Socio-Economic and Cultural Aspects of Use of Technology in Marketing: An Empirical Study of New-Age Tech-Based Ventures

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ABSTRACT
Fueled by technological breakthroughs, marketing has experienced a sea change. Exploiting a range of digital tools to modern business operations is the trend. These changes alter consumer behaviour, affect company development, and shift market dynamics. Technological adoption by businesses is propelled primarily by three factors: socio-economic, affordability, and digital literacy. Information technology has proven it can drive down the actual and psychological costs of setting up. It even allows new entrants to compete against established firms in the Market. For one thing, digital marketing resources supply small businesses with inexpensive means to reach people worldwide. The odds are even. Rather than perpetuating to the specifications of their tools culture, materials impact how people receive new technology--with factors like local habits and language biasing acceptance. Marketers, therefore, need to understand these factors as they lay out strategies for a given market. The Ascendancy of Social Media has Geared into the Market. New vistas are opened to businesses through direct communication channels. Unexpected next-this marks the arrival of personalised marketing strategies calling on data analytics to power them. They serve to deepen customer involvement and customer retention. It is all a question of economy when business takes to the technology highway. Companies in high growth zones may introduce digital tools quickly, while those areas, perhaps needing to conserve resources, take things more gently. There are specific requirements arising from the legal policies of the government, too. To some degree, they determine how the enterprise handles data or how platforms are used in marketing operations. Socio-economic and cultural factors meet in the area of technology-based marketing. A sample of 261 was collected to find the result of the study. The main socio-economic and cultural factors impacting the Use of Technology in Marketing are Income level & Economic development, Education and Technological Literacy, Consumer Privacy and Trust, and Influence of social media.

Keywords – Technology in Marketing, Socio-Economic Impact, Cultural Influence, Digital Marketing, Tech-Based Ventures.

Introduction

From a technology in a marketing perspective, social considerations concern Steven Sundman's changing consumer habits and lifestyle changes, changes in modes of communication and ethical issues related to digital tools. At the same time, social media channels, search engines and e-commerce sites allow businesses to link up with customers, providing them with real-time advice that is customized and immediate answers. Furthermore, Sineviciene et al. (*2021*) This fast interaction process builds up a close relationship between brands and the end user, bringing great benefits for both parties. Nevertheless, the ongoing collection of consumer data raises ethical questions about privacy, consent and information security. Companies must guard against these threats while maintaining an appreciation for them in digital exchanges.

Adopting technology in marketing is driven by economic factors, influencing business efficiency, cost management and market broadening. Automation tools, targeted advertising, and digital content strategies all reduce marketing expenses even as they increase their reach. In digital marketing, small and medium-sized enterprises face lower entry barriers, which allows them to compete with larger companies. In particular, Curry et al. (*2021*) greater reliance on technology brings economic risks— for instance, competition among the algorithms and what regulations will come from platform owners. All this affects a business's visibility and profitability. Cultural factors influence how businesses put technology to work in their marketing strategies and what kind of responses they receive from consumers. Large digital platforms expose consumers to diverse products, services and cultures— People's own experiences and biases often come into direct conflict with those of others. This affects their shopping behaviour and the reputation of brands. Cultural differences pose a problem in marketing materials production, as businesses have to ensure that their campaigns resonate with specific groups while maintaining an international presence. The issue is that brand image and local conditions sometimes do not match each other.

Additionally, Urbano et al. (*2019*) Loading campaigns from market to market accordingly, then rewriting input materials should be adapted strictly according to community habits is important if businesses preserve the same format throughout different nations, taking all behinds into account. Social media platforms serve as the primary marketing channels where companies can present content, engage with customers and conduct targeted advertising campaigns. On these platforms, brands and customers converse, inviting participation through comments, shared data and direct communications. Also, consumer-generated content such as opinions, experience stories and so on further strengthens brand impressions. Risks for businesses on social media include data privacy, ethical issues, and false information. The adoption of different digital tools in businesses varies based on the economic conditions, affordability and digital literacy. These tools are valuable in improving efficiency and reducing costs, as well as reaching other markets by allowing for data-driven decision-making. Through digital platforms businesses can interact directly with consumers, interacting with them via more personalised content and targeted campaigns. With this change, consumers are now demanding transparency when it comes to how their data is being used, which calls for businesses to find the right balance between personalisation and a responsible approach to data so as to not lose trust. Personalization has become a key factor of digital marketing, with businesses using their consumers' data to present advertising, suggestions and other content. While personalized marketing increases user satisfaction, companies must be mindful of new dangers, such as surveillance or bias discounting, that may arise from adapting products according to individual user preferences.Moreover, Cruz-Cárdenas et al. (*2019*) Businesses find themselves caught between the consumer's two needs for personalization on the one hand and trusteemed from above, open data

source on the other. Influencer marketing is an important trend in digital advertising, where companies work with social media influencers to promote products and services.

An influencer's work as a long-term powerholder brings aesthetic enjoyment and shapes the consumer's attitude and purchasing choices. Whether influencer marketing is effective or not depends on authenticity, engagement and audience trust. Nevertheless, problems occur when influencers do things like this, leading to bad situations: Ads aren't true or reliable. This, in turn, poses a new challenge for businesses, which must pick and carefully choose partners where the recommended practices align with their own values and brand image by, Nguyen et al. (*2022*). As the power of online advertising platforms grows, small businesses and startups especially benefit from digital marketing cost efficiency. Pay-per-click advertising, search engine optimization, and social media marketing are economic alternatives to traditional advertising. So, startups using brand-new technology can build an image and customers and gain a fairly level playing field with large corporations. However, digital marketing does demand continuous investment in content creation, campaign management and platform optimization, posing financial dilemmas for startup businesses with small budgets. Algorithm-driven marketing applications such as Google Ads and Facebook Ads influence positioning and customer reach.

Likewise, Kumar et al. (*2021*) Platform algorithms use machine learning to analyze user behaviour and tailor advertisements. While this makes marketing more effective, businesses depend on platform algorithms, which are subject to change and update. Algorithm changes can affect advertising performance, necessitating businesses to reposition strategies frequently. The unpredictability of algorithmic changes brings financial instability, as enterprises must invest in ongoing optimization to remain visible. E-commerce platforms open the door to international markets, allowing companies to reach global audiences. With sites like Amazon, Shopify and regional e-commerce platforms, enterprises no longer face geographical limitations for selling their goods. This, in turn, generates more competition because the business has to distinguish itself in branding user environment and price considerations. With manufacturers selling directly to customers, traditional supply chains have been transformed into a new pattern that cuts out intermediaries and raises profits. However, logistics, distribution and after-sales service are important for maintaining customer satisfaction and business growth.

Literature review

The use of technology in marketing has transformed the world of business and, at the same time, exerted its influence on social and economic aspects and cultural dimensions. Socio-Economic Aspects.Global markets are uncovered, allowing businesses of all sizes to use an online presence. E-commerce platforms take products made in one location and sell them everywhere else globally with minimal physical infrastructure costs. Specifically, Grewal et al. (*2020*) small and medium enterprises (SMEs) can compete with big companies, promoting competition and innovation. Nevertheless, entering such an open global market also means businesses will have to alter their strategies in line with Quite different areas. The rise of digital marketing has created a demand for new expertise. Professions in data science, content creation and social media management have emerged, transforming the nature of work. The marketing industry's structure and learning modality have also had to evolve.

Conversely, Marasco et al. (*2018*) highlights the need for institutions that educate marketers to update curricula according to the industry's requirements, replacing outdated rules with new ones reflecting technological changes while providing an education that bridges theory and practical work. While

technology presents many opportunities, it also deepens socio-economic disparities. If Internet access is lacking in a region, businesses face great difficulties adopting digital marketing strategies. This digital division can worsen existing inequalities among people- and limit economic growth within less privileged areas. Addressing infrastructure gaps and running digital literacy programs are the footholds for joining in growth, which benefits everyone. The digital platform provides a place where people can detail their identities and interests. The kind of person you are and how what you wear impacts others around you becomes linked with the way in marketers' minds. Marketers who understand how digital identity is expressed and its place concerning consumer behaviour can create more authentic marketing strategies that feel real EA quality. Ethical issues come into play with the use of cultural icons for marketing.

Furthermore, Blut and Wang (*2020*) If a symbol is used insensitively or without credit given to the relevant culture, it can mean repudiation from that society and damage the public image. Once an inadmissible situation arises, rectifying the mistake usually comes at a considerable cost in terms of resources and time, so it may not be possible for all companies to do this. Engaging cultural consultants and involving community voices in developing campaigns can mitigate this risk and promote more respectful use of cultural symbols. Social media platforms are a hotbed of cultural trends, rapidly spreading ideas and fashions. Marketers monitor these sites to detect the first signs of new trends and introduce them into marketing campaigns. Real-time involvement requires flexibility and an understanding of the culture for marketing activities to be relevant and entertaining. Viral marketing can bring huge economic benefits when the public is instantly aware of a brand. However, virality may backfire as negative content also spreads as quickly. In contrast, Katsikeas et al. (*2020*) Marketers must fashion campaigns that attract attention and instil values consistent with a brand ethos to avoid possible negative repercussions. Technological improvements are raising consumer expectations of the shopping experience. Marketers need to use augmented reality and chatbots that meet these expectations. This integration builds engagement but requires continuous development work to keep up with technological changes.

Equally, Chaffey and Smith (*2022*) The fast pace of technological change demands that marketers be adaptive. Continuous learning, along with some practical applications of their tools, is the way to stay competitive. Creating an innovative culture inside marketing teams promotes flexibility and an ability to seize new opportunities.Collecting and analyzing consumer data brings personalized marketing administrations, improving the mall user experience. However, the use of industry-wide practices shows privacy concerns rising as people suspect the handling of their information. Marketers must balance personalization with respect for privacy, as this forms a major challenge: they also need transparent data and adherence to regulation. Ethical data management is crucial for sustainable personalized marketing, building trust and long-term customer relationships.Advances in technology raise consumer expectations of seamless, interactive experiences. Marketers thus need to embrace augmented reality and chatbots. Integration changes operations, but new developments keep pace with it.Marketing strategies will have to stay abreast of technological trends if they are to remain applicable and effective.As businesses move globally, understanding and respecting cultural norms becomes all-important.

Meanwhile, Grewal et al. (*2020*) Marketers must put money into cultural research and bring in local experts to ensure adequate and workable campaigns they stage. This preemptive move ensures that no cultural clangers so prevalent these days bring disgrace to a brand. A marketing team that knows about cultural sensitivities can enhance the effectiveness of global campaigns through training.Discipline in the use of consumer data remains a key issue. Marketers must enact strong data

protection measures and communicate how data is used transparently. Trust in ethical practices builds consumer relationships, protecting against legal risks using ethical data management.As technology advances further and further, consumers change their behaviour and expectations. Now, people want personalized experiences and instant replies from brands. To this marketers must apply the technology in question for data analysis and trends projection, requiring thus proactive engagement strategies. However, reliance on technology also leads to problems with data privacy; social media platforms are increasingly influential in culture-created narratives and consumer attitudes.

In particular, Dibb et al. (*2019*) discuss key marketing concepts Brands use these platforms to talk with consumers, share content and join in theirs. Such engagements necessitate an understanding of the peculiar received wisdom and user habits of platforms. Lapses can lead to ridicule, but brand loyalty and cultural resonance will be gained if campaigns are successful.Subscription economies are taking over as many sectors shift to this model, leaving consumers with round-the-clock access to products and services. This change affects marketing strategies, concentrating on customer retention and long-term commitment rather than just one-off sales. Marketers must create content and experiences that keep their subscribers engaged and loyal.Consumers are increasingly concerned with environmental sustainability and corporate social responsibility. Brand brands can distinguish themselves on the market by featuring a commitment to these areas in their branding. Moreover, this allows marketers to communicate authentically about our company's commitments. A firm must walk the walk for its environmental effects, not just talk green.User-generated content (UGCs) allows brands and consumers to forge a union, creating community and trust. By encouraging consumers to create and share content around a brand, marketing efforts can be multiplied and real testimonials obtained.

Additionally, Saura (*2021*) On the other hand, brands need to navigate the unforeseeability that UGC entails and maintain stringent quality controls to protect the image of their brands.With the rise of digital platforms, brand loyalty dynamics have changed.Consumers have access to a myriad of choices and information today.If you are not supplying does not just stem from delivering values consistently, building close relationships individually and receiving natural feedback; it will be impossible for consumers with so many choices to remember you.Marketers in this intense competitive terrain must innovate in building deep ties that will draw customers back to the product.Storytelling serves as a powerful marketing tool.It allows companies to convincingly communicate their messages in storytelling form that audiences can appreciate and believe.Effective storytelling techniques can humanize brands, arouse emotions and create a memorable customer experience.Marketers must create stories aligning with their brand's values and resonating with the intended audience.Peer reviews and customer testimonials now play an influential role in consumer purchasing decisions.Indeed, satisfied customers who are encouraged to talk about their experiences can enhance a company's credibility and attract new customers.Marketers should encourage and shine a light on genuine testimonials while dealing with negative feedback constructively.

The advent of voice-activated assistants has changed how consumers look for information: voice search optimization is becoming more crucial than text.Marketers, therefore, need to optimize content specifically for voice interactions.Using collected consumer data makes marketing more personalized, offering service users a fresh experience.However, this practice poses privacy problems, and as consumers wake up to data misuse, they become guarded. Moreover, Husin et al. (*2022*) Balancing the personal touch with respect for privacy is a major challenge for marketers and requires clear and open data use policy-making, plus strict adherence to regulations. It is critical to establish trust through ethical management of the data used in personalized marketing, both for the

sake of users and for the future sustainability and development of personalized mar.Viral marketing campaigns can quickly increase brand visibility, leading to significant economic rewards. But virality is unpredictable, and should undesired content become widespread, campaigns can lose both attention and goodwill.Marketers need to conduct campaigns which will attract attention yet are still in line with brand values. Doing Viral Marketing RightSymphony to the key of strategic advertising, Marketing Sui, The bricoleur public relations among the facets of a viral marketing strategy, active preparation and standby measures are indispensable.On the one hand, brands need to take a meaningful stand on environmental sustainability and corporate social responsibility today. Positioning itself in these respects will allow a brand to stand out from competitors.Marketing strategies should earnestly translate these commitments into action so that they are tangible. This involves more than giving form to hollow words--it means guiding them with information and concrete actions. Companies cannot even appear to "greenwash" their efforts; they make people think they are practising environmentally friendly technologies.

Objective
To study the Socio-Economic and Cultural factors affecting Use of Technology in Marketing.

Methodology
A sample of 261 participants were collected from customers in different sector. The method of sampling was "Random sampling" for collection of data and examination was done by "Explanatory Factor Analysis" for results.

Findings
The table demonstrates demographic details, it shows that 52.87% are Male, 47.13% are female. Looking at the age, 34.09% are between 30 to 35 years of age, 34.86% are between 35 to 40 years of age, and 31.05% are above 40 years of age. With regards to Type of sector, 31.80% is Clothing & Apparel, 39.46% is Food & Beverages, and 28.74% is Electronic.

Participant's Details

Variables	Participants	Percentage
Gender		
Male	138	52.87%
Female	123	47.13%
Total	**261**	**100**
Ages in years		
30 to 35	89	34.09%
35 to 40	91	34.86%

Above 40	81	31.05%
Total	**261**	**100**
Type of Sector		
Clothing & Apparel	83	31.80%
Food & Beverages	103	39.46%
Electronics	75	28.74%
Total	**261**	**100**

"Factor Analysis"
"KMO and Bartlett's Test"

"Kaiser-Meyer-Olkin Measure of Sampling Adequacy"		.758
"Bartlett's Test of Sphericity"	"Approx. Chi-Square"	4353.549
	df	91
	Significance	.000

"KMO and Bartlett's Test", value of KMO is .758

"Total Variance Explained"

"Component"	"Initial Eigenvalues"			"Rotation Sums of Squared Loadings"		
	"Total"	"% Of Variance"	"Cumulative %"	"Total"	"% Of Variance"	"Cumulative %"
1.	6.308	45.059	45.059	**3.739**	26.706	26.706
2.	2.734	19.528	64.587	**3.689**	26.349	53.056
3.	1.806	12.902	77.488	**2.524**	18.026	71.082
4.	1.387	9.908	87.397	**2.284**	16.315	**87.397**
5.	.433	3.095	90.491			
6.	.432	3.086	93.577			
7.	.217	1.551	95.128			
8.	.180	1.286	96.413			
9.	.173	1.235	97.648			
10.	.116	.829	98.477			
11.	.080	.569	99.046			
12.	.065	.464	99.510			
13.	.041	.291	99.801			
14.	.028	.199	100.000			

The four factors contribute towards explaining total 87.397% of variance. Variance that is explained by Income level & Economic development is 26.706%, Education and Technological Literacy is 26.349%, Consumer Privacy and Trust is 18.026%, and Influence of social media is 16.315%.
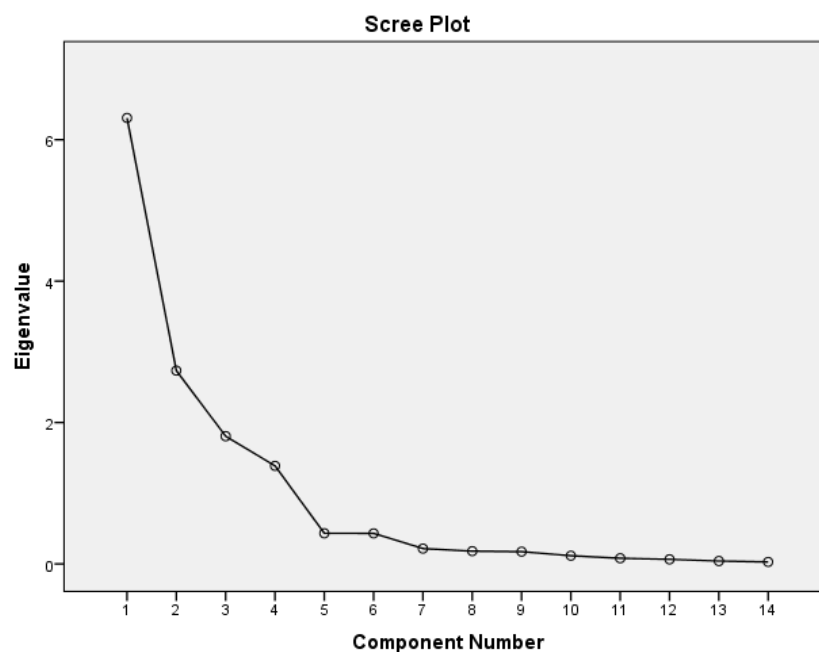
Scree Plot

"Rotated Component Matrix"

S. No.	Statements	Factor Loading	Factor Reliability
	Socio - Economic Factor: - Income level & Economic development		**.952**
1.	Income affects purchasing power, which in turn influences the way consumers engage with technology	.943	
2.	Higher-income consumers may have access to more advanced technologies (smartphones, smart homes)	.880	
3.	Digital advanced technologies like AI, VR, and data analytics are used to personalize marketing campaigns	.866	
4.	Economic downturns lead businesses to adapt focus cost-effective solutions & technology	.848	
	Education and Technological Literacy		**.965**

1.	Educational level towards technology in a society affect consumers interaction with digital marketing	.960	
2.	High-tech marketing strategies like AI & chatbot may be more effective	.910	
3.	Educating consumers on using digital tools can increase engagement with online platforms	.904	
4.	High levels of tech literacy make technology adoption easy and comfortable	.885	
	<u>Cultural Factors</u>: - Consumer Privacy and Trust		**.882**
1.	Brands that are transparent about their sustainability efforts are more likely to build trust with consumers	.920	
2.	Marketers must ensure transparency in how customer data is used	.835	
3.	Marketers must understand the level of trust that consumers place in technology	.820	
	Influence of social media		**.819**
1.	Social media serve as marketing channels to engage with customers and conduct targeted advertising	.932	
2.	Regulations that encourage sustainability, make consumers confident in purchase decisions	.924	
3.	Pay-per-click advertising, search engine optimization, and social media marketing are economic alternatives	.614	

Factors of the study and its related variables

The first factor of the study is Income level & Economic development, the variables it include are Income affects purchasing power, which in turn influences the way consumers engage with technology, Higher-income consumers may have access to more advanced technologies (smartphones, smart homes), Digital advanced technologies like AI, VR, and data analytics are used to personalize marketing campaigns, and Economic downturns lead businesses to adapt focus cost-effective solutions & technology. Education and Technological Literacy is the second factor, it includes variables like, educational level towards technology in a society affect consumers interaction with digital marketing, High-tech marketing strategies like AI & chatbot may be more effective, educating consumers on using digital tools can increase engagement with online platforms, and High levels of tech literacy make technology adoption easy and comfortable. Third factor is Consumer Privacy and Trust, its variables are Brands that are transparent about their sustainability efforts are more likely to build trust with consumers, Marketers must ensure transparency in how customer data is used, and Marketers must understand the level of trust that consumers place in technology. Last and fourth factor is Influence of social media, its variables are Social media serve as marketing channels to engage with customers and conduct targeted advertising, Regulations that encourage

sustainability, make consumers confident in purchase decisions, and Pay-per-click advertising, search engine optimization, and social media marketing are economic alternatives.

"Reliability Statistics"

"Cronbach's Alpha"	"Number of Items"
.894	14

Total reliability of 14 items that includes variables for Socio-Economic and Cultural factors affecting Use of Technology in Marketing 0.894.

Conclusion

Consumer behavior, business strategies and the market of which companies are a part are all shaped by technology. Digital tools expand a company's reach, lower costs, and personalize customer interaction. Social media platforms keep companies in touch with consumers, promote customer loyalty and heighten brand awareness. Data analytics drives advertisements that will reach specific consumer targets, though it faces issues related to privacy and ethics. Automation and artificial intelligence come to businesses through consumer demands for personalized experiences and "always-on" responsiveness. The marketing is thus all about rather than single sales selling continuingly subscriptions. Despite privacy concerns, businesses must engage in ethical data management, taking advantage of consumer insights from their activities as a resource for personalized marketing. User-generated content adds credibility to a brand, but it brings problems in maintaining control over quality. Voice search and Artificial Intelligence are changing the ways consumers relate to brands, requiring that companies build a digital presence so they can shape the future. For marketers, balancing ethical responsibility and innovation is key to sustaining consumer trust. Technology continues to develop, requiring flexibility and strategic planning from businesses that hope to succeed. Moreover, as these operations occur between countries worldwide, it is essential to recognize that many social and economic factors will also impact what can be done in international marketing operations. The main socio-economic and cultural factors impacting the Use of Technology in Marketing are Income level & Economic development, Education and Technological Literacy, Consumer Privacy and Trust, and Influence of social media.

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