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BIZNESA VADĪBA



Kristīne Broka. BŪVUZŅĒMUMU KONKURETSPĒJA LATVIJĀ UN TO IETEKMĒJOŠIE FAKTORI

Ekonomikas un kultūras augstskola

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Anotācija

Pētījuma aktualitāte: Būvuzņēmumu konkurētspēju ietekmējošo faktoru definēšanai ir ļoti liela nozīme gan valsts, gan arī Latvijas būvuzņēmumu kontekstā. Būvniecības nozare ir svarīga valsts ekonomikas daļa. Ņemot vērā šīs nozares ciešo saikni ar investīciju vidi un darba tirgu, tās konkurētspējas analīze kļūst īpaši būtiska ilgtermiņa plānošanai. Konkurētspēju ietekmējošo faktoru noteikšana ļauj precīzāk izprast, kādi apstākļi veicina vai arī kavē uzņēmuma izaugsmi un ilgtspēju. Šāda analīze sniedz skaidrāku priekšstatu par tirgus dinamiku, palīdzot uzņēmumiem pielāgot savas darbības tirgus mainīgajiem apstākļiem. Vienlaikus, ja faktori tiek analizēti krietni plašākā mērogā, piemēram, kādā noteiktā nozarē, iespējams izstrādāt daudz efektīvāku nozares attīstības stratēģiju, veicinot kopējo valsts ekonomikas attīstību un, līdz ar to, arī sabiedrības labklājību.

Pētījuma mērķis: Izvērtēt Latvijas būvuzņēmumu konkurētspēju ietekmējošos faktorus.

Pētījuma metodes: Ar kvalitatīvās pētījuma stratēģijas palīdzību tika iegūti un analizēti primārie dati no daļēji strukturētām intervijām. Iepriekš sagatavots jautājumu saraksts ļāva darba autoriem izprast būvniecības nozares ekspertu viedokli par faktoriem, kas ietekmē būvuzņēmumu konkurētspēju Latvijā. Kopumā tika veiktas sešas daļēji strukturētas intervijas ar būvniecības nozares ekspertiem.

Sasniegtie rezultāti: Būvuzņēmumu konkurētspēju Latvijā ietekmē daudz dažādu faktoru – kopumā tika identificēti 19 ietekmes aspekti. Šobrīd no tiem konkurētspēju visspēcīgāk ierobežo nodokļu slogs, zemākās cenas principa piemērošana iepirkumos, tirgus neprognozējamība, ierobežots tirgus apjoms, darbaspēka (tostarp kvalificētā) trūkums, korupcija un netaisnīga konkurence, administratīvais slogs un birokrātiskais aparāts.

Atslēgas vārdi: konkurētspēja; konkurētspēju ietekmējošie faktori; būvuzņēmumi.

Ievads

Būvniecības sektors ieņem nozīmīgu lomu valsts ekonomikā – būvniecības nozare ne tikai rada un nodrošina iesaistītu darbinieku skaitu valstī, bet arī veido nozīmīgu daļu no valsts iekšējā kopprodukta, veicina infrastruktūras attīstību, uzlabo iedzīvotāju dzīves kvalitāti, vienlaikus spēj radīt pievilcīgu vidi investīcijām, kā arī pozitīvi ietekmē citus valsts tautsaimniecības sektorus. Definējot būvuzņēmumu konkurētspēju ietekmējošos faktorus, būvuzņēmēji spēj savlaicīgi reaģēt uz tirgus svārstībām, identificējot uzņēmuma stiprās un vājās puses – proti, šāda pieeja ļauj uzņēmumam saglabāt konkurētspēju ilgtermiņā. Savukārt valstij, iesaistoties būvuzņēmumu ietekmējošo faktoru definēšanā un analīzē, rodas iespēja uzlabot būvniecības sektoru valstī kopumā, piemēram, pārskatot būvniecības normatīvos regulējumus un nozares stratēģiju, izstrādājot noteiktus atbalsta mehānismus, tādējādi ne vien stiprinot būvuzņēmumu konkurētspēju visā nozarē, bet veicinot arī valsts attīstību, un līdz ar to arī tādējādi arī sabiedrības labklājību kopumā.

Pētījuma galvenais mērķis ir izvērtēt Latvijas būvuzņēmumu konkurētspēju ietekmējošos faktorus. Lai sasniegtu šo mērķi, pētījuma autore izvirza šādus uzdevumus:

- Izpētīt teorētisko bāzi par konkurētspēju ietekmējošiem faktoriem būvniecības nozarē;
- Izvērtēt pašreizējo tirgus situāciju būvniecības nozarē Latvijā;
- Apzināt un analizēt būvuzņēmumu konkurētspēju ietekmējošos faktorus būvniecības nozarē Latvijā;
- Identificēt būtiskākos būvuzņēmumu konkurētspējas šķēršļus būvniecības nozarē Latvijā;
- Izstrādāt secinājumus un priekšlikumus būvuzņēmumu konkurētspējas pilnveidei Latvijā.

Tiek izvirzīts sekojošs pētījuma jautājums – kādi ir konkurētspēju ietekmējošie faktori būvniecības nozarē Latvijā?

Pētījuma objekts bija – būvuzņēmumu konkurētspēja un to ietekmējošie faktori; pētījuma priekšmets – Latvija.

Darba pētījuma metodes ietvēra daļēji strukturētas intervijas ar būvniecības nozares ekspertiem. Daļēji strukturētajās intervijās piedalījās seši respondenti.

Pētījums veikts laika posmā no 2025. gada aprīlim līdz 2025. gada maijam.

Pētījums veikts par būvniecības nozares NACE 2.red. kods 41 (ēku būvniecība), NACE 2.red. kods 42 (inženierbūvniecība), NACE red. kods 43 (specializētie būvdarbi).

Daļēji strukturēto interviju rezultātā tika izgūti, apkopoti un analizēti primārie dati, kas sniedza atbildes uz pētījuma izvirzīto jautājumu. Intervijas gaitā darba autore tostarp izmantoja Osguda skalu, kas ļāva respondentiem savus definētos būvuzņēmumu konkurētspējas ietekmējošos faktorus novērtēt arī pēc piecu punktu skalas, tādējādi nosakot katra faktora ietekmes pakāpi uz būvuzņēmumu konkurētspēju. Apkopojot daļēji strukturēto interviju rezultātus tostarp tika izstrādāti secinājumi un priekšlikumi būvuzņēmumu konkurētspējas pilnveidošanai Latvijā.

Analītiskais apskats

Konkurētspējas jēdziena definēšana ir kļuvusi īpaši aktuāla līdz ar globalizācijas procesiem, piesaistot daudzu pētnieku un zinātnieku uzmanību. Pēdējās desmitgadēs ir publicēts daudz zinātnisko darbu, kuros tiek pētīti konkurētspējas jēdziens un konkurētspējas ietekmējošie faktori, kā rezultātā konkurētspējas jēdziens periodiski tiek pārskatīts un transformēts (Bhawsar & Chattopadhyay, 2015).

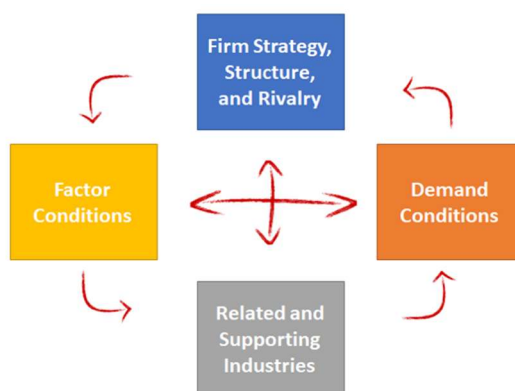
Konkurētspējas definīcijai ir daudz variāciju – to var definēt un pētīt atkarībā no tā, vai tiek vērtēti atsevišķi uzņēmumi, kāda atsevišķa nozare, reģions, valsts kopumā vai arī starptautiskā vide.

Eiropas Savienības ekonomikas komisārs Valdis Dombrovskis konkurētspēju sasaista kopā ar produktivitātes jēdzienu, paužot viedokli, ka abi koncepti nav nodalāmi, tostarp uzsverot, ka konkurētspēju ietekmē daudz dažādu faktoru, piemēram, biznesa vide, dažādu inovāciju ieviešana, finanšu instrumentu pieejamība, kopējais darba tirgus regulējums, kā arī normatīvais regulējums (Dombrovskis, b.g.). Ņemot vērā, ka jēdziens “konkurētspēja” ir ticis atvasināts no jēdziena “konkurence”, tad pēc būtības abu jēdzienu ekonomiskā nozīme semantiski ir identiska – proti, ja ar vārdu “konkurence” tiek saprasta ekonomisko subjektu savstarpējās sacensības, tad konkurētspēja ir subjektam piemītošas īpašības, kas dod šim ekonomiskajam subjektam iespēju veikt tādas darbības, kuras ļauj tam gūt panākumus šajās sacensībās (Михайлов, 1999 kā citēts Repše, 2017). Proti, ja konkurētspēju vērtē uzņēmumu kontekstā, tad individuāla uzņēmuma konkurētspēju raksturo tā priekšrocības pār konkurentiem un parasti ir saistīta ar tā spējām izdzīvot tirgū un gūt peļņu.

Konkurētspēju ietekmējošo faktoru definēšanai ir liela nozīme nozares kontekstā – definējot šos faktorus un nosakot tostarpu uzņēmumu konkurētspējas vajākos punktus, uzņēmējiem rodas iespēja pārskatīt sava uzņēmuma stratēģisko plānošanu, lēmumu pieņemšanas tendences, identificēt draudus un savas iespējas reāllaikā, pārskatīt resursu izmantošanu, tādējādi iegūstot iespēju uzlabot savu ekonomisko stabilitāti tirgū, savukārt valdības līmenī rodas iespēja pārskatīt konkrētās nozares normatīvos regulējumus un stratēģiju kopumā, veicinot pozitīvas pārmaiņas. Konkurētspēju ietekmējošo faktoru noteikšana ļauj precīzāk izprast, kādi apstākļi veicina vai kavē uzņēmuma izaugsmi un ilgtspēju. Šāda analīze sniedz skaidrāku priekšstatu par tirgus dinamiku, palīdzot uzņēmumiem pielāgot savas darbības tirgus mainīgajiem apstākļiem. Vienlaikus, ja faktori tiek analizēti plašākā mērogā, piemēram, visā nozarē, iespējams izstrādāt daudz efektīvāku nozares attīstības stratēģiju, jo uzņēmumu konkurētspēja ir būtiska ne vien pašu uzņēmumu un nozares izaugsmes, bet arī nozares ilgtspējas un kopējās stabilitātes nodrošināšanai, jo tieši konkurētspējas rādītāji norāda uz nozares spēju pārdot savus produktus, preces vai pakalpojumus tirgū, sacenšoties ar citiem tirgus dalībniekiem (BASE, 2016).

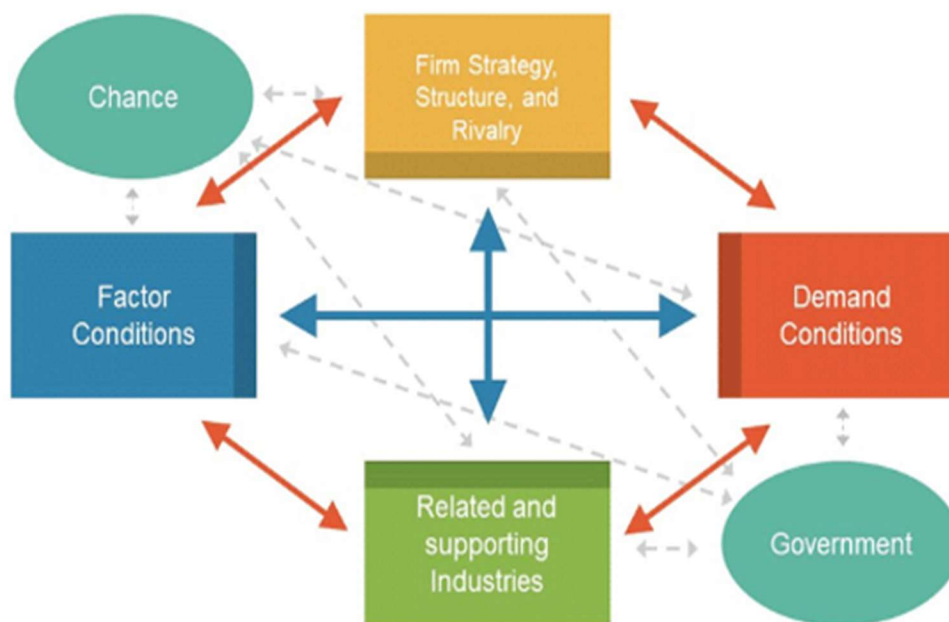
Konkurētspējas mērīšanai ir nepieciešams skaidrs un konceptuāls ietvars, kas balstīts noteiktās zināšanās, ņemot vērā virkni indikatorus. Viens no atpazīstamākajiem mūsdienu ekonomistiem un biznesa stratēģijas teorētiķiem, kā arī konkurētspējas teorijas pamatlicējiem Maikls Porters, kura zinātniskie raksti ir iedvesmojuši un ietekmējuši dažādu uzņēmumu stratēģisko plānošanu, daloties savās atziņās par konkurētspējas jēdzienu atzīst, ka, neskatoties uz konkurētspējas koncepta plašo atpazīstamību visā pasaulē, tas aizvien nav pietiekami labi izprasts (Porter, 2004). Saskaņā ar zinātnieka izstrādāto analītisko modeli “*Porter’s Diamond Model*” (1. att.) uzņēmumu konkurētspējas novērtēšanai, kas palīdz identificēt konkrētus faktorus, kas kavē vai veicina uzņēmumu konkurētspēju un izdarīt konstruktīvus secinājumus, uzņēmumu konkurētspēja jāanalizē pēc četriem būtiskākajiem nosacījumiem jeb dimensijām:

1. “Faktoru nosacījumi” (“*Factor Conditions*”) – resursi, kas ir pieejami valstī, lai tā varētu atbalstīt konkrētu nozari, piemēram, kvalificēts darbaspēks, dabas resursi, infrastruktūra, tehnoloģijas, kapitāls u.c.;
2. “Pieprasījuma nosacījumi” (“*Demand Conditions*”) – vietējā tirgus pieprasījums pēc nozares produkta vai pakalpojuma;
3. “Saisītās un atbalstošās nozares” (“*Related and Supporting Industries*”) – tādu piegādātāju un partneru klātbūtne valstī, kas spēj veicināt efektivitāti un inovācijas;
4. “Uzņēmuma stratēģija, struktūra un konkurence” (“*Firm Strategy, Structure and Rivalry*”) – kā uzņēmumi konkrētajā valstī tiek veidoti, vadīti, tostarpu, kā tie konkurē savā starpā (Porter, 1990).



