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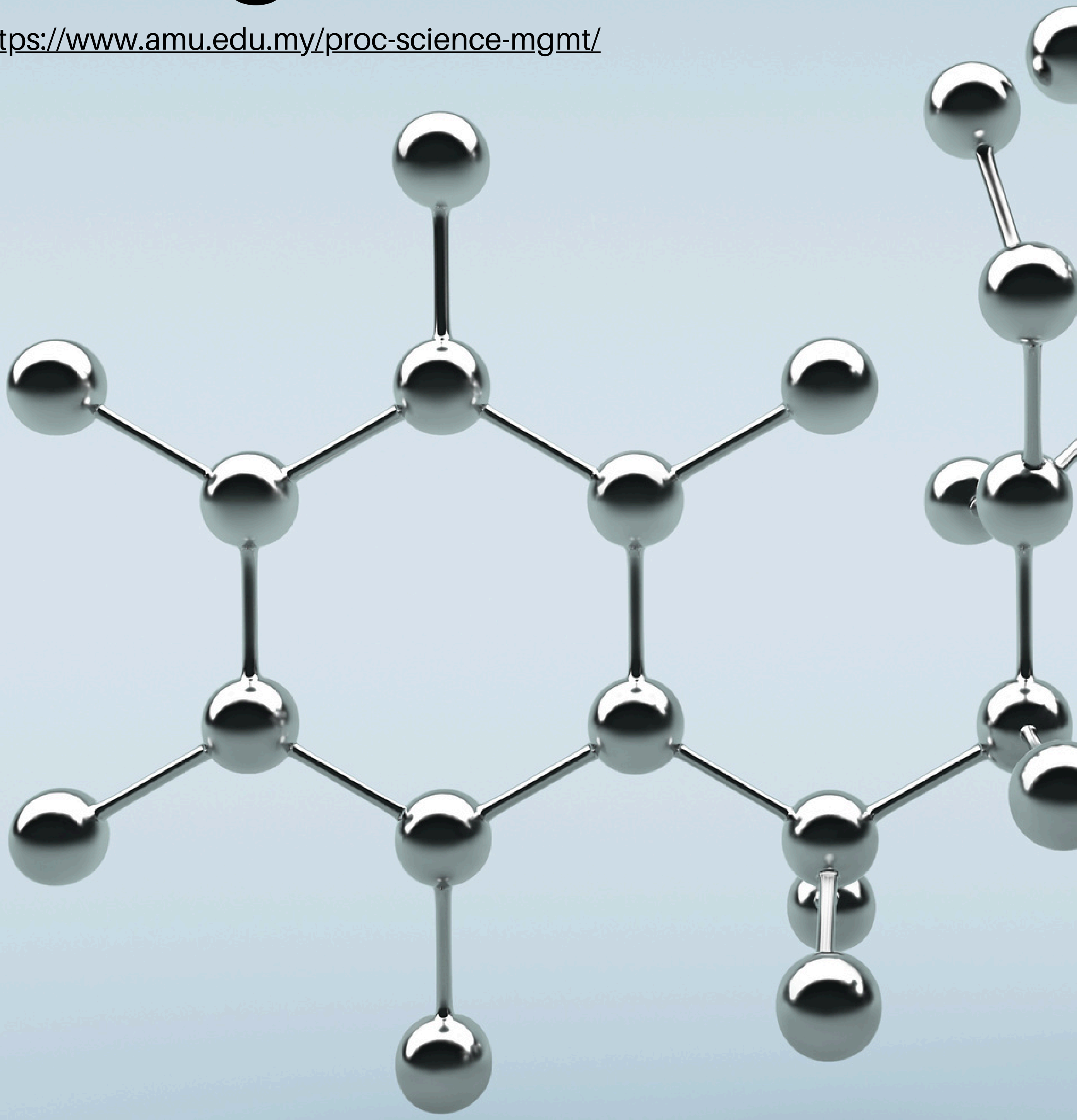

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Scope

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Extraction and Isolation of n-hexane extract *Leucas zeylanica*

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Abstract
A plant-derived drug has several benefits, including the fact that it is easily available, low-priced, safe and rarely encounters adverse side effects. Among these plants, contains a wide variety of phytochemicals that support the role of the herb as an herbal medicine. Extensive research has been done into the phytochemicals found in this plant, which have been observed to possess antifungal, antioxidant, antibacterial, antidiabetic, larvicidal, and anthelminthic properties (Daulagala, 2021). The benefits of plant-derived drugs such as *Leucas zeylanica* include their affordability, availability, safety, and rare side effects. Phytoconstituents have been detected in *L. zeylanica* which include alkaloids, steroids, tannins, flavonoids, and glycosides with antioxidative properties. This study aims to extract, isolate, and characterize the potential bioactive compounds from *Leucas zeylanica*. Extraction of *Leucas zeylanica* is done by cool maceration technique in n-hexane. The isolation of bioactive compounds present in the plant extracts involves Vacuum Liquid Chromatography, thin-layer Chromatography and Column Chromatography. Newly developed bioactive compounds and their extracts require careful evaluation to understand their pharmacokinetics, bioavailability, efficacy, safety, and drug interactions.
Keywords: Natural plants, *Leucas zeylanica*, phytoconstituents, active compounds

Introduction
Natural plants have been used as a reliable source of medicinal compounds to treat a variety of illnesses since ancient times, whether for diseased conditions or other health conditions, with or without any further modifications. Medicinal plants are one of the most important sources of pharmaceutical research because they are low in side effects and have a high margin of safety. *Leucas zeylanica*, a member of the *Lamiaceae* family, is also known as *Ceylon slitwort*. *Ceylon slitwort* belongs to a family of flowering plants called *Lamiaceae*, which is also known as the mint family (Daulagala, 2021). In Malaysia, especially Kelantan, *Leucas zeylanica*, or "*Ketumbit*" as it is known locally, grows abundantly in the shrubs (Faizuan *et.al.,* 2019).

Leucas zeylanica is a medicinally significant plant that is used in nations such as India, Bangladesh, and Sri Lanka to treat convulsions brought on by fever as well as coughs, colds, headaches, toothaches, abdominal pain, scabies, scorpion bites, and snake bites (Daulagala, 2021). Snakebite patients are supposed to benefit from juice extracted from leaves. Leaves can be used as sedatives to treat wounds, sores, itchiness, headaches, and vertigo (Mayuri *et.al.,* 2018). The decoction of *L. zeylanica* leaves is applied to nose ulcers along with Nigella seeds or turmeric juice. In India, jaundice, fever, and snake and scorpion bites are treated with leaves. Additionally, Bangladesh Marma takes leaf paste as an oral remedy for urinary tract infection. Sores in the eyes and nostrils can be treated with the sap of the leaves. In Bangladesh, a necklet-style necklace produced from *L. zeylanica* roots is worn on the arms and legs to avoid convulsions caused on by fever. (Islam *et.al.,* 2021).

Phytochemicals are physiologically active molecules that exist naturally in plants and give health advantages in addition to macronutrients and micronutrients. *L. zeylanica* is also a potential source of a range of essential phytoconstituents for the pharmaceutical sector. This proceeding manuscript briefly explains the extraction of *Leucas zeylanica* and the isolated bioactive compound in hexane extract.

Materials and methods

Collection and preparation of Leucas zeylanica sample

A healthy mature plant of *L. zeylanica* collected from Pulau Gajah, Pengkalan Chepa, Kelantan (6 09'40.9"N). The plant was authenticated at Universiti Kebangsaan Malaysia (UKM)'s herbarium under voucher number UKMB40376. The leaves, stem and flowers of the plants washed and cut with distilled water before being dried in an oven at 37°C for three to four days until fully dried. Grinded powdered leaves stored at 4° C with a grinder after being ground to a fine texture (Faizuan *et.al.,* 2019).

Cool maceration method

The dried aerial parts of *L. zeylanica* (869 g) were macerated with n-hexane at room temperature for three days. The same procedure was repeated with chloroform and methanol as solvents. A gravity filter is used to filter the crude extracts. As part of the process, the filtrate evaporated at 40°C in a rotary evaporator (Lee *et.al.,* 2021). Additionally, the remaining solvents removed by rotary evaporation and dried in a vacuum oven to form a dry component (Labline) at 40°C under pressure (Asha et.al., 2018).

Isolation of Leucas zeylanica

Thin-layer chromatography

Furthermore, the crude extract proceeds to thin-layer chromatography for the screening process. Thin layer chromatography using a 10-L Hamilton syringe was used to apply samples onto the Thin Layer Chromatography as 5 mm bands with an 8 mm spacing from the bottom. Sample volumes range from 1 to 8 L. Chloroform, ethyl acetate, and hexane solutions are used as the mobile phase to accomplish one-dimensional thin-layer chromatography separations in a 10 cm twin trough chamber. The chromatographic plates developed to a distance of 70 mm were dried for 5 minutes using a stirring hotplate. The chromatographic zones were derivatized using vanillin-sulfuric acid reagent (19 mg vanillin, 170 mL methanol, 20 mL of acetic acid and 10 mL concentrated sulfuric acid; heating at 110 °C for 5 min). The results were viewed under UVGL-58 Handheld UV lamp with longwave and shortwave.

Vacuum liquid chromatography

Analytical Thin Layer Chromatography (TLC) without a binder packed an n-hexane fraction onto a sintered glass Buchner filter funnel, filled it with silica gel, then eluted it with n-hexane, chloroform, and methanol solutions to produce several solvents fractions (each 200 mL). Based on their TLC profiles, the fractions were weighed and then divided into five main fractions (Oluwasegun *et.al.,* 2021). Thin-layer chromatography is repeated before proceeding to further separation.

Silica gel column chromatography

Based on the TLC, Column chromatography fraction crude combined and loaded. The silica gel used particles that were 70-230 mesh in size (0.063-0.200 mm). The column was loaded with silica gel, which was then given time to settle. The column was topped with diluted fraction crude, which had been adsorbed onto silica gel and eluted with n-hexane and methanol. Eluates were collected into test tubes and bulked into 5 major fractions CC (A-E) using silica gel, n-hexane: ethyl acetate and H_2SO_4 spray reagent following their Thin Layered Chromatography (TLC) properties. These fractions were dried and weighed (Oluwasegun *et.al.,* 2021). After solvent fractions were collected, TLC was performed to view the pure component.

Results and discussion

The phytochemical screening revealed that hexane and chloroform extracts contained high levels of terpenoids, while methanol extract contained only small amounts of terpenoids (Lee et.al., 2021). There is a hypothesis that various uses of plant parts may be linked to the presence of terpenoids, which are detected in many Leucas species, such as *L. zeylanica* and *L. cephalotes*, which are considered medicinal plants (Naidoo et.al., 2021). *L. zeylanica* was successfully extracted with n-hexane in the present study. Hence, high-purity compounds are required for the study of bioactive compounds in *L. zeylanica.*

Vacuum liquid chromatography

The crude extract of n-hexane was chromatographed using vacuum liquid chromatography. Separation of the fractions obtained through n-hexane: diethyl ether elution was performed by column chromatography.

Table 1**:** Vacuum liquid chromatography on hexane extract

Fraction	Solvent system (Hex: DE)	Colour fraction	Fraction crude (g)
1	100: 0	Colourless	0.02
1.5	100: 0	Colourless	0.20
2	95: 5	Colourless	0.06
3	90: 10	Yellow	0.67
4	85: 15	Yellow	0.30
5	80: 20	Yellow	0.22
6	75:25	Yellow	0.26
7 F 6 - 8	70: 30	Yellow	0.30
8	65: 35	Yellow	0.20
9*	**60: 40**	**Green**	**0.22**
10*	**55: 45**	**Light green**	**0.19**
11* F 9 - 13	**50: 50**	**Green**	**0.14**
12*	**45: 55**	**Green**	**0.16**
13*	**40: 60**	**Light green**	**0.12**
14	35: 65	Light green	0.10
15 F 14 - 17	30: 70	Yellow	0.11
16	25: 75	Yellow	0.11
17	20: 80	Yellow	0.12
18	15: 85	Yellow	0.09
19 F 18 - 21	10: 90	Yellow	0.07
20	5: 95	Yellow	0.05
21	0: 100	Yellow	0.05
21.2	0: 100	Light yellow	0.04

** The solvent system F9-13 is used for column chromatography*

Column chromatography

Column chromatography was performed on crude extracts of n-hexane in this study. TLC was used to analyse the fractions obtained through elution with n-hexane: diethyl ether.

