming di tiktok?	Apakah anda sudah pernah melakukan pembelian pada live streaming di tiktok?
Wanita	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Pria	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya
Wanita	Ya	Ya

2. Hasil pernyataan indikator

1) Permintaaan

PE1	PE2	PE3	PE4	PE5
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5	5	4	5	5
4	5	4	4	5
5	5	5	5	5
5	5	5	5	5
5	5	5	5	5
4	4	4	4	4
3	5	4	4	5

PE1	PE2	PE3	PE4	PE5
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3	4	3	5	4
4	4	5	4	4
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3	4	5	3	4
4	4	3	3	3
5	4	3	3	3
5	5	5	5	5
4	5	5	5	5

PE1	PE2	PE3	PE4	PE5
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4	4	4	4	3
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5	4	4	5	5
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3	3	2	2	2
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1	3	5	5	5
3	2	2	2	1
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4	3	4	3	2
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3	3	5	5	4
5	5	5	5	5
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5	3	5	5	4
4	3	4	5	5
4	4	4	4	4

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PE1	PE2	PE3	PE4	PE5
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4	5	5	4	5
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4	5	3	5	3
3	2	3	3	2
4	4	4	4	4
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4	4	3	3	2
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2	1	3	1	2
5	5	5	5	5
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5	4	4	5	5
4	4	4	4	4
5	5	4	4	4
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5	5	5	5	4
4	4	4	4	4
4	4	4	4	4
4	4	4	5	5
4	5	4	5	5
4	4	4	4	4

PE1	PE2	PE3	PE4	PE5
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4	4	4	4	4
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3	4	5	4	3
3	3	3	4	3
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3	4	5	3	4
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PE1	PE2	PE3	PE4	PE5
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4	5	4	5	5
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5	5	5	5	5
4	3	2	3	3

2) Kenyamanan

KE1	KE2	KE3	KE4	KE5
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5	5	5	5	5
3	4	4	4	5
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5	5	5	5	5
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5	4	5	5	5
5	5	5	5	5
5	5	5	5	5

KE1	KE2	KE3	KE4	KE4
5	5	5	5	5
5	5	5	4	4
5	4	5	3	3
4	4	4	4	4
5	5	5	5	5
3	4	5	3	3
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3	3	4	4	4
4	4	4	4	5
3	2	3	3	3
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KE1	KE2	KE3	KE4	KE4
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5	5	5	5	5
5	4	5	4	5
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4	4	4	4	4
5	5	5	4	4
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KE1	KE2	KE3	KE4	KE4
4	3	3	4	4
5	3	4	5	4
3	5	4	4	5
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3	4	5	3	4
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3	4	4	4	4
1	1	1	1	1
3	2	1	3	2
5	5	5	5	5
1	1	1	1	1

KE1	KE2	KE3	KE4	KE4
4	5	5	5	4
5	4	5	5	5
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4	4	4	4	4
4	5	5	5	5
5	4	3	4	4
3	3	3	4	4

KE1	KE2	KE3	KE4	KE4
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3	4	4	4	4
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KE1	KE2	KE3	KE4	KE4
5	4	5	5	4
4	5	4	4	5
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3) Interaktivitas

IN1	IN2	IN3	IN4
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IN1	IN2	IN3	IN4
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IN1	IN2	IN3	IN4
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5	5	5	5
4	3	5	4

IN1	IN2	IN3	IN4
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5	3	4	3
5	5	5	5
4	4	4	4
3	4	5	4
5	5	5	5

IN1	IN2	IN3	IN4
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5	4	4	4
4	5	4	4
3	3	2	3
4	1	1	1
4	4	4	4
5	5	4	5
3	2	2	3
4	3	4	3

IN1	IN2	IN3	IN4
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5	5	5	5
5	2	3	1
3	1	4	5
4	4	4	4
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4	4	3	4
4	4	4	4
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4	4	5	5
5	5	4	4
5	5	5	4
4	5	5	5
5	4	4	5
4	4	4	4
4	4	5	5
4	3	5	4

IN1	IN2	IN3	IN4
3	3	4	5
3	3	4	5
5	5	5	4
5	5	5	5
5	5	5	5

4) Keceriaan

KC1	KC2	KC3	KC4	KC5
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4	5	4	4	3
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4	4	4	4	4
5	5	5	5	5
4	3	5	3	4
3	4	4	3	3
5	5	5	5	5
3	2	3	2	3
4	4	4	4	4

KC1	KC2	KC3	KC4	KC5
3	3	4	3	3
3	5	3	3	3
5	5	5	5	3
5	5	5	5	5
4	4	3	3	3
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3	4	4	4	3
3	2	3	4	4
5	5	5	5	5
4	4	4	5	5
3	4	3	3	2

KC1	KC2	KC3	KC4	KC5
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3	4	5	3	5
3	3	3	3	1
4	4	4	4	4
2	3	2	3	2
4	4	4	4	4
5	4	3	5	4

KC1	KC2	KC3	KC4	KC5
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3	5	5	5	4
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4	5	5	4	4
4	4	4	4	4
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5	4	3	5	3
5	5	5	5	5
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
5	4	5	3	4
3	5	4	3	3

KC1	KC2	KC3	KC4	KC5
4	4	4	3	3
3	3	3	3	3
3	4	4	4	2
5	5	5	5	5
5	5	5	5	5
5	5	5	5	5
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3	5	3	3	3
4	4	2	4	3
4	3	3	3	3
3	4	3	3	3
4	5	4	4	4
4	4	4	4	4

KC1	KC2	KC3	KC4	KC5
3	3	3	2	2
5	5	5	5	5
4	4	4	4	4
3	4	5	4	5
5	5	5	5	5
4	5	5	5	5
4	5	4	5	4
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4	4	4	4	4
4	4	4	4	4
3	4	4	3	3
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5	5	4	3	4
3	4	5	5	3
5	5	5	5	5
4	3	4	5	3

5) Kenikmatan yang Dirasakan

KD1	KD2	KD3	KD4	KD5
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5	5	5	5	5
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4	4	4	5	5
3	3	3	3	5
5	5	5	5	5
3	3	4	4	4
4	4	4	4	4
5	5	5	5	5

KD1	KD2	KD3	KD4	KD5
5	5	5	5	5
3	3	4	4	5
4	3	5	3	5
4	5	4	5	5
5	5	5	5	5
5	5	5	5	5
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4	4	4	3	4
3	3	3	3	3

KD1	KD2	KD3	KD4	KD5
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5	5	5	5	4
4	4	4	4	4
4	4	4	4	4
4	3	4	3	5

KD1	KD2	KD3	KD4	KD5
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3	5	5	4	4
4	4	5	5	3
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1	2	2	1	1
1	3	2	1	3
5	5	5	5	5
1	1	1	1	1
3	3	5	5	5
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4	4	4	4	4
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4	3	4	4	4
5	5	5	5	5
5	5	5	5	5
5	5	5	5	5
4	4	4	4	5

KD1	KD2	KD3	KD4	KD5
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4	3	4	3	5
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KD1	KD2	KD3	KD4	KD5
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6) Niat beli secara Impulsif

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5	5	5	5	5
5	5	5	5	5
3	4	4	4	4
4	4	5	5	5
4	5	4	5	5
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NB1	NB2	NB3	NB4	NB5
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2	3	4	3	3
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NB1	NB2	NB3	NB4	NB5
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1	1	4	2	4
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NB1	NB2	NB3	NB4	NB5
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4	4	4	4	4

NB1	NB2	NB3	NB4	NB5
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4	5	5	4	5
5	5	5	5	5

NB1	NB2	NB3	NB4	NB5
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5	5	5	5	5
4	5	3	4	5

LAMPIRAN III
HASIL OLAH DATA SMART PLS

1. Model Struktural
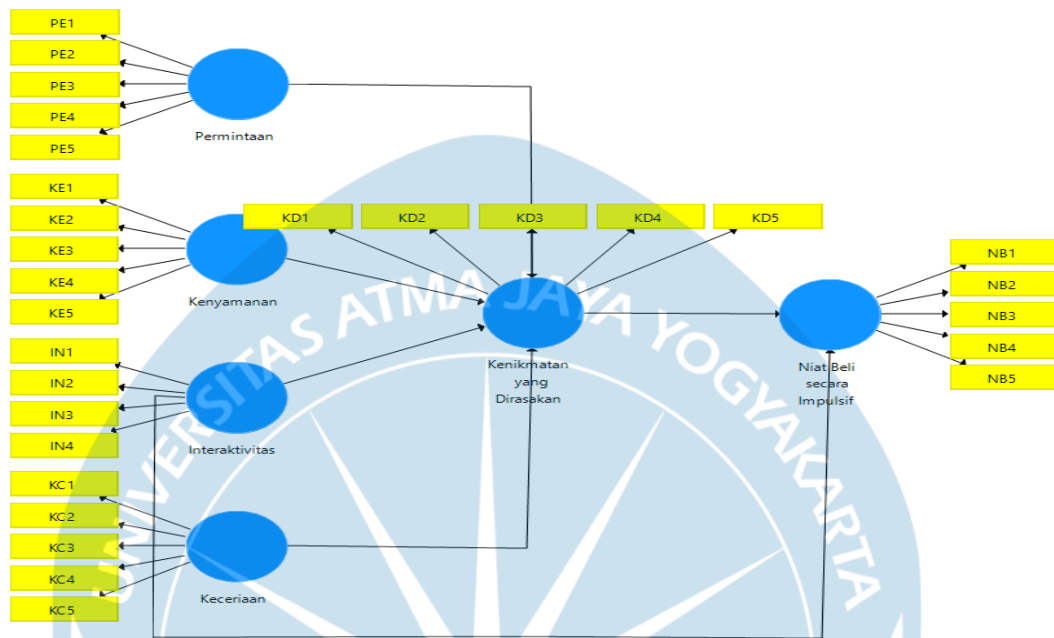
2. Model konstruk
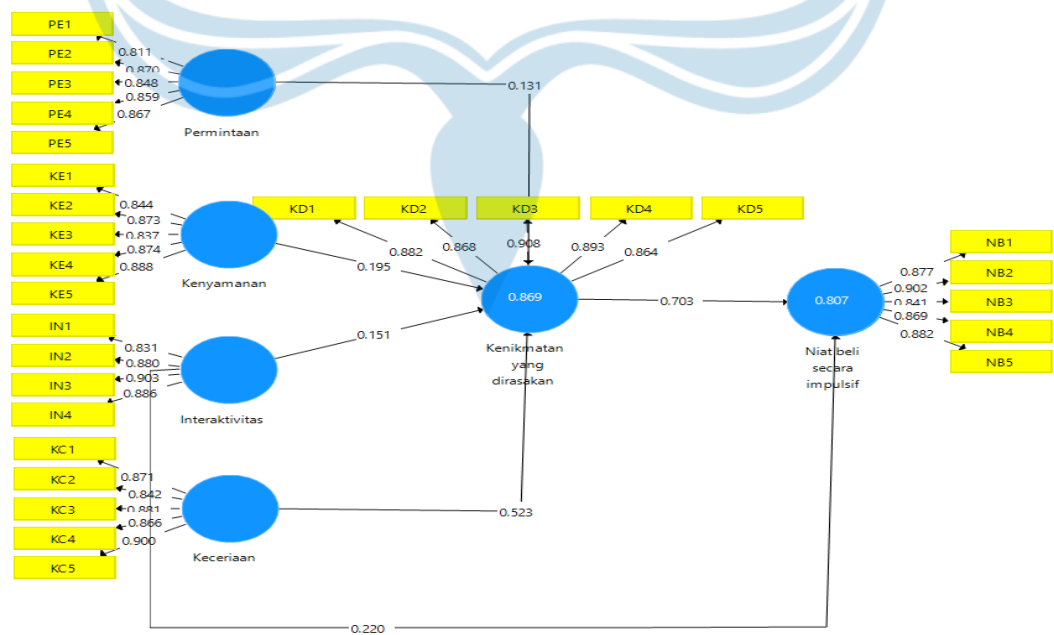
3. Outer loading

Outer Loadings

Mean, STDEV, T-Values, P-Values

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
IN1 <- Interaktivitas	0.831	0.830	0.036	22.890	0.000
IN2 <- Interaktivitas	0.880	0.879	0.024	36.340	0.000
IN3 <- Interaktivitas	0.903	0.902	0.018	50.813	0.000
IN4 <- Interaktivitas	0.886	0.886	0.019	45.641	0.000
KC1 <- Keceriaan	0.871	0.870	0.022	39.657	0.000
KC2 <- Keceriaan	0.842	0.840	0.032	26.098	0.000
KC3 <- Keceriaan	0.881	0.881	0.020	43.263	0.000
KC4 <- Keceriaan	0.866	0.866	0.020	42.826	0.000
KC5 <- Keceriaan	0.900	0.900	0.014	65.515	0.000
KD1 <- Kenikmatan yang dirasakan	0.882	0.883	0.023	38.360	0.000
KD2 <- Kenikmatan yang dirasakan	0.868	0.866	0.022	38.603	0.000
KD3 <- Kenikmatan yang dirasakan	0.908	0.907	0.016	56.132	0.000
KD4 <- Kenikmatan yang dirasakan	0.893	0.891	0.020	44.457	0.000
KD5 <- Kenikmatan yang dirasakan	0.864	0.862	0.026	33.557	0.000
KE1 <- Kenyamanan	0.844	0.844	0.028	30.504	0.000
KE2 <- Kenyamanan	0.873	0.873	0.023	38.531	0.000
KE3 <- Kenyamanan	0.837	0.836	0.041	20.674	0.000
KE4 <- Kenyamanan	0.874	0.872	0.025	35.164	0.000
KE5 <- Kenyamanan	0.888	0.887	0.021	41.654	0.000
NB1 <- Niat beli secara impulsif	0.877	0.874	0.022	39.403	0.000
NB2 <- Niat beli secara impulsif	0.902	0.901	0.015	60.033	0.000
NB3 <- Niat beli secara impulsif	0.841	0.838	0.028	29.539	0.000
NB4 <- Niat beli secara impulsif	0.863	0.863	0.023	38.333	0.000
NB5 <- Niat beli secara impulsif	0.882	0.881	0.022	40.866	0.000
PE1 <- Permintaan	0.811	0.809	0.033	20.741	0.000
PE2 <- Permintaan	0.870	0.870	0.026	32.844	0.000
PE3 <- Permintaan	0.848	0.847	0.027	31.577	0.000
PE4 <- Permintaan	0.859	0.859	0.026	33.368	0.000
PE5 <- Permintaan	0.867	0.868	0.022	40.266	0.000

4. AVE *(Average Variance Extracted)*

Construct Reliability and Validity

▦ Matrix ⌗ Cronbach's Alpha ⌗ rho_A ⌗ Composite Reliability ⌗ Average Variance Extract...	Copy to Clipboard			
	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Interaktivitas	0.898	0.900	0.929	0.766
Keceriaan	0.921	0.922	0.941	0.760
Kenikmatan yang dirasakan	0.929	0.930	0.947	0.780
Kenyamanan	0.915	0.916	0.936	0.746
Niat beli secara impulsif	0.923	0.924	0.942	0.764
Permintaan	0.905	0.908	0.929	0.725

5. *Fornell-Larcker Criterion*

Discriminant Validity

| | Fornell-Larcker Criter... | Cross Loadings | Heterotrait-Monotrait ... | Heterotrait-Monotrait ... | Copy to Clipboard: | Excel Format |

	Interaktivitas	Keceriaan	Kenikmatan yang dirasakan	Kenyamanan	Niat beli secara impulsif	Permintaan
Interaktivitas	0.875					
Keceriaan	0.859	0.872				
Kenikmatan yang dirasakan	0.855	0.905	0.883			
Kenyamanan	0.793	0.773	0.825	0.864		
Niat beli secara impulsif	0.821	0.825	0.891	0.767	0.874	
Permintaan	0.769	0.776	0.811	0.810	0.760	0.852

6. *Composite Reliability*

Construct Reliability and Validity

| | Matrix | Cronbach's Alpha | rho_A | Composite Reliability | Average Variance Extract... | Copy to Clipboard: |

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Interaktivitas	0.898	0.900	0.929	0.766
Keceriaan	0.921	0.922	0.941	0.760
Kenikmatan yang dirasakan	0.929	0.930	0.947	0.780
Kenyamanan	0.915	0.916	0.936	0.746
Niat beli secara impulsif	0.923	0.924	0.942	0.764
Permintaan	0.905	0.908	0.929	0.725

7. *R-square*

R Square

| | Matrix | R Square | R Square Adjusted | |

	R Square	R Square Adjusted
Kenikmatan yang dirasakan	0.869	0.867
Niat beli secara impulsif	0.807	0.805

8. *Q-square*

Construct Crossvalidated Redundancy

	Total	Case1	Case2	Case3	Case4	Case5

	SSO	SSE	Q² (=1-SSE/SSO)
Interaktivitas	800.000	800.000	
Keceriaan	1000.000	1000.000	
Kenikmatan yang dirasakan	1000.000	331.093	0.669
Kenyamanan	1000.000	1000.000	
Niat beli secara impulsif	1000.000	391.685	0.608
Permintaan	1000.000	1000.000	

9. *Path coefficients*

Path Coefficients

Mean, STDEV, T-Values, P-Values

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Interaktivitas -> Kenikmatan yang dirasakan	0.151	0.144	0.072	2.104	0.036
Interaktivitas -> Niat beli secara impulsif	0.220	0.220	0.088	2.497	0.013
Keceriaan -> Kenikmatan yang dirasakan	0.523	0.521	0.069	7.543	0.000
Kenikmatan yang dirasakan -> Niat beli secara	0.703	0.704	0.086	8.187	0.000
Kenyamanan -> Kenikmatan yang dirasakan	0.195	0.199	0.069	2.839	0.005
Permintaan -> Kenikmatan yang dirasakan	0.131	0.136	0.057	2.299	0.022

10. Bootstrapping
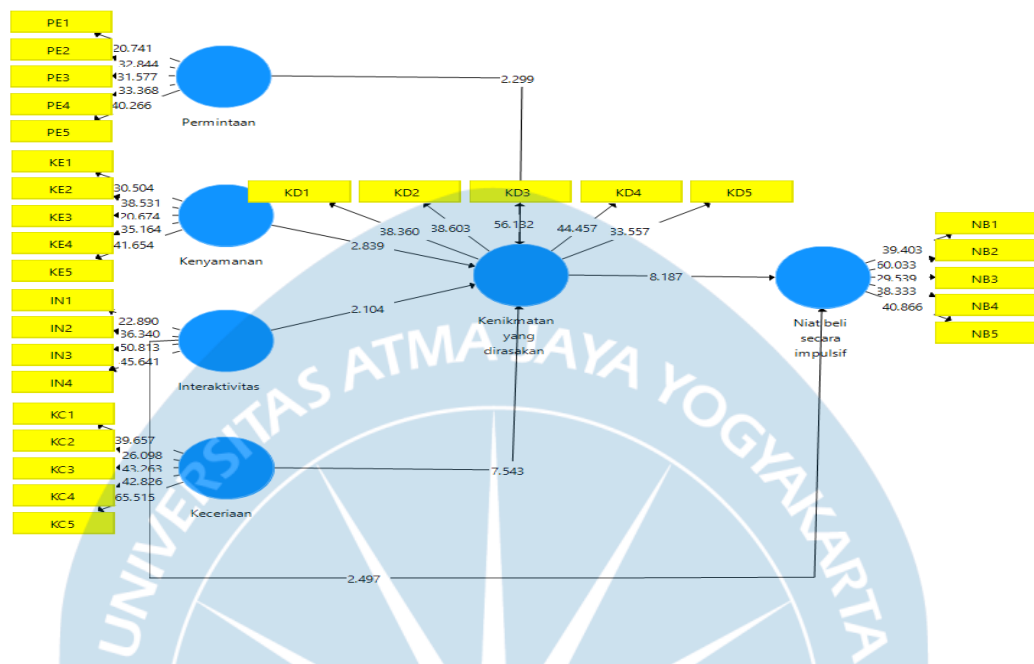
11. Spesific indirect effects

Specific Indirect Effects

Mean, STDEV, T-Values, P-Values

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Interaktivitas -> Kenikmatan yang dirasakan -> Niat beli secara impulsif	0.106	0.101	0.053	2.014	0.045
Keceriaan -> Kenikmatan yang dirasakan -> Niat beli secara impulsif	0.367	0.367	0.066	5.607	0.000
Kenyamanan -> Kenikmatan yang dirasakan -> Niat beli secara impulsif	0.137	0.141	0.055	2.503	0.013
Permintaan -> Kenikmatan yang dirasakan -> Niat beli secara impulsif	0.092	0.095	0.040	2.284	0.023

LAMPIRAN IV
JURNAL ACUAN 1 DAN JURNAL ACUAN II

SOR
perspective

Exploring factors influencing impulse buying in live streaming shopping: a stimulus-organism-response (SOR) perspective

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Shu-Chiung Lin
Tatung University, Taipei, Taiwan
Hsiao-Ting Tseng
College of Electrical Engineering and Computer Science, National Central University, Taoyuan City, Taiwan
Farid Shirazi
Ted Rogers School of ITM, Toronto Metropolitan University, Toronto, Canada
Nick Hajli
School of Management, Swansea University, Swansea, UK, and
Pei-Tzu Tsai
Department of Information Management, National Taiwan University of Science and Technology, Taipei, Taiwan

Abstract

Purpose – Based on the stimulus-organism-response theory, this research constructs the influence of the stimulus factors of the live-streaming shopping environment on consumers' psychological situation. It then produces the research model of impulsive purchase intention.

Design/methodology/approach – In this study, the online questionnaire survey method was used to survey users who participated in live-streaming shopping, and a total of 335 valid questionnaires were collected. Then SPSS and SmartPLS were used for data empirical evaluation and hypotheses test.

Findings – Research results show that demand, convenience, interactivity, and playfulness are positively stimulating consumers' perceived enjoyment. And their perceived enjoyment directly drives their intention of impulsive purchase.

Practical implications – The choice of the live streaming platform, the design of the interactive interface, and the design of the shopping process are all factors that the streamer must carefully consider. The results of this study can be used as a reference for the development of live-streaming shopping and provide the industry with an understanding of the main factors that affect users' live streaming and impulsive purchases to plan an effective live streaming platform and content.

Originality/value – "E-commerce live streaming" is regarded as the latest trend of e-commerce, and impulse buying is regarded as a key factor in the success of transactions. This research has developed factors that influence impulsive purchases after watching live streaming based on the SOR theory.

Keywords E-commerce, Live streaming, Influencer economy, Online streamer, SOR theory, Impulsive buying

Paper type Research paper

1. Introduction

The maturity of mobile communication technology and the popularization of smart devices have changed people's multimedia watching habits and consumer behavior (Xu *et al.*, 2020). As Paul and Rosenbaum (2020) mentioned that retailing and consumer services had changed the way buyers and sellers engage in marketplace exchanges because of the recent technology and innovation. In this context live streaming has become a new medium for e-commerce marketing (Hu and Chaudhry, 2020). Live streaming of e-commerce has been regarded as the latest trend of e-commerce and has become a new channel, new way, and new experience for consumers to shop (Hu and Chaudhry, 2020; Geng *et al.*, 2020).

With the prevalence and the technical maturity of live stream platforms, the number of businesses using the live stream for sales has rapidly increased. Among them, many businesses use the high popularity of influencers or online streamers to drive the growth of the influencer economy (Geng *et al.*, 2020; Lu and Chen, 2020), thereby creating new business opportunities. From a marketing perspective, the influencer creates a rapidly shopping atmosphere, and the business provides a convenient shopping approach to attract consumers' attention in the context of live streaming shopping. The consumer who watches live-streaming shopping pays more attention to the influencer and then involuntarily places an order when introducing products/services by the influencer. The influencer of live streaming shopping impacts consumers' psychological situation of impulsive buying and earns more and more revenue for businesses and platforms (Lu and Chen, 2020). However, it is unknown what kinds of stimulus factors affect consumers' behavior of impulsive buying of live streaming shopping. To bridge the research gap, this study discovers the antecedent factors that impact the psychological situation of impulsive buying in live streaming shopping.

In consumer behavior research, research on impulsive buying behavior has always attracted attention, mainly because consumers will simplify and eliminate the process of rational judgment and thinking during the process of impulsive buying behavior (Parboteeah *et al.*, 2009). Impulsive buying also affects the sales of most products each year (Muruganantham and Bhakat, 2013; Hausman, 2000). Nicholls *et al.* (2001) also found that more than half of consumers have had impulsive buying (Badgaiyan and Verma, 2015). The related literature on impulsive buying behavior has also increased recently from the e-commerce emergence (Muruganantham and Bhakat, 2013; Chan *et al.*, 2017). Consumers' impulsive buying occupies a significant proportion of the overall consumer market. The virtual consumer market that can be carried out anytime and anywhere has become a virtual environment for impulsive buying (Verhagen and Van Dolen, 2011). As a result, consumers' impulsive buying behavior on the internet has become a research topic that cannot be ignored. Especially live streaming shopping, which is a simultaneous shopping channel is easier to urge the consumer to immerse the situation of impulsive buying because of limited shopping time and quantity of products and services, watching others' purchases, and a hasty shopping atmosphere. Therefore, investigating the affecting factors of impulsive buying behavior of live streaming shopping is the latest and critical issue.

Shen and Khalifa (2012) mentioned that system design factors drive impulsive online purchases. Parboteeah *et al.* (2009) asserted that website characteristics influence consumers' impulsive buying behavior. Badgaiyan and Verma (2015) categorized the situational factors that impact impulsive buying behavior into personal and in-store factors. Although previous research has emphasized many factors based on system design and personal reasons to impact consumers' impulsive buying behavior, meanwhile, many causes that affect consumers' impulsive purchases on the live streaming shopping platform also have been noted (Xu *et al.*, 2020; Park and Lin, 2020; Mccormick, 2016; Lu and Chen, 2020; Geng *et al.*, 2020). Watching live streaming shopping is like watching an influencer's or online streamer's show on the internet (Park and Lin, 2020). The process of live streaming shopping and the influencer's expression is full of shopping cues to impact consumers' psychological decision-

making and then produce consumers' impulsive buying behavior (Dawson and Kim, 2010; Lu and Chen, 2020). However, these cues are unrecognizable and have not yet been well-defined in the previous research. Therefore, this study observes what kind of cues affect consumers' psychological situation of impulsive buying in live streaming shopping.

This study intends to clarify the psychological decision-making process that affects consumers' impulsive buying intention in the context of live streaming shopping. The influencing factors of psychological decision-making will be carefully discovered from the process of live streaming shopping based on the perspective of influencer marketing. The influencer immediately and continuously generates consumers' shopping demands in live stream shopping and provides a convenient shopping approach. When consumers obtain product or service information from the influencer and then create a shopping demand, the consumer will instantaneously produce an urge to own the product or service (Harris and Shiptsova, 2007; Sun et al., 2016). Many studies have mentioned that Internet convenience can stimulate consumers' desire to shop and influence impulsive buying behavior (Brown, 1989; Dai et al., 2008).

Meanwhile, the influencer pays more attention to interacting with consumers and responding to their questions as well as builds an interesting shopping situation during live streaming shopping. The liveness and interactivity of the website shape the shopping presence of the website, which affects the mood of consumers, and in turn, affects the impulse of customers to buy online (Ha and James, 1998; Sedig et al., 2014). During the live-streaming shopping activity, the streamer not only has high interactivity and real-time information provision with Internet users. In addition, other studies have confirmed that perceptual interactivity positively affects consumers' purchase intentions (Kim and Park, 2013, Hwang and Oh, 2020). At the same time, establishing a sense of presence is even more indispensable, creating an atmosphere for customers even if they are shopping online as if they were shopping in a store (Xu et al., 2020). In summary, the influencer of live-streaming shopping impacts consumers' psychological situation of impulsive buying and promotes the trading volume to earn benefits for businesses. Many researchers have used different attribute concepts to discuss impulsive purchase or impulsive purchase behavior, but few studies on the impact of consumer participation in live streams on impulsive purchase intention. Therefore, this research is based on the SOR framework concept of Dennis et al. (2009), which uses various incentives to create a stimulus for consumers. Like the concept of experience media proposed in experiential marketing, it is discussed that live-streaming shopping creates different consumption patterns by providing various satisfaction media and influences consumer satisfaction and self-recognition through incentives to promote purchase impulse (Söderlund, 2022). Therefore, this study focuses on the impact of the live stream on consumer impulsive purchase intention. The research model is based on the stimulus-organism-response (SOR) theory of Laato et al. (2020) and Mehrabian and Russell (1974). Taking consumers' external stimuli and their influence on consumer behavior as the anchor point, the relationship between the antecedents that affect participation in live-streaming shopping and impulsive purchase intention is verified.

The remainder of this paper is organized as follows. Section 2 describes the critical literature on influencer economy, live streaming, impulsive buying, and stimulus-organism-response theory. Section 3 explains the research hypotheses and research framework. Section 4 explains the research methodology and design. Section 5 presents and discusses the results of the analysis. Section 6 presents conclusions, academic and managerial implications, and future research suggestions.

2. Literature review
Live streaming shopping of electronic commerce provides online consumers a new way to buy products and services directly and immediately. The new business model quickly

attracts many users including influencers, sellers, and buyers to participate and generate a lot of profits. This study takes the perspective of the SOR developed by Mehrabian and Russell (1974) to explore the relationships between external environmental stimuli, internal psychological situations, and impulsive buying intention when the buyer participates in the context of live streaming shopping. The following sections discuss related works of literature including influencer economy, live streaming, impulsive buying, and SOR theory.

2.1 Influencer economy and live streaming

Influencers and online streamers refer to individuals with a high profile in one or several Internet communities (Mccormick, 2016). Influencer and online streamer is a new profession developed in the environment of Internet media. Today's online social media has broken the previous media's unidirectional message delivery model (Pagoto *et al.*, 2016). It has prompted the emergence of influencers and online streamers and brought a new consumption opportunity to the social media market.

The influencer economy is a fan economy, an emerging market derived from gathering huge fans. In the influencer economy, fans are potential consumers of the market, the most direct purchasers of goods sold by influencers (Hung, 2020). Influencer shapes personal image, makes good use of their characteristics, and acts as a model to promote products through their dynamic demonstration of the authenticity of interaction with consumers. This is a way to gather many fans' attention through influencers, target the marketing market and extend to various consumer markets. According to the report of Influencer Marketing Hub (2022), the influencers marketing industry will rapidly develop to reach approximately $16.4 billion in 2022.

Live streaming refers to how the client sends its video, audio, or image to everyone on the internet to watch. People communicate and interact with others or website managers in the internet environment and get feedback through discussion boards, evaluations, chat rooms, etc. These have become a kind of interpersonal interaction (Baruah, 2012). Live streaming can use its advantages to display products in real-time and experience a lifestyle without distance from others through the internet. In addition, the traditional marketing methods have high channel costs and geographical restrictions, which limits the expansion of consumption. Therefore, the new model has brought substantial social resources to the market channel, which can be a significant factor in the successful development of the influencer economy.

2.2 Impulsive buying

Impulsive buying is an immediate and sudden purchase made by customers without anticipation or careful consideration (Karbasivar and Yarahmadi, 2011), which can be regarded as irrational behavior that violates the normal shopping process and is primarily hedonistic (Parboteeah *et al.*, 2009). Customers' impulsive purchase decisions are often formed after they are already in the shopping place (Badgaiyan and Verma, 2015). Many factors cause consumers to make impulsive purchases, including the influence of the shopping environment, personal internal preferences, personality traits, external environmental stimuli, and the current situation of the purchase (Shen and Khalifa, 2012; Parboteeah *et al.*, 2009; Badgaiyan and Verma, 2015; Xu *et al.*, 2020; Park and Lin, 2020; Mccormick, 2016; Lu and Chen, 2020; Geng *et al.*, 2020).

In recent years, many studies have explored the impact of virtual cues from online stores on impulsive consumer purchases. For example, Parboteeah *et al.* (2009) used virtual cues related to high and low tasks as external stimuli to explore the impact of consumers' perceived usefulness and perceived enjoyment on impulsive online purchases. Dawson and Kim (2010) used the focus interview method to analyze the attributes of virtual reminders that affect consumers' online impulsive purchases, including promotion, creativity, sales, advice,

etc. Verhagen and Van Dolen (2011) distinguished consumers' beliefs in online stores into two attributes: convenience function and pleasure. Finally, they explored the influence of consumers' positive and negative emotions and browsing behavior on the impulse to purchase.

Beatty and Ferrell (1998) even pointed out that in the process of impulsive buying, consumers will experience a strong desire to buy. Moreover, the relationship between the impulse to buy and the individual's psychological emotions (Souiden *et al.*, 2019) in retailing has also been confirmed. The more positive the emotional state (e.g. enjoyment, gratification, pleasure, etc.), the more positively influenced consumers to make impulse purchases (Saad and Metawie, 2015). By stimulating the external environment, the extent to which the store stimulates customers' purchase intention can be promoted, which in turn triggers consumers' impulsive purchases (Cheah *et al.*, 2020). Based on the above research findings, consumers will have impulsive buying behavior because of shopping environment factors, external stimuli, and other factors. In addition, impulsive purchases are non-planned purchases (Saad and Metawie, 2015), so external environmental stimulation and internal psychological changes have become essential in affecting impulsive purchases (Chen *et al.*, 2022). Therefore, this study uses perceived enjoyment as the internal psychological stimuli of consumers to explore whether the degree of perceived enjoyment impacts impulsive purchase behavior.

2.3 Stimulus-organism-response theory (SOR theory)
The SOR model is derived from environmental psychology (Mehrabian and Russell, 1974). It uses the concept of "stimulus-response" and the cognition and emotion of individual organisms as an intermediary to generate individual approach-avoidance behaviors (Mummalaneni, 2005).

The SOR model assumes that using environmental cues as stimuli affects individuals' cognitive and emotional responses, affecting consumer behavior (Mehrabian and Russell, 1974). The model believes that stimuli, such as demand, convenience, interactivity, and playfulness, will affect consumers' emotional responses (Mehrabian and Russell, 1974), and one's perceived enjoyment can represent one's positive and negative emotional responses. The consumer's response to stimuli is divided into approach and avoidance (De Luca and Botelho, 2021). The approach response is that consumers are willing to stay, explore, interact and identify with the environment, and increase their willingness to return to the environment to buy goods. On the contrary, avoidance response means that consumers have no willingness or even stay away from the environment, are dissatisfied, bored, and irritable, and have no willingness to consume again. Moreover, this study expresses positive and negative emotional reactions to perceived enjoyment.

Many studies use the SOR model to explain consumers' approach-avoidance behaviors in specific environments (Eroglu *et al.*, 2001; Hwang *et al.*, 2012; Badgaiyan and Verma, 2015). For example, Eroglu *et al.* (2001) use the SOR model to research the online environment, using the atmospheric information of the online store as an environmental stimulus to explore the emotional state and cognitive state of customers, and created a research model of the influence of online store environment on customer purchasing behavior. Eroglu *et al.* (2001) re-examined the relationship between the online store environment and consumer behavior. The results show that the website atmosphere significantly impacts consumers' perception, attitude, and satisfaction. Website atmosphere can be regarded as a virtual environment designed by consumers to experience online retailers, which is used to create positive emotional responses from consumers, thereby influencing or increasing consumers' purchasing behavior. Therefore, providing a high-quality website environment can cause consumers to produce impulse-buying behavioral responses (Manganari *et al.*, 2011). In addition, Mummalaneni's (2005) website design is regarded as an important factor in the success of online retailers. It uses the SOR theory to explain the relationship between website

characteristics, consumer cognition, and emotional response to consumer response behavior. Manganari *et al.* (2011) developed the SOR theoretical framework based on the above theories to observe the behavior of consumers in online stores, where the stimulus is the environmental cues from the online store, the individual represents the consumer's emotional, cognitive state. The last behavioral responses are divided into two types: approach or avoidance.

In recent years, the innovation of online and offline shopping environments and the emphasis of merchants on consumer experience have prompted more and more attention to impulse buying behavior. Especially in the business environment driven by the epidemic (Laato *et al.*, 2020), the online environment stimulates a more frequent and noticeable appearance. It stimulates consumers' shopping motivation and even the generation of behavior. Dawson and Kim (2010) indicated the importance of the consumers' virtual reminders to the Internet environment are promotional messages (limited time, discounts, lucky draws, etc.). The more promotional messages in the internet environment, the more they positively impact promoting consumers' impulsive purchases. Parboteeah *et al.* (2009) pointed out that the cognitive state of consumers (e.g. perceived website usefulness) can help or increase emotional state response (e.g. perceived website hedonistic) and will promote consumers' impulse to buy. Flight *et al.* (2012) found that it is important to create a good shopping atmosphere to promote consumers' impulse purchases, and Parboteeah *et al.* (2009) also believed that emotional states would dominate the occurrence of purchasing impulses.

The above research shows that stimulating external environmental factors will prompt consumers to approach and avoid impulsive purchases. Therefore, this study refers to the SOR framework concept of Dennis *et al.* (2009), using demand, convenience, interactivity, playfulness, etc., as environmental stimulus factors, and promotes impulsive purchases by stimulating the inner perceived enjoyment of consumers.

2.4 Summary
Based on the above literature and background exploration, this study gets the following conclusions to illustrate the importance of this study. First, the advent of the digital commerce era has drastically changed consumers' shopping habits. The online shopping experience and behavior of consumers are more critical than ever. Studies have found that enterprises' online shopping orientation was "purpose-oriented" in the past, but now there is a ubiquitous online shopping phenomenon. These phenomena make it impossible for companies to understand and control how consumers' perceived enjoyment of the shopping experience is generated? How the consumer's does perceived enjoyment promote his/her willingness to shop on an emotionally driven impulse? If the driving mechanism of these orientations is not precise, it will put the enterprise at a disadvantage due to the unclear marketing strategy. From the above discussion, this study shows that consumers will have impulse buying behavior because of shopping environment factors and external stimuli, and other factors. In addition, impulsive buying behavior is a kind of unplanned buying behavior; thus "external environment stimuli" and "internal psychological changes" play a vital role in influencing impulse buying. Therefore, this study regards perceived enjoyment as the internal psychological stimuli of consumers and explores whether the degree of perceived enjoyment impacts impulses in buying behavior. The next part of this research will synthesize the findings of the above theoretical basis to derive the conceptual framework of this research and the establishment of hypotheses.

3. Conceptual framework and hypotheses
According to the influencer marketing strategy in the context of live streaming shopping and based on the theoretical model of SOR, this research explores the impact of the live stream on

consumption patterns. It mainly explores what factors or marketing techniques can promote consumers' desire to buy. This study adopts demand, convenience, interactivity, and playfulness as external environmental stimulus factors to investigate affecting consumers' internal psychological changes (e.g. perceived enjoyment). Meanwhile, this study also explores the relationship between perceived enjoyment and impulsive buying intentions. In the following sections, this study proposes five hypotheses and establishes the research model.

3.1 Demand

The generation of human behavior mainly comes from the intrinsic motivation of the individual, and the motivation that triggers consumption behavior is usually produced by intrinsic demand (Wulf and Lewthwaite, 2016). Under the conditions of a market economy, peoples' production and living consumption needs are inseparable from market exchanges. With people's increasing interest in material culture and living standards, consumer demand is also diversified and multi-level (Sun *et al.*, 2016). As a result, the consumption field expands, and consuming content is also increasingly enriched.

Demand plays a crucial role in consumer behavioral research affecting consumers' impulsive purchases (Zhang *et al.*, 2021). When consumers feel demand and desire for a particular product through external environmental stimuli, they will have motivation, eventually inducing consumer behavior. The demand may be the desire generated by a certain commodity's preference, need, or deficiency (Bronfenbrenner *et al.*, 1994). When watching live-streaming shopping, consumers will receive a series of product introductions, detailed functional descriptions, and demonstrations from online streamers. That is, consumers can easily find their demands and needs for products through the influencer's marketing in a live-streaming environment (Purushothaman and Krishnamurthy, 2016; Liu *et al.*, 2020). When consumers have demand-driven by satisfying the demand, consumers will start looking for information about the product due to their purchase decision process (Blackwell *et al.*, 2006). The consumer's emotion will become well after the demands are satisfied (Harris and Shiptsova, 2007). The live-streaming platform quickly provides consumers with information on a series of products, eliminating the need for consumers to search for product information and improving the process of purchasing decisions, whether or not the customer needs this product. When buying a product, the most considerable stimuli for customers is demand, and then the most significant factor in generating the impulse to buy (Liu *et al.*, 2020). Therefore, this research proposes hypothesis H1.

H1. In the live-streaming shopping environment, demand will positively affect the consumer's degree of perceived enjoyment.

3.2 Convenience

In terms of current consumer behavior, convenience has become one of the important factors that affect consumers' purchase intentions (De Kerviler *et al.*, 2016). According to Brown (1989), if firms can provide consumers with more convenience, the more they can encourage consumers to consume their products and create a consumers pleasure shopping experience. In the Internet world, the platform of electronic commerce, as proposed by Seiders *et al.* (2000), has systematic storage of consumer information, which can simplify the ordering process of consumer shopping and provide consumer convenience. Consumers can shop at home without going out in a convenient shopping environment, which is a convenient service for consumers. Dai *et al.* (2008) mentioned convenience as the concept that consumers consume the least time and energy in service consumption. A study by Harris and Shiptsova (2007) pointed out that convenience significantly impacts the number, quantity, and amount of

purchases made by consumers. In online shopping, consumers have recently become closer to using live streaming for consumption behavior. One of the most important reasons is the convenience brought by live streaming. Consumers use live streaming to subtract the behavior of selecting and searching for products, and they can directly consume the live streaming. The convenient shopping process in the context of live streaming enhances consumers' good shopping experience. Therefore, this research proposes hypothesis H2.

H2. In the live streaming shopping environment, convenience will positively affect the consumer's degree of perceived enjoyment.

3.3 Interactivity
With the rise of webcasting, live-streaming shopping has become one of the trends in the e-commerce industry. Consumers have become bored with the traditional shopping environment in the past. Instead, they have become interested in shopping models such as a TV that can fully and immediately provide shopping information to increase their willingness to buy. The important factor that causes change is interactivity (Sedig *et al.*, 2014; Yang and Shen, 2018). Live-streaming shopping can increase the interactivity between the streamer and the consumer. It allows consumers to experience still the presence of shopping at the store while shopping at home, provides consumers with the fun of bargaining with the streamer during live-streaming shopping, and allows consumers to experience emerging consumption patterns (Xu *et al.*, 2020). Ha and James (1998) believe that interactivity represents how the communicator and the audience respond to communication needs. Research has pointed out that Internet interactivity is one of the critical factors influencing consumers' online experience, perceived enjoyment, and psychological situation (Akar and Topçu, 2011; Yang and Shen, 2018). While participating in live-streaming shopping, consumers can directly interact with a streamer on the screen and understand and recognize the product and service through interaction. The live streamer can also use interactivity to attract consumers' attention and create consumers' good mood, which influences consumers' perceptions and enhances their purchase intentions. Therefore, this research proposes hypothesis H3.

H3. In the live streaming shopping environment, interactivity will positively affect the consumer's degree of perceived enjoyment.

3.4 Playfulness
Playfulness can be interpreted as the user's perceptually engaging mentality during experience or behavior. Barnett (2011) defines *playfulness* as a characteristic that comes from the heart, is relatively stable, does not easily change with the environment, and is a characteristic state produced through the interaction between humans and the environment. Chang *et al.* (2015) mentioned that playfulness would affect users' willingness to participate in social media and experience a joyful, interactive atmosphere. Kang *et al.* (2020) asserted that playfulness improved consumers' purchase decision-making process in the 3D virtual reality stores. Byun *et al.* (2017) also highlighted that playfulness affected pioneering consumers' pre-order behavior for novel products. In the context of live streaming shopping, the streamer is to attract the consumer with vivid enough content and provide novel or differential products that are highly different from other stores to improve consumers' playfulness in the whole process. The influencer needs to create a joyful atmosphere for consumers, while the consumers' enjoyment is an essential factor that affects whether the consumer stays on this platform. Therefore, this research proposes hypothesis H4.

H4. In the live streaming shopping environment, playfulness will positively affect the consumer's degree of perceived enjoyment.

3.5 Perceived enjoyment

Perceived enjoyment is defined as the degree to which a person feels good, happy, or satisfied with the situation (Eroglu *et al.*, 2001). Perceived enjoyment is also a subjective experience, which will vary due to different personal feelings in the same environment (Shiau and Luo, 2013). The brain achieves the subjective sense of enjoyment through many internal and external factors such as preferences, needs, and learning (Westbrook *et al.*, 2013). Wu *et al.* (2018) noted that perceived enjoyment could forecast users' continuous participation in social networking sites game applications. Byun *et al.* (2017) also emphasized that perceived enjoyment increases the purchase intention of innovative consumers. Saad and Metawie (2015) have emphasized that perceived enjoyment was significantly associated with impulse buying behavior in the virtual store. Live-streaming shopping offers a dazzling array of products and a wide range of items, coupled with the live-streaming streamer's lively introduction and other external factors, which may affect the consumer's degree of perceived enjoyment. Moreover, it makes consumers intend to purchase impulsively (Madhavaram and Laverie, 2004). Therefore, this research proposes hypothesis H5.

H5. In the live streaming shopping environment, perceived enjoyment will positively affect the consumer's intention of an impulsive buying.

3.6 Research framework

As research of Beatty and Ferrell (1998) believes that the more stimuli consumers are exposed to, the more likely they are to promote buying impulse. According to the explanation in previous sections, consumers easily cause the intention of impulsive buying to be affected by external stimulus factors during the process of live streaming shopping (Xu *et al.*, 2020; Park and Lin, 2020; Mccormick, 2016; Lu and Chen, 2020; Geng *et al.*, 2020). The influencer plays an essential role in continuously carrying out many stimulus factors that affect consumers' intention of impulsive buying to improve selling quantity. Therefore, the influencer marketing strategy mainly originates from building many stimulus factors to affect consumers' impulsive buying in the context of live streaming shopping. This study uses the personal demand, convenience, interactivity, playfulness, etc. provided by the live stream as environmental stimuli to explore the impact on consumers' psychological situation and impulse to buy. Whether the stimulus factors affect consumers' inner psychological situation and impulsive buying, the study uses perceived enjoyment as an intermediary variable and impulsive buying intention as a dependent variable.

Based on the situation of external environmental stimuli impacting internal psychological perception, this study adopts the SOR theory to explore the relationship between the participation in live-streaming shopping and the impulsive purchase of watching live streaming shopping. This study examines whether when consumers' stimuli are satisfied, consumers will accept and form an impulse to buy or not. The research framework consists of three parts, the influence of stimuli (S), including demand, convenience, interactivity, and playfulness, which in turn influences internal psychological changes (O), the variable is perceived enjoyment, to generate purchase impulse intention behavior (R) (as shown in Figure 1).

4. Methodology

The research method used in this study is the questionnaire survey method. This study details the data collection, questionnaire design, and pre-test analysis in the following section.

4.1 Data collection

This study is quantitative and collects the data required for examining these hypotheses of this research using purposive sampling through web questionnaires (Saunders *et al.*, 2009).

Figure 1.
Research framework
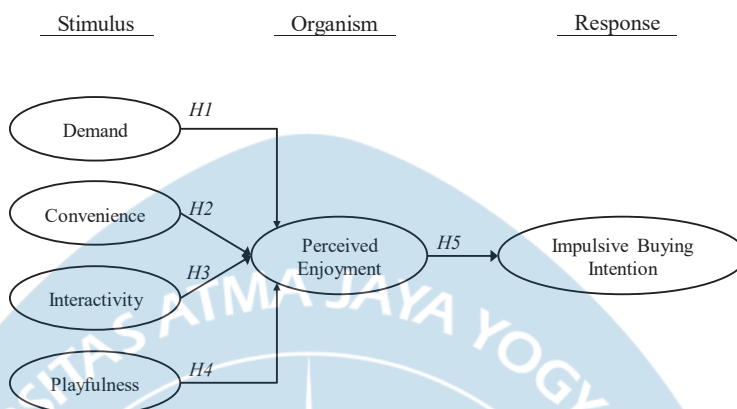
The questionnaire designed in this study is mainly based on the theoretical basis of previous studies, which will be further explained in the 4.2 measurement design.

This research aims to understand the impulse buying behavior of users who have participated in live shopping online. In other words, the population of this study is all users who have participated in online live shopping. Therefore, the respondents who received an invitation to fill in the questionnaire for this research are users who have watched online live shopping. To prevent users who are not within the scope of the research from participating by mistake, we declared at the beginning of the questionnaire that this questionnaire could only be filled out by users who have participated in online live shopping (including viewing and purchasing). To understand the behavioral intentions after impulse shopping, it is necessary to understand users who have experience in live shopping. This includes consumers who have shopped live online and users who have watched live online shopping but have not made any purchases. In addition, the questionnaires for this research are distributed using the live-streaming boards of well-known forums as the source of recruiting research participants.

4.2 Measurement design

This study restricts participants from having an online live streaming shopping viewing experience. In the beginning, this study asked the participants for their personal information, including their gender, age, and education level. Then, asked them about their watching experience of live-streaming shopping, including weekly watching hours, watching time, and live-streaming shopping experiences.

After collecting the participants' personal information and live streaming shopping-watching experience, this study then asked these study participants to recall their watching process and answer the following six parts of questions. The first part, five questions, investigates whether demand will affect consumers' situation of live-streaming shopping (Messinger and Narasimhan, 1997). The second part, five questions, investigates whether convenience will become an incentive for consumers to buy products on the live-streaming process (Dai *et al.*, 2008). The third part, four questions, investigates whether the interactivity of the live-streaming shopping platform can provide consumers with a high degree of discussion space. The fourth part, five questions, investigates whether the playfulness of live-streaming shopping will arouse consumers' desire to buy products. The fifth part, five questions, investigates watching live-streaming shopping can make audiences feel perceived enjoyment. In the sixth part, five questions investigate whether live-streaming shopping will

promote consumers' impulsive purchases. The questions in the above parts are all measured on the Likert five-point scale. One means strongly disagree, and five means strongly agree.

4.3 Pre-test
After the questionnaire items had been developed, this study first asked two social commerce experts to assist in correcting the question items to confirm that the scale of this study was developed correctly. Next, this study asked 50 users who watched live-streaming shopping to conduct a pre-test to ensure that there are no questions on the questionnaire that are unclear or semantic ambiguous. After the pre-test, the questions will be corrected according to the respondents' feedback. The formal web questionnaire is shown in Appendix.

5. Data analysis results
This study uses the online questionnaire survey method to collect empirical data. The research object is users who have watched live streaming shopping. A total of 413 questionnaires were collected, 78 invalid questionnaires (e.g. answering time is too short, filling in incomplete, blank) were deleted, and 335 valid questionnaires were obtained. The effective questionnaire rate was 81.1%. The descriptive statistical analysis, measurement assessment, model fit, path analysis, and hypotheses test are described in the following sections.

5.1 Descriptive statistical analysis
The personal information of the participants in this study is as follows. There are 162 males (48.4%) and 173 females (51.6%). The age group is mainly distributed in the 21–25 years old (31.6%), of which 7.8% of the people over the age of 50 have watched the live streaming, indicating that the popularity of live streaming is speedy. The education background is the most in bachelor's (65.1%), followed by 20.0% in the master's (see Table 1 for details).

The live streaming experience of the participants in this study is as follows. In terms of the hours of watching live streaming, 52.8% of people watch live streaming within an hour on average a week (see Table 2). Nearly 90% of the respondents watched live streaming at night, followed by noon (3.6%). Among the survey respondents, more than half (55.8%) have purchase experience in live streaming shopping; others are only watching experience (see Figure 2 for details).

Variable	Item	Frequency	Percentage
Gender	Male	162	48.4
	Female	173	51.6
Age	Under 20	50	14.9
	21–25	106	31.6
	26–30	50	14.9
	31–35	49	14.6
	36–40	31	9.3
	41–45	8	2.4
	46–50	15	4.5
	Over 50	26	7.8
Education background	High school	35	10.4
	Bachelor	218	65.1
	Master	67	20.0
	PhD	15	4.5

Table 1.
Distribution of demographics of the participants ($N = 335$)

Variable	Item	Frequency	Percentage
Watching hours/week	1 or less	177	52.8
	2–3	76	22.7
	4–5	13	3.9
	5–6	28	8.4
	7–8	6	1.8
	8–9	28	8.4
	10 or more	7	2.1
Watching time	Morning	6	1.8
	Noon	12	3.6
	Afternoon	8	2.4
	Night	300	89.6
	Midnight	9	2.7
Live streaming shopping experiences	Yes	187	55.8
	No	148	44.2

Table 2.
Distribution of participants' live stream watching experience ($N = 335$)

5.2 Measurement assessment

The mean, standard deviation (SD), standardized factor loading, average variation extraction value (AVE), composite reliability (CR), and Cronbach's value of each variable and item in this study are shown in Table 3.

This study uses composite reliability (CR) and Cronbach's α value to measure the reliability of each aspect. The research analysis results showed that the Cronbach's α value of each construct was between 0.820 and 0.939, and the CR value of each construct was between 0.882 and 0.954, which are above the standard value of 0.7. Finally, it shows that the questionnaire measurement indicators of this study have good reliability.

The factor loading of each construct item in this study is greater than the standard value of 0.5 suggested by Fornell and Larcker (1981). The AVE of each construct is also greater than the threshold value of 0.5 suggested by Fornell and Larcker (1981). A load of individual factors in this research questionnaire is more significant than 0.73, and the AVE value of all potential variables is between 0.633 and 0.805. Factors can significantly explain each
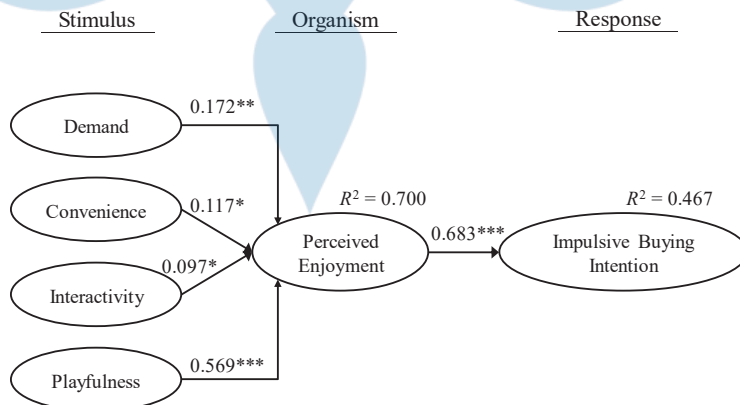
Figure 2.
Structural equation model path analysis results

Note(s): *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

Construct	Item	Mean	S.D.	Factor loading	AVE	CR	Cronbach's alpha
Demand	ND1	3.69	0.901	0.87	0.707	0.925	0.899
	ND2	3.65	0.910	0.85			
	ND3	3.70	0.892	0.85			
	ND4	3.52	0.912	0.80			
	ND5	3.40	1.001	0.86			
Convenience	CV1	3.88	0.862	0.85	0.633	0.896	0.853
	CV2	3.69	0.937	0.80			
	CV3	3.83	0.821	0.80			
	CV4	3.83	0.789	0.75			
	CV5	3.59	0.955	0.77			
Interactivity	IN1	3.80	0.795	0.81	0.652	0.882	0.820
	IN2	3.72	0.803	0.87			
	IN3	3.91	0.765	0.81			
	IN4	3.78	0.810	0.73			
Playfulness	DL1	3.73	0.911	0.74	0.707	0.923	0.896
	DL2	3.82	0.807	0.77			
	DL3	3.93	0.704	0.89			
	DL4	3.94	0.787	0.88			
	DL5	3.85	0.831	0.91			
Perceived Enjoyment	PL1	3.53	0.888	0.92	0.805	0.954	0.939
	PL2	3.54	0.877	0.91			
	PL3	3.58	0.909	0.91			
	PL4	3.47	0.891	0.86			
	PL5	3.53	0.928	0.89			
Impulsive Buying Intention	IPP1	3.64	0.983	0.85	0.744	0.936	0.914
	IPP2	3.72	0.951	0.85			
	IPP3	3.52	0.966	0.88			
	IPP4	3.56	0.952	0.86			
	IPP5	3.81	0.953	0.88			

Table 3.
Weight table of each
construct factor

question item in this study. The question item passes the test of convergence validity, and each construct has good convergence validity.

Table 4 analyzes the correlation coefficient and discriminative validity of each construct. Discriminative validity refers to the correlation between a particular construct and other constructs. When the correlation coefficient is below 0.3, it is a low correlation, 0.3 to 0.7 is a medium correlation, and 0.7 or more is a high correlation. If the square root of AVE of

	Demand	Convenience	Interactivity	Playfulness	Perceived enjoyment	Impulsive buying intention
Demand	0.841					
Convenience	0.535	0.796				
Interactivity	0.485	0.580	0.807			
Playfulness	0.681	0.614	0.519	0.841		
Perceived Enjoyment	0.670	0.615	0.544	0.808	0.897	
Impulsive Buying Intention	0.719	0.537	0.515	0.649	0.683	0.863

Note(s): The value of the diagonal is the square root of AVE by latent constructs from their indicators; elements in the lower triangular are the Pearson correlation coefficients

Table 4.
Analysis of construct
correlation coefficient
and discriminative
validity

discriminative validity is greater than the correlation coefficients of other constructs, it indicates that the construct has good discriminative validity (Hair *et al.*, 2010). The square root of the AVE value of each construct in this study is greater than the correlation coefficient between the construct and other constructs, indicating that the scale of this study has high discriminative validity (Fornell and Larcker, 1981).

The goodness of fit of the research framework was also measured using the formulation of GoF, GoF = Sqrt(Average(AVE) * Average(R^2)). According to the recommendation of Wetzels *et al.* (2009), when the GoF value is higher than 0.36, the research framework has a good model fit. The model fit of this research framework was 0.643, demonstrating a high level of model fit. The research framework thus reached the acceptance level of model fit.

Summarizing the above analysis results, the measurement items in this study have good convergence validity and discriminative validity, showing that the scale of this study has good construct validity.

5.3 Path analysis and hypotheses test

After testing the reliability and validity, the SmartPLS in the structural model equation was used to analyze the relationship between the constructs. This study verifies the hypotheses based on the path analysis of the structural equation model in Figure 2, and the results are described below.

In terms of stimulus factors, demand significantly influences perceived enjoyment ($\beta = 0.172$; $p < 0.01$), thus empirical data support H1. Convenience significantly influences perceived enjoyment ($\beta = 0.117$; $p < 0.05$), thus empirical data support H2. Interactivity also significantly influences perceived enjoyment ($\beta = 0.097$; $p < 0.05$), thus empirical data support the research hypothesis of H3. The influence of playfulness on perceived enjoyment ($\beta = 0.569$; $p < 0.001$) is significant, thus the research hypothesis of H4 is supported by empirical data. In terms of internal psychological changes, perceived enjoyment significantly influences impulsive buying intention ($\beta = 0.683$; $p < 0.001$), thus empirical data support the research hypothesis of H5. Figure 2 shows that the R^2 of perceived enjoyment is 0.700, and the R^2 of impulsive purchase intention is 0.467, which shows that the degree of perceived enjoyment in the four aspects of stimulus factors can explain more than 70% of the variance. The measurement of impulsive buying intention in perceived enjoyment can explain more than 46.7% of the variance, indicating that the model in this study has good explanatory power.

6. Conclusions and suggestions

The impact of external environmental stimuli on a consumer's psychological situation and impulsive buying intention in the context of live stream shopping was explored in this study by taking the perspective of SOR theory (Mehrabian and Russell, 1974). The following sections describe the discussion and conclusion, theoretical and managerial implications, limitations, and future studies.

6.1 Discussion and conclusion

The results verified that demand, convenience, interactivity, and playfulness significantly affect the intermediary's psychological response as perceived enjoyment, of which playfulness has the most significant influence ($\beta = 0.569$), followed by demand ($\beta = 0.172$), convenience ($\beta = 0.117$), and interactivity ($\beta = 0.097$). The $R^2 = 0.7$ of the influence of these four stimulus factors on the intermediary's psychological factor perceived enjoyment reveals that the explanatory power of demand, convenience, interactivity, and playfulness on the effect of perceived enjoyment could reach about 70%. The research results

also indicate that the β value of perceived enjoyment on impulsive purchase is 0.683, which shows that the impact of perceived enjoyment on impulsive purchase is considerable. When the live streaming audience feels enjoyment, it is more likely to trigger an impulsive purchase. Finally, the $R^2 = 0.467$ of the impact of perceived enjoyment on impulsive purchase indicates that the explanatory power of perceived enjoyment on impulsive purchase is about 46.7%, which is the main factor affecting impulsive purchase. Thus, the relationship of external environmental stimulus factors' effect on behavioral intention to impulsive buying indicates that perceived enjoyment is the critical decision factor influencing consumers' impulsive buying intention in live streaming shopping.

As mentioned above, when using live streaming for product promotion or e-commerce, the target audience must feel perceived enjoyment to guide the target audience's impulsive purchase intention and achieve the purpose of promotion. The results confirm that perceived enjoyment plays a critical role in affecting consumers' behavioral intention in the context of live streaming shopping (Wu *et al.*, 2018; Byun *et al.*, 2017). The findings are also consistent with Saad and Metawie's (2015) study on the perceived enjoyment effect on impulsive buying intention. In addition, among the factors that affect perceived enjoyment, playfulness has the most significant influence, with a β value of 0.569. The most important thing is to show that the live streaming content must make the target audience feel interesting. The findings confirm that playfulness plays a crucial part in impacting consumers' perceived enjoyment of live streaming shopping (Chang *et al.*, 2015).

The second is demand, which means that the content of live streaming and the products sold must be what the target audience needs or trigger their needs. As expected, this study finds demand to be a significant stimulus affecting perceived enjoyment (Liu *et al.*, 2020), which echoes the findings of Zhang *et al.* (2021), who concluded that the most demand influences consumers' options when making an impulsive purchase decision. Moreover, the following are convenience and interactivity, which are important factors affecting consumers' purchase intentions separately (De Kerviler *et al.*, 2016; Akar and Topçu, 2011; Yang and Shen, 2018). The findings confirm that both convenience and interactivity affect consumer's psychological responses and impulsive purchases during the process of the live streaming shopping (Sedig *et al.*, 2014; De Kerviler *et al.*, 2016; Kim and Park, 2013; Hwang and Oh, 2020; Xu *et al.*, 2020). In summary, these factors are a great explanation and predictive ability on how to use live streaming to promote products, which valid that the model of this research contributes to academic and practical contributions.

6.2 Theoretical implications

"E-commerce live streaming" is regarded as the latest trend of e-commerce, and impulse buying is regarded as a critical factor in the success of transactions. Based on the SOR theory, this research has developed factors that influence impulsive purchases after watching live streaming. The stimulus factors include demand, convenience, interactivity, and playfulness. The psychological response of the intermediary is perceived enjoyment, while the final result is impulsive purchase intention. This study applied SOR theory to confirm the relationship between external environmental factors and internal psychological changes while positing the relationship between psychological response and impulsive buying intention. The study makes several meaningful contributions to the theoretical development of SOR theory and understanding of external environmental factors and internal psychological changes.

First, through a novel application of SOR theory, this study explored the influence of external environmental factors on internal psychological changes while internal psychological changes impact impulsive buying intention in live streaming shopping. Thus, this study broadens the research scope of SOR theory and identifies the relationships among external environmental factors, internal psychological changes, and impulsive

buying intention in live streaming shopping. Second, this study discovers external environmental factors, including demand, convenience, interactivity, and playfulness, by exploring the influencer marketing strategy in live streaming shopping based on SOR theory. Third, this study finds stimulus factors based on the perspective of influencer marketing to understand the ecosystem of live streaming e-commerce and extend the scope of SOR theory. Third, this study initially explores the consumers' impulsive buying intention in live streaming shopping based on the perspective of influencer marketing. The influencer marketing perspective is different from traditional marketers' aspect because the influencer has a reputation and his/her fans. The characteristic of the influencer combines the characteristic of the star and marketer to promote products, services, and e-commerce. From this aspect, this study broadens the field of marketing research. Finally, live stream e-commerce is different from traditional e-commerce, including B2B, B2C, C2B, C2C, etc. Exploring a new business model of live stream e-commerce based on SOR theory broadens the capability of theory explanation and understands consumers' behavioral intention in the new business model.

6.3 Managerial implications

The findings of this study also bring some managerial implications to the e-commerce industry of live shopping, reminding us of some aspects that need attention. First, this study indicates that playfulness plays the most crucial role in evoking perceived enjoyment in live streaming shopping. The following stimulus factors are demand, convenience, and interactivity. For example, when using live streaming for product promotion or e-commerce, the streamer must develop and provide exciting content according to the target audience's needs. Meanwhile, the influencers continuously devote their ability to shape an atmosphere of demand in products/services for consumers to trigger the target audience's perceived enjoyment and then generate the intention of an impulsive purchase.

On the other hand, convenience is also a factor that affects perceived enjoyment. One of the characteristics of community online streaming is that there is no field restriction, allowing online streaming brands to let interested community audiences watch online streaming under any circumstances. For example, when using live streaming for product promotion or e-commerce, it is necessary to provide the target audience with a convenient way to watch the live streaming, interact with and purchase products, etc. Since such a new type of consumption pattern is to allow consumers to have a new experience, it should not sacrifice the convenience and practicality that consumers should expect. Finally, interactivity also affects perceived enjoyment. For example, when using live streaming for product promotion or e-commerce, interacting with the target audience can also increase the sense of perceived enjoyment. Interaction is an essential part of the live broadcast. It is recommended that stores design more interesting interactive bridges during the live broadcast to improve audience participation and take the opportunity to show the characteristics of products or services. However, moderate interaction is enough because interactivity is not the most important factor. Therefore, the live streaming platform, the design of the interactive interface, and the shopping process are all factors that the streamer must carefully consider.

In addition, the sample distribution of this study is mainly the young group under the age of 35 (76%). They are the target audience in e-commerce of live streaming and their watching time focuses on at night (89.6%). The manager of the live streaming platform needs to design novel and interesting programs for this group to attract their attention. Meanwhile, the best time provided the live streaming program is at night to satisfy young people's needs because many of them are night owls who like to surf the internet at night. The results of this study can be used as a reference for the development of live-streaming shopping and provide the industry with an understanding of the main factors that affect users' live streaming and impulsive purchases to plan an effective live streaming platform and content.

6.4 Limitations and future study

This research is based on the SOR theory and develops factors that affect impulsive purchases after watching live streaming. The stimulus factors include demand, convenience, interactivity, and playfulness. The mediator variable is perceived enjoyment which is a psychological response; the result is impulsive purchase intention. This study reveals several important findings, but it has some limitations. First, the collected data were obtained from only one emerging market in Asia. Although the scale of consumption makes it worth studying, future research should confirm the results concerning other developed markets and perhaps other cultural regions. Second, this study only adopted perceived enjoyment in the part of psychological response. However, the influence of perceived enjoyment on the intention of impulsive purchase is quite significant. The explanatory power of the influence of perceived enjoyment on impulsive purchase accounts for about 46.7%, indicating that other factors will affect impulsive purchase intention. Therefore, the follow-up research can focus on the factors that affect the impulsive purchase, find out other factors (e.g. arousal, dominance, etc.) that may affect impulsive purchase intention and impulsive purchase, and enhance the explanatory power of the entire context.

Third, although these stimulus factors significantly influence perceived enjoyment, the other stimuli can be discovered because influencer marketing is a new tendency. Many novel phenomena are waiting for researchers' observation, for example, to investigate the relationship between the influencer's charisma and impulsive purchase intention. In addition, it is also suggested to classify and discuss the characteristics of the industry or the characteristics of products/services (e.g. eco-friendly products, sustainable products, etc.). It should be possible further to understand the differences in online streaming shopping marketing strategies. Fourth, the current study only conducts a purposive sample survey of users who use online streaming or have an online shopping experience. The current research results cannot be extrapolated to users' perceptions without watching experience. Therefore, it is suggested that users who do not have an online streaming shopping experience can also understand their thoughts in the future, enabling enterprises to understand better how to promote the online streaming shopping market. Finally, the sample is mainly young people under the age of 25. Finally, it is suggested that future research should conduct more rigorous stratified sampling to understand the experience and cognition of users of all ages, genders, and educational backgrounds, which will make the research more complete.

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Appendix

Construct	Item	Description
Demand	ND1	It makes me want to buy products while watching the live stream
	ND2	The process of watching the live stream makes me want to own the item
	ND3	I can see what I want in the live stream shopping
	ND4	I can see what I need in the live stream shopping
	ND5	I often feel that the displayed products are what I need while watching the live stream
Convenience	CV1	I find it convenient to shop by the live stream
	CV2	It saves me much time by the live stream
	CV3	It reduces many troubles for me to pick up the products because of the diversity of delivery method of live stream shopping
	CV4	I can buy items while watching the live stream
	CV5	The payment process is simple in the live streaming shopping
Interactivity	IN1	I can communicate directly with the online streamer
	IN2	I can communicate directly with other participants
	IN3	I can interact with others by leaving a message
	IN4	It makes me feel engaged while reading others' responses
Playfulness	DL1	I share with my friends the interesting contents about the live stream shopping
	DL2	I observe the contents of the live stream shopping are interesting
	DL3	Watching live stream shopping makes me joyful
	DL4	To participate in live stream shopping is an interesting activity for me
	DL5	It makes my life interesting while participating in live stream shopping
Perceived Enjoyment	PL1	It makes me happy while watching live stream shopping
	PL2	I can feel the happy atmosphere in the live stream shopping
	PL3	The atmosphere created by the live stream makes me feel very happy
	PL4	I am very happy to be able to interact directly with the online streamer
	PL5	I enjoy watching live stream shopping
Impulsive Buying Intention	IPP1	When the item I want to buy has a time limit, it makes me want to own it impulsively
	IPP2	When the item I want to buy is limited, I want to urge to buy impulsively
	IPP3	The atmosphere of being strongly introduced by the online streamer will increase my desire to buy immediately
	IPP4	While many consumers expressed their willingness to buy, I would prefer to buy it quickly
	IPP5	Promotions in live stream shopping make me want to buy items instantly

Table A1.
Full questionnaire

Corresponding author
Farid Shirazi can be contacted at: f2shiraz@ryerson.ca

The Effect of Expertise Time Constraints, Interactivity and Promotion on Impulse Purchases Live Streaming TikTok

Tetty Rahmiati Harahap
Department of Accounting, Faculty of Economic, Universitas Islam Labuhanbatu;
Sumatra Utara, Indonesia
E-Mail: tettyrahmiatiharahap92@gmail.com

Erni Wahyuni
Department of Accounting, Faculty of Economic, Universitas Islam Labuhanbatu;
Sumatra Utara, Indonesia
E-Mail: erniw9883@gmail.com

ABSTRACT

E-commerce is currently developing rapidly throughout the world. This development began when the Covid-19 outbreak occurred and was felt by people throughout the world and there were increasingly more forms of online transactions compared to manual ones. This research aims to analyze the relationship between live streaming-based online sales and impulsive buying using indicators of interactivity, expertise and promotion time limit. This research is quantitative descriptive. The population in this study were students using TikTok in Labuhanbatu Regency. The sampling technique used was non-probability sampling. A web-based online questionnaire was created using the application from google form. Respondents were invited via email, WhatsApp, with a message containing a link connected to a website containing the questions in the questionnaire, then filled in. The targeted sample of 100 participants from this research is expected to meet the requirements to participate in this research. The data obtained from the research was processed using data analysis techniques, namely multiple linear regression analysis using SmartPLS. The results of this research conclude that interactivity has a positive and significant effect on impulse buying. This means that the higher the interaction that streamers build in making online sales on TikTok Live Streaming the higher the impulse purchases made by consumers. Second, this research also found that expertise has a positive and significant effect on impulse buying. the expertise a social media influencer possesses can greatly determine a customer's level of engagement, and therefore, their intent to purchase as well. In this way, the higher the expertise the streamer has in making sales on live streaming The higher the rate of impulsive betting that occurs during live streaming. Lastly, promotion time limits have a positive and significant effect on impulse buying. This means that the more promotional exposure felt by consumers, the higher the impulse purchases made during live streaming. Time limit marketing is a strategy for marketing products by providing limited time to create pressure for buyers so that they can speed up the process of making purchasing decisions.

Keywords*: Media Social Marketing, Interactivity, Expertise, Promotion Time Limit, Impulsive Buying.*

ABSTRAK

E-commerce saat ini berkembang pesat di seluruh dunia Perkembangan ini dimulai ketika wabah Covid-19 terjadi dan dirasakan oleh masyarakat di seluruh dunia serta semakin banyaknya bentuk transaksi online dibandingkan manual.Penelitian ini bertujuan untuk menganalisis hubungan antara penjualan online berbasis live streaming terhadap pembelian impulsif dengan menggunakan indikator interactivity, expertice dan promotion time limit. Penelitian ini merupakan penelitian deskriptif kuantitatif. Populasi dalam penelitian ini mahasiswa pengguna Tiktok yang

ada di Kabupaten Labuhanbatu. Teknik pengambilan sampel yang digunakan adalah non-probability sampling, Kuesioner online berbasis web dibuat dengan menggunakan aplikasi dari google form. Responden diundang melalui email, Whatsapp, dengan pesan berisi link yang dihubungkan ke website berisi pertanyaan-pertanyaan dalam kuesioner, kemudian diisi. Sampel yang ditargetkan sebanyak 100 partisipan dari penelitian ini diharapkan dapat memenuhi syarat untuk berpartisipasi dalam penelitian ini. Data yang diperoleh dari penelitian diolah dengan menggunakan teknik analisis data yaitu analisis regresi linier berganda dengan menggunaka bantuan SmartPLS. Hasil penelitian ini menyimpulkan bahwa interactivity berpengaruh secara positif dan signifikan terhadap pembelian impulsif. Artinya semakin tinggi interaksi yang dibangun oleh streamer dalam melakukan penjualan online di TikTok Live Streaming maka semakin tinggi pula pembelian impulsifyang dilakukan oleh konsumen. Kedua, Penelitian ini juga menemukan bahwa expertice berpengaruh secara positif dan signifikan terhadap pembelian impulsif. keahlian yang dimiliki influencer media sosial dapat sangat menentukan tingkat keterlibatan pelanggan, dan oleh karena itu, niat mereka untuk membeli juga. Dengan demikian semakin tinggi keahlian yang dimiliki oleh streamer dalam melakukan penjualan di live streaming makan semakin tinggi pembial impulsif yang terjadi saat live streaming. Terakhir, promotion time limit berpengaruh secara positif dan signifikan terhadap pembelian impulsif. Artinya semakin banyak paparan promosi yang dirasakan oleh konsumen maka semakin tinggi pembelian impulsif yang dilakukan saat live streaming, time limit marketing merupakan strategi untuk memasarkan produk dengan memberikan keterbatasan waktu untuk menimbulkan desakan bagi pembeli sehingga dapat mempercepat proses dalam pengambilan keputusan pembelian.

Kata kunci*: Media Pemasaran Sosial, Interaktivitas, Keahlian, Batas Waktu Promosi, Pembelian Impulsif.*

INTRODUCTION

E-commerce is currently developing rapidly throughout the world, this development began when the Covid-19 outbreak occurred and was felt by people throughout the world and increased the form of online transactions compared to manual ones. The convenience and availability factor of the marketplace encourages people to carry out buying and selling activities online so that there is no need for sellers and buyers to meet face to face, and there is no need to queue to make transactions. Online shopping is now felt to be easier and saves time compared to going directly to the shop or supermarket. Consumers feel safe and rely on it. In Indonesia, online shopping has experienced a drastic increase, marked by the development of business actors operating in the online marketplace industry (Darmawan & Gatheru, 2021).

Indonesia's large and relatively young population, coupled with a rapidly growing middle class and high levels of consumer confidence, have been key drivers of retail and e-commerce expansion. This rapid development is reinforced by the many marketplaces that currently dominate the Indonesian market, such as Tokopedia, Bukalapak, Shopee, Lazada. In the current market, Tokopedia, Bukalapak, and Shopee plus the presence of TikTok Commerce occupy the highest position as commerce frequently visited by consumers. Before TikTok Commerce, Shopee successfully established itself as the most popular e-commerce in Indonesia in the fourth quarter (Q4) 2019. Shopee's fourth quarter monthly visitors were 72,973,300 and Shopee was ranked number 1 in the AppStore and PlayStore (Prawira & Sihombing, 2021). From the first quartile of 2017 to 2019, Shopee continued to be the most popular e-commerce in Southeast Asia and the most downloaded application on the Play Store (Ilyas et al., 2020). With consumers dominated by the younger generation, this country has great potential to accelerate retail development because they have greater purchasing power (Prawira & Sihombing, 2021; Wibisono & Fachira, 2021).

Social media has an important role in influencing consumer purchasing decisions (Singh et al., 2023; Wegmann et al., 2023). This influence often leads to spontaneous purchases when browsing these platforms or what can also be called impulse buying and

the presence of social media has been found to have contributed to an increase in impulse buying behavior (Han, 2023). The phenomenon known as Impulse buying is defined as a sudden and unplanned purchasing decision (Amos et al., 2014). Since the early 2000s, the use of social networking sites has skyrocketed, and businesses have capitalized on this trend by implementing social commerce strategies, resulting in increased revenues (Xiang et al., 2022; Alsoud at al., 2022). The development of information technology is also changing human behavior towards a shopping culture. Seeing this phenomenon, it is important to realize that excessive and uncontrolled purchases can result in undesirable consequences. Social networking sites play an important role in amplifying impulse buying tendencies among their users (Pahlevan et al., 2022).

TikTok is a social media platform that currently also provides e-commerce services. TikTok started as a social media used by users as a place of entertainment, namely users can share video content from activities or trends that are currently happening. However, currently TikTok has added a new feature where users can make sales online. Furthermore, TikTok has also opened a Live Streaming service which is generally used as a place to promote products or sell online to consumers. The live streaming feature is characterized as one of the impulses buying platforms developed by TikTok. Impulsive purchases are often found in TikTok live streaming, meaning that the interaction between the streamer and the user is one of the factors that influences consumers to make impulse purchases (Huang & Suo, 2021; Ming et al., 2021). Apart from that, the many offers such as ease of shopping, time-limited promotions and discount information are other determining factors that attract consumers' attention to make impulsive purchases on the TikTok application.

Regarding the underlying causes, excessive social media use occurs when social networks are viewed by individuals as an important mechanism for relieving stress, loneliness, or depression. Empirical evidence also shows that excessive use of social media is particularly problematic for young people (Johan et al., 2023). Consumers' tendencies to make compulsive purchases have received much attention in empirical research (Kyrios et al., 2020; Müller et al., 2021). The presence of social media and the internet today has made it easier for consumers to search for and buy products or services without limits and have access that can be used via their smartphone (Johan et al., 2023). Apart from that, the features presented in the form of credit cards and payment methods are widely available to meet every consumer's need. Empirical findings state that this tendency causes many consumers behavior to make impulsive purchases by spending a lot of time and money and can increase impulse purchases to a greater extent (Pahlevan et al., 2022).

Research examining impulsive buying has previously been widely conducted in various developed countries, but is rarely conducted in developing countries, especially Indonesia. Existing literature also generally reviews impulsive buying on e-commerce platforms, but nothing has discussed e-commerce-based social media platforms. This research aims to test and analyze the relationship between online sales on TikTok live streaming and impulse purchases. Therefore, this research proposes a problem formulation of the relationship between interactivity and impulsive buying, what is the relationship between expertise and impulsive buying and what is the relationship between promotion time limits and impulsive buying in the younger generation in Indonesia. Considering that literature on impulse buying on the TikTok application is still rare, it is important to conduct this research due to this void.

METHODS

There are three dependent variables in the research, namely interactivity. Interactivity is defined as the extent to which two or more communicating parties can act on each other, on the communication media, and on the message and the extent to which these influences are synchronized. Then Expertise is defined as the extent to which the endorser is considered to have sufficient knowledge and experience or skills to promote the product. Third, promotion time limit, which is defined as promotion limited time, which

is defined as a form of promotion or offer that provides a certain number of periods until the product is no longer available to be offered again. What sellers need to do is communicate to consumers to immediately buy the products they offer before the set time limit. Determining this time is the seller's authority and right to sell their products by determining the time limit and quantity of products to be sold. Meanwhile, the independent variable in this research is impulse buying, which is defined as spontaneous purchases made by consumers when watching live streaming.
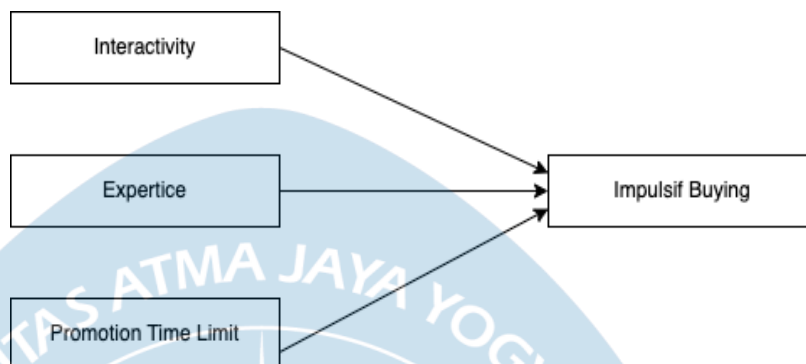
Figure 1. Research Model

This research is quantitative descriptive. The population in this study were student TikTok users in Labuhanbatu Regency. The sampling technique used is non-probability sampling, with a purposive sampling method with the following sample criteria: 1) consumers who have made online Shopee purchases more than once; 2) aged over 17 years to 50 years; 3) Respondents are students in Labuhanbatu Regency City. The type of data used by researchers is primary data by distributing questionnaires to respondents. Meanwhile, the primary data sources collected by researchers used closed questions. In this research, a Likert scale was used. The research scale used is a scale of strongly disagree with a score of one to strongly agree with a score of five. A web-based online questionnaire was created using an application from Google Forms. Respondents were invited via email, WhatsApp, with a message containing a link connected to a website containing the questions in the questionnaire, then filled in. The targeted sample of 100 participants from this research is expected to meet the requirements to participate in this research.

RESULT

The results of this study classify several response criteria. Based on the results of data analysis, the criteria for respondents based on gender, university, major, pocket money, social media accounts and purchasing intensity can be seen in Table 1.

<table>
<tr><td colspan="4" align="center">**Table 1.** Respondent Characteristics</td></tr>
<tr><td>**Respondent criteria**</td><td>**Information**</td><td>**Amount**</td><td>**Percentage %**</td></tr>
<tr><td rowspan="2">Gender</td><td>Man</td><td>19</td><td>18.81</td></tr>
<tr><td>Woman</td><td>77</td><td>76.23</td></tr>
<tr><td rowspan="3">University</td><td>ULB</td><td>61</td><td>60.39</td></tr>
<tr><td>UNIVA</td><td>27</td><td>26.73</td></tr>
<tr><td>UNISLA</td><td>8</td><td>7.92</td></tr>
<tr><td rowspan="3">Major</td><td>Management</td><td>62</td><td>61.38</td></tr>
<tr><td>Engineering</td><td>13</td><td>12.87</td></tr>
<tr><td>Education</td><td>21</td><td>20.79</td></tr>
<tr><td rowspan="4">Allowance/ Income</td><td><IDR 500,000</td><td>8</td><td>7.92</td></tr>
<tr><td>>IDR 500,000 - IDR 1,500,000</td><td>51</td><td>50.49</td></tr>
<tr><td>>IDR 1,500,000 - IDR 3,000,000</td><td>31</td><td>30.69</td></tr>
<tr><td>>IDR 3,000,000</td><td>6</td><td>5.94</td></tr>
<tr><td rowspan="3">Social Media Accounts</td><td>1 Accounts</td><td>6</td><td>5.94</td></tr>
<tr><td>2-3 Accounts</td><td>83</td><td>82.17</td></tr>
<tr><td>>3 Accounts</td><td>7</td><td>6.93</td></tr>
<tr><td rowspan="3">Purchase Intensity/month</td><td>1 time</td><td>23</td><td>22.77</td></tr>
<tr><td>2 - 3 times</td><td>65</td><td>64.35</td></tr>
<tr><td>>3 times</td><td>8</td><td>7.92</td></tr>
</table>

From on Table 1, there are several criteria for respondents, the first being 19 males amounting to 18.81% and 77 females amounting to 76.23%. Second, ULB universities numbered 61 people at 60.39%, UNIVA numbered 27 people at 26.73% and UNISLA numbered 8 people at 7.92%. Third, management majors totaling 62 people amounting to 61.38%, engineering totaling 13 people amounting to 12.87% and education totaling 21 people amounting to 20.79%. Fourth, pocket money/income <IDR 500,000 totaling 8 people is 7.92%, >IDR 500,000 – IDR 1,500,000 amounting to 51 people accounting for 50.49%, >IDR 1,500,000 – IDR 3,000,000 totaling 31 people amounting to 30.69% and >IDR 3,000,000 totaling 6 people amounting to 5.94%. Fifth, social media accounts. 1 account totaling 6 people is 5.94%, 2-3 accounts totaling 83 people is 82.17% and >3 accounts totaling 7 people is 6.93%. And the intensity of purchases/month 1 time, amounting to 23 people, amounted to 7.92%, purchases/month 2-3 times amounting to 65 people amounting to 64.35% and >3 times amounting to 8 people 7.92%. Based on the results of calculation data analysis using SmartPLS, convergent validity results were obtained as follows:
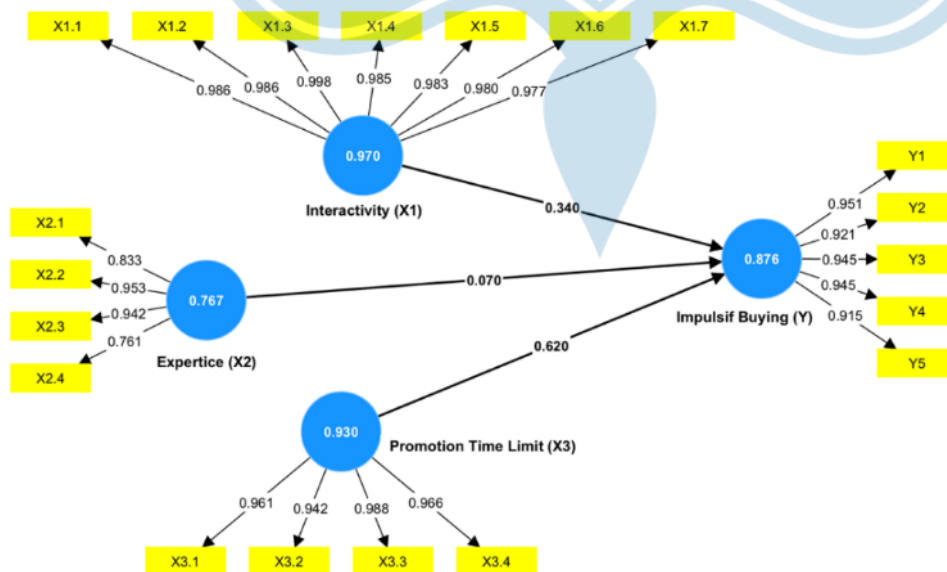

Figure 2. PLS Algorithm Results

From on Figure 2, the loading value above 0.70 shows that the construct can explain more than 50% of the indicator variance.

Table 2. Outer Loading Value

Item	Expertise	Impulse Buying	Interactivity	Promotion Time Limit
X1.1			0.986	
X1.2			0.998	
X1.3			0.985	
X1.4			0.983	
X1.5			0.98	
X1.6			0.977	
X1.7			0.862	
X2.1	0.833			
X2.2	0.953			
X2.3	0.942			
X2.4	0.761			
X3.1				0.961
X3.2				0.942
X3.3				0.988
X3.4				0.966
Y1		0.951		
Y2		0.921		
Y3		0.945		
Y4		0.945		
Y5		0.915		

From on Table 2, all outer loading values are >.70. Therefore, it can be concluded that all indicators have met the minimum threshold requirements. Convergent Validity is also seen from the AVE (Average Variance Extracted) value. To ensure that there are no problems related to measurement, the next step in evaluating the outer model is to test reliability by looking at composite reliability and Cronbach's alpha. The results of composite reliability and Cronbach's alpha will show a good value if it is above 0.70. The following is the output value of composite reliability and Cronbach's alpha.

Table 3. Reliability and Adjusted R-square.

Construct	Composite reliability	Cronbach's alpha	Avarie Variance extracted	R-Square	R-square adjusted
Expertise (X2)	0.888	0.911	0.767		
Impulse Buying (Y)	0.969	0.965	0.876	0.470	0.453
Interactivity (X1)	0.966	0.995	0.97		
Promotion Time Limit (X3)	0.977	0.977	0.93		

From on Table 3, the composite reliability and Cronbach's alpha values for all constructs are above 0.70, which indicates that all variables are declared reliable. After the estimated model meets the outer model criteria, the structural model (inner model) is tested. The inner model describes the relationship of one variable with other variables. Inner model testing is carried out to test the relationship between latent variables based on the research hypothesis, so that it can provide answers to research questions. It can be concluded that the bank performance variable obtained an Adjusted R Square value of 0.470. This finding explains that the percentage of impulsive purchases can be explained by interactivity, expertise and promotion time limit of 46.7%, the rest is explained by other factors not included in this research. Thus, the Adjusted R Square value of 47.0% is in the medium category. This research hypothesis testing was carried out by looking at the Bootstrapping calculation results. In this study, a confidence level of 95% was used so that the limit of inaccuracy (α) = 5% = 0.05, the t-table value was 1.96. If the t-statistic value is smaller than the t-table value (t-statistic < 1.96), then H01 is accepted and H1 is rejected. If the t-statistic value is greater than or equal to the t-table (t-statistic > 1.96), then H01 is

rejected and H1 is accepted. The following are the results of Bootstrapping calculations in this research:
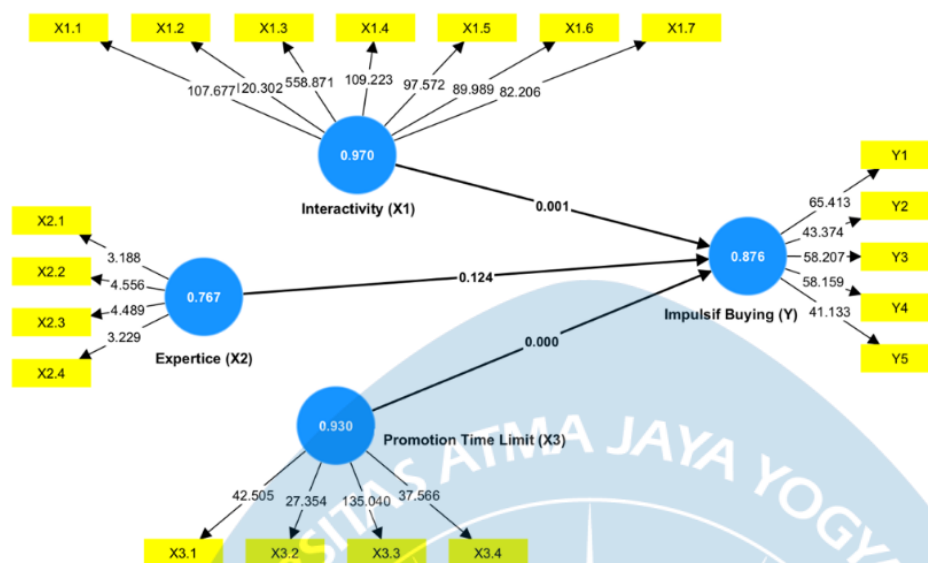
Figure 3. Bootstrapping Calculation Results

Table 4. Path Coefficient Value

Model	Original sample	Sample means	Standard deviation	T statistic	P Value
Interactivity (X1) -> Impulse Buying (Y)	0.324	0.314	0.097	3.537	0.000
Expertise (X2) -> Impulse Buying (Y)	0.337	0.327	0.101	3.339	0.001
Promotion Time Limit -> Impulse Buying (Y)	0.594	0.599	0.066	0.012	0.000

Based on the results of the analysis in Table 4, it can be concluded that the relationship between interactivity and impulsive buying has a P-value of 0.000 <0.05, meaning that the hypothesis is accepted and interactivity on impulsive buying has a positive and significant effect. Second, the relationship between expertise and impulsive buying obtained a P-value of 0.001> 0.05, meaning that the hypothesis is accepted, expertise on impulsive buying has a positive and significant effect. Finally, the results of data analysis in testing the hypothesis above found that the P-Value value of the relationship between promotion time limit and impulsive buying is 0.000 > 0.05, which means the hypothesis is accepted and the results show that promotion time limit has a positive and significant effect on impulsive buying.

DISCUSSION

Based on the results of data analysis, this research found that interactivity had a positive and significant effect on impulse buying. This means that the higher the interaction built by streamers in making online sales on TikTok Live Streaming, the higher the sudden purchases made by consumers. Interactivity is said to stimulate customers' physiological arousal thereby influencing their attitudes and purchasing intentions (Iwan & Arisman, 2023). In online commerce, interactivity acts as an important atmospheric cue to stimulate consumers' cognitive and emotional states and subsequently influence behavioural responses. The results of this research are in line with research conducted by Zhang et al. (2022), which states that perceived interactivity influences customer perceived value and increases customer purchase intentions. In the process of live streaming shopping, consumers evaluate the effect of interaction with the streamer and produce emotional reactions, then their behaviour will undergo a series of changes. Specifically on the one hand, consumers will evaluate the effects of interactions with streamers that cause psychological wave movements and arouse emotions. This kind

of emotional reaction will not only increase consumers' attention to live broadcast products, but also encourage consumers to make impulse purchases to calm their emotional turmoil (Zhang et al., 2022; Li et al., 2023). That is, the emotion of enjoyment plays a mediating role between interaction quality and impulse purchase intention. In this case it can be explained that consumer perceptions of the online shopping atmosphere will influence consumer passion and emotions of pleasure, which will lead to impulsive purchases. Moreover, the stronger the consumer's passion and pleasure emotions, the easier it is to make impulse purchases.

This research also found that expertise has a positive and significant effect on impulse buying. Expertise is basically defined as the extent to which the endorser is considered to have sufficient knowledge, experience or skills to promote the product (AlFarraj et al., 2021; Pick, 2021). Expertise is the main feature that an influencer must have to be successful, well known and followed, and considered a credible source of information for their fans. This research is in line with research conducted by Koay et al. (2021) and Khan et al. (2022), that expertise will not only shape the level of credibility felt by the influencer but can also shape customer buying behaviour and intentions. Therefore, the expertise that a social media influencer possesses can greatly determine a customer's level of engagement, and therefore, their intent to purchase as well. Thus, the higher the skill a streamer has in making sales on live streaming, the higher the impulsive buying that occurs during live streaming.

This research also found that promotion time limits have a positive and significant effect on impulse buying. This means that the more promotional exposure a consumer experiences, the higher the impulse purchases made during live streaming (Lee & Chen, 2021; Yi et al., 2023). Limited time promotions are a form of promotion or offer that provides a certain number of periods until the product is no longer available to be offered again. What sellers need to do is communicate to consumers to immediately buy the products they offer before the set time limit. This time determination is the authority and right of the seller to sell his products by determining the time limit and quantity of products to be sold. Time limit marketing is a strategy for marketing products by providing limited time to create pressure for buyers so that they can speed up the process of making purchasing decisions. This research is in line with research conducted by Yuniarti & Syafri (2023), which found that promotion time limits had a positive and significant effect on impulse buying.

CONCLUSION

Based on the results and discussion above, this research concludes that interactivity has a positive and significant effect on impulse buying. This means that the higher the interaction built by streamers in making online sales on TikTok Live Streaming, the higher the impulse purchases made by consumers. This research also found that expertise has a positive and significant effect on impulse buying. The expertise that a social media influencer possesses can greatly determine a customer's level of engagement, therefore, their intent to purchase as well. The higher the skill a streamer has in making sales on live streaming, the higher the impulsive buying that occurs during live streaming. Lastly, promotion time limits have a positive and significant effect on impulse buying. This means that the more promotional exposure felt by consumers, the higher the impulse purchases made during live streaming. Time limit marketing is a strategy for marketing products by providing limited time to create pressure for buyers so that they can speed up the process of making purchasing decisions.

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