1. att. Portera “Dimanta modelis” (Avots: Meirc, 2020)

Šīs 4 dimensijas veido vienotu sistēmu, jeb kodolu, kur katra no dimensijām ietekmē vienu otru. Taču M. Porters, kā papildfaktoros ārpus izstrādātā “dimanta modeļa”, min tostarp “Valdības lēmumus/lomu” („*Government's Role*“) un “Nejaušos notikumus” („*Chance Events*“) (2. att.). M. Porters skaidro, ka abi faktori nav daļa no “dimanta modeļa” kodola, taču tiem ir liela loma konkurētspējas ietekmēšanai – autors šīs dimensijas dēvē par ārējiem spēkiem, kas mijiedarbojas ar četrām “dimanta modeļa” dimensijām. Pēc Portera domām, arī valdības lēmumiem un vadības praksei ir liela ietekme uz konkurētspēju – valdības spēks darbojas no ārpuses – vide tiek ietekmēta caur politiku, normatīvajiem regulējumiem, valsts atbalstu u.c. faktoriem, savukārt “nejaušie notikumi” ir tādi notikumi, kas ir ārpus valdības vai uzņēmumu kontroles – tie darbojas kā neprognozējami katalizatori, kas spēj spēcīgi vai pat radikāli mainīt tirgus apstākļus (Wickham, 2005), piemēram, karš valstī, no kuras iepriekš ir tikuši iepirkti būvmateriāli, pēkšņi liedz būvuzņēmumiem pieeju pie resursiem, liekot uzņēmējiem meklēt jaunus piegādātājus, kas var būt smags izaicinājums.



2. att. Portera “Dimanta modelis” (Avots: Slidemodel, 2025)

Abu papildfaktoru iedarbība uz konkrētu uzņēmumu var atšķirties, atkarībā no katra uzņēmuma spējas pielāgoties jauniem apstākļiem.

Pētījuma metodoloģija

Darba autore primāro datu ieguvei un analīzei veica sešas daļēji strukturētas intervijas ar būvniecības nozares ekspertiem, kas sniedza atbildes uz pētījuma izvirzīto jautājumu, proti: „Kādi ir konkurētspēju ietekmējošie faktori būvniecības nozarē Latvijā?” Intervijas tika veiktas ar 4 būvinženieriem/ būvdarbu vadītājiem, kas ikdienā ir saistīti ar projektēšanu, publiskajiem būvdarbu iepirkumiem, būvdarbu organizēšanu, tehnisko uzraudzību dažādos būvniecības posmos (tostarp 2 no šiem ekspertiem ir arī būvuzņēmēji) un 2 ekspertiem, no kuriem viens eksperts specializējas būvniecības energoefektivitātes jautājumos un strādā gan ALTUM, gan arī Būvuzņēmējdarbības un

nekustamā īpašuma ekonomikas institūtā par pētnieku, bet otrs eksperts specializējas būves informācijas modelēšanas digitālajā vidē (BIM), kas apvieno projektēšanu, būvniecību un ēku apsaimniekošanu.

Respondenti identificēja, viņuprāt, būvuzņēmumu konkurētspēju ietekmējošos faktoros, vienlaikus tos detalizēti pamatojot gan ar savu praktisko darba pieredzi, gan novērojumiem būvniecības segmentā valstī kopumā. Sniegtā informācija ļāva darba autoriem ne vien apkopot būvuzņēmumu konkurētspēju ietekmējošos faktoros Latvijā, bet, tostarp, izmantojot Osguda skalu, kur „1” – „nav negatīvas ietekmes”, „2” – neliela negatīva ietekme, „3” – vidēji izteikta negatīva ietekme, „4” – izteikta negatīva ietekme, bet „5” – „ļoti negatīva ietekme”, definēt būvuzņēmumu konkurētspēju ietekmējošos faktoros ar vislielāko negatīvo ietekmi. Atbildot uz papildu jautājumiem, respondenti izteica savu viedokli par vēlamies soļiem no valsts puses būvuzņēmumu konkurētspējas veicināšanai, kā arī, balstoties uz savu profesionālo kompetenci, dalījās ar ieteikumiem, kas būtu jāveic pašiem būvuzņēmumiem savas konkurētspējas veicināšanai.

Balstoties uz iegūtajiem rezultātiem, tika formulēti pētījuma būtiskākie secinājumi, kā arī izstrādāti priekšlikumi būvuzņēmumu konkurētspējas pilnveidei Latvijā.

Pētījuma rezultāti

Daļēji strukturēto interviju ar nozares ekspertiem rezultātā tika identificēti faktori, kas ietekmē Latvijas būvuzņēmumu konkurētspēju. Šie faktori tika klasificēti atbilstoši M. Portera "dimanta modeļa" koncepcijai un sadalīti četrās galvenajās modeļa dimensijās: "Faktoru nosacījumi", "Pieprasījuma nosacījumi", "Saistītās un atbalstošās nozares" un "Uzņēmuma stratēģija, struktūra un konkurence". Papildus tika identificēti tādi būvuzņēmumu konkurētspēju ietekmējošie faktori, kas darbojas kā ārējie spēki un tiek klasificēti kā M. Portera „dimanta modeļa” papildfaktori: “Valdības lēmumi / loma” un “Nejauši notikumi”.

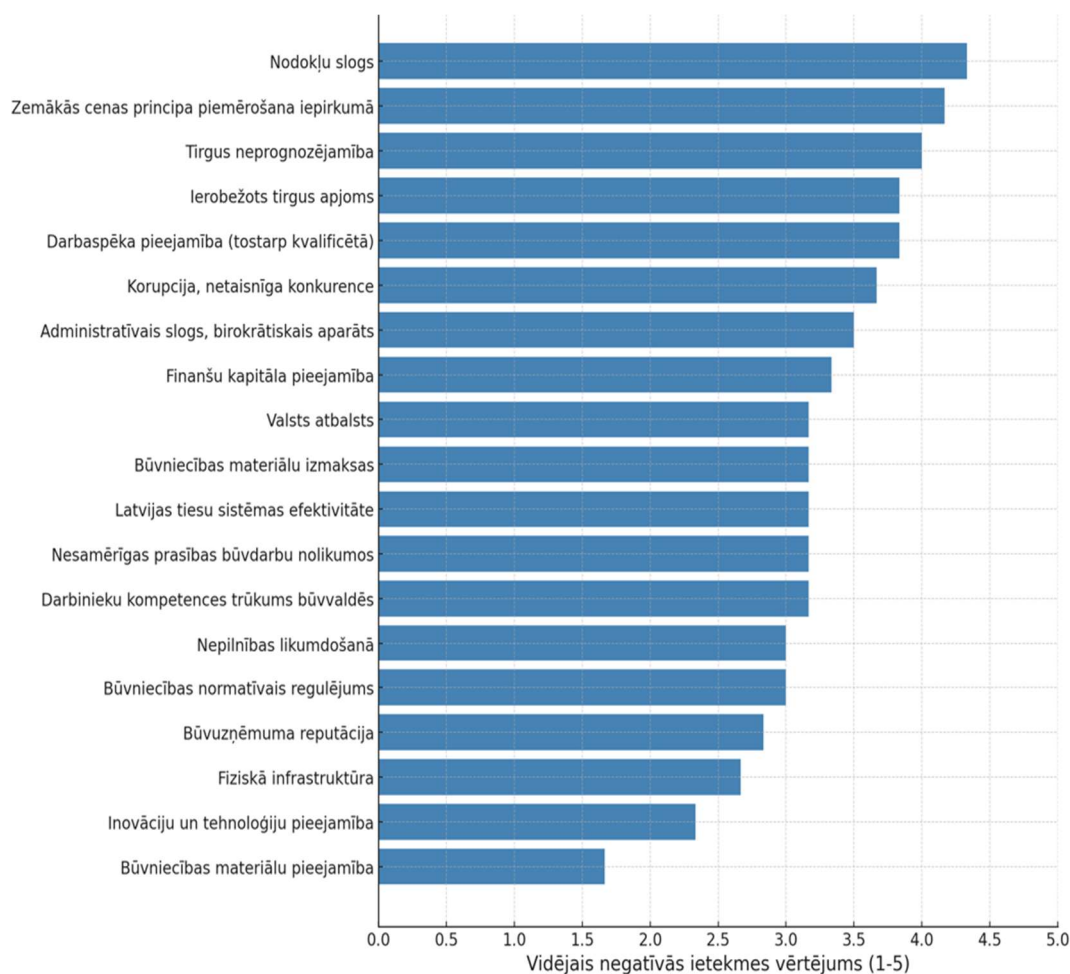
Kopumā tika identificēti un definēti deviņpadsmit būvuzņēmumu konkurētspēju ietekmējošie faktori Latvijā (1. tabula).

1. tabula. Būvuzņēmumu konkurētspēju ietekmējošo faktoru iedalījums pēc M. Portera “Dimanta modeļa” (Avots: autores apkopojums no intervijām)

N.p.k.	Dimensija	Ekspertu identificētie būvuzņēmumu konkurētspēju ietekmējošie faktori
1.	“Faktoru nosacījumi”	<ul style="list-style-type: none"> – Darbaspēka pieejamība (tostarp kvalificētā) – Finanšu kapitāla pieejamība – Būvniecības materiālu pieejamība – Būvniecības materiālu izmaksas – Inovāciju un tehnoloģiju pieejamība – Fiziskā infrastruktūra
2.	“Pieprasījuma nosacījumi”	<ul style="list-style-type: none"> – Ierobežots tirgus apjoms – Nesamērīgas prasības būvdarbu nolikumos – Zemākās cenas principa piemērošana iepirkumā
3.	“Saisītās un atbalstošās nozares”	<ul style="list-style-type: none"> – Būvniecības materiālu pieejamība (ja piegādā atbalsta uzņēmēji) – Inovāciju un tehnoloģiju pieejamība (ja nodrošinājums nāk no saistītām nozarēm)
4.	“Uzņēmuma stratēģija, struktūra un konkurence”	<ul style="list-style-type: none"> – Būvuzņēmuma reputācija – Korupcija, netaisnīga konkurence – Zemākās cenas principa piemērošana (kā cenu dempings vai konkurences izkropļojums)
5.	Papildfaktors “Valdības lēmumi/loma”	<ul style="list-style-type: none"> – Būvniecības normatīvais regulējums – Darbinieku kompetences trūkums būvvaldēs – Administratīvais slogs un birokrātiskais aparāts – Nepilnības likumdošanā – Nodokļu slogs – Valsts atbalsts – Latvijas tiesu sistēmas efektivitāte – Prasības būvdarbu nolikumos (ja tos regulē valsts)
6.	Papildfaktors “Nejaušie notikumi”	<ul style="list-style-type: none"> – Tirgus neprognozējamība (piemēram, pandēmija, karš)

Būvuzņēmumu ekspertu definētos faktoros „būvniecības materiālu pieejamība” un „inovāciju un tehnoloģiju pieejamība”, atkarībā no skatupunkta, var attiecināt gan pie “Faktoru nosacījumi”, gan arī pie “Saisītās un atbalstošās nozares” – jāņem vērā vai tiek vērtēta šo faktoru ietekmi no valstī pieejamo iekšējo resursu konteksta, vai arī kontekstā ar ārējo sadarbību, kas veicina šo resursu efektīvu izmantošanu.

Lai definētu, kuri no augstāk minētiem faktoriem šobrīd visnegatīvāk ietekmē būvuzņēmumu konkurētspēju Latvijā, respondenti katram no tiem piešķīra vērtējumu no „1” līdz „5” pēc Osguda skalas, kur 1“ – „nav negatīvas ietekmes”, “2” – neliela negatīva ietekme, “3” – vidēji izteikta negatīva ietekme, “4” – izteikta negatīva ietekme, bet „5” – „ļoti negatīva ietekme” uz būvuzņēmumu konkurētspēju Latvijā. Iegūtie dati tika apkopoti, aprēķinot katra faktora vidējo vērtējumu, kas atspoguļo tā kopējo negatīvās ietekmes līmeni uz būvuzņēmumu konkurētspēju (1. att.).



1. att. Faktoru negatīvas ietekmes novērtējums uz būvuzņēmumu konkurētspēju (Avots: autora veiktās intervijas rezultāta apkopojums)

Lai gan maksimālais iespējamais vērtējums ir “5”, vidējais respondentu vērtējums reti sasniedz šo robežu. Pamatojoties uz Osguda skalas robežvērtībām, “3,5” atrodas starp “vidēji izteiktu negatīvu” un “izteikti negatīvu” ietekmi, līdz ar to faktori, kuru vidējais vērtējums ir no “3,5” uz augšu, uzskatāmi par tādiem, kam ir būtiska negatīva ietekme uz būvuzņēmumu konkurētspēju.

Saskaņā ar iegūtajiem datiem, visnegatīvāk būvuzņēmumu konkurētspēju Latvijā ietekmē nodokļu slogs, zemākās cenas principa piemērošana iepirkumos, tirgus neprognozējamība, ierobežots tirgus apjoms, darbaspēka (tostarp kvalificētā) trūkums, korupcija un netaisnīga konkurence, administratīvais slogs un birokrātiskais aparāts.