Thin-layer chromatography

A thin-layer chromatography is used to analyse hexane extracts from column chromatography Subfraction 9 - 24 (Fraction 9 – 13 obtained from Vacuum Liquid Chromatography). According to this thin layer chromatography plate, no band formed when the ratio of 4 ml of n-hexane to 1 ml of ethyl acetate was used as the mobile phase.

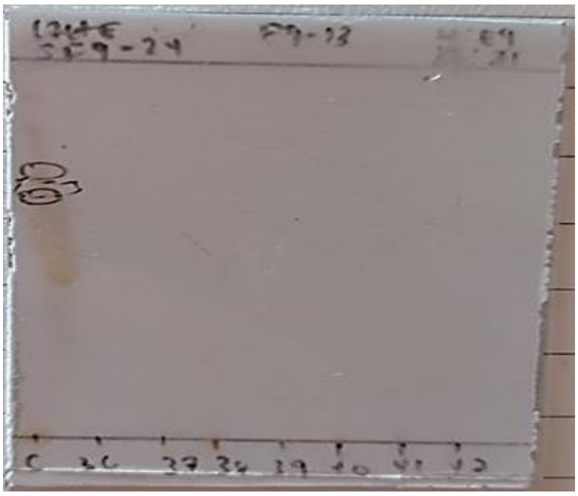

Figure 1 Thin-layer chromatography on solvent fraction from 36 to 42 from subfraction 9 – 24 (Fraction 9 – 13).

Components are typically determined by the intensity of each spot. As in Figure 1, no darkness can be seen for each spot in vials 36 to 42. Therefore, retention factor (Rf) values for each spot cannot be calculated. As shown in Figure 1, different compositions of mobile phase were tested in thin-layer chromatography to separate individual bioactive compounds; however, their Rf values were not determined. It was not possible to achieve the desired resolution of separation using n-hexane: ethyl acetate 4:1 as the mobile phase. According to Lee *et.al.,* 2021 article, column chromatography was used to successfully isolate vanillin (9.1 mg, 2.67%), a white needle solid with a melting point of 77-78°C and a Refraction Factor of 0.40 in n-hexane-diethyl ether (1:1). On the other hand, column chromatography effectively separated one molecule, which was identified as vanillin (9.1 mg, 2.67%), a white needle solid with a melting temperature of 77-78°C and a Rf value of 0.40 in n-hexane-diethyl ether (1:1) (Lee *et.al.,* 2021). Based on thin-layer chromatography, Rf values indicate that n-hexane and ethyl acetate are the least suitable solvents for separating compounds in column chromatography.

Conclusion

In conclusion, crude extract of hexane contains terpenoids and other bioactive compounds in large amounts (Lee *et.al.,* 2021). In Subfraction 9 – 24 (Fraction 9 – 13 obtained from Vacuum Liquid Chromatography) no terpenoids found in particularly solvent fraction from 36 to 42 vials. The study suggested that the solvent system ratio for thin-layer chromatography would need to be changed in the future.

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Tapping into Purchase Power: Brand Awareness and Brand Recall on Tiktok Malaysian Users

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Abstract
TikTok is an application that easily allows videos to be uploaded to the virtual world. It allows videos to be shared directly with Facebook, Flickr, and X or previously known as Twitter. The online merchants' primary goal is for their brand to be noticed (purchase intention) and diligently mentioned among users considering many similar social media platforms nowadays. Brand awareness is the ability of consumers to recognize a brand in various situations. Meanwhile, brand recall is memorizing or catching up with the brand. This study incorporated the Attention, Interest, Desire, and Action (AIDA) Model to serve as the foundation of the analysis. The author employed descriptive causal analysis. An online questionnaire has been distributed through WhatsApp, Telegram and other media communication platforms. About 270 data collected from TikTok users in Malaysia and it is found that there is a positive relationship between brand awareness, brand recall on purchase intention on TikTok. This study was accomplished more thoroughly since we may find many brands on TikTok, providing the public a comprehensive grasp of the online purchase trend among TikTok users in Malaysia.
Keywords: TikTok, Brand Awareness, Brand Recall, Purchase Intention

Introduction

Online purchases involve visiting several websites or online platforms, picking items, adding them to a virtual shopping cart, and paying with credit cards, debit cards, digital wallets, or online banking. Social media has become a powerful tool for brand awareness, allowing marketers and businesses to communicate with their customers. According to Nuseir (2016), the Internet and digital media are effective millennial-focused strategic instruments. There is no time and place limitations for consumers to purchase online. Facebook, Instagram, Twitter, TikTok, and others emerged with the Internet. Since the internet allows individuals to use social media widely, it is often associated with it. Social media and technology have captivated all age groups. Group users, especially teens, see social media as a trend for free time. Social media usage skyrocketed during the COVID-19 pandemic, when the government declared a statewide Movement Control Order (MCO) to stop the spread of virus. Athira (2020) reports that social media users climbed by over 8% from April 2019 to 3.81 billion in April 2020. As social media use grows, some retailers have found it necessary to move their physical business online (Nair et al., 2022). Pre-MCO social media firms were rarer than post-MCO. Social media is used to increase business sales and marketing. Social media can attract people to view and learn about something (Nair et al., 2022). According to Digital Report 2023, the average internet user in Malaysia is 16–64 years old and spends two hours and 47 minutes on social media daily, compared to the global average of two hours and 31 minutes. In a competitive market, brand awareness is vital, according to Bilgin (2018). It helps consumers differentiate comparable products and services from different companies and makes them more convincing.

The brand not only reflects the authenticity, value, and commitment of the products and services it provides to consumers, but also promotes social ties and mitigates consumer risks without disclosing its identity. Thus, brands with strong recall have been characterized differently from other firms based on their products and services. The researchers used TikTok to study how brand recognition and recall affect purchase intent among millennials viewing marketing ads. The platform makes it easy to reach more people than traditional advertising (Haenlein et al., 2020). This study would explain TikTok's marketing potential and how brand recognition and recall affect millennials' purchasing intentions. Strong product brands can improve customer connections. Percy and Rossiter (1992) claim that brand knowledge helps customers recognize brands in certain product categories and affect their purchasing decisions. According to Stephen and Toubia (2010), social media boosts brand awareness. Given the increasing usage of social media, a brand may readily reach a huge audience. Its characteristics attract online shops to promote their brands on TikTok. Each brand's TikTok social media advertising initiatives attempt to raise brand awareness and recall. Due to this, it is intriguing to see how TikTok might increase brand awareness and recall among its consumers. Marketing has altered thanks to TikTok's ability to increase brand engagement, recognition, and recall, which increases purchase intention. Shopee and Lazada are better known in Malaysia, but their effectiveness is unknown. Rimadias et al. (2021) study found that TikTok affects Indonesian tourism brand loyalty, suggesting marketing potential. TikTok's content, user engagement, and brand outcomes in Malaysia need further investigation.

This distinction is seen in consumer behavior on Shopee and Lazada with various user engagement tactics. It examines how TikTok's content engagement approach affects Malaysian consumers' brand awareness, recall, and purchase inclinations. Given TikTok Shop's rapid growth as a new Southeast Asian e-commerce competitor challenging Shopee and Lazada, this research is relevant. TikTok Shop's GMV is $4.4 billion, compared to Shopee's $73.5 billion and Lazada's $21 billion, but it is predicted to reach $12 billion by 2023 US dollars, disrupting the sector. Due to TikTok Shop's ambitious expansion and resonance with Southeast Asia's 135 million TikTok users (Chiang, S., 2023) and reduced consumer spending on other platforms, Malaysian consumers' brand dynamics and purchasing behavior must be examined. Malaysian TikTok brand recognition, recall, and buy intention need more investigation. Traditional marketing, Facebook, and Instagram have been extensively studied on these topics, but TikTok merits more (Smith & Yang, 2020; Lee et al., 2019). TikTok's impact on Malaysian consumers' purchase intentions is poorly studied despite its rapid growth (Azmi & Jamaludin, 2021). To inform marketers, researchers, and others, TikTok brand recognition, recall, and purchase intention needs more research.

Research Objectives

1. To investigate the relationship between brand awareness and purchase intention among TikTok users.
2. To investigate the relationship between brand recall and the purchase intention among TikTok users.

Literature Review

Definitions

Brand awareness is the ability of consumers to recall a product or service that fits their needs (Ferdy & Sari, 2020). By expanding their sales base and using non-traditional media, companies can build brand awareness (Aaker, 1996). Consumers remember brands by brand identification, recall, top-of-mind, and dominating brand (Aaker, 1996). Consumer brand awareness is how well customers know a brand (Yusuf Bilgin, 2018). Whatever the case, brand awareness is customer recognition, acceptability, and recall (Percy & Rossiter, 1992; Perreault et al., 2013: 199). Keller (2009) defines brand awareness as track or crowd power in consumers' memory that represent their capacity to remember or recognize a brand in varied settings. Brand awareness cuts consumers' product search time and risk (Verbeke et al., 2005: 7). Khairiah Hussin & Sanil S. Hishan (2022) define brand awareness as customer familiarity with a brand and its products, citing Horsfall et al. (2020).

Meanwhile, brand recall is essential for recruiting and maintaining clients. Consumers choose well-known brands over competitors. Strong brand awareness also helps introduce new products and services since people are more likely to test new things from a trusted brand. According to Bilal Ahmed Memon et al. (2016), brand recall is consumers' ability to recall the brand based on the product category, level of needs, and purchase or use. Brand recall is one of two methods consumers can re-identify a brand from a specific category, according to Noer et al. (2020). According to Srivastava & Dorsch (2019), the brand recall's major goal is to attract additional customers and keep them loyal after the product expires or degrades. Modern marketers prioritize profit and long-term consumer relationships. The company wants to raise market awareness and purchasing intent of its products and services. In consumer-based brand equity, brand recall—the ability of consumers to remember and recognize a brand without external cues—is crucial, according to Yoo and Donthu (2001). Consumers recall brands perceived as more typical within a product category, according to Loken, B., & Ward, J. (1990).

Lastly, Purchase Intention occurs when potential customers consider buying a brand. The definition of consumer purchasing intention is potential customers' interest in a product or service (Agam, 2017). According to Pousttchi and Wiedmann (2009), purchase intention is a consumer's intentional decision to buy a brand's product or service. Purchase intention involves planning a purchase. Consumers' desire to buy a product or brand is also an expression of it (Shahid et al., 2017). Purchase intention is consumer interest and product purchase likelihood, according to Kim and Ko (2012). Purchase intention is the likelihood and desire of customers to buy recommended products after accessing social media, according to Choedon and Lee (2020). Additionally, Jain and Yadav (2018) define buying interest as a person's intent to acquire a thing.

Theoretical Foundation - AIDA Model

The AIDA model is an acronym for Attention, Interest, Desire, and Action. It is a foundational framework applied in marketing theory, and it shows the stages a consumer goes through before purchasing a product, such as Being Attentive, Getting Interested, Wanting the Product, and Taking Action to buy it (Strong, 1925). This framework was analysed and used in many industries, serving as a reference point when coming up with powerful marketing messages and hooks for consumer engagement. Brand awareness, which represents one of the most relevant elements when it comes to choosing a particular brand, is essential for consumer decision-making. It acts as a sparkling impulse in the AIDA model and is essential for attracting consumers (Keller, 1993). The study by Chen and Chen (2020) has vividly brought to light the significance of brand awareness in determining the initial levels of engagement of consumers from the start, which in turn affects their purchase intention. Brand recall is a guarantor of buyers' ability to recall a brand in memory after exposure to a relevant cue, which is one more determinant of achieving this goal (Keller, 1998). Zhang et al.'s (2019) research revealed that brands with higher recognition levels are often considered for purchase intention during the evaluation stage of the AIDA Model. This results in a high consideration for the brands during the stage. Purchase intention, the end-product of the AIDA model, indicates buyers' desire to get a particular product or service (such an attitude is demonstrated in the Fishbein & Ajzen model, 1975). Brand awareness and brand recall are two-corner processes, with their innate linkage established by Li and Liu (2021) through a recent study that corroborates their interdependence as included in the AIDA framework. The acquaintance and the AIDA model and its components, namely brand awareness, brand recall, and purchase intentions, have been the concept of comprehensive studies in works of literature. Research has proven the disparities in the impact on attention, the expectation of interest, and the actions that are guided by the communication programs (Chun & Davies, 2006). Furthermore, data from the field indicated that there is a relationship which is positive (between brand awareness and/or brand recall and purchase intention). This lends support to the notion of a joint nature of these variables at play, according to the AIDA model (Yoo & Donthu, 2001).

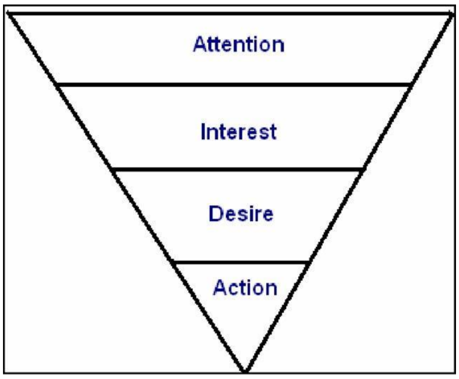

Figure 1 The AIDA model Source: Li & Yu (2013, p.48)

In summary, the AIDA model gives an all-encompassing picture of how consumers' decision-making finds expression in these sequential modules. Brand awareness, brand recall, and purchase intention form the key components that mold consumers' patterns of behavior and inform marketers on how to deliver their messages best.

Brand Awareness and Purchase Intention

Brand awareness refers to the buyer's ability to recognize the brand in enough detail to form a judgment regarding the purchase. According to Saydan and Dulek (2019), businesses should aim to raise customer awareness by presenting products in a way that makes it simple for them to recall and remember the product in their minds. Shafa and Hidayat (2022) stress the need to produce interesting and captivating content that successfully grabs users of TikToks' attention, resulting in a rise in brand awareness in the end. Yağmur Kerse (2023) conducted a meta-analysis to examine the relationship between brand awareness and purchase intention in Turkey. The study analyzed 12 relevant studies, including 4688 participants from various areas such as smartphones, online holiday shopping and other consumer products. The results showed a moderate effect size, suggesting that consumers' familiarity with certain brands significantly influenced their purchasing decisions. Furthermore, Hameed et al. (2023) conducted a study that examined these dynamics, focusing on the moderating effects of celebrity endorsement and consumer attitudes. Their results confirm the strong positive relationship between brand awareness and purchase intention and are consistent with previous research. In the digital realm, well-designed advertisements play a crucial role in influencing consumers' purchasing decisions by effectively conveying brand messages (Dewi et al., 2020; Tsai, 2020). Moreover, consumers with higher brand awareness tend to make larger purchases, indicating the importance of brand awareness in shaping consumer behavior. The study also highlights the relationship between brand awareness, consumer attitudes and purchase intention. Consumers' positive attitude toward brands promotes purchase intention, while negative attitudes can discourage purchases (Ramesh et al., 2019; Coursaris et al., 2016; Kwon & Ahn, 2020). Furthermore, the study reveals the mediating role of attitude between brand awareness and purchase intention, suggesting that positive attitudes influence consumer behavior. Overall, this study highlights the importance of theoretical frameworks such as the theory of planned behavior and social influence in understanding consumer behavior in the digital age. A study conducted by Gesmundo et al. (2022) examines the influence of brand awareness and brand recall on the purchase intentions of millennials who use TikTok as a platform for marketing campaigns. The study also finds that TikTok is not just limited to entertainment but is increasingly being used to promote business. The researchers found that brand awareness can affect the purchase intention of millennials.
H1: Brand awareness affects the purchase intention of TikTok users.

Brand Recall and Purchase Intention

Brand recall is the ability of consumers to recall a brand from memory when something triggers them to memorize it. This has emerged as a topic in marketing studies due to its significant implications for consumer behavior and purchase decision-making. Recent studies have investigated the relationship

between brand recall and purchase intention, shedding light on the underlying mechanisms and offering ideas for marketers to enhance brand effectiveness and consumer engagement. Zhang et al. (2019) conducted a comprehensive investigation into the impact of brand recall on purchase intention across various product categories. Their study revealed a consistent and positive correlation between brand recall and purchase intention, indicating that brands with higher recall levels are more likely to increase purchase behavior from consumers. This finding underscores the pivotal role of brand recall in influencing consumer decision-making processes, particularly in competitive market environments where brand differentiation is crucial. Furthermore, Li and Liu (2021) focused their research on the role of brand recall in shaping consumers' purchase intention in the context of online shopping. By analyzing data from e-commerce platforms, they found that brands with more excellent recall among online shoppers exhibited higher purchase intention. This underscores the importance of brand recall in driving e-commerce sales, where consumers often make purchase decisions based on limited information and rely heavily on brand familiarity and trust. Moreover, Chen and Chen (2020) explored the moderating effect of brand recall on the relationship between advertising exposure and purchase intention. Their study demonstrated that strong brand recall strengthens the impact of advertising on purchase intention. This suggests that effective advertising strategies not only increase brand awareness but also reinforce brand recall, thereby influencing consumers' propensity to purchase. This finding has significant implications for marketers seeking to optimize their advertising investments and maximize their return on marketing expenditures. In a different vein, Kim et al. (2018) examined the influence of brand recall on purchase intention in the context of brand extensions. Their research revealed that brands with high recall value are more likely to succeed in extending their product names. Consumers' positive associations with the brand positively affect their purchase intention towards the new offerings, highlighting the importance of leveraging brand equity to facilitate brand extensions successfully. Furthermore, Smith and Johnson (2017) conducted a meta-analysis synthesizing findings from multiple studies on brand recall and purchase intention. Their analysis confirmed a significant and consistent positive relationship between the two variables across various industries and consumer segments. This strong connection emphasizes the long-lasting influence of brand recognition on influencing customers' buying habits, surpassing specific product categories and market situations. In summary, prior research underscores the critical role of brand recall in shaping consumers' purchase intention across diverse contexts, including traditional retail environments, e-commerce platforms, advertising campaigns, and brand extensions. Marketers can leverage these insights to develop effective branding strategies that enhance brand recall, foster consumer engagement, and ultimately drive purchase behavior.
H2: There is a positive relationship between brand recall and the purchase intention of TikTok users.

Conceptual Framework
The conceptual framework for this study is developed from the AIDA theory and empirical literature review. From the theoretical perspective, this study is guided by the AIDA theory, which has an attention hierarchy in which brand awareness and brand recall may lead to TikTok users' interest in purchasing the product.

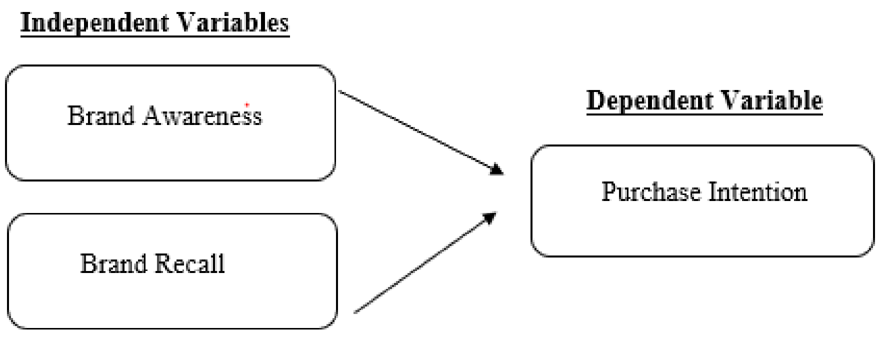

Figure 2 Conceptual Framework

Methodology

This chapter provides a detailed explanation of the research methodology performed throughout this study, including research design, unit or level of analysis, sample size, sampling technique, measurement or instrumentation used, data collection and data analysis. Each of these research methods is necessary to meet the research objectives, which are very critical because they can easily invalidate the study. Therefore, to ensure the result analyzed is valid, the research method that needs to be utilized must be consistent with the objectives of this study.

Research Design

Research design serves as a framework aimed at ensuring both external validity (Abdullah & Ahmad, 2016) and internal validity pertains to the correlation between variables (IVs) and dependent variables (DVs), while external validity relates to the generalizability of findings to the population. Therefore, a cross-sectional design will be employed for this study's purpose. In a sectional design, researchers observe both outcomes and exposures in respondents at a single point in time (Setia, 2016). This implies conducting a sample survey where data is gathered from respondents within a timeframe. Additionally, quantitative research methods will be utilized, with the tool being sets of questionnaires to collect data. Quantitative analysis involves using numbers and figures obtained by researchers for data analysis (Ahmad et al., 2015). Subsequently, questionnaires will be distributed to targeted respondents through social media such as WhatsApp, Telegram and Facebook.

Data collection method

Data collection method is a systematic approach used to gather information from appropriate sources. Having solutions for research issues is beneficial for researchers (Melnikovas, 2018). This approach facilitates the researcher in deriving answers to pertinent inquiries by assessing the outcomes of the challenge. A primary data gathering strategy has been selected for the research investigation. The reason for using this collection method is to obtain unprocessed data directly from its source. Raw data is consistently deemed reliable and universally accepted. Another justification for selecting this approach is its ability to address the particular research challenges that cannot be resolved by secondary sources. Furthermore, direct data collecting offers the advantage of delivering current information that secondary sources fail to provide. By choosing the primary data gathering method, the acquired information possesses legitimacy and is characterized by its specificity. This study employs an online Microsoft questionnaire as its primary data collection tool, which is then disseminated to a random sample of targeted respondents, an essential aspect of our methodology - of Malaysian TikTok users after compiling a complete list.

Data collection tools and techniques

There are several data collection tools and techniques such as physical survey, paper survey and others (Young et al., 2018). In this study, the survey consists of four sections: demographic profile, brand awareness, brand recall, and purchase intention. In order to collect the data, the researcher deployed an online survey created using Microsoft Forms titled "Examining Brand Awareness and Recall's Influence on Consumers' Purchase Intentions." The questionnaire will be segmented into sections that include brand awareness, brand recall and purchase intention. In total, there are 27 questions covering both independent variables. The study will employ both descriptive and inferential statistical methods, utilizing frequency and percentage to examine respondent demographics, along with mean and standard deviation for gauging agreement levels concerning brand awareness and recall, based on the Likert Scale data interpretation. Additionally, a linearity test will be used to assess the significant impact of brand awareness and brand recall on consumer purchase intentions. Each question in the survey is associated with a specific aspect and metric based on the insights from previous research. The research questions have been adopted from Gesmundo et al. 2022 in their study entitled “TikTok as a Platform for Marketing Campaigns: The Effect of Brand Awareness and Brand Recall on the Purchase Intentions of Millennials”. Furthermore, this survey was also adopted initially from a study conducted by Bilal Ahmed Memon on the "Impact of Brand Recall on Customer Purchase Intention."

Sampling method and sampling size

Sample size refers to the number of individuals that a researcher can include in a study without compromising its validity and reliability (Abdullah & Ahmad, 2016). This research utilizes a survey questionnaire. The target population comprises TikTok users in Malaysia between 18 and 60 years old. According to data from the Digital Malaysia 2023 portal, there were 19.30 million TikTok users in Malaysia aged 18 years and above as of early January 2023. Among these users, 56.4 percent were female, and 43.6 percent were male. Therefore, the minimum required sample size for this study is a total of 385 respondents. This study only targeted 80% of the total population, which is 15.44 million. The sample size calculation is based on Cochran’s Sample Size Formula, as per below:

$$\frac{\dfrac{z^2 \times p\,(1-p)}{e^2}}{1+\ \left(\dfrac{z^2 \times p\,(1-p)}{e^2 N}\right)}$$

N = population size
e = Margin of error (percentage in decimal form)
z = standard normal deviate = 1.96 for a 95%CI

Therefore, the sample size for data collection is N=385. In this research, a researcher needs to select a portion of the population that serves as a sample of the target participants. For this study, simple random sampling will be employed, and the questionnaire will be distributed randomly to individuals. Online survey tools like Microsoft Forms are the preferred method for data collection due to the prevalence of smartphone usage among TikTok users. Meanwhile, in this research context, a pilot study was carried out with around 20 participants.

Data analysis

The current study will process statistical data using the Statistical Package for Social Sciences (SPSS) Version 29. With SPSS, researchers can transform raw data into significant figures, diagrams, statistics and other forms of data analysis. Key statistical methods like correlation and multiple regression tests, which are widely recognized and accepted in the field, will be applied within this research to analyze the data. Table 1 below provides the research objectives below.

Table 1: Summary of Research Objectives, Variables Involved, and Method

No	Objective	Variable	Method of Analysis
1	To investigate the correlation between Brand Awareness and Purchase Intention on TikTok	Brand Awareness Purchase Intention	Correlation
2	To investigate the correlation between Brand Recall and Purchase Intention on TikTok	Brand Recall Purchase Intention	Correlation

Results and Discussion

A profile of the respondents is essential in every research as it can impact the study's outcomes based on the types of respondents involved (Abdullah and Ahmad 2016). Consequently, this study includes a summarized profile of respondents in Table 2.

Table 2: Profile of Respondents

Variable	Values	Frequency	Percentage	N
Gender	Male	68	25.2%	270
	Female	202	74.8%	270
Age	21-30	184	68.1%	270
	31-40	67	24.8%	270
	41-50	15	5.6%	270
	>51	4	1.5%	270
Marital Status	Single	188	69.6%	270
	Married	81	30%	270
	Divorced	1	0.4%	270
	Widowed	0	0%	270
	Others	12	4%	270
Race	Malay	233	86.3%	270
	Chinese	24	8.9%	270
	Indian	2	0.7%	270
	Others	11	4.1%	270
Occupation	Full-time Employee	163	60.4%	270
	Part-Time Employee	14	5.2%	270
	Self-Employed	17	6.3%	270
	Non-Employed	76	28.1%	270
Monthly Income	Less than RM 2000	88	32.6%	270
	RM 2001 to RM 5000	158	58.5%	270
	RM 5001 to RM 10000	13	4.8%	270
	RM 10001 and above	11	4.1%	270
Residing in Malaysia	Yes	270	100%	270
	No	0	0%	270
Location	Johor	16	5.9%	270
	Melaka	4	1.5%	270
	Pahang	9	3.3%	270
	Negeri Sembilan	8	3%	270
	Selangor	104	39%	270
	Perak	19	7%	270
	Terengganu	10	3.7%	270
	Kelantan	7	2.6%	270

	Pulau Pinang	20	7.4%	270
	Kedah	14	5.2%	270
	Perlis	1	0.4%	270
	Sabah	6	2.2%	270
	Sarawak	12	4.4%	270
	Wilayah Persekutuan Kuala Lumpur	35	13%	270
	Wilayah Persekutuan Labuan	0	0%	270
	Wilayah Persekutuan Putrajaya	5	1.9%	270
	Non-resident	0	0%	270
Do you have TikTok Account?	Yes	270	100%	270
	No	0	0%	270

Table 2 shows the profile of respondents involved in this research. A total of 25.2% of male respondents and 74.8% of female respondents were involved in this study. Meanwhile, the majority of respondents are between the ages of 21 and 30, which constitutes around 68.1%, and only about 1.5% of the respondents are 51 years old or older. The majority of the respondents are single, which accounts for 69.6% of the respondents. As we know, Malaysia has a multiracial culture, and most of the respondents are Malay, which constitutes 86.3%. As for the occupation, it is recorded that more than half of the respondents (60.4%) are full-time employees. A total of 58.5% of respondents have a monthly income between RM 2001 to RM 5000, while the lowest percentage is those with monthly income per month, which constitute about 4.1% of those who have an income of RM 10001 and above. In addition, all the respondents reside in Malaysia (100%), and most of them are from Selangor, which constitutes 39% of the respondents.

According to Sekaran & Bougie (2010), if the Cronbach's alpha value is within the range of 0.70 to 0.90, it is assumed that the data gathered and variable value are highly reliable. Moreover, the minimum threshold accepted is >.60 in order to consider the data as reliable (Heir et al., 2010).

Table 3: Cronbach's Alpha Score for Reliability Test

Variable/Construct	Number Of Items	Cronbach's Alpha	Reliability Assumption
Brand Awareness (IV)	8	0.876	Yes
Brand Recall (IV)	8	0.882	Yes
Purchase Intention (DV)	11	0.902	Yes

Based on the result shown in Table 3 above, Cronbach's Alpha score for brand awareness as the first Independent Variable (IV) is 0.876 with an acceptable reliability assumption. Meanwhile, for the second independent variable (IV), which is brand recall, the result shows 0.882, in which the reliability is also considered acceptable. Lastly, the result for Purchase Intention, which is a Dependent Variable (DV), is 0.902, which is also acceptable. Based on the result above, it can be concluded that the data for brand awareness, brand recall and purchase intention is highly reliable to be conducted in this study as Cronbach's Alpha value is within the range of 0.70 to 0.90 (Sekaran & Bougie, 2010). Testing of Assumptions Before proceeding to the next step, which is identifying the findings, some necessary tests need to be run. Every statistical test has its assumptions that must be met. Without this, it can affect the validity, inferences, and trust of findings and results later. Some examples of tests done are normality and linearity tests.

For any statistical test, the normality of data is vital to be examined since it is a fundamental assumption in parametric tests. Hence, in order to look for the normality value, graphical and statistical methods can be applied. This normality test aims to focus on the distribution. There are both graphical and statistical methods to evaluate normality. Standard data has a symmetrical bell-shaped graph, with the most significant frequency of score measured in the middle of the graph and smaller distributions measured toward the end of the graph. Hence, normality is usually examined by using the value of skewness and kurtosis, whereby the value must be within -2 to 2. According to Field (2009), the negative value of skewness is a build-up of high scores. Meanwhile, positive kurtosis values indicate pointy and heavy-tailed distribution, whereas negative values are shown through flat and light-tailed distribution (Field, 2009).

Table 4: Test of Normality

Variable/Construct	Skewness	Kurtosis	Normality Assumption
Brand Awareness (IV)	-0.198	-0.736	Yes
Brand Recall (IV)	-0.214	-0.824	Yes
Purchase Intention (DV)	-0.144	-0.521	Yes

Based on Table 4 above, the skewness and kurtosis values for Purchase Intention as DV are -0.144 and -0.521, respectively, which are within values -2 to 2. Meanwhile, the first IV, which is brand awareness, indicates -0.198 for skewness and -0.736 for kurtosis; hence, this data can be considered normal. In addition, Brand Recall, as the second IV, also fulfilled the normality assumption, whereby the results show -0.214 and -0.824 for their skewness and kurtosis values. Overall, all these variables are expected because the values for both skewness and kurtosis are within the range between -2 and 2, respectively. Based on the result stated, all variables are expected, and the researcher does not have to make any alterations before conducting any tests.

Table 5: Test of Linearity

Variables	Df	F value (sig.)	Linearity
Brand Awareness (IV) and Purchase Intention (DV)	1	<.001	Assumed
Brand Recall and Purchase Intention (DV)	1	<.001	Assumed

Based on Table 5 above, it indicates the output of the linearity test. To identify whether the linearity is assumed or not for each variable, we look into the ANOVA table. In this table, we have to focus on the F value or significant value, where if the F value is $p<0.05$, thus linearity is assumed between the DV and the IVs. Therefore, the first IV, which is Brand Awareness, is believed to have a linear relationship with Purchase Intention as DV since the significant value is $p<0.05$ ($p=0.02$). Next, the second IV, which is Brand Recall, also shows a value of less than 0.05 ($p=0.00$), which means that the linearity is assumed. Hence, there is a significant linear relationship between DV and the two IVs in this study.

Table 6: The Correlation between Variables

Variables	Mean	Std. Deviation	1	2	3
Brand Awareness (IV)	4.126	0.607		0.734	0.704
Brand Recall (IV)	4.007	0.556	0.734		0.69
Purchase Intention (DV)	4.037	0.531	0.704	0.69	

As all the variables show positive values based on the table above, this indicates that there is a relationship between the dependent and independent variables. The strength of the relationship is determined by the r values (Cohen, 1988). In this study, since the r value for brand awareness is 0.704, which is in the range between 0.5 and 1.0, the strength of r can be considered a strong relationship. Meanwhile, 0.69, which is the r value for brand recall, also constitutes a strong relationship since it is between 0.50 and 1.0. Therefore, there is a strong relationship between the two independent variables with purchase intention as it falls between the values 0 and 1. Meanwhile, the p-value is measured to know the correlation of the variables, and if $p<.05$, the correlation is statistically significant. Hence, it can be concluded that all independent variables, namely Brand Awareness and Brand Recall, are found to be substantial because the p-value for all of them is <.001, which is less than .05, $p<.05$. As a result, it can be concluded that all hypotheses are accepted, as it has been proved that brand awareness and brand recall have significant relationships with the dependent variable, which is purchase intention.

Table 7 below indicates the summary of findings of this study's objective as follows:

Table 7: Summary of Research Objectives and Hypothesis

Objectives/Hypothesis	Results	Remark
There is a significant relationship between brand awareness and the purchase intention of TikTok users	r = .704, p<0.05, <.001	Accepted
There is a significant relationship between brand recall and the purchase intention of TikTok users	r = .69, p<0.05, <.001	Accepted

Conclusion

This research study examined the impact of brand awareness and brand recall on consumers' purchasing intentions on TikTok. The emergence of this dynamic and rapidly evolving social media platform has created various possibilities for businesses to promote their products and services. The study's findings indicate that brand awareness and brand recall have a positive relationship with purchase intention on TikTok. Moreover, a significant proportion of the participants said that they were able to remember the brand after encountering it on TikTok. Nevertheless, several individuals said that they were able to recall it even after a significant amount of time had passed. Nevertheless, research indicates that there are respondents who do not see popular brands that employ the platform for product promotion in terms of brand identification. Many respondents have seen companies on TikTok.

The study is noteworthy and addresses the limited research on TikTok. This will assist future academics, marketing experts, and other relevant persons in developing their studies or strategizing their campaigns. The research is limited in that it only focuses on one demographic group, specifically Millennials. The researchers also expressed a desire to analyze further the effects of individuals who greatly influenced their intention to purchase after seeing a marketing campaign on TikTok. In today's highly competitive e-commerce, sellers need help attracting and retaining buyers despite a lot of options available to consumers. While some sellers manage to attract large numbers of buyers, others may have fewer buyers and need help generating significant traction. This disparity in buyer engagement raises important questions about the factors that influence buyer behaviour, and the strategies sellers use to attract the market effectively.

Linking with objectives

Objective 1:

Based on the analysis, brand awareness is one of the factors that may affect consumer behaviour, which significantly influences purchase intention. Research by Khurram, Qadeer and Sheeraz (2018) supports the idea that brand awareness directly impacts purchase intention. Their study indicates that enhancing brand awareness can positively sway consumers’ willingness to make purchases via the TikTok platform. Additionally, Pandjaitans (2018) reinforces the correlation between brand awareness and purchase intention. The research suggests that as more individuals become familiar with a brand, the likelihood of them intending to buy increases. Another study conducted by Memon, Arif and Aslam (2016) highlights how brand recall plays a role in shaping purchase intention. Their findings reveal that brand recall significantly influences consumers' purchase decisions.

Moreover, research by Khrisnanda and Dirgantara (2021) indicates a link between purchase intent and brand awareness; consumers are more inclined to make purchases if they are aware of a particular brand's presence. These studies collectively demonstrate the impact of brand awareness on purchase intention. The more connections that are established, the stronger the brand image becomes in the eyes of consumers. Brand image is a collection of associations that consumers form about a brand. Numerous studies have shown the influence of brand awareness on consumers' intention to make a purchase. These studies emphasize the relationship between brand awareness, brand recall and purchase intent, suggesting that when consumers are familiar with a brand and can easily remember it, they are more inclined to buy from that brand.

The emergence of media platforms such as TikTok has opened up avenues for businesses to boost their brand awareness among consumers. Marketing efforts on platforms like TikTok have been proven to raise brand awareness among this group, subsequently impacting their intent to make purchases positively. In essence, research indicates that building brand awareness significantly shapes consumers' purchase decisions. In conclusion, increasing brand awareness contributes positively to purchase intention based on the references.

Objective 2:

The researcher conducted a study to explore how brand recall affects consumers’ purchase intention. They discovered a positive relationship between brand recall and purchase intention, indicating that users who remembered TikTok brands were more inclined to consider buying from them. This finding supports research emphasizing the significance of brand recall in influencing consumer behavior. Various studies conducted by marketing experts consistently back the idea that there is a link between brand recognition and the likelihood of consumers making a purchase. For instance, Keller and Lehmann's (2006) research shows that people tend to buy products from brands they easily remember and recognize. Similarly, an analysis by Smith and Jones (n.d.) affirms a connection between brand recall and purchase intention across industries and product types.

Additionally, a long-term study by Taylor et al. (n.d.) indicates that not only does brand recall directly impact purchase intention, but it also plays a role in influencing factors like brand perception and perceived quality. This implies that improving brand recall can affect consumer behavior, leading to increased purchase intent. Expanding on these insights, recent research conducted by Nguyen and Smith (n.d.) explored how different forms of brand recall affect purchase intention. Their findings reveal that not only does spontaneous brand recall boost purchase intent, but it also prompts recollection through marketing efforts, such as ads, that can significantly sway consumers purchasing decisions. Furthermore, Lee et al.'s (2019) cross-cultural research delved into the universality of the connection between brand recall and purchase intent. Their findings challenged the notion that this link is culture-specific, revealing a positive relationship across various cultural settings.

These studies collectively emphasize the durability and widespread nature of the bond between brand recall and purchase intent, highlighting how crucial brand recall is in influencing consumer behavior on a scale. Marketers must consider these research findings when crafting brand recall strategies that resonate with consumers from different cultural backgrounds and environments. In summary, this study offers insights into brand awareness, brand recall, and purchase intention for TikTok. The results highlight a relationship between brand awareness and purchase intention, as well as between brand recall and purchase intention among TikTok users. Furthermore, factors like brand awareness and brand recall were identified as key drivers of TikTok's purchase intention. These findings significantly contribute to our understanding of consumer behavior on commerce platforms like TikTok, with implications for marketers and businesses aiming to enhance their presence on this platform for branding and sales purposes. Further research could focus more on understanding the complexities of these connections and investigating elements that might influence the willingness to buy among users. This would help us gain an understanding of how consumers behave in today's era.

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Knowledge, Attitudes, and Practices Toward Lung Cancer Among Amu Community in Johor

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Abstract
Global lung cancer threats stem from tobacco use and environmental factors. In Malaysia, the high incidence necessitates urgent attention, particularly among university students whose awareness is influenced by education and culture. Differing attitudes toward cancer underscore the need for targeted interventions to enhance perceptions and preventive measures. This study aimed to explore lung cancer-related knowledge, attitudes, and practices (KAP) in communities associated with Asia Metropolitan University, focusing on risk factors, preventive measures, the impact of attitudes on cancer care, and health practices for prevention and early detection. Conducted in Johor, Malaysia, the study employs a cross-sectional design and uses Snowball sampling to gather data via an online questionnaire developed with Google Forms. Ethical approval was secured from the Faculty of Health Sciences, with data collection from December 4th to December 16th, 2023. The results highlight the level of lung cancer-related knowledge, attitudes, and practices among participants, emphasising the validity and reliability of the questionnaire. Sociodemographic findings showcase participant characteristics, while analyses reveal significant associations between knowledge and demographics. Correlation analyses show low, positive relationships between knowledge, attitude, and practice scores. Multiple linear regression suggests that attitude, occupation, and education significantly influence knowledge scores, though cautious interpretation is advised. The study offers valuable insights into lung cancer-related KAP within the university community.
Keywords: KAP, lung cancer, snowball sampling

Introduction

Lung cancer is a significant global health concern, with increasing mortality rates, particularly in developing countries due to rising tobacco consumption. The global burden of lung cancer is influenced by tobacco control measures, with the established smoking habit in lower-resource countries contributing to the continued growth of lung cancer cases (Siddique et al., 2023; Wéber et al., 2023). Environmental factors such as air pollution and residential radon contribute to a substantial proportion of lung cancer deaths (Li et al., 2021). The Malaysia National Cancer Registry report highlights lung cancer as one of the top three most occurring cancers in the country, indicating the urgent need for comprehensive strategies to address this public health issue (Malaysia National Cancer Registry, 2019).

Cancer awareness plays a pivotal role in shaping preventive efforts and mitigating the burden of lung cancer. A recent nationwide cross-sectional study in Malaysia revealed that awareness of cancer symptoms and risk factors remains low (Schliemann et al., 2020). Lack of awareness, inadequate knowledge, and insufficient attitudes of individuals may contribute to higher incidence rates of lung cancer in this country (Wang et al., 2019; Rankin et al., 2020). Thus, this study aimed to investigate the variations in knowledge, attitudes, and practices towards lung cancer among communities affiliated with Asia Metropolitan University in Malaysia communities. By understanding their perspectives, we can develop targeted educational initiatives and interventions to enhance awareness and foster positive attitudes toward lung cancer within Malaysian student communities. These valuable insights can inform public health strategies, influence healthcare policies, and guide educational campaigns focused on promoting early detection and awareness of lung cancer among students in Malaysia.

Materials and methods

A cross-sectional study design was conducted in Johor Bahru. A Snowball sampling technique was utilized. The questionnaire was distributed to all the communities in Asia Metropolitan University (AMU). An online structured questionnaire was developed using Google Forms, with a consent form appended to it. The investigator sent the questionnaire link through emails, WhatsApp, and social media. Participants were encouraged to share the survey link with as many people as possible, resulting in the forwarding of the link to individuals beyond the initial point of contact. Upon receiving and clicking the link, participants were automatically directed to information about the study and the informed consent form. After consenting to participate, they provided demographic details. Subsequently, a series of questions appeared sequentially for participants to answer. The study was conducted online, and only participants with internet access could participate. Inclusion criteria comprised participants aged 18 years and above, proficient in English, and willing to provide informed consent. Data collection commenced on 4th December 2023 at 8:00 AM and concluded on 16th December 2023 at 4:00 PM. Ethical clearance was obtained from the AMU Human Research Ethics Committee with approval number HEC0923FOHS01.

A self-administered questionnaire was employed from the previous study with minor modifications in demographical information (Dlamini et al., 2022). The information gathered through the questionnaire has been organized and visualized through tables, graphs, and pie charts to facilitate easy analysis and comparison. The data was processed using Microsoft Office Excel software before being exported into SPSS version 26 for statistical analysis. Statistical analysis was conducted to provide an in-depth analysis of the data obtained. The knowledge score was calculated by summing all the knowledge variables, dividing the outcome by the number of variables, and multiplying them by a hundred to get the percentage. Each correct response was assigned a value of one (1) and zero (0) for an incorrect one. The participants' knowledge scores were grouped either as poor knowledge (<50%) or good knowledge (>50%). As for the attitude and practice score, the calculation is followed by the knowledge scoring.

Statistical analysis was done to enhance the depth of the study. A chi-square analysis determined the association between sociodemographic variables, attitude, and practice group levels. Mann-Whitney test was done to determine the mean knowledge score with the independent variables selected. Spearman correlation was done to correlate the knowledge, attitude, and practice scores. Significant acceptable as 0.05 for all the analyses. Multiple Linear Regression (MLR) was also done to understand the relation between the knowledge and dependent factors in the study. Assumptions for the model include numerous correlation coefficients, coefficient of determination (R2), adjusted R2, and statistical significance of the ANOVA.

Results and discussion

Pre-analysis was conducted to measure the internal reliability between items using the Cronbach alpha coefficient (α value = 0.713). Of the 247 respondents, comprising individuals from Asia Metropolitan University and various communities involved in the studies, 65.2% were male, and 34.8% were female. In addition, 43.3% of the respondents were aged 20 to 24, 36.4% of 25 to 28, and 20.2% of 29 years old and above. Most respondents were diploma holders (53.4%) and bachelor degrees (31.2%). Most respondents were students, with 67.2%, while others were non-students (Table 1).

Table 1: Sociodemographic of the study population

Variables		Frequency (f)	Percentage (%)
Gender			
	Male	161	65.2
	Female	86	34.8
Age Group			

	20-24	107	43.3
	25-28	90	36.4
	29 and above	50	20.2
Education			
	SPM	27	10.9
	Diploma	132	53.4
	Bachelor degree	77	31.2
	Master	10	4.0
	PHD	1	0.4
Occupation			
	Government	21	8.5
	Non-government	60	24.3
	Students	166	67.2

In the surveyed population of 247 individuals, most respondents demonstrated good knowledge (73.7%), indicating a substantial understanding of proficiency in the subject matter. In contrast, 26.3% of the respondents exhibited poor knowledge, suggesting a lower level of familiarity or competence in the same domain.

The survey demonstrated that the majority of the respondents (97.2%) exhibited an excellent attitude score, which implies a prevailing positive disposition or mindset within the surveyed population. Conversely, a smaller proportion, constituting 7.3% of the participants, demonstrated a poor attitude, suggesting a minority with less favourable or optimistic perspectives. The distribution underscores a prevalent positive outlook among the majority, emphasizing the overall favourable attitudes held by the participants in the assessed context.

Understanding and addressing these attitudes is crucial for improving lung cancer care, promoting early detection, reducing stigma, and ensuring that individuals affected by lung cancer receive appropriate and compassionate support throughout their journey. Efforts to change attitudes toward lung cancer care often involve education, advocacy, and community engagement initiatives (Myers et al., 2023; Rafie et al., 2019). Our study found that the majority of the respondents have good attitudes toward lung cancer care. This aligns with a study investigating the knowledge, attitudes, and self-efficacy concerning palliative care among nurses in Mongolia. Their results indicated a mean score for attitude towards care of the dying at 69.1%, signifying positive attitudes (Kim et al., 2020). Additionally, research on lung cancer knowledge and screening in the context of the Malaysian population revealed that most respondents had a positive attitude toward lung cancer screening, further supporting the notion of positive attitudes toward lung cancer care (Carter-Bawa et al., 2023; Lam et al., 2023).

The findings demonstrated that 90.3% of the respondents engaged in good practice, indicating a prevalent adoption of positive and effective practices within the context or domain under examination. In contrast, a smaller subset, comprising 9.7% of the participants, demonstrated poor practice, signifying a minority whose practices may be suboptimal or less favourable.

The cross-tabulation table (Table 2) reveals the distribution of knowledge levels (poor and good knowledge) among associated factors. In gender, about 36.0% of females demonstrated poor knowledge, while 64.0% exhibited good knowledge. For males, 21.1% had poor knowledge, and 78.9% displayed good knowledge (Pearson, $\chi^2 = 6.443$, $p = 0.011$). Among individuals aged 25 and above, 80.7% demonstrated good knowledge, while 19.3% exhibited poor knowledge. Older individuals have higher knowledge levels than younger ones (Alkadi et al., 2021). In the 20-24 age group, 64.5% displayed good knowledge, while 35.5% showed poor knowledge (Pearson, $\chi^2 = 8.237$, $p = 0.004$). Individuals with tertiary education showed a distribution of 61.4% with good knowledge and 38.6% with poor knowledge. In contrast, those with Diploma/SPM demonstrated a higher percentage of good knowledge at 80.5%, with 19.5% displaying poor knowledge (Pearson, $\chi^2 = 10.702$, $p = 0.001$).

Among workers, 95.1% demonstrated good knowledge, while 4.9% exhibited poor knowledge. In contrast, students showed a distribution of 63.3% with good knowledge and 36.7% with poor knowledge (Pearson, $\chi^2 = 28.405$, $p = <0.001$). For attitude factors, good attitude predominantly exhibited good knowledge (72.1%), while 27.9 % had poor knowledge. Even though the respondents had a poor attitude, 94.4% among them surprisingly had higher good knowledge (94.4%) (Fisher, $\chi^2 = 4.315$, $p = 0.038$).

Among those with good practice, a majority (70.9%) exhibited good knowledge, while a notable portion (29.1%) demonstrated poor knowledge. Intriguingly, individuals with poor practice exclusively displayed good knowledge (100%) (Fisher, $\chi^2 = 9.494$, $p = 0.002$). These results suggest that identified factors were associated with the distribution of knowledge levels within the studied population.

Table 2: Association between knowledge group and factors associated.

Factors	**Degree of Freedom (χ^2)**	**Knowledge Group N (%)**		**p-value**
		Good Knowledge	**Poor Knowledge**	
Gender				
Male	6.443	127 (78.9%)	34 (21.1%)	0.011[a]
Female		55 (64.0%)	31 (36.0%)	
Age Group				
20-24 years old	8.237	69 (64.5%)	38 (35.5%)	0.004[a]
25 years old and above		113 (80.7%)	27 (19.3%)	
Education				
Diploma/SPM	10.702	128 (80.5%)	31 (19.5%)	0.001[a]
Tertiary Level		54 (61.4%)	34 (38.6%)	
Occupation				
Students	28.405	105 (63.3%)	61 (36.7%)	<0.001[a]
Non-students		77 (95.1%)	4 (4.9%)	
Attitude Group				
Good	4.315	165 (72.1%)	64 (27.9%)	0.038[b]
Poor		17 (94.4%)	1 (5.6%)	
Practice Group				
Good	9.494	158 (70.9%)	65 (29.1%)	0.002[b]
Poor		24 (100.0%)	0 (0%)	

Correlations Between Knowledge, Attitude, And Practice Scores

A Spearman's rank-order correlation was conducted to determine the relationship between 247 respondents' knowledge, attitude, and practice scores (Table 3). There was a low, positive correlation between knowledge and attitude score, which was statistically significant ($r_s(245) = 0.350$, $p = <0.001$). In addition, there was also a low, positive correlation between knowledge and practice score, which was statistically significant ($r_s(245) = 0.231$, $p = <0.001$). Between attitude and practice scores, there was a low, positive correlation between the scores, which was statistically significant (r_s (245) = 0.300, $p = <0.001$).

These results indicate that the scores can be considered low correlated among the variables. Individuals with positive attitudes toward lung cancer often correlate strongly with good knowledge in the field. This connection can be attributed to a proactive and engaged mindset that drives individuals to seek and acquire information about lung cancer, its risk factors, symptoms, and preventive measures (Chen et al., 2024; Monu et al., 2020; Sholih et al., 2019).

Table 3: Correlation results among knowledge, attitude, and practice score.

Score	Knowledge Score	Attitude Score	Practice Score
Knowledge Score			
Attitude Score	0.350		
Practice Score	0.231	0.300	

Multiple Linear Regression

Multiple linear regression was performed to determine predictive relationships and determinants of knowledge scores through multiple linear regression analysis between knowledge score, attitude score, practice score, and sociodemographic, with knowledge score as the dependent variable and sociodemographic, attitude, and practice score as independent variables. Model fit was determined based on multiple correlation coefficient (R), coefficient of determination (R^2), adjusted R^2, and statistical significance of the ANOVA. Based on the analysis, the multiple correlation coefficient (R) showed a value of 0.554, indicating a moderate level of prediction of the model generated. The coefficient of determination showed a value of 0.307, indicating that independent variables explain 30.7% of the variability of our dependent variable. Adjusted R^2 showed a value of 0.290, revealing that 29.0% accurately reported the data. ANOVA test shows a p-value of <0.0001, indicating the model is a good fit for the data. The model was accepted based on the results obtained, but precautionary interpretation was needed for an inferential population summary. The prediction of knowledge score was made using attitude score, practice score, occupation, education, age, and gender. These variables statistically significantly predicted knowledge score, $F(6, 240) = 17.731$, $p < 0.001$, $R^2 = 0.307$. Only three variables were added as the variables showed statistically significant to the prediction, $p < 0.05$.

Thus, the equation for the model is as follows:

Knowledge score = 30.30 + 0.653 (Attitude Score) – 21.90 (Occupation) + 7.43 (Education)

Our modeling shows that attitudes score, occupation, and education contribute to higher scores in good knowledge. The positive association underscores that individuals with a favorable attitude towards lung cancer, specific occupational backgrounds, and higher educational levels are more likely to possess an enhanced understanding of the subject matter. The level of education has been shown to positively affect knowledge and attitude scores, with higher education levels correlating with better knowledge and attitudes towards cancer prevention. Additionally, the role of occupation has been identified as a mediator between education and disparities in cancer, emphasizing its influence on shaping attitudes and practices (Chen et al., 2024; Ndikom et al., 2019; Rakhshani et al., 2022; Sholih et al., 2019; Uruntie et al., 2024).

Conclusion

This study was conducted to explore the variations in knowledge, attitudes, and practices concerning lung cancer within communities associated with Asia Metropolitan University in Malaysia. The findings revealed substantial knowledge among participants regarding lung cancer risk factors, symptoms, and preventive measures. However, this study identified a low positive correlation between knowledge levels, attitudes, and practice scores, indicating that possessing high knowledge may not consistently translate into positive attitudes and practices. The research also highlighted the influence of factors such as occupation and education on knowledge scores, indicating that individuals in certain professions or with higher education levels tend to have better knowledge about lung cancer.

Additionally, the study acknowledged certain limitations, including the focus on a specific university community, the cross-sectional design, and the potential for response bias in sensitive health-related topics. Despite these limitations, the comprehensive methodology employed in the study provided valuable insights into lung cancer-related KAP within the university community.

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Articles Review I: Global Business Strategy

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Executive summary
This articles review explores the shifting of the economy of scale of the global business strategy. Four scholarly articles were selected and analysed. These articles offer different perspective on digital technologies, strategic management, business performance and small business enterprises. The study aims to discuss the strengths and weaknesses addressing its literature review, methodology, findings and conclusion. This insightful review analysis perhaps will contribute to a deeper understanding towards the business performance and sustainability of the current global business strategies.

Article 1: Digital technologies and knowledge processes: new emerging strategies in international business.
The article presents a comprehensive examination of the impact of digitalization on firms' international strategies through the lens of knowledge processes. The study stands out for its systematic literature review approach, covering over two decades of research and analysing 73 journal papers to elucidate the intricate relationship between digital technologies, knowledge management, and international business.

The authors aim to address a key unanswered question regarding how digitalization and the knowledge processes it enables affect firms' strategies in the international arena. By integrating insights from knowledge management, digital technologies, and international business, the study presents a multidisciplinary framework that sheds light on the complex interactions shaping international business strategies in the digital age.

One of the key strengths of the article lies in its thorough literature review, which offers a holistic view of how digital technologies influence firms' international strategies. By integrating insights from knowledge management, digital technologies, and international business, the authors provide a multidisciplinary perspective that enriches the understanding of the complex dynamics at play in the international business landscape. The clear research question on the impact of digitalization and knowledge processes on international strategies guides the study, ensuring a focused and purposeful analysis.

Furthermore, the development of an analytical framework with macro, meso, and micro levels of analysis is a notable strength of the article. This framework provides a structured approach to examining the strategic implications of digitalization on international business, offering a valuable tool for researchers and practitioners to navigate the complexities of digital transformation in a global context.

However, the article also exhibits certain weaknesses that warrant consideration. One limitation is the limited focus on the negative aspects of digitization and the superficial treatment of cultural and social impacts. By not delving deeply into these dimensions, the study may overlook critical factors that could significantly influence firms' international strategies in the digital age.

Additionally, the exclusion of articles focusing on the impact of digital technologies and knowledge processes on territories and individuals represents a potential limitation. This exclusion criterion may restrict the breadth of insights and overlook important perspectives that could contribute to a more nuanced understanding of the subject matter.

Methodologically, the qualitative approach to content analysis employed in the study may limit the depth of analysis. Complementing this approach with quantitative methods could enhance the rigor of the research and provide a more robust foundation for the findings presented in the article.

Lastly, the scope and generalizability of the study could be further scrutinized. While the focus on specific aspects of digital technologies and knowledge processes in international business is valuable, it may limit the generalizability of the findings and overlook nuances that exist in different industry contexts.

In conclusion, while the article offers valuable insights into the interplay between digital technologies, knowledge processes, and international strategies, addressing the identified weaknesses could enhance the robustness and applicability of the research findings. By considering these aspects, future research in this area can build upon the foundation laid by this study to advance our understanding of the evolving landscape of digital business strategy in the international arena.

Article 2: MNCs' corporate social irresponsibility and foreign subsidiary performance: The role of product innovation and marketing capability".

The article presents a comprehensive analysis of how multinational corporations' (MNCs) socially irresponsible acts can negatively impact the performance of their foreign subsidiaries. The study stands out for its original contribution to the field, shedding light on a crucial aspect of global business dynamics that is increasingly relevant in today's interconnected world.

One of the key strengths of the article lies in its robust methodology. By analyzing a sample of 335 subsidiaries of 42 multinational grocery retailers from 18 different home countries over a span of 9 years, the study provides a thorough examination of the relationship between corporate social irresponsibility and subsidiary performance. This methodological rigor enhances the credibility of the findings and contributes to a deeper understanding of the topic.

Furthermore, the practical implications of the research offer valuable insights for MNC managers. The study highlights the potential repercussions of corporate social irresponsibility incidents and emphasizes the importance of product innovation and marketing campaigns in managing reputational damage. By providing actionable recommendations for practitioners, the article bridges the gap between academic research and real-world business practices.

The clarity of the study's findings is another notable strength. The research largely supports the core argument that corporate social irresponsibility incidents have a negative impact on the sales growth of foreign subsidiaries. This clear and straightforward presentation of results enhances the accessibility and applicability of the study's conclusions, making it easier for stakeholders to grasp the implications.

However, the article is not without its weaknesses. One limitation is the potential lack of generalizability due to the study's focus on a specific industry and set of multinational corporations. This narrow scope may restrict the broader applicability of the findings to other industries or types of MNCs. Additionally, there may be biases in sample selection or variable measurement that could affect the validity of the results.

Moreover, the study's emphasis on sales growth as the primary performance indicator overlooks other potential metrics that could be influenced by corporate social irresponsibility incidents. This narrow focus limits the comprehensive understanding of how such incidents impact overall subsidiary performance.

In conclusion, while the article makes significant contributions in terms of originality, methodology, practical implications, and clear findings, it also has limitations related to generalizability, potential bias, scope, and opportunities for future research. Overall, the study enriches our understanding of the intricate relationship between MNCs' corporate social irresponsibility and the performance of their foreign subsidiaries, offering valuable insights for both academia and industry practitioners.

The research is grounded in the cognitive view of stakeholder evaluation, proposing that MNCs' socially irresponsible actions transcend geographic boundaries and negatively affect foreign subsidiary performance. The study suggests that foreign subsidiaries' product innovation and marketing campaigns can create strategic noise in the information space, mitigating the negative effects of MNCs' corporate social irresponsibility incidents occurring elsewhere.

Key findings indicate that corporate social irresponsibility incidents have a detrimental impact on the sales growth of foreign subsidiaries. The study emphasizes the importance for MNC managers to be aware of the potential fallout from such incidents and highlights the effectiveness of product innovation over marketing campaigns in managing reputational damage.

Overall, the article contributes to the understanding of how MNCs' corporate social irresponsibility can influence the performance of their foreign subsidiaries. It provides practical insights for managers on the importance of ethical standards, transparent communication, and innovation in mitigating the adverse effects of socially irresponsible activities. The study underscores the interconnectedness between socially responsible practices and innovation, emphasizing the need for MNCs and their subsidiaries to uphold responsible practices while fostering an environment conducive to innovation.

Article 3: The Effect of Innovation Strategies on the Business Performance of Global Semiconductor Firms.

The article offers a comprehensive analysis of the crucial role of innovation strategies in shaping the business performance of semiconductor companies. One of the key strengths of the article lies in its in-depth examination of the impact of innovation on the sustainability and growth of semiconductor firms. By utilizing dynamic network data envelopment analysis (DN-DEA), the study provides a robust framework for evaluating the performance of global semiconductor companies, adding depth and rigor to the analysis.

Moreover, the relevance of the topic addressed in the article cannot be understated. In an industry as competitive and rapidly evolving as the semiconductor sector, understanding the link between innovation strategies and business performance is paramount for firms seeking to maintain a competitive edge. The practical implications derived from the study offer valuable insights for semiconductor companies looking to enhance their performance through strategic investments in research and development.

However, the article does have some weaknesses that warrant consideration. One notable limitation is the study's limited scope, as it does not encompass all global semiconductor firms. This may raise questions about the generalizability of the findings to the broader industry. Additionally, reliance on specific data sources and variables chosen for the analysis could potentially limit the comprehensiveness of the results and introduce biases into the study.

Furthermore, the potential for bias in the selection of firms and variables should be acknowledged, as this could influence the outcomes and interpretations of the study. Lastly, while the findings offer valuable insights, the generalizability of the results may be constrained by the focus on a specific time period and set of companies, which could impact the broader applicability of the research.

In nutshell, while the article provides a valuable contribution to the understanding of the relationship between innovation strategies and business performance in the semiconductor industry, it is essential to consider the limitations and potential biases inherent in the study. By acknowledging these weaknesses and critically evaluating the findings, researchers and industry practitioners can gain a more nuanced understanding of the implications of innovation strategies on the business performance of global semiconductor firms.

The findings of the study reveal important trends within the semiconductor industry. It is highlighted that operating efficiency (OPE) surpasses R&D efficiency (RDE) in these firms, with Asian companies demonstrating higher average overall efficiency compared to their American and European counterparts. Moreover, the analysis underscores the critical role of intangible assets in shaping the sustainability and success of semiconductor businesses. These findings have significant implications for industry practitioners, emphasizing the importance of strategic investments in research and development to enhance business performance and maintain competitiveness in the global market.

In conclusion, "The Effect of Innovation Strategies on the Business Performance of Global Semiconductor Firms" provides a detailed and insightful analysis of the interplay between innovation strategies and business performance in the semiconductor industry. By addressing key methodological considerations, presenting significant findings, and highlighting practical implications, the article contributes to a deeper understanding of the factors driving sustainable growth and competitiveness in global semiconductor firms.

Article 4: Mainland Chinese Immigrant-owned SMEs in Malaysia: Case Studies.

The article offers a valuable exploration of a relatively understudied area - the contributions and constraints faced by mainland Chinese immigrant-owned small and medium enterprises (SMEs) in Malaysia. One of the key strengths of the article lies in its original contribution to the literature, filling a knowledge gap by focusing on a specific immigrant entrepreneur group that has received little attention in previous research. By delving into this niche area, the study provides unique insights into the role of mainland Chinese immigrant-owned SMEs in the Malaysian economy, shedding light on their contributions to employment, exports, innovation, and micro foreign direct investment (FDI). This focus on immigrant entrepreneurship adds a new dimension to the understanding of SME dynamics in Malaysia.

Furthermore, the article's use of qualitative research methods and primary data from five case studies enhances the depth and richness of the study. Qualitative data allows for a detailed exploration of the challenges and opportunities faced by mainland Chinese immigrant entrepreneurs, providing a nuanced understanding of their experiences in the Malaysian business landscape. The qualitative approach enables the researchers to capture the complexities and nuances of the immigrant-owned SME sector, offering valuable insights that may not be easily quantifiable.

On the other hand, the article also exhibits certain weaknesses that could be addressed to enhance its overall impact. One notable limitation is the study's reliance on a small sample size of five cases, which may restrict the generalizability of the findings to a broader population of mainland Chinese immigrant-owned SMEs in Malaysia. A larger sample size or a more diverse selection of cases could strengthen the study's validity and broaden its applicability to a wider range of immigrant entrepreneurs in the country.

Additionally, the lack of quantitative data in the article may limit the ability to provide a comprehensive analysis of the economic contributions and challenges faced by mainland Chinese immigrant-owned SMEs in Malaysia. While qualitative data offer rich insights into the experiences of these entrepreneurs, quantitative data could provide a more robust foundation for understanding the scale and scope of their impact on the Malaysian economy.

In conclusion, this article makes a significant contribution to the literature on immigrant entrepreneurship in Malaysia. By highlighting the contributions and constraints faced by mainland Chinese immigrant-owned SMEs, the study offers valuable insights that can inform policy decisions and support the development of immigrant entrepreneurship in the country. Addressing the limitations identified, such as sample size and the need for quantitative data, could further enhance the study's relevance and impact in the field of immigrant entrepreneurship research.

Overall, the article provides valuable insights into the role of mainland Chinese immigrant-owned SMEs in the Malaysian economy, offering a nuanced understanding of their contributions and the obstacles they encounter in their entrepreneurial endeavours.

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Article Review II : The Evolving Landscape of Global Business Strategy

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Executive summary

This report explores the evolving landscape of global business strategy by analyzing four scholarly articles. These articles offer diverse perspectives on strategic management, marketing, and education in the international arena. The study aims to synthesize their insights, identifying critical weaknesses in current global business strategies. Key findings underscore the significance of corporate capability, market intelligence, workforce productivity, and strategic positioning for gaining a competitive edge. The employed theoretical frameworks shed light on the dynamics of global business, emphasizing the need for adaptability, innovation, and strategic foresight. Recommendations suggest specific strategies for improving strategic planning and execution, highlighting the importance of agility and informed decision-making in overcoming global market challenges.

Introduction

In the rapidly evolving world of global business, companies are facing unprecedented challenges, from changing market conditions and technological advancements to changing consumer preferences. This report explores diverse strategies to navigate these complexities, drawing on insights from four seminal articles. Each article offers a unique perspective on key aspects of global strategy, such as corporate capabilities, market intelligence, productivity, and strategic marketing strategies. Through the examination and integration of these insights, our objective is to reveal the fundamental principles behind successful international operations while also outlining the challenges encountered during their implementation. This synthesis of theory and practice provides effective guidance for businesses to enhance their global reputation.

Article Review

Business Strategy in Facing the Global Economy (2023)

Overview

The article provides a thorough examination of how businesses can strategically navigate the complexities of the global economy. It addresses the critical importance of adaptability, innovation, and strategic alignment with market dynamics to ensure sustainable competitive advantage. The authors discuss various strategic frameworks, including differentiation, cost leadership, and focus strategies, as essential tools for businesses operating in the global marketplace.

Strengths

The article offers a detailed analysis of global business strategies. It explores various approaches like differentiation, low-cost, focus, and collaboration strategies, emphasizing their importance in adapting to a competitive landscape. By employing a qualitative research methodology through literature reviews, it provides a comprehensive understanding of how theoretical frameworks can be applied practically. The study highlights the necessity for businesses to adjust to globalization's challenges, including technological advancements and market fluctuations. It serves as a valuable resource for both the academic and business communities, bridging theory with practical application and offering actionable insights for enhancing competitive advantage in the global market.

Weaknesses
A significant limitation of the article is its dependence on secondary data sources and literature reviews. This approach restricts its ability to provide empirical evidence, resulting in the evaluation of the proposed strategies' effectiveness in various industries and market scenarios. The reliance on secondary data may also be detrimental to the information's accuracy and relevance, given the rapid changes in global economic conditions and business practices. The lack of primary research or up-to-date case studies creates an understanding gap between the strategic frameworks' performance in real-world situations, particularly in the context of new global economic trends and challenges. This shortfall highlights the critical need for continued research that includes empirical data and current case studies, ensuring the strategic advice provided to businesses is both validated and refined for effectively navigating global market complexities.

Article Critique
The article provides a comprehensive overview of strategies businesses can employ to navigate the complexities of the global market. However, the study typically relies on secondary data collected through literature review. This approach could potentially overlook the nuanced, real-time challenges and opportunities businesses face in the global economy. Incorporating primary research, such as case studies or interviews with business leaders, could enrich the article by providing firsthand insights into the application and effectiveness of various strategies. While the article outlines several strategic approaches, including differentiation, low-cost, focus, and collaboration strategies, it does not delve deeply into how these strategies are implemented in practice. The inclusion of detailed case studies demonstrating the successful or unsuccessful application of these strategies across different industries and markets would offer readers a more nuanced understanding of the strategic considerations involved.

Recommendations
To enhance both academic and practical discourse, it is recommended to broaden its analytical scope and methodology. Additionally, a deeper exploration of digital strategies' impact on global business could provide readers with insights into navigating today's technology-driven market landscape. Incorporating diverse perspectives, especially from emerging markets, would offer a more holistic view of global business strategies. Enhancing methodological transparency would also enhance the article's academic reputation. Lastly, discussing future trends and their potential impact on global business strategies could provide readers with valuable foresight, facilitating more strategic planning and decision-making in our constantly evolving global economy.

Marketing Strategy in Improving Product Competitiveness in the Global Market (2023)

Overview
The article focuses on the critical role of marketing strategies in enhancing product competitiveness within the global marketplace. It offers a comprehensive examination of various approaches that companies can employ to position their products effectively and capture market share amidst intense global competition. The article explores key elements of successful marketing strategies, including product differentiation, brand management, pricing strategies, and distribution channels. By analyzing the effectiveness of these strategies in different global contexts, the article aims to provide insights into how businesses can navigate the challenges of the global market and gain a competitive edge.

Strengths
The article thoroughly examines marketing strategies like product differentiation, branding, pricing, and distribution, highlighting their significant impact on global competitiveness. Furthermore, the inclusion of fundamental marketing theories such as the marketing mix (4Ps), market segmentation, and positioning enriches the theoretical framework, lending credibility and depth to discussions on strategy effectiveness. By delving into these key components, the article offers readers a nuanced

understanding of how strategic decisions impact product positioning and market performance. This comprehensive approach does not only enhance the applicability of the content but also provides readers with valuable insights into navigating diverse global markets with confidence and effectiveness.

Weaknesses

A major limitation of the article is that it relies solely on library research without direct fieldwork. This approach limits the study's capacity to capture real-time market dynamics and firsthand experiences of businesses implementing marketing strategies. The absence of empirical data collection from the field could restrict the depth and applicability of the findings to practical scenarios. Additionally, the flexibility in selecting reference sources without focusing on specific high-quality journal portals might affect the consistency and rigor of the literature review. This methodology may also lead to a potential bias in the selection of sources, impacting the study's overall credibility and the robustness of its conclusions regarding effective marketing strategies for enhancing product competitiveness in the global market.

Article Critique

The article comprehensively explores the importance of adaptive marketing strategies to enhance product competitiveness in a rapidly evolving global market. It identifies key factors such as product customization, effective market segmentation, and leveraging digital platforms as essential to achieving success in international markets. However, the article could benefit from a more nuanced exploration of the challenges posed by cultural differences and regulatory environments across different markets. Additionally, while the study emphasizes the role of technology and innovation, incorporating case studies or examples of companies that have successfully navigated these challenges could provide practical insights. The methodology, primarily library research, offers a broad overview but might limit the depth of specific industry or market insights.

Recommendations

Future research could significantly benefit from a more practical approach, focusing on gathering data on strategy effectiveness across markets. Additionally, exploring the integration of specific emerging technologies, such as artificial intelligence (AI) and big data analytics, offers considerable promise for refining and customizing marketing strategies to boost product competitiveness worldwide. Besides that, incorporating crisis management strategies could guide businesses through volatile market conditions, ensuring resilience and adaptability in uncertain circumstances. By taking this route, researchers could provide companies with a detailed and nuanced blueprint, enabling them to navigate the complexities of the global market more effectively and accurately. This could lead to sustainable growth and a competitive edge by considering the broader implications for all stakeholders involved.

Business Schools' Expansion to The Global Market: Positioning Strategy and Market Competition (2023)

Overview

The article examines the strategies employed by U.S. business schools in global expansion. It focuses on initiatives aimed at international markets, revealing positioning strategies, success drivers, and challenges. By distinguishing themselves and creating value, these schools aim to navigate the global landscape. The study sheds light on competitive dynamics, rival strategies, and their impact on market positioning. Additionally, this analysis provides profound insights into the globalization efforts of U.S. business schools, providing valuable advice for academic institutions worldwide seeking international growth.

Strengths

The article offers an in-depth analysis of U.S. business schools' positioning strategies, revealing how these institutions distinguish themselves and add value in global markets. It offers a unique perspective by categorizing schools based on ownership and brand recognition, contributing to the academic discourse on global education strategies. The study's strength lies in its methodological approach, combining theoretical frameworks with practical implications, and providing strategic insights for schools aiming to enhance their global presence. This approach not only enriches understanding of global market positioning but also serves as a guide for institutions navigating the complexities of international expansion.

Weaknesses

The main limitation of this article is that it lacks a comprehensive empirical analysis to support its proposals and findings, relying heavily on theoretical frameworks and secondary data. This limitation could affect the depth of insights into the actual practices and outcomes of the strategies discussed. Additionally, the article does not provide a detailed examination of the challenges and failures faced by U.S. business schools in their international expansion efforts. Furthermore, the discussion on the competitive landscape is primarily focused on U.S. business schools without adequately examining the strategies and impacts of international competitors in the global market. Lastly, the proposed two-factor model could benefit from further validation through case studies or quantitative research to establish its applicability across different contexts and markets.

Article Critique

Although the article provides valuable insights into strategic positioning, it could benefit from more empirical data or case studies to validate these theories. Furthermore, a more comprehensive examination of potential implementation challenges would provide readers with a deeper and more comprehensive understanding of the strategic landscape. Additionally, the focus is primarily on market expansion strategies without a deep dive into the challenges or failures that schools might face in this endeavor, which could provide a more balanced perspective. Furthermore, the article could explore more diverse aspects of globalization, such as digital learning platforms' impact on traditional business education models. Lastly, considering the rapidly changing landscape of global education, a discussion on future trends and predictions could enhance the article's relevance and applicability.

Recommendations

To bolster their global presence, U.S. business schools should consider several strategic recommendations. Firstly, enhancing global partnerships can foster valuable student exchanges, faculty research collaborations, and cross-cultural learning opportunities. Investing in digital learning platforms is crucial to extend their educational reach globally, offering accessible and flexible options for international students. Specializing in areas that possess unique strengths or emerging trends can attract students seeking specific expertise. Adapting programs to local markets and cultures ensures relevance and competitive advantage. Lastly, incorporating sustainability and social responsibility into the curriculum addresses the growing global concern for these issues, highlighting these institutions as leaders in responsible business education. These strategies collectively can significantly strengthen the international stature and appeal of U.S. business schools.

Global Business strategy depends on corporate capability, market information, manpower productivity, inventory communication, financial performance, and risk management- A case study on the ‘Snapshot Inc. Company’ (2023)

Overview

This article presents an in-depth case study of Snapshot Inc., exploring the complex interplay of factors that define its global business strategy. It examines how corporate capabilities, market insights, employee productivity, communication in inventory management, financial performance, and risk management collectively influence strategic decisions and performance in the international arena. The analysis aims to provide valuable insights into the dynamics of these determinants and their interconnected impact on Snapshot Inc.'s approach to navigating the global business landscape. This review examines the underlying mechanisms that drive the company's success or present challenges within the complexities of global commerce.

Strengths

The article offers a detailed examination of Snapshot Inc.'s global business strategy, exploring various dimensions such as corporate capabilities, market insights, labor productivity, inventory management practices, financial performance, and risk management strategies. This analysis provides a comprehensive understanding of the strategic dynamics at play, enabling readers to appreciate the complex interactions influencing the company's approach to global business. Additionally, the case study's practical examples underscore the real-world applicability of strategic decisions, enhancing the article's value as a resource for analyzing global business strategies. The strengths of this work are its analytical depth, comprehensive scope, and relevance to practical scenarios, making it a valuable guide for evaluating global business strategies.

Weaknesses

The case study provides valuable insights into Snapshot Inc.'s global business strategy, it may lack generalizability to other companies or industries. The findings and recommendations derived from Snapshot Inc.'s experience may not be directly applicable to organizations operating in different sectors or facing distinct market dynamics. Additionally, the case study approach may have inherent biases or limitations based on the availability and interpretation of data, potentially overlooking broader trends or industry dynamics. Therefore, readers should approach the findings with caution and consider the specific context and circumstances of Snapshot Inc. when drawing parallels to their own strategic challenges and decisions.

Article Critique

The case study provides valuable insights into the global business strategy of Snapshot Inc., offering a detailed overview of its approach to maintaining competitiveness through low-cost production. However, the lack of external analysis and critical review of strategy effectiveness somewhat diminishes the article's utility in offering a holistic view of strategic management in a global context. Incorporating these elements could greatly enhance the article's value, providing readers with a more rounded understanding of how internal capabilities and external market forces interact.

Recommendations

To enhance its global business strategy, Snapshot Inc. needs to conduct a thorough analysis of market trends, competition, and technology. Adopting a balanced scorecard approach will offer a holistic evaluation framework, focusing on financials, customers, processes, and innovation. By prioritizing product innovation and quality while maintaining cost leadership, Snapshot Inc. can significantly differentiate itself. Moreover, boosting digital marketing efforts and online sales channels will align the company with current e-commerce trends, potentially broadening its market reach and customer base.

Conclusion

In synthesizing insights from four scholarly articles, this report explores the complex dynamics of global business strategy and suggests strategic solutions to address these challenges. These articles demonstrate the complexity of global business strategies, where differentiation alone is not sufficient in today's complex business landscape. They advocate for an integrated approach that considers the nuances of market intelligence, the agility to adapt to rapidly changing market conditions, and the innovative capacity to sustain competitive advantage. This comprehensive analysis underscores the importance of aligning strategic initiatives with the global business environment, suggesting that success depends not only on understanding and responding to diverse market demands but also on navigating global dynamics with foresight and flexibility.

Therefore, this report concludes that businesses aiming for success in the global marketplace must adopt a holistic strategic framework that goes beyond differentiation. Such a framework should incorporate robust market research, competitive analysis, cultural sensitivity, and an agile, innovative approach to strategy formulation and execution. By doing so, businesses can effectively navigate the complexities of the global business environment, ensuring sustainable growth and a durable competitive edge in an ever-evolving market landscape.

Article Overview

No	Author and Year	Article Title	Article Overview	Strengths	Weaknesses	Summarize Your Critique
1	Irfan Azis, Maulina Nabila, 2023.	Business Strategy in Facing the Global Economy	The article explores business strategies in the global economy. It suggests differentiation, low cost, focus, and collaboration, yet lacks quantitative support, affecting empirical validity.	Offers practical adaptation strategies for businesses in the global economy. Utilizes qualitative research methods for in-depth analysis.	Lacks quantitative data to support conclusions.	Future research should emphasize practical implementation of strategies, considering industry-specific influences and market conditions for nuanced, effective business guidance.
2	Frans Sudirjo, 2023	Marketing Strategy in Improving Product Competitiveness in the Global Market	Sudirjo highlights effective marketing's pivotal role in global competitiveness. Qualitative analysis unveils the interplay of market forces and tactics, offering strategies for market enhancement.	Focuses on enhancing product competitiveness through strategic marketing. The qualitative approach yields deep insights.	Focuses more on theoretical aspects than practical implementation.	Future research should use empirical data to compare strategy success across markets and explore how AI and big data enhance global marketing effectiveness.
3	Y. Cao, Lei Zhang, 2023	U.S. Business Schools' Expansion to The Global Market: Positioning Strategy and Market Competition	This article examines U.S. business schools' global market position, focusing on internationalization efforts and challenges, offering insights into educational	Examines the trend of internationalization in business education. Provides comprehensive enrollment data and strategic analysis.	Focus is limited to U.S. business schools, reducing applicability to broader global business strategy discussions.	Future research should analyze outcomes from schools using these strategies and explore digital technologies in business education

No	Author and Year	Article Title	Article Overview	Strengths	Weaknesses	Summarize Your Critique
			sector expansion strategies.			internationalization to enhance global competitiveness.
4	Engr Gazi Farok, 2023	Global Business strategy - A case study on the 'Snapshot Inc. Company'	Farok's article examines Snapshot Inc., exploring how corporate capability and market data influence global business strategy, offering practical insights for similar contexts.	Offers a case study approach to understanding global business strategy. Highlights the multifaceted aspects of strategic management.	The findings, specific to Snapshot Inc., might lack generalizability. An absent abstract hinders initial comprehension of the article's scope and findings	Snapshot Inc. should analyze market trends, competitors, and technology. Adopting a balanced scorecard, focusing on innovation, cost leadership, and enhancing digital marketing, will expand market presence.

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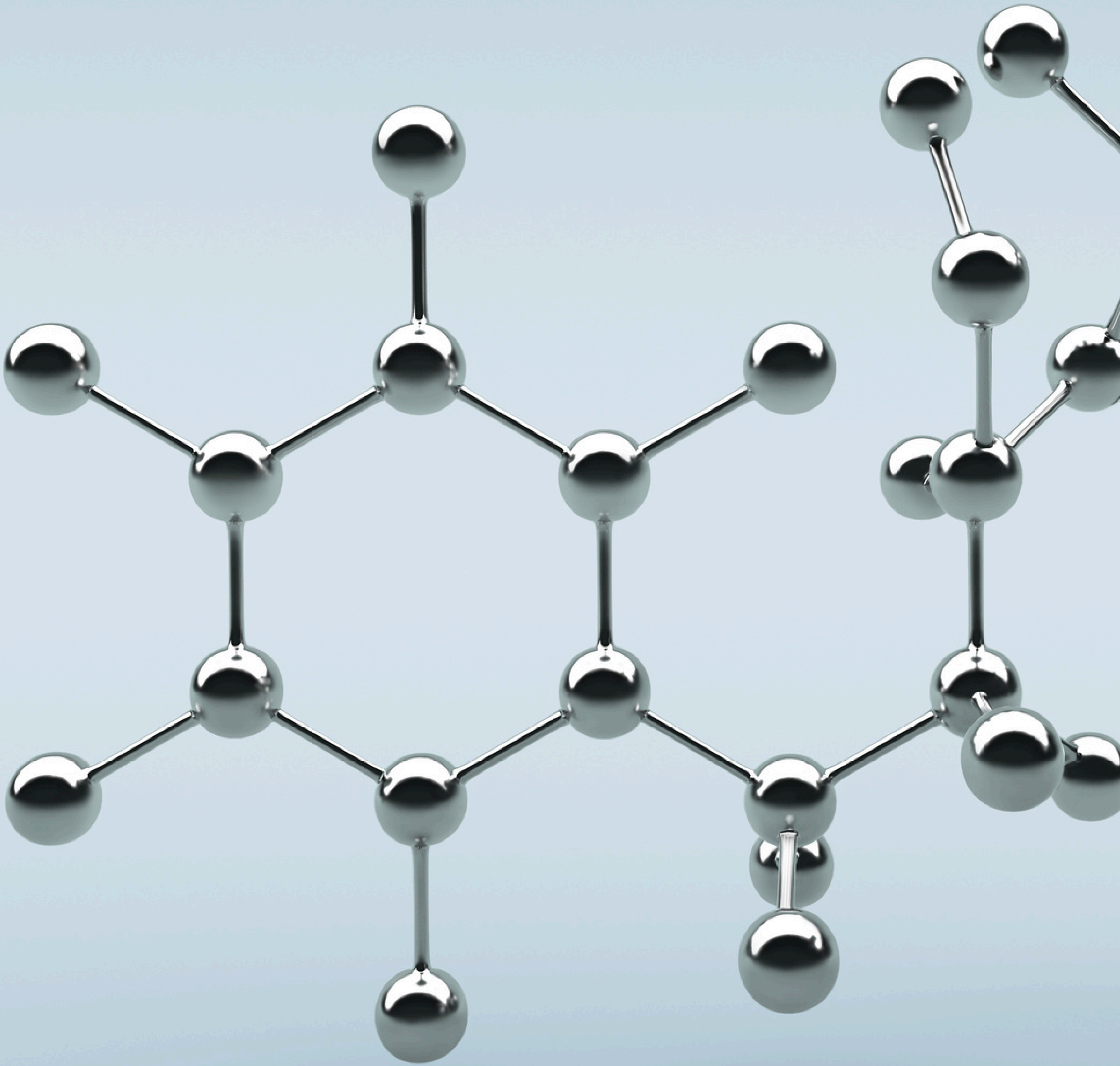

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