Interviju respondenti uzsver, ka darbaspēka trūkums ir vērojams nozares dažādos līmeņos. Kvalificēts darbaspēks tostarp pietrūkst nozares kontrolējošās iestādēs, piemēram, būvvaldēs, kur bieži tiek nodarbināti darbinieki ar zemāku kvalifikācijas līmeni nekā būvniecības nozarē strādājošie speciālisti. Savukārt nozares tirgus apjoms nav stabils, jo pastāv lielas svārstības starp valsts un privātā sektora pasūtījumiem.

Pēdējo gadu tirgus neprognozējamība ir ievērojami mazinājusi būvuzņēmumu konkurētspēju. Vienlaikus daudziem būvuzņēmumu vadītājiem ir grūtības nomaksāt visus nodokļus, kas veicina ēnu ekonomiku.

Negodīga konkurence un korupcija, tostarp būvniecības karteļu skandāli, veicina būvuzņēmumu neuzticēšanos publiskajai iepirkumu sistēmai, kā rezultātā daudzi būvuzņēmumi neiesaistās lielajos publiskajos iepirkumos pat tad, ja tie atbilst visām nolikuma prasībām un tiem ir visi nepieciešamie resursi būvdarbu veikšanai.

Respondenti tostarp uzsver, ka administratīvais slogs nozarē ir pārāk liels – neskatoties uz valdības centieniem uzlabot situāciju, līdz šim nav vērojamas nozīmīgas pozitīvas izmaiņas.

Zemākās cenas piemērošana, kā saimnieciski izdevīgāka piedāvājuma vienīgais nosacījums, veicina cenu dempingu un negatīvi ietekmē pakalpojuma kvalitāti.

Secinājumi

Latvijas būvuzņēmumu konkurētspēju ietekmē vairāki faktori – pamatojoties uz interviju gaitā iegūtajiem rezultātiem, kopumā tika identificēti 19 iekšējie un ārējie faktori.

Pētījuma gaitā tika secināts, ka šobrīd Latvijas būvuzņēmumu konkurētspēju visnegatīvāk ietekmē zemākās cenas kritērija piemērošana publiskajos iepirkumos, pārmērīgi liels nodokļu slogs, darbaspēka (tostarp kvalificētā) trūkums, nepietiekams tirgus apjoms un tirgus neprognozējamība, sevišķi pēdējos piecos gados, korupcija un netaisnīga konkurence, kā arī administratīvais slogs un birokrātiskais aparāts.

Zemākās cenas piemērošana iepirkumos izraisa cenu dempingu, veicinot situācijas, kur iepirkumos uzvar nevis kvalitatīvie un ilgtspējīgie risinājumi, bet gan zemākās cenas kritērijs; pārmērīgi liels nodokļu slogs veicina ēnu ekonomikas izplatību, ierobežo investīciju iespējas; darbaspēka, tostarp augsti kvalificētā, būtiski ietekmē pakalpojuma kvalitāti un būvdarbu izpildes termiņus; ierobežots tirgus apjoms izraisa spēcīgu konkurenci starp uzņēmumiem, veicinot tostarp cenu dempingu; tirgus neprognozējamība, sevišķi pēdējos gados, ko parasti ietekmē ārējie faktori (piemēram karš vai pandēmija), mazināja uzņēmumu spēju pielāgoties tirgum un plānot uzņēmuma stratēģiju ilgtermiņā, kas rada spēcīgus uzņēmuma konkurētspēju izaicinājumus, bet atsevišķos gadījumos izraisot būvuzņēmumu maksātnespēju; korupcija, netaisnīgā konkurence ne vien kropļo tirgu, bet arī mazina būvuzņēmumu uzticēšanos publisko iepirkumu, līdz ar to arī valsts, politikai; administratīvais slogs un birokrātiskais aparāts aizvien rada lieku resursu patēriņu ne vien pašiem būvuzņēmumiem, bet arī valsts pārvaldei un citām ar būvniecības nozari saistītām pusēm.

Balstoties uz secinājumiem, tiek izstrādāti sekojoši priekšlikumi būvuzņēmumu konkurētspējas veicināšanai: nepieciešams pārskatīt un pilnveidot publisko iepirkumu likumu, aizstāt zemākās cenas piemērošanas kritēriju nolikumos ar saimnieciski izdevīgāka piedāvājuma kritēriju, kas ietver sevī vismaz kvalitātes un ilgtspējas kritērijus; veikt nodokļu politikas pārskatīšanu un piemērot atvieglojumus būvniecības uzņēmumiem, kas modernizē procesus un ievieš ilgtspējas risinājumus; izstrādāt motivējošu atbalsta programmu, kas piesaistītu darbaspēku būvniecības nozarē, tostarp atvieglot nosacījumus ārvalstu darbaspēka piesaistei; valsts pārvaldē nepieciešams piesaistīt ekspertus, kam ir praktiska pieredze būvniecības nozarē; atbalstīt eksporta veicināšanas pasākumus būvniecības uzņēmumiem; veicināt pievilcīgu vidi investoriem caur nodokļu un birokrātijas mazināšanas politiku, vienlaikus mazinot administratīvo slogu; stingrāk pievērsties ēnu ekonomikas un korupcijas apkarošanai.

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Valērijs Ivanovs. DIGITĀLĀ MĀRKETINGA STRATĒGIJU IETEKME UZ TELEKOMUNIKĀCIJU PAKALPOJUMU SNIEDZĒJU NOZARI LATVIJĀ

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Anotācija

Pētījuma aktualitāte: Mūsdienās digitālā mārketinga stratēģijas ir kļuvušas par vienu no svarīgākajiem elementiem uzņēmumu konkurētspējas nodrošināšanā. Telekomunikāciju nozarē, kur valda liela konkurence starp telekomunikāciju pakalpojumu sniedzējiem un klientu pieaugošajām prasībām pēc augstvērtīgāka pakalpojuma saņemšanas, kuras ar katru gadu turpina pieaugt. Pēdējos gados digitālā mārketinga nozīme ir ievērojami pieaugusi, jo aizvien vairāk cilvēku gan Latvijā, gan pasaulē saskarās ar kādu no digitālā mārketinga paveidiem, jo jau 2021. gadā interneta lietotāju skaits sasniedza aptuveni 4,66 miljardus iedzīvotāju, jeb aptuveni 59, 5% no visu pasaules iedzīvotāju skaita kopā, kas arī turpina palielināties gadu no gada (Pinca u.c., 2023). Khanfar (2024) pētījums, kurā tiek salīdzinātas telekomunikāciju operatoru izmantotās digitālā mārketinga stratēģijas uzņēmuma snieguma uzlabošanai, arī pamato darba autora pētījuma aktualitāti un tāpēc darba autoram ir svarīgi izpētīt kā dažādas digitālā mārketinga stratēģijas ietekmē telekomunikāciju uzņēmumu sniegumu Latvijā. Pētījuma aktualitāti arī pamato tas, ka Latvijā šāda veida pētījums vēl nav veikts.

Pētījuma mērķis: Izpētīt digitālā mārketinga stratēģiju ietekmi uz telekomunikāciju pakalpojumu sniedzēju konkurētspēju Latvijā un izstrādāt ieteikumus šo stratēģiju efektivitātes paaugstināšanai.

Pētījuma metodes: Anketēšana, dokumentu analīze, mediju monitorings, finanšu analīze, grafiskā analīze, aprakstošās statistikas metodes; kontentanalīze.

Sasniegtie rezultāti: Pētījuma gaitā tika identificētas efektīvākās digitālā mārketinga stratēģijas, kas veicina telekomunikāciju uzņēmumu konkurētspēju Latvijā, kā arī izstrādāti ieteikumi šo stratēģiju efektivitātes paaugstināšanai.

Atslēgas vārdi: digitālais mārketings; telekomunikācijas; konkurētspēja; Latvija.

Ievads

Mūsdienās digitālā mārketinga kanāli un stratēģijas nodrošina uzņēmumu konkurētspēju un it īpaši, telekomunikāciju nozarē, kur Latvijā valda visai liela konkurence starp telekomunikāciju sniedzēju uzņēmumiem. Tāpēc telekomunikāciju uzņēmumi ir motivēti sniegt augstvērtīgāku pakalpojumu, jo ar katru gadu klientu vēlmes un prasības turpina augt un konkurējošie uzņēmumi nestāv uz vietas. Ļoti būtisks digitālā mārketinga izmantošanas aspekts ir tāds, ka tas ļauj daudz efektīvāk nodibināt un uzturēt kontaktu ar mērķauditoriju un dažkārt samazināt mārketinga kampaņas izlietos līdzekļus. Tādi mārketinga kanāli kā sociālie mediji un e-pasta vēstules ar reklāmām. Turklāt kā rāda pētījumi, izmantojot digitālo mārketingu uzņēmumi var samazināt izdevumus reklāmai un saņemt labāku atgriezenisko saiti no mērķauditorijas (Pinca u.c., 2023).

Latvijas telekomunikācijas nozares vadošie uzņēmumi – Tele2, Latvijas mobilais telefons (Turpmāk – LMT), Bite un Tet konkurē savā starpā piedāvājot diezgan līdzīgus pakalpojumus (mobilos zvanus, internetu, televīziju u.c.), tādējādi uzņēmumi apgūst jaunus veidus kā piesaistīt un noturēt klientus.

Trīs no operatoriem kopā veido aptuveni 100% no mobilo sakaru pakalpojumu tirgus Latvijā. Mobilajā sakaru segmentā trīs mobilie operatori – LMT, Tele2 un Bite – nodrošina lielāko vairākumu pakalpojumu. Pēc (LIAA, 2023) mājaslapas datiem, LMT un Tele2 katrs aptuveni apkalpo ap 38% no kopējā mobilo internetu pieslēgumu skaita, kamēr Bite aptuveni 23% un Tet fiksētās balss telefonijas pakalpojumu nodrošina 48% lietotāju (SPRK, 2020). Veicot tirgus analīzi var saprast, ka tirgus ir piesātināts ar mobilo sakaru pieslēgumiem un Sabiedrisko pakalpojumu regulēšanas komisijas jaunākie pieejamie dati par kopējo aktīvo SIM karšu izmantošanu liecina, ka 2024. gada sākumā Latvijā kopējais aktīvo SIM karšu daudzums sasniedza ap 2, 68 miljoniem, kas uz to brīdi bija par 43,7% vairāk nekā iedzīvotāju Latvija, precīzāk uz 1,87 miljoniem iedzīvotāju. 2024. gada sākumā telekomunikāciju operatoru pieslēgumu skaits: Tele2 bija – 1058662 aktīvas SIM kartes, LMT – 982929 aktīvas SIM kartes, BITE – 639346 aktīvas SIM kartes (SPRK, 2024), TET (2023. gadā) bija 62319 fiksēto līniju aktīvo klientu (CEIC data, 2023). Tāpēc darba autoram bija svarīgi veikt pētījumu un uzzināt kādi digitālā mārketinga veidi ir plašāk izmantoti Latvijas telekomunikāciju pakalpojumu nozarē.

Pētījuma mērķis bija izpētīt digitālā mārketinga stratēģiju ietekmi uz telekomunikāciju pakalpojumu sniedzēju konkurētspēju Latvijā un izstrādāt ieteikumus šo stratēģiju efektivitātes paaugstināšanai.

Lai sasniegtu pētījuma mērķi tika izvirzīti šādi uzdevumi:

1. Izpētīt teorētisko literatūru par digitālā mārketinga stratēģijām un telekomunikāciju nozari.
2. Klasificēt un analizēt dažādus digitālā mārketinga stratēģiju veidus, un izpētīt to specifiskās īpatnības.
3. Izstrādāt pētījuma metodoloģiju, lai empīriski novērtētu digitālā mārketinga stratēģiju ietekmi uz uzņēmumu sniegumu un konkurētspēju.
4. Izpētīt klientu uzvedību un apmierinātības līmeni, saistībā ar uzņēmumu realizētajām digitālā mārketinga kampaņām.
5. Salīdzināt dažādu telekomunikāciju uzņēmumu rezultātus, lai noteiktu, kuras stratēģijas ir visefektīvākās attiecībā uz tirgus pozīcijas uzlabošanu.

Pētījuma objekts bija telekomunikāciju pakalpojumu sniedzēju sektora uzņēmumi Latvijā. Pētījuma priekšmets bija digitālā mārketinga stratēģiju ietekme uz telekomunikāciju pakalpojumu sniedzēju nozari Latvijā. Pētījuma jautājums bija: Kā telekomunikāciju pakalpojumu sniedzēju konkurētspēju Latvijā ietekmē digitālā mārketinga stratēģijas?

Lai sasniegtu pētījuma mērķi tika izmantotas šādas pētījuma metodes:

1. Datu vākšanas metodes: anketēšana; dokumentu analīze, mediju monitorings;
2. Datu apstrādes metodes: finanšu analīze; grafiskā analīze; aprakstošās statistikas metode; kontentanalīze.

Pētījuma ierobežojumi:

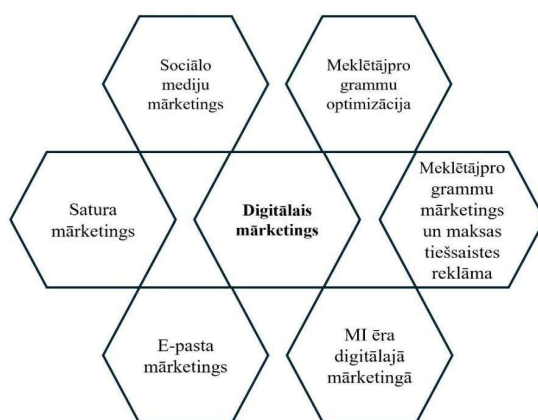
- Tika pētīti 4 telekomunikāciju pakalpojumu sniedzēji Latvijā. Pētāmie telekomunikāciju pakalpojumu sniedzēju operatori: Tele2, LMT, BITE, TET;
- Aptaujāto respondentu skaits: 202 cilvēki;
- Pētījuma periods: 2025. gada marts - aprīlis;
- Pētītais periods par Latvijas telekomunikāciju pakalpojumu sniedzējiem bija 2020-2023. gads.

Pētījuma rezultātu apraksts: Respondenti par viss efektīvāko, digitālā mārketinga kanālu uzskata sociālo tīklu mārketingu, kurš pārliecinoši dominē starp pārējiem kanāliem. Sociālos tīklus kā vienu no efektīvākajiem telekomunikāciju mārketinga kanāliem minēja 34% respondentu, arī e-pasta

mārketingu tiek uzskatīts par nozīmīgu to savā izvēlē iekļāva 23%. Trešajā vietā ierindojas meklētājprogrammu mārketingu ar 13% respondentu izvēli, tad ceturtajā vietā atrodas saturs mārketingu ar 10% respondentu balsu, mobilais mārketingu saņēma 7% balsu, apmaksāta reklāma 5%, interaktīvais mārketingu 3%, popularitātes mārketingu vien 2%, influenceru mārketingu un mārketinga automatizācija iegūta vien 1% balsu. Rezultātā tika identificētas efektīvākās digitālā mārketinga stratēģijas, kas veicina telekomunikāciju uzņēmumu konkurētspēju Latvijā, kā arī izstrādāti ieteikumi šo stratēģiju efektivitātes paaugstināšanai.

Analītiskais apskats

Jēdziens digitālais mārketingu var tikt definēts kā elektronisko tehnoloģiju, interneta un mobilajām platformām balstīta mārketinga komunikācijas metode, kas ļauj sasniegt un iesaistīt patērētājus reāllaikā (Chaffey & Ellis-Chadwick, 2019). Ja mēs analizējam digitālo mārketingu no plašāka skatu punkta, tad to mēdz dēvēt arī par tiešsaistes mārketingu vai interneta mārketingu, kurš ir mārketinga sastāvdaļa. Digitālais mārketingu sevī ietver interneta un citu digitālo tehnoloģiju (datoru, mobilo telefonu, digitālo mediju platformu) izmantošanu produktu un pakalpojumu veicināšanā (Kalicube, 2025). Digitālais mārketingu ir balstīts uz lielo datu analīzi un jauno mediju tehnoloģijām, kas uzņēmumiem palīdz efektīvāk komunicēt un mijiedarboties ar mērķauditoriju, palielinot zīmola atpazīstamību un pārdošanas apjomus. Tā galvenā priekšrocība ir reāllaika efektivitāte, kas ļauj labāk izprast un apmierināt patērētāju vajadzības, nodrošinot personalizētas mārketinga stratēģijas un kanālus (Zhan, 2024). Tā pat digitālais mārketingu pārvalda produktu ražošanu, loģistiku, izplatīšanu, publicitāti un citas mārketinga aktivitātes gan tiešsaistē, gan ārpus tās, veidojot mārketinga kanālus un nodrošinot tiešu saziņu starp uzņēmumiem un patērētājiem. Produktu cenu noteikšana ir digitālā mārketinga pamats, kas ir galvenais faktors uzņēmumu mārketinga lēmumu analīzē (Xuehui, 2023). No augstāk minētā var secināt to, ka digitālais mārketingu piedāvā jaunas iespējas veidot ciešākas attiecības ar mērķauditoriju un iegūt tik ļoti uzņēmumiem nepieciešamo atgriezenisko saiti. Tomēr digitālā mārketinga jomā tehnoloģiju attīstības process norit ļoti straujiem soļiem un uzņēmumiem ir jāspēj patstāvīgi pielāgot savas stratēģijas jaunākajām tehnoloģiju tendencēm, jo nākotnē var sagaidīt vēl lielāku automatizācijas, mākslīgā intelekta integrāciju digitālajā mārketingā, kas, ja netiks pienācīgi uzraudzīts, tad var tikt pārkāpta patērētāju privātuma aizsardzība un vispārpieņemtie ētikas standarti 12.



1. att. Aktuālākie digitālā mārketinga stratēģiju veidi (Avots: autora apkopojums)

Kā redzams augstāk attēlā, tad darba autors apkopojā pašus svarīgākos digitālā mārketinga veidus.

Tālāk darba autors veica Latvijas telekomunikāciju operatoru digitālo kanālu analīzi un noskaidroja, kuri no operatoriem ir tirgus līderi pēc auditorijas lieluma dažādos kanālos.

1. tabula. LMT, Tele2, Bite, Tet uzņēmumu digitālo kanālu analīze. (Avots: autora apkopojums)

	LMT	Tele2	Bite	Tet
Facebook sekotāju skaits 19.04.2025.	92000	81000	73000	30000
X sekotāju skaits 19.04.2025.	27200	11500	11100	19000
YouTube abonentu skaits 19.04.2025.	26100	1870	3600	2920
Galvenie satura veidi	Tehnoloģiju jaunumi; pakalpojumu reklāmas; pasākumu tiešraides; oriģinālrādījumi YouTube;	Piedāvājumi un akcijas; podkāsti; dažādi konkursi un interaktīvs saturs sekotājiem.	Draudzīga komunikācija, konkursi un kampaņas ar klientu iesaisti; dzīvesstila saturs (hokejs, svētku pasākumi) youtube.com; atsaucīgs klientu serviss ar personisku pieskārienu.	Pakalpojumu jaunumi; optiskā interneta, TV, IT risinājumi; izglītojoši padomi par kibernetiķi; tehnoloģiju pamācības; Tet TV+ satura popularizēšana; formālāks, informatīvs tonis, bet ar klientu servisa uzsvaru X platformā.
Inovatīvas pieejas	Akcentē inovācijas (5G, droni, viedtehnoloģijas); sociālajos tīklos; veido plašas diskusijas par tehnoloģiju nākotni; operatīvs klientu atbalsts X	Īsteno sabiedriskas kampaņas pret naidu internetā un par jauniešu iedrošināšanu; asprātīgs un sociāli atbildīgs tonis, kas atšķir Tele2 no citiem. Jaunais AI rīks "Dzirkstele" Tele2 e - veikalā.	Cilvēciskums komunikācijā, izceļ darbiniekus un klientu stāstus; izmanto humoru un pozitīvismu kopienas veidošanai.	Uzsver uzticamību un savienojamību; integrē dažādu produktu komunikāciju vienotā stāstā; izglīto sekotājus par IT drošību un tehnoloģiju lietošanu; sponsorē tehnoloģiju un sporta pasākumus un atspoguļo tos sociālajos medijos.
Populārākais kanāls	Facebook	Facebook	Facebook	Facebook

Kā no tabulās redzams, tad visiem četriem uzņēmumiem Facebook platforma ir lielākais un svarīgākais sociālais tīkls, kur tie sasniedz desmitiem tūkstošu sekotāju un komunicē ar klientiem. Kopīga iezīme ir arī tas, ka visi operatori izmanto X kā klientu apkalpošanas ar ātro ziņu un atbildi kanālu, lai gan sekotāju skaits tur ir krietni mazāks nekā Facebook. YouTube kanāli galvenokārt

kalpo kā video satura krātuves par telekomunikāciju pakalpojumu sniedzēju aktivitātēm un kā digitālā mārketinga papildinājums, vienīgi no visiem četriem LMT ir izdevies kaut cik jūtami paplašināt YouTube auditoriju, pateicoties oriģinālsatura rādīšanas stratēģijai. Atšķirības rodamos vienīgi uzņēmumu komunikācijas stilā un kampaņā, piemēram LMT fokusējas uz tehnoloģisku progresu un izklaidējošu tehnoloģisku saturu, Tele2 liek uz saru uz sociālu vērtību un atbildības komunikāciju, Bite uz cilvēcisku, pozitīvu un kopienas veidojošu saturu, Tet uz uzticamu pakalpojumu un praktisku un noderīgu padomu sniegšanu. Katrs uzņēmums cenšas atrast savu nišu, kura vēl nav aizpildīta aktīvi pielāgojot saturu savai auditorijai. Taču visu uzņēmumu kopīgais mērķis ir veidot divpusēju, atvērtu dialogu ar klientiem un stiprināt zīmola tēlu ar sociālo platformu palīdzību.

Šajā analītiskajā nodaļā darba autors analizēja digitālā mārketinga jēdzienu, uzsverot tā unikālo divvirzienu komunikāciju un spēju personalizēt ziņojumus reāllaikā, atšķirībā no metodēm kādas tika izmantotas tradicionālajam mārketingā. Turpmākā digitālā mārketinga attīstība saistīta ar sociālo tīklu (Facebook, YouTube, X u.c.) kā arī viedtālrunu masveida ienākšanu, veicinot e-komercijas strauju izaugsmi un jaunu digitālā satura formu rašanos. Darba autors izcēla galvenos digitālā mārketinga kanālus, tādus kā: sociālo mediju mārketingus; SEO/SEM; satura un e-pasta mārketingus, norādot, ka tie, pareizi tiek pareizi kombinēti, būtiski uzlabo zīmola atpazīstamību un uzņēmuma peļņu.

Pētījuma metodoloģija

Aptaujas anketa tika izstrādāta digitālā formātā un sūtīta gan uz e-pastu, gan izdalīta papīra formātā un iedota aizpildīšanai lielajā darba kolektīvā, draugu, radu un paziņu lokā. Aptauja bija anonīma un dalība tajā brīvprātīga. Jau anketas ievadā respondentiem tika izklāstīts pētījuma mērķis un tas, ka anketa ir anonīma, un norādīts aptuvenais aizpildīšanas laiks (~6 minūtes), tādējādi veicinot respondentu uzticēšanos un patiesu atbildību sniegšanu. Šāda anketas izsniegšanas pieeja elektroniskā veidā un papīra veidā ir arī darba autora gadījumā bija ļoti veiksmīga un efektīva jo ļāva piesaistīt 202 lielu respondentu skaitu.

Anketa kopumā sastāvēja no piecām daļām, aptverot: respondenta profilu; aptaujājamo pamanītās operatora digitālā mārketinga aktivitātes; operatora efektīvākos mārketinga kanālus; attieksmes un uzvedības apgalvojumu jautājumus; atvērtu jautājumu par telekomunikāciju pakalpojuma sniedzēja mārketinga veidu kāds ir visvairāk pārliecinājis klientu.

2. tabula. Respondentu anketas struktūra (Avots: autora apkopojums)

Anketas daļa	Jautājums	Komentārs
1.	Respondentu profils: 1. Dzimums. 2. Vecums. 3. Izglītība. 4. Darba stāžs. 5. Dzīvesvieta. 6. Telekomunikāciju operatora izvēle. 7. Telekomunikācijas operatora pakalpojumu izmantošanas ilgums.	Demogrāfiskie jautājumi par respondentu dzimumu, vecumu, izglītības līmeni, darba stāžu un dzīvesvietu, kā arī praktiski jautājumi par pašreizējo telekomunikāciju operatoru un pakalpojuma lietošanas ilgumu pie konkrētā operatora. Šī sadaļa darba autoram ļauj analizēt, vai pastāv atšķirības starp atbilžu tendencēm dažādās respondentu grupās.
2.	Kurus no zemāk minētajiem digitālā mārketinga stratēģijām pēdējā gada laikā esat pamanījis/-usi no sava telekomunikāciju pakalpojumu sniedzēja?	Respondentiem no 11 atbilžu variantiem tika lūgts atzīmēt tās atbildes, kuras viņuprāt bija atbilstošākās. Jautājums ar vairāku atbilžu izvēli, kurā respondentiem bija jāatzīmē, kuras no uzskaitītajām digitālā mārketinga stratēģijām viņi pēdējā gada laikā ir pamanījuši no sava telekomunikāciju pakalpojumu sniedzēja. Uzskaitītās opcijas ietvēra, piemēram, sociālo tīklu mārketingu, e-pasta mārketingu, meklētājprogrammu mārketingu (SEO), mobilo mārketingu (SMS un lietotņu paziņojumus), satura mārketingu, influenceru (ietekmētāju) mārketingu u.c. Respondenti drīkstēja atzīmēt vairākas atbildes, lai precīzi atspoguļotu savu pieredzi.
3.	Kuri no šiem kanāliem, Jūsaprāt, ir visefektīvākie un visvairāk ietekmē Jūsu viedokli vai lēmumus par telekomunikāciju pakalpojumu sniedzējiem?	Respondentiem no 11 atbilžu variantiem tika atzīmēt trīs atbildes, kuras viņuprāt bija atbilstošākās. Turpinot iepriekšējo tematiku, šajā jautājumā respondentiem tika lūgts no iepriekš minētajiem digitālajiem kanāliem izvēlēties trīs, kuri, viņuprāt, visvairāk ietekmē viņu viedokli vai lēmumus par telekomunikāciju pakalpojumu sniedzējiem. Šis jautājums ļāva identificēt, kurus kanālus lietotāji paši uzskata par nozīmīgākiem priekš viņiem.
4.	Lūdzu, novērtējiet šos apgalvojumus par savu telekomunikāciju pakalpojumu sniedzēju, izmantojot skalu no 1 līdz 5.	Respondentiem no 12 atbildēm likerta skalā tika lūgts atzīmēt cik ļoti viņi piekrīt vai nepiekrīt dotajam apgalvojumam par savu telekomunikāciju operatoru. 1 – (pilnībā nepiekrītu) līdz 5 – (pilnībā piekrītu). Aptaujā iekļautie apgalvojumi aptvēra vairākus aspektus, tostarp: uzmanības pievēršanu uzņēmuma reklamām sociālajos tīklos; e-pasta piedāvājumu noderīgumu, uzticēšanos caur digitālajiem kanāliem saņemtajai informācijai, digitālo kampaņu ietekmi uz vēlmi mainīt operatoru; mobilās lietotnes paziņojumu informatīvo vērtību, satura mārketinga saistošumu; digitālā mārketinga aktivitāšu ietekmi uz uzticību un kopējo apmierinātību ar uzņēmumu, kā arī konkurentu mārketinga ietekmi uz potenciālu pāriet pie cita pakalpojumu sniedzēja. Šāda apgalvojumu skala sniedza detalizētus, kvantitatīvi analizējamus datus par respondentu uzskatiem un pieredzi.
5.	Kurš telekomunikāciju pakalpojuma sniedzēja mārketinga veids Jūs pēdējā gada laikā ir visvairāk pārliecinājis un kāpēc?	Šajā atvērtajā tipa jautājumā respondentiem tika lūgts uzrakstīt kāds telekomunikāciju operatora mārketinga veids ir viss vairāk uzrunājis viņus kā klientus.

Šajā tabulā darba autors uzskatāmi parāda anketas struktūru, jautājumus un sniedz komentārus par tās aizpildīšanu.

Pētījuma rezultāti

Darba autors veica visu uzņēmumu finanšu rezultātu apkopošanu vienotā pārskatāmā tabulā. Tabulā būs attēlots telekomunikāciju pakalpojumu uzņēmumu vidējā aritmētiskā, mediānas, dispersijas, standarta novirzes un standarta kļūdas aprēķini.

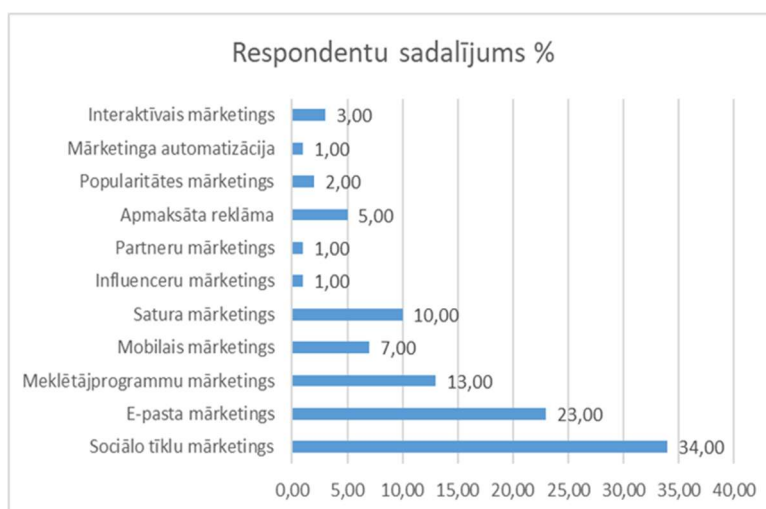
Četru lielāko Latvijas telekomunikāciju uzņēmumu (Tele2, LMT, Bite un Tet) 2020.–2023. gada finanšu rādītāju salīdzinošajā analīzē, darba autors atklāja būtiskas atšķirības to rentabilitātē un peļņas tendencēs. Tele2 uzrādīja visaugstāko rentabilitāti, tā vidējā gada tīrā peļņa minētajā izpētes periodā bija 36,51 milj. eiro, un 2023. gadā Tele2 peļņa sasniedza 46,63 milj. eiro, kas bija augstākais līmenis četru gadu griezumā, tostarp starp visiem uzņēmumiem. Analizējot LMT finanšu sniegumu, var secināt, ka tas bija stabils un pakāpeniski augošs, vidējā peļņa 30,36 milj. eiro un starp uzņēmumiem ierindojās otrajā vietā, un, kas ir ne mazāk svarīgi uzņēmumam bija vismazākās peļņas svārstības (zemākā dispersija, standartnovirze) salīdzinājumā ar citiem operatoriem, kas norāda uz uzņēmuma spēju pielāgoties un liecina par ilgtspējīgu izaugsmi pat mainīgos tirgus apstākļos. Bite sākotnēji uzrādīja zemāko peļņu, taču četru gadu laikā tās peļņa strauji augusi no 16,4 milj. eiro 2020. gadā līdz 33,4 milj. eiro un 2023. gadā (gandrīz 50% pieaugums pēdējā gadā), un šis kāpums rezultējās ar vislielākajām peļņas svārstībām starp uzņēmumiem (augstākā dispersija, standartnovirze), kas liecina par uzņēmuma veiksmīgu izaugsmes stratēģiju un tirgus daļas palielināšanu piesātināta tirgus apstākļos. Savukārt Tet peļņa minētajos gados nepārtraukti samazinājās no 30 milj. eiro 2020. gadā līdz 19 milj. eiro 2023. gadā (kritums par gandrīz 40%).

3. tabula. Uzņēmumu rezultātu aprakstošas statistikas metodes attēlošana (Avots: autora apkopojums)

Uzņēmums	Vidējā peļņa (4 gadu periodā)	Dispersija (milj. eiro) ²	Standartnovirze (milj. eiro)	Standarta kļūda (milj. eiro)	Mediāna (milj. eiro)
Tele2	36,51	46,57	6,82	3,41	33,78
LMT	30,36	12,11	3,48	1,74	29,95
Bite	23,51	50,46	7,10	3,55	22,12
Tet	24,97	21,94	4,68	2,34	25,41

Tālāk darba autors veiks respondentu anketas analīzi.

Kopumā aptauju aizpildīja 202 respondenti. Dalībnieku vidū bija pārstāvēti abi dzimumi – sieviešu skaits bija nedaudz lielāks nekā vīriešu (aptuveni 51% pret 49%), tikai daži respondenti izvēlējās neatklāt savu dzimumu. Respondentu vecuma struktūra koncentrējās uz vidējā vecuma un jaunākajās paaudzēs, lielākā daļa (ap divām trešdaļām) bija vecumā no 18 līdz 45 gadiem. Aptuveni viena piektdaļa aptaujāto bija vecumā no 46 līdz 65 gadiem, savukārt ļoti jaunu 18 gadu vecumu nesasnējušu personu un gados vecāku cilvēku vecumā virs 65 respondentu īpatsvars bija salīdzinoši neliels kopā mazāk par 5%. Šāda tendence ir diezgan loģiska, ņemot vērā, ka darba autora darba vietā ļoti liela daļa nodarbināto ir tieši šajās vecuma grupās. Aptaujāto izglītības līmenis lielākoties bija vidējs, jo 58% respondenti atbildēja, ka viņiem ir iegūta pamatizglītība, aptuveni 39% respondentu norādīja, ka viņiem ir iegūta augstākā izglītība (bakalaura grāds vai augstāks), savukārt tikai 1% atbildēja, ka viņiem ir iegūta pamatizglītība.



2. att. Respondenti izvēlētie digitālā mārketinga kanāli (Avots: autora apkopojums no respondentu anketas)

Secinājumi

Veiktā pētījuma ietvaros darba autors izdara šādus secinājumus:

1. Darba autora pētījuma jautājums ir atbildēts - digitālā mārketinga stratēģiju efektīva īstenošana sniedz telekomunikāciju pakalpojumu sniedzējiem jūtamu konkurences priekšrocību. Šī priekšrocība ļauj gan labāk komunicēt ar klientiem, gan veidot lojalitāti un pozitīvu zīmola tēlu, patērētāju acīs, kas galu galā atspoguļojas uzņēmuma finanšu panākumos. Latvijas telekomunikāciju nozarē redzams, ka uzņēmumi, kuri apstieidz citus digitālajā vidē, spēj arī noturēties tirgus virsotnē un uzrādīt labākus finanšu rezultātus
2. Tirgus izpētes datu liecina, ka Latvijas telekomunikāciju tirgus ir ļoti piesātināts, jo mobilu sakaru pieslēgumu skaits pārsniedz iedzīvotāju skaitu par aptuveni 47%, kas nozīmē, ka jaunu klientu piesaiste galvenokārt notiek uz konkurentu rēķina.
3. Respondentu aptaujas rezultāti liecina, ka lielākā daļa telekomunikāciju klientu pamana uzņēmumu aktivitātes digitālajā vidē, piemēram tiešsaistes reklāmām, sociālo tīklu saturam un citiem mārketinga materiāliem.
4. Pētījuma analīze atklāja statistiski nozīmīgu pozitīvu sakarību starp telekomunikāciju uzņēmumu digitālā mārketinga aktivitātēm un klientu lojalitāti. Tas nozīmē, ka uzņēmumi ar pārdomātām un intensīvām digitālā mārketinga stratēģijām spēj izveidot lojālāku klientu bāzi, palielinot klientu noturēšanas rādītājus.
5. Finanšu rādītāju (piemēram, ROA un ROE) analīze, digitālo kanālu analīze un respondentu atbilžu dinamika liecina, ka pastāv pozitīva saikne starp digitālā mārketinga aktivitātēm un telekomunikāciju uzņēmumu darbības rezultātiem.
6. Sociālo mediju platformas un video satura kanāli ir kļuvuši par nozīmīgiem digitālā mārketinga rīkiem telekomunikāciju nozarē. Pētījuma gaitā konstatēts, ka daudzi respondenti brīvajā laikā mēdz skatīties videoklipus (piemēram, YouTube) un cita veida saturu, kurā integrētas uzņēmumu reklāmas, kas uzsver šādas pieejas efektivitāti jaunu klientu piesaistē.
7. Respondentu aptaujā tika noskaidrots, ka daļa patērētāju lēmumus par pakalpojumu sniedzēja izvēli pieņem neatkarīgi no mārketinga komunikācijām, vairāk balstoties uz

pakalpojuma kvalitāti un cenu, no tā izriet, ka produkta kvalitātei un mārketinga vēstījumam jābūt ciešā saskaņā.

8. Kvalitatīvā aptaujas datu analīze parādīja, ka klientu reakcija uz digitālo mārketingu ir atkarīga no satura atbilstības un piedāvātās personalizācijas pakāpes. Respondenti norādīja, ka pozitīvi uztver mārketinga aktivitātes, kas pielāgotas viņu interesēm un vajadzībām, savukārt uz uzbāzīgu vai neprecīzi mērķētu reklāmu tie reaģē negatīvi.

Veiktā pētījuma ietvaros darba autors izvirza šādus priekšlikumus:

1. Finanšu rādītāju (piemēram, ROA un ROE) analīze, digitālo kanālu analīze un respondentu atbilžu dinamika liecina, ka pastāv pozitīva saikne starp digitālā mārketinga aktivitātēm un telekomunikāciju uzņēmumu darbības rezultātiem.
2. Sociālo mediju platformas un video satura kanāli ir kļuvuši par nozīmīgiem digitālā mārketinga rīkiem telekomunikāciju nozarē. Pētījuma gaitā konstatēts, ka daudzi respondenti brīvā laikā mēdz skatīties videoklipus (piemēram YouTube) un cita veida saturu, kurā integrētas uzņēmumu reklāmas, kas uzsver šādas pieejas efektivitāti jaunu klientu piesaistē.
3. Respondentu aptaujā tika noskaidrots, ka daļa patērētāju lēmumus par pakalpojumu sniedzēja izvēli pieņem neatkarīgi no mārketinga komunikācijām, vairāk balstoties uz pakalpojuma kvalitāti un cenu, no tā izriet, ka produkta kvalitātei un mārketinga vēstījumam jābūt ciešā saskaņā.
4. Kvalitatīvā aptaujas datu analīze parādīja, ka klientu reakcija uz digitālo mārketingu ir atkarīga no satura atbilstības un piedāvātās personalizācijas pakāpes. Respondenti norādīja, ka pozitīvi uztver mārketinga aktivitātes, kas pielāgotas viņu interesēm un vajadzībām, savukārt uz uzbāzīgu vai neprecīzi mērķētu reklāmu tie reaģē negatīvi.
5. Ņemot vērā sociālo mediju un video satura augsto efektivitāti, jo klienti šajās platformās pavada ļoti daudz laika, uzņēmumiem jāpalielina uzsvars uz satura mārketingu tieši šajās platformās. Ieteicams regulāri veidot kvalitatīvus, informatīvus un izklaidējošus video (piemēram, pamācības, produktu apskatus, kampaņu klipus, aktuālo produktu apskatus, raidījumus).
6. Lai ne tikai spētu piesaistīt klientus, bet tos arī noturētu telekomunikāciju pakalpojumu operatoriem ir lielāku uzmanību jāpievērš pakalpojumu kvalitātei, telekomunikāciju uzņēmumiem jā rūpējas, lai to mārketinga solījumi atbilstu reālajai pieredzei. Nepieciešams veikt nepārtrauktus pakalpojumu un klientu apkalpošanas kvalitātes uzlabojumus un par tiem skaidri komunicēt digitālajos kanālos. Uzsverot reālus, ar datiem pamatotus sasniegumus.
7. Uzņēmumiem ieteicams plašāk ieviest mārketinga automatizācijas rīkus un lielo datu analīzi, lai padziļināti izprastu klientu uzvedību un vēlmes. Tā pat to nepieciešams veikt biežāk, jo klientiem vienā dienā var būt vienas vēlmes, savukārt citā dienā jau citas. Tas ļautu veidot precīzi mērķētas un personalizētas digitālā mārketinga kampaņas katram klientu segmentam, piemēram, individuāli pielāgotus piedāvājumus un ziņojumus.

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Albina Golovko. STARPULTŪRU KOMUNIKĀCIJA UN KOMANDU VADĪBA DZELZCEĻA TRANSPORTA NOZARES UZŅĒMUMOS

Ekonomikas un kultūras augstskola

Maģistra studiju programma "Biznesa vadība"

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Anotācija

Pētījuma aktualitāte: Starpkultūru komunikācija un komandu vadība ir nozīmīgi faktori, kas ietekmē dzelzceļa transporta uzņēmumu darbības efektivitāti, īpaši starptautiskos infrastruktūras projektos, kāds ir Rail Baltica. Šādu projektu ietvaros sadarbojas vairāk nekā 100 uzņēmumu no dažādām kultūrām, un atšķirīgās komunikācijas normas, vadības pieejas un darba stili var būtiski ietekmēt sadarbības rezultātus.

Pētījuma mērķis: Izstrādāt starpkultūru komunikācijas stratēģiju uzņēmumiem, kas darbojas dzelzceļa transporta nozarē, lai veicinātu efektīvu starptautisko komandu sadarbību un uzlabotu vadības kvalitāti.

Pētījuma metodes: Pētījumā izmantota jauktā pētniecības pieeja, iekļaujot kvantitatīvās metodes (anketēšana) un kvalitatīvās metodes (padziļinātas intervijas). Tika veikta arī iekšējo dokumentu un sekundāro datu analīze. Datu apstrādei izmantota aprakstošā statistika, korelācijas analīze, grafiskā analīze, kā arī satura analīze.

Sasniegtie rezultāti: Pētījumā tika identificēti galvenie šķēršļi starpkultūru komunikācijā, analizētas darbinieku un vadītāju pieredzes atšķirības un izstrādāta praktiski izmantojama stratēģija komunikācijas uzlabošanai starptautiskās komandās. Rezultāti kalpo kā pamats turpmākai vadības pieeju pilnveidei Rail Baltica projektā un līdzīgos starptautiskos infrastruktūras procesos.

Atslēgas vārdi: starpkultūru komunikācija; komandu vadība; dzelzceļa transports; Rail Baltica; starptautiskie projekti.

Ievads

Starpkultūru komunikācija un efektīva komandu vadība ir kļuvušas par neatņemamu nosacījumu starptautisko infrastruktūras projektu ilgtspējīgai īstenošanai. To īpaši spilgti ilustrē Rail Baltica projekts, kurā vienlaikus sadarbojas vairāk nekā 100 organizāciju no dažādām kultūrām un profesionālajām vidēm (RB Rail, b/n). Eiropas dzelzceļa sistēmas 24 oficiālās valodas, dažādās lēmumu pieņemšanas pieejas un vadības prakses, kā arī darba organizācijas modeļi būtiski ietekmē sadarbības kvalitāti un projekta izpildes tempu. Eiropas Savienības Dzelzceļa aģentūra savā 2024. gada pārskatā norāda, ka līdz pat 70% dzelzceļa incidentu ir saistīti ar komunikācijas nepilnībām.

Ņemot vērā minētos apstākļus, autore formulēja pētījuma mērķi: izstrādāt starpkultūru komunikācijas stratēģiju, kas būtu pielietojama dzelzceļa transporta nozares uzņēmumos starptautisku projektu kontekstā, ar mērķi paaugstināt sadarbības efektivitāti un uzticēšanos komandās.

Lai sasniegtu šo mērķi, tika izvirzīti šādi uzdevumi:

1. analizēt normatīvos aktus un vadlīnijas par komunikāciju dzelzceļa nozarē;

2. veikt zinātniskās literatūras un līdzīgu pētījumu analīzi par starpkultūru vadību un komandas dinamiku;
3. identificēt problēmas, kas kavē efektīvu komunikāciju starptautiskās komandās;
4. izstrādāt praktisku stratēģijas modeli un sniegt ieteikumus tās ieviešanai.

Pētījumā tika izmantotas kvalitatīvās un kvantitatīvās metodes, tostarp dokumentu analīze, darbinieku anketēšana un padziļinātas intervijas ar četriem vadītājiem. Iegūtie dati tika apstrādāti, izmantojot aprakstošo statistiku, transkripciju, kontentanalīzi un grafisko analīzi.

Pētījuma rezultātā tika identificētas būtiskākās problēmas – zemā vadītāju spēja pielāgoties kultūras atšķirībām, neskaidra lomu struktūra un nepietiekama atgriezeniskās saites sistēma. Pamatojoties uz šiem secinājumiem, autore ir izstrādājusi starpkultūru komunikācijas stratēģiju, kas piedāvā praktiski īstenojamu pieeju kultūru dažādības pārvaldībai, tādējādi sasniedzot izvirzīto pētījuma mērķi.

Analītiskais apskats

Mūsdienu globalizētajā vidē starpkultūru komunikācija ir kļuvusi par būtisku faktoru organizāciju darbībā, jo īpaši starptautiskos infrastruktūras projektos, kur iesaistīti darbinieki ar dažādu kultūras pieredzi. Efektīva komunikācija tieši ietekmē projektu kvalitāti, operacionālo drošību un sadarbības ilgtspēju (European Union Agency for Railways, 2024). Dzelzceļa transporta nozarē šie izaicinājumi ir īpaši akūti, ņemot vērā 24 Eiropas Savienības oficiālo valodu lietojumu un starpkultūru atšķirības, kas palielina pārpratumu iespējamību (European Union Agency for Railways, 2024).

Rail Baltica projekts, kurā sadarbojas partneri no dažādām valstīm, ilustrē sarežģītu kultūras vidi ar atšķirīgiem komunikācijas stiliem, darba organizācijas pieejām un vērtību sistēmām (RB Rail, n.d.). Iepriekšējie pētījumi norāda, ka veiksmīga starpkultūru komunikācija veicina darbinieku apmierinātību, samazina konfliktu riskus un uzlabo komandu produktivitāti (Engagedly, 2023; Morrison & Conaway, 2006).

Autore uzsver, ka efektīva starpkultūru komunikācija ir būtisks priekšnosacījums projektu sekmīgai norisei, un tās trūkums var būtiski ietekmēt gan uzticēšanos komandā, gan lēmumu pieņemšanas dinamiku (Adler & Aycan, 2018). Latvijā veiktais sabiedriskās domas pētījums arī norāda uz iespējamo spriedzi starp dažādām etniskajām grupām, kas atspoguļojas darba vidē (Kažoka & Bērziņa, 2023).

Analizējot teorētiskās pieejas, būtiskas ir Gērtas Hofstedes kultūras dimensijas (Dickson u.c., 2003) un Kultūras orientāciju modelis (Ardichvili u.c., 2007), kas sniedz pamatu darba stilu, autoritātes uztveres un laika uztveres analīzei. Šie modeļi ir būtiski instrumenti, lai izprastu, kā veidot pielāgotu vadības un komunikācijas praksi kultūru daudzveidīgās komandās.

Starpkultūru kompetences, tostarp kultūras inteliģence (CQ) un kultūras elastība (Caligiuri & Caprar, 2022), tiek atzītas kā kritiski svarīgas prasmes starptautisko komandu vadītājiem. Tās ietver spēju pielāgot komunikāciju, saprast kultūras signālus un reaģēt uz dažādiem uzvedības modeļiem.

Latvijas pētnieki (piem. Treļš u.c., 2023) uzsver sociālemocionālās kompetences nozīmi, tostarp empātiju, cieņu un ētikas ievērošanu, kas veicina pozitīvu darba vidi. Tāpat būtiska ir iekļaujošā līderība, kas balstīta uz atvērtību, līdzdalību un cieņpilnu komunikāciju (Ardichvili u.c., 2022).

Lai mazinātu kultūras barjeras, būtiski ir skaidri noteikt komandas struktūru, atbildības jomas un lomu sadalījumu, kā arī nodrošināt regulāras apmācības un atgriezeniskās saites mehānismus. Vadītājiem ieteicams ieviest kultūras indikatorus un novērtēšanas rīkus, lai pielāgotu savas darbības stratēģijas starptautiskai videi.

Apkopojot aplūkotos aspektus, autore secina, ka starpkultūru komunikācijas teorētiskie ietvari un empīriskie pētījumi sniedz strukturētu pamatu praktisku risinājumu izstrādei. Šie secinājumi kalpo kā pamats turpmākai pētījuma metodoloģijas izveidei un pielietojuma analīzei konkrētajā Rail Baltica projekta kontekstā.

Pētījuma metodoloģija

Pētījumā ir pielietotas jauktās pētniecības metodes, kas apvieno kvantitatīvās un kvalitatīvās metodes ar mērķi sniegt vispusīgu izpratni par starpkultūru komunikācijas procesiem dzelzceļa transporta uzņēmumos. Šāda izvēle ļāva strukturēti analizēt gan skaitliski novērtējamas parādības, piemēram, uzticēšanās līmeni komandā, gan arī dziļi kontekstuālus faktorus, kas atklāj kultūras interpretāciju un uztveres atšķirības.

Tika izmantots jaukto metožu dizains, kas ietver sākotnēju kvantitatīvo datu vākšanu ar aptauju (67 respondenti četros Rail Baltica projektā iesaistītos uzņēmumos), kam sekoja kvalitatīvās datu ieguves fāze – daļēji strukturētas intervijas ar četriem projektu vadītājiem un dokumentu analīze. Dokumentu analīzē tika iekļauti gan uzņēmuma Italferr iekšējie komunikācijas noteikumi, gan starptautiskie standarti, piemēram, ISO 44001:2017 un ERA drošības vadlīnijas (European Union Agency for Railway, 2024).

Kvantitatīvo datu apstrādei tika izmantota aprakstošā statistika un korelācijas analīze. Datu apstrāde tika veikta Excel un Python vidēs, iekļaujot vizualizāciju ar matplotlib un seaborn bibliotēkām. Kvalitatīvie dati – interviju transkripti – tika analizēti, izmantojot tematiskās analīzes metodi pēc Braun & Clarke (2006) modeļa. Atslēgvārdi tika kodēti un grupēti tematiskos blokos, piemēram, uzticēšanās, lomu skaidrība, pielāgošanās stili.

Izmantoto teorētisko ietvaru veido četri atzīti modeļi: G. Hofstede kultūras dimensiju teorija (Hofstede, 2001), Ang & Van Dyne (2015) kultūras inteliģences (CQ) modelis, GLOBE pētījums par līderību kultūrvīdēs (House u.c., 2020), kā arī strukturētās komunikācijas modelis ISO 44001:2017. Šie modeļi tika izmantoti kā pamats instrumentu izstrādei un datu interpretācijai.

Šī daudzslāņainā metodoloģiskā struktūra nodrošināja datu ticamību un iespēju formulēt praksē pielietojamu stratēģiju kultūras dažādības pārvaldībai. Iegūtie dati tika triangulēti starp visiem avotiem (anketa, intervijas, dokumenti), lai pārbaudītu to konsekveci.

Pētījuma rezultāti

Dokumentu analīze

Lai izvērtētu starpkultūru komunikācijas vadības sistēmu kvalitāti Rail Baltica projektā, tika veikta salīdzinošā dokumentu analīze starp Italferr iekšējo komunikācijas vadlīniju dokumentu COI n. 16/AD del 27/01/2023 un diviem globāli atzītiem standartiem – ISO 44001:2017 un Safety and Interoperability Report (European Union Agency for Railway, 2024). Analīzes mērķis bija identificēt atbilstību starptautiskajiem sadarbības un komunikācijas principiem, īpaši kontekstā ar kultūras daudzveidības pārvaldību (1. tabula).

1.tabula. Dokumentu salīdzinošā analīze (Avots: autora apkopojums)

Analizētais aspekts	Italferr COI n. 16/AD (2023)	ISO 44001 / ERA vadlīnijas
Komunikācijas struktūra	Centralizēta, ar hierarhisku atbildības sadalījumu.	Uz sadarbību balstīta, ar horizontāliem atbildības modeļiem.
Valodas politika	Nav definēta; izmantota angļu valoda kā de facto standarts.	Prasīta skaidra valodas izvēle un terminoloģijas standartizācija.
Kultūras pielāgošanās	Netiek tieši pieminēta dokumentā.	Nepieciešama komunikācijas pielāgošana kultūras kontekstam.
Lomu un atbildību sadalījums	Detalizēts, ar noteiktām pozīcijām un funkcijām.	Elastība lomu definēšanā, ja tā nepieciešama sadarbības efektivitātei.
Sadarbības forma ar partneriem	Dominē formāla saziņa ar EDzL un partneriem.	Uzsvērtā stratēģiska partnerība, sadarbības uzturēšana caur uzticēšanos.
Komunikācijas kanāli	Strukturēta korespondence, e-pasti.	Ieteikta kombinēta pieeja – formāla un neformāla komunikācija.

Rezultāti norāda, ka Italferr dokumentācija nodrošina augstu strukturētības un centralizācijas līmeni, kas veicina vienotu komunikācijas praksi un reputācijas pārvaldību. Tomēr salīdzinājumā ar ISO un ERA prasībām tika konstatēts, ka trūkst skaidras valodas politikas, kultūras pielāgošanās mehānismu un neformālās komunikācijas kanālu stimulēšanas. Italferr pieeja lielā mērā balstās uz vertikāli orientētu pārvaldību, kas var ierobežot elastību starptautiskā komandā.

Savukārt ISO 44001 un ERA uzsver partnerībā balstītu komunikāciju, valodas standartizāciju, kultūras inteligenci un adaptīvu vadību. Tāpēc dokumentu analīze atklāj nozīmīgu potenciālu Italferr politikas pilnveidošanai, lai labāk atbilstu mūsdienu starpkultūru projektu vajadzībām.

Šie secinājumi kalpo kā pamats praktisku stratēģisko priekšlikumu izstrādei, kas uzlabotu starpkultūru komunikācijas efektivitāti daudzvalstu inženiertehniskos projektos.

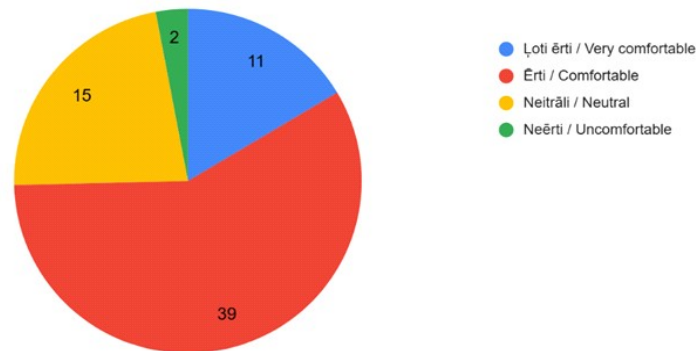
Anketēšanas rezultātu analīze

Lai izprastu starpkultūru komunikācijas efektivitāti Rail Baltica projektā, tika veikta anonīma aptauja, kuras mērķis bija apzināt darbinieku pieredzi saistībā ar komunikāciju, kultūras atšķirībām un vadības pieejām. Aptaujā piedalījās 67 respondenti no četriem projektā iesaistītiem uzņēmumiem. Aptaujas dati sniedza daudzslāņainu ieskatu par sadarbības kvalitāti un kultūras ietekmi uz komandas dinamiku.

Aptaujas mērķis bija izvērtēt Rail Baltica projektā iesaistīto darbinieku subjektīvo pieredzi starpkultūru komunikācijā. Dati iegūti ar strukturētu aptauju, aptverot tēmas kā uzticēšanās, komunikācijas efektivitāte un vadības elastība kultūru jautājumos. Analīze tika veikta ar Python datu rīkiem, izmantojot aprakstošo statistiku un korelāciju aprēķinus.

Respondentu atbildes liecina par vispārēji pozitīvu sadarbības vidi. Kultūras dažādība komandās tika apstiprināta – 65 no 67 norādīja, ka viņu komandās strādā cilvēki no dažādām kultūrām. Šo realitāti lielākā daļa novērtē pozitīvi – 50 respondenti atzīmēja, ka jūtas ērti vai ļoti ērti sadarbojoties ar kolēģiem no citām kultūrām, un 44 respondenti uzskata, ka starpkultūru komunikācija komandā ir efektīva. Zemāk redzamā apļa diagramma atspoguļo respondentu sadalījumu pēc viņu ērtuma līmeņa sadarbībā ar citu kultūru pārstāvjiem (1. attēls):

Cik ērti Jūs jūtaties, sadarbojoties ar kolēģiem no citām kultūrām? / How comfortable do you feel working with colleagues from other cultures?



1.att. Atbilžu sadalījums uz ceturto jautājumu: komforta līmenis, sadarbojoties ar kolēģiem no citām kultūrām (Avots: autora veiktās aptaujas rezultātu apkopojums)

Lomu un atbildību skaidrība komandās saņēmusi augstāko novērtējumu (vid. 3,94), tai seko uzticēšanās kolēģiem (vid. 3,90) un starpkultūru komunikācijas efektivitāte (vid. 3,81). Zemāk novērtēta tika vadītāju spēja pielāgoties kultūras daudzveidībai (vid. 2,80), kas norāda uz vadības kompetenču trūkumu šajā aspektā.

Respondentu atbildes rāda augstu strukturētības līmeni komandās, taču nepietiekamu vadītāju pielāgošanos kultūras dažādībai. Lomu skaidrība korelē ar labāku uzticēšanos un komunikācijas kvalitāti. Rezultāti iezīmē spēcīgu pamatu organizatoriskās skaidrības nozīmei starpkultūru komandās.

Pearson korelācijas aprēķini parādīja ciešu pozitīvu saistību starp lomu skaidrību un uzticēšanos komandā, kā arī starpkultūru komunikācijas efektivitāti. Tāpat identificēta korelācija starp strukturētību un psiholoģisko drošību – skaidri definētas lomas veicina atvērtību un uzticēšanos komandās.

Vienlaikus vadītāja pielāgošanās spēja kultūras aspektos nekorelē ar strukturētību vai citiem pozitīvajiem rādītājiem. Tas liecina, ka kultūras inteligence vadībā nav sistemātiski attīstīta un tiek uztverta kā atsevišķa dimensija.

Statistiskā analīze apliecina, ka lomu skaidrība ir centrālais faktors, kas veicina uzticēšanos un efektīvu komunikāciju multikulturālās komandās. Vadītāju kultūras adaptācijas trūkums neietekmē strukturētību, bet var mazināt komandas integrāciju ilgtermiņā.

Secinājumi, kas izriet no aptaujas rezultātiem, norāda, ka kultūru daudzveidība Rail Baltica projektā ir ikdienas realitāte, ko lielākā daļa respondentu uztver pozitīvi. Komandas, kurās ir skaidrs lomu un atbildības sadalījums, demonstrē augstāku uzticēšanās līmeni un efektīvāku komunikāciju. Tas apliecina, ka strukturēta vadības pieeja ir būtisks priekšnoteikums produktīvai starpkultūru sadarbībai.

Tajā pašā laikā aptauja izgaismo būtiskus izaicinājumus – vadītāju nepietiekamu pielāgošanos kultūru dažādībai, kā arī valodas barjeras, kas rada izslēgtības sajūtu un ietekmē lēmumu pieņemšanas procesus. Šie rezultāti uzsvēr nepieciešamību mērķtiecīgi stiprināt kultūras inteligenci un psiholoģiskās drošības veidošanu komandās, īpaši vadības līmenī.

Interviju analīze

Šajā pētījumā intervijas tika izmantotas kā būtiska kvalitatīvā datu ieguves metode ar mērķi padziļināti izprast starpkultūru komunikācijas un vadības praksi Rail Baltica projekta komandās. Intervijas kalpoja kā instruments, lai papildinātu kvantitatīvās aptaujas rezultātus ar kontekstuāli bagātu un cilvēcisko pieredzi balsītu informāciju. Tās sniedza iespēju analizēt kultūras daudzveidības ietekmi uz lēmumu pieņemšanu, komunikācijas dinamiku un uzticēšanās veidošanu no vadītāju perspektīvas. Kopumā tika intervēti četri vadošie speciālisti: divi Latvijas un divi ārvalstu vadītāji, pārstāvot inženiertehniskās, juridiskās un organizatoriskās funkcijas četros dažādos Rail Baltica projektā iesaistītajos uzņēmumos.

Pirmajā intervijā Italferr S.p.A. projekta direktors uzsvēra individuāli pielāgotas vadības pieejas nozīmīgumu – viņa vadības filozofija balstās nevis kultūras vispārinājumos, bet katra darbinieka personīgo motivatoru un robežu izpratnē. Uzticēšanos viņš saista ar konsekventu vadības rīcību, savukārt iekļaušanu – ar decentralizētām struktūrām. Viņš norādīja, ka būtiskākās barjeras veidojas nevis valodu, bet vietējās kultūras nerakstīto noteikumu neizpratnes dēļ, un būtiska ir vietējo kolēģu loma šo nianšu skaidrošanā.

Otrās intervijas dalībnieks no L4 – projekta vadītājs ar publisko iepirkumu pieredzi – atzina, ka viņa galvenais uzdevums ir nodrošināt procesu atbilstību starptautiskā vidē, ko sarežģī dažādu valstu administratīvo sistēmu un komunikācijas kultūru atšķirības. Viņš uzsvēra standartizētu procedūru, strukturētas dokumentācijas un oficiālas sapulču formas nozīmi, vienlaikus atzīstot, ka šāds formālisms jāpapildina ar neformālām saliedēšanas aktivitātēm un uzticību veicinošu komunikāciju.

Trešajā intervijā vietējais inženierzinātņu eksperts no AE Engineering uzsvēra strukturētības nozīmi – gan komunikācijā, gan projektu vadībā. Viņš akcentēja daudzkanālu pieejas priekšrocības un pielāgošanos dažādu kultūru partneriem, izmantojot skaidras normas, rakstisku pienākumu sadalījumu un individuālas sanāksmes. Līdzīgi kā citi respondenti, arī viņš uzticēšanos balsta konsekvencē un atgriezeniskās saites kvalitātē, vienlaikus norādot uz vajadzību pēc vadītāju kultūras sensitivitātes apmācībām.

Ceturtajā intervijā ārvalstu būvdarbu vadītājs no ERB Rail JV izcēla kultūras inteligenci kā priekšnoteikumu veiksmīgai sadarbībai multikulturālā komandā. Viņš uzsvēra angļu valodas nepietiekamību kā vienīgo saziņas rīku, norādot, ka būtiskākais izaicinājums ir atšķirīga komunikācijas un kritikas uztvere dažādās kultūrās. Tiešā klātienē komunikācija tiek atzīta par visefektīvāko, savukārt komunikācijas stils tiek apzināti atfērīts no idiomām un kultūrspecifiskiem izteicieniem. Vadītājs aktīvi strādā pie uzticēšanās stiprināšanas un uzskata, ka iekļaujoša vadība ir nevis deklarācija, bet ikdienas darbība.

Visu četru interviju salīdzinājums rāda, ka, neskatoties uz atšķirīgajām lomām, pieredzi un kultūras izcelsmi, vadītāji Rail Baltica projektā vienprātīgi atzīst, ka starpkultūru komandu efektivitāte balstās uz trīs galvenajiem pamatprincipiem: individuāli pielāgotu vadības pieeju, strukturētu un daudzkanālu komunikāciju un aktīvu uzticēšanās veidošanu. Kultūras atšķirību ietekme galvenokārt izpaužas lēmumu pieņemšanā, kritikas sniegšanā un komunikācijas stilā, savukārt šo atšķirību pārvarēšana prasa elastību, skaidrību un psiholoģisko drošību veicinošu vidi. Šie rezultāti stiprina pieņēmumu, ka kultūras inteligence un iekļaujošā līderība nav papildinājumi, bet gan būtiskas kompetences starptautisku infrastruktūras projektu vadībā.

Starpkultūru komunikācijas stratēģijas izstrāde

Starpkultūru komunikācijas stratēģijas izstrāde šajā pētījumā tika balstīta uz empīriskajiem datiem, kas iegūti no dokumentu satura analīzes, darbinieku aptaujas un četrām padziļinātām vadītāju intervijām. Stratēģijas nepieciešamību noteica vairāki praksē konstatēti trūkumi Rail Baltica projekta kontekstā: neskaidri komunikācijas kanāli un atbildības robežas, nepietiekama kultūras jutība vadības lēmumos, ierobežotas iespējas sniegt drošu atgriezenisko saiti, kā arī nesaskaņotība starp organizatoriskajām struktūrām un reālo darba dinamiku daudzvalstu komandās. Šie faktori būtiski

ietekmēja sadarbības kvalitāti un uzticēšanos starp komandas locekļiem. Tādēļ stratēģijas galvenais mērķis ir veidot uzticamu, skaidru un adaptīvu komunikācijas sistēmu, kas samazina pārpratumu risku un palielina efektivitāti, vienlaikus stiprinot komandas psiholoģisko drošību un iekļaušanu.

Stratēģijas saturs strukturēts sešās galvenajās dimensijās: skaidras lomas un komunikācijas ķēdes definēšana; vadības pielāgošanās spējas stiprināšana, identificējot kultūras uzvedības indikatorus; formālas atgriezeniskās saites sistēmas ieviešana; kultūras inteligences (CQ) apmācību ieviešana vadītājiem un darbiniekiem; daudzkanālu un hibrīdas komunikācijas formātu kombinēšana, balstoties uz uzdevuma raksturu un komandas locekļu profilu; onboarding programmas papildināšana ar kultūras orientācijas elementiem. Stratēģija balstās uz CQ teorētisko bāzi (Livermore, 2020), ISO 44001:2017 standartiem, kā arī psiholoģiskās drošības un uzticēšanās modeļiem, kas izriet no starptautiskās literatūras (Edmondson, 2018; Miska u.c., 2020). Galvenais uzsvars likts uz kombinēto – strukturālo un cilvēkcentrēto – pieeju: strukturēti formāti sniedz prognozējamību, savukārt individuāla pielāgošanās kultūru specifikai nodrošina komandas saliedētību un ilgtspēju.

Lai nodrošinātu, ka stratēģija kļūst par reāli funkcionējošu sistēmu, pētījumā izstrādāts arī detalizēts ieviešanas modelis, kas ietver septiņus integrācijas soļus. Pirmais solis ir iekšējās komunikācijas audita veikšana, analizējot procedūras, lēmumu plūsmu un sapulču struktūru. Otrais posms paredz kultūras riska izvērtējumu komandās, identificējot galvenos pretstatus, piemēram, tiešuma/neticamības vai kolektīvisma/individualisma atšķirības. Trešajā posmā tiek veikta stratēģijas pielāgošana konkrētās organizācijas specifikai, t.sk. valodu politikai, projektu formātam un komunikācijas ieradumiem. Ceturtais solis paredz CQ apmācību ieviešanu ar diferencētu saturu vadītājiem un darbiniekiem. Piektajā posmā tiek ieviesta digitālā platforma atgriezeniskās saites vākšanai, kas ļauj regulāri novērtēt komunikācijas kvalitāti. Sestajā posmā tiek papildināta jauno darbinieku adaptācijas programma ar kultūras orientāciju un mentoru sistēmu. Pēdējais – septītais posms – ir regulāra ietekmes izvērtēšana, izmantojot rādītājus, piemēram, uzticēšanās līmeni, konfliktu biežumu, darbinieku iesaisti un apmierinātību ar komunikācijas kvalitāti.

Šāda strukturēta, bet vienlaikus elastīga pieeja stratēģijas ieviešanai nodrošina, ka teorētiski formulētie risinājumi tiek integrēti praksē, ņemot vērā katras organizācijas kontekstu un komandas specifiku. Ilgtermiņā tas stiprina projekta izpildes kvalitāti, darbinieku noturību, starpkultūru saskaņu un pozitīvu reputāciju starptautiskajā vidē.

Secinājumi

Pamatojoties uz visaptverošu empīrisko analīzi – intervijām, dokumentu pārskatīšanu un darbinieku aptauju ir izstrādāti šādi secinājumi:

1. Starpkultūru komunikācija Rail Baltica projektā ir būtisks faktors, kas ietekmē gan ikdienas sadarbību, gan projekta rezultātu kvalitāti. Darbinieku un vadītāju pieredze apliecina, ka dažādu kultūru pārstāvju sadarbība ir ikdienas realitāte, kas prasa mērķtiecīgu pieeju un kompetenču attīstību.
2. Kultūras atšķirības visbiežāk izpaužas lēmumu pieņemšanā, atgriezeniskās saites sniegšanā, konfliktu risināšanā un komunikācijas veidā. Šie aspekti rada potenciālus pārpratumus, ja netiek nodrošināta skaidra, vienota un saprotama pieeja informācijas apmaiņai.
3. Vadītāju spēja pielāgoties starpkultūru vidē tika novērtēta zemāk nekā darbinieku pielāgošanās prasmes, kas liecina par vadības kompetenču trūkumu šajā jomā. Tieši vadītāja uzvedība tika identificēta kā būtiskākais elements efektīvai komandas dinamikai.
4. Tika pierādīta tieša saikne starp lomu skaidrību, uzticēšanos komandā un iekšējās komunikācijas kvalitāti. Jo strukturētāka ir darba organizācija, jo augstāka ir darbinieku

savstarpējā uzticēšanās un emocionālā drošība.

5. Psiholoģiskā drošība komandās pastāv, taču nav konsekventi nodrošināta. Liela daļa respondentu nejūtas pietiekami droši, lai atklāti paustu bažas vadībai, kas norāda uz nepieciešamību pēc drošas, atvērtas komunikācijas vides.
6. Kultūras izslēgšanas sajūtu visbiežāk izraisa valodas barjeras, informācijas neprecizitāte un darbinieku ignorēšana, kas tieši ietekmē motivāciju, lojalitāti un līdzdalību.
7. Dati apliecina, ka visaugstāk novērtētie aspekti ir lomu skaidrība, uzticēšanās kolēģiem un starpkultūru komunikācijas efektivitāte, savukārt viszemāk – vadības elastība un spēja pielāgoties kultūras dažādībai. Tas norāda uz neatbilstību starp organizatorisko struktūru un līderības kompetencēm.
8. Korelācijas analīze apstiprināja, ka skaidri definētas lomas un atbildības pozitīvi ietekmē komunikācijas kvalitāti un psiholoģisko drošību komandās, savukārt vadītāja pielāgošanās spēja nav tieši saistīta ar strukturēto sadarbību.
9. Salīdzinot dokumentus, tika konstatēts, ka standartos balstīta, uz uzticēšanos vērsta komunikācija būtiski uzlabo sadarbību starptautiskā projektā, savukārt formāli hierarhiski dokumenti, kas ignorē kultūras aspektus, var radīt nesaskaņas un interpretācijas atšķirības.
10. Intervijas atklāja, ka veiksmīga starpkultūru vadība balstās uz personalizētu, empātisku pieeju, daudzkanālu komunikāciju, decentralizētu lēmumu pieņemšanu un spēju izvairīties no stereotipiem. Iekļaušana tiek veidota, aktīvi iesaistot arī klusākos darbiniekus.
11. Pētījuma rezultātā izstrādātā stratēģija piedāvā praktisku ietvaru organizācijām ar starpkultūru komandām, aptverot gan strukturētu komunikācijas modeli, gan darbinieku adaptācijas, atgriezeniskās saites, vadības apmācību un kultūras riska novērtēšanas komponentus. Tās ieviešana veicina informācijas saprotamību, psiholoģisko drošību un efektīvu sadarbību ilgtermiņā.

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Anna Krecere – Bernarte. RĪGAS IEDZĪVOTĀJU ILGTSPĒJĪGO UZVEDĪBU IETEKMĒJOŠIE FAKTORI

*Ekonomikas un kultūras augstskola
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Zinātniskais vadītājs: Dr. oec, profesore Jeļena Titko*

Anotācija

Pētījuma aktualitāte: Pieaugošo vides problēmu un klimata pārmaiņu kontekstā ilgtspējīga dzīvesveida ievērošana kļūst arvien būtiskāka, īpaši pilsētvidē, kur koncentrējas lielākā daļa iedzīvotāju – Rīgā tie ir aptuveni 614 tūkstoši cilvēku (CSP, 2023). Neskatoties uz to, ka 78% Latvijas iedzīvotāju atzīst klimata pārmaiņas par nopietnu problēmu, tikai 25% veic reālas darbības to ierobežošanai (Eiropas Komisija, 2021). Viedās administrācijas un reģionālās attīstības ministrija norāda, ka 40% sadzīves atkritumu joprojām tiek nogādāti poligonos (VARAM, 2021). Šie rādītāji liecina par nepieciešamību izprast faktorus, kas ietekmē Rīgas iedzīvotāju ilgtspējīgu uzvedību, lai sekmētu efektīvākus risinājumus sabiedrības motivēšanā uz videi draudzīgu rīcību.

Pētījuma mērķis: Izvērtēt Rīgas iedzīvotāju ilgtspējīgo uzvedību ietekmējošos faktorus.

Pētījuma metodes: Pētījumā izmantotas datu ieguves metodes, literatūras analīze un anketēšana, kā arī datu apstrādes metodes, frekvenču jeb biežumu analīze un ranžēšana.

Sasniegtie rezultāti: Pētījuma rezultāti atklāj, ka lielākā daļa Rīgas iedzīvotāju apzinās ilgtspējīga dzīvesveida nozīmi, taču ikdienā šo principu ievērošana ir atkarīga no vairākiem faktoriem. Nozīmīgākie šķēršļi ir ieradumu inerence, augstākas izmaksas videi draudzīgām alternatīvām un infrastruktūras trūkums. Biežāk minētie motivējošie faktori ilgtspējīgas uzvedības ieviešanai ir personīgā atbildības sajūta par vidi, vēlme saglabāt veselību, kā arī bērnu nākotnes apsvērumi. Nozīmīgu ietekmi uz uzvedību rada arī sociālie faktori, piemēram, ģimenes atbalsts. Aptaujas rezultāti liecina, ka informētības līmeņa paaugstināšana un praktisku, pieejamu risinājumu ieviešana var būtiski uzlabot iedzīvotāju ilgtspējīgu rīcību. Datu analīze rāda, ka atsevišķām iedzīvotāju grupām, piemēram, augstāka izglītība un ienākumu līmenis ir augstāka motivācija ievērot ilgtspējīgas prakses.

Atslēgas vārdi: ilgtspēja; Rīga; vide; paradumu maiņa; ilgtspējīga attīstība

Ievads

Vides degradācija, klimata pārmaiņas un resursu izsīkums ir radījuši nepieciešamību pārorientēt sabiedrības uzvedību uz ilgtspējīgākiem dzīvesveida principiem. Ilgtspējīga uzvedība ietver individu ikdienas rīcības, kas veicina dabas resursu saglabāšanu, emisiju samazināšanu un vides kvalitātes uzlabošanu (UNEP, 2020). Eiropas Savienībā uzmanība tiek pievērsta sabiedrības iesaistei ilgtspējīgas attīstības mērķu sasniegšanā, kas atspoguļots arī Eiropas Zaļajā kursā, kurš uzsver nepieciešamību mazināt resursu patēriņu un virzīt sabiedrību uz videi draudzīgām izvēlēm (Eiropas Komisija, 2021).

Latvijā, atbilstoši pēc Ekonomiskās sadarbības un attīstības organizācijas datiem, 2022. gadā, pilsētu iedzīvotāji rada 1,1 tonnu sadzīves atkritumu uz vienu cilvēku gadā, kas pārsniedz ES vidējo rādītāju (OECD, 2022). Turklāt Latvijas sabiedrība tikai pakāpeniski pieņem ilgtspējīgus patēriņa paradumus – 2022. gada ANO pētījumā atklāts, ka mazāk nekā 30% iedzīvotāju regulāri izvēlas ilgtspējīgus produktus vai pakalpojumus (ANO, 2022).

Pētījuma objekts ir Rīgas iedzīvotāji. Pētījuma priekšmets ir Rīgas iedzīvotāju ilgspējīgu uzvedību ietekmējošie faktori. Pētījuma mērķis ir izvērtēt faktorus, kas ietekmē Rīgas iedzīvotāju ilgspējīgo uzvedību. Pētījumā tiek veikta teorētiskā izpēte par ilgspēju un iedzīvotāju ilgspējīgo uzvedību. Izstrādāta anketa Rīgas iedzīvotāju ilgspējīgo uzvedību faktoru noteikšanai un izvērtēšanai. Veikta Rīgas iedzīvotāju aptauja. Noteikts Rīgas iedzīvotāju ilgspējīgo uzvedību ietekmējošo faktoru nozīmīgumu. Pētījuma jautājums, kādi ir Rīgas iedzīvotāju ilgspējīgo uzvedību ietekmējošie faktori. Pētījumā izmantotas datu ieguves metodes, literatūras analīze un anketēšana, kā arī datu apstrādes metodes, frekvenču jeb biežumu analīze un ranžēšana.

Analītiskais apskats

Ilgspējīga attīstība un ar to saistītās iedzīvotāju uzvedības izmaiņas mūsdienu sabiedrībā ir kļuvušas par vienu no aktuālākajām tēmām gan nacionālā, gan starptautiskā mērogā. Pieaugošais vides piesārņojums, klimata pārmaiņas un resursu izsīkšana uzliek par pienākumu ne vien politikas veidotājiem, bet arī sabiedrībai kopumā pārskatīt savus patēriņa un dzīvesveida ieradumus. Ilgspējīga uzvedība šajā kontekstā ir ne tikai vēlama, bet obligāts priekšnoteikums harmoniskai sabiedrības attīstībai.

Ilgspējīgas uzvedības jēdziens tiek definēts kā indivīda rīcība, kuras mērķis ir samazināt negatīvo ietekmi uz vidi, veicināt sociālo labklājību un nodrošināt resursu saglabāšanu nākamajām paaudzēm (Kollmuss & Agyeman, 2002). Šī uzvedība ietver plašu darbību spektru – sākot no ikdienas izvēlēm, piemēram, pārtikas produktu iegādes un atkritumu šķirošanas, līdz pat sabiedriskajai līdzdalībai videi draudzīgu iniciatīvu ietvaros (One Planet Network, 2016).

Apvienoto Nāciju Organizācija uzsver, ka uzvedības maiņa ir viens no galvenajiem virzītājspēkiem pārmaiņām, kas nepieciešamas, lai nodrošinātu ilgtermiņa sabiedrības un vides līdzsvaru. Tomēr uzvedības maiņu nereti apgrūtina dažādi psiholoģiski, sociāli un ekonomiski šķēršļi, kas liedz indivīdiem pieņemt ilgspējīgus lēmumus, pat ja viņi apzinās to nozīmi (ANO, 2022).

Starptautiskie pētījumi uzrāda līdzīgas tendences. GlobeScan aptaujā, kas veikta 31 valstī ar 30 000 respondentiem, secināts, ka visbiežākie šķēršļi ilgspējīgas uzvedības ieviešanai ir laika trūkums, finansiālās izmaksas un ieradumu inerģe (GlobeScan, 2023). Čehijas pētījumā norādīts, ka ilgspējīgas uzvedības veidošanā izšķiroša ir izglītība un sabiedrības normu maiņa (Dimitrova u.c. 2021). Latvijas mērogā pieejami vien fragmentāri pētījumi, piemēram, Biznesa augstskolas Turība, konferences ietvaros veikta neliela mēroga aptauja, kas parādīja, ka iedzīvotāji bieži uzskata savu rīcību par nenozīmīgu kopējās problēmas risināšanā (Granta, 2024).

Latvijā novērojama neatbilstība starp iedzīvotāju uzskatiem un reālo rīcību attiecībā uz vides ilgspēju. Saskaņā ar Eiropas komisijas 2021. gada datiem, 78% Latvijas iedzīvotāju uzskata klimata pārmaiņas par nopietnu problēmu, taču tikai 25% aktīvi iesaistās šīs problēmas risināšanā. Turklāt 40% sadzīves atkritumu vēl aizvien tiek apglabāti poligonos, kas liecina par nepietiekamu ilgspējīgas uzvedības prakses izplatību (VARAM, 2021). Rīga, kā Latvijas lielākā pilsēta ar 629 000 iedzīvotāju ir stratēģiski nozīmīgs reģions ilgspējības mērķu sasniegšanai. Augsts iedzīvotāju blīvums, patēriņa līmenis un pilsētvides specifika veido atšķirīgu kontekstu salīdzinājumā ar lauku reģioniem, tāpēc ir būtiski izprast tieši Rīgas iedzīvotāju uzvedību ietekmējošos faktorus (Centrālā statistikas pārvalde, 2023).

Pētījuma metodoloģija

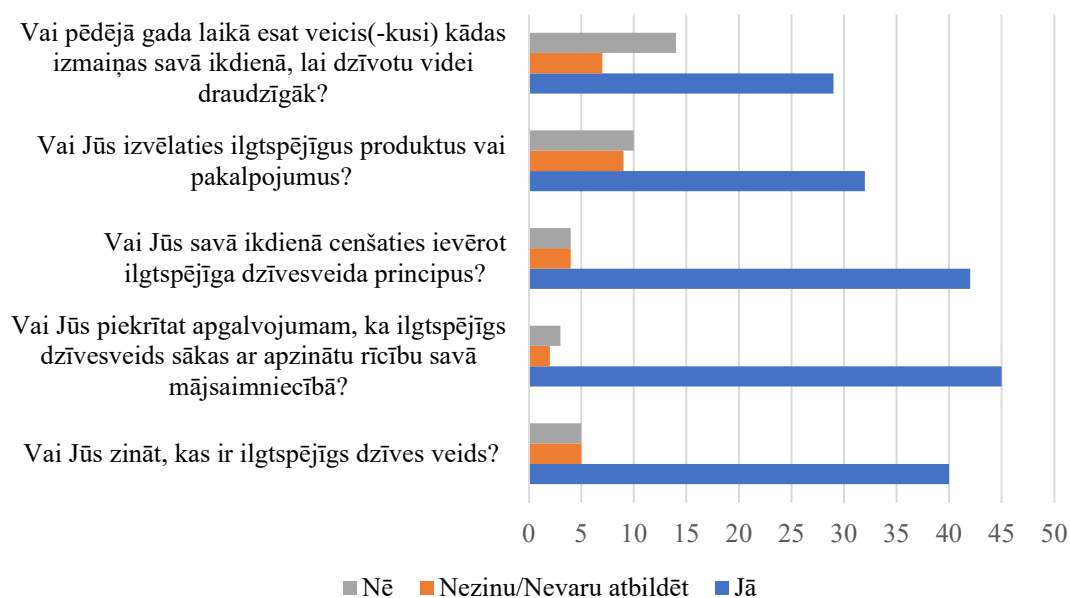
Pētījuma metodoloģija balstījās uz literatūras analīzi un kvantitatīvo pētījumu, lai noteiktu Rīgas iedzīvotāju ilgspējīgu uzvedību ietekmējošos faktorus. Vispirms tika veikts teorētiskais apskats, kurā analizēja dažādus avotus, lai gūtu ieskatu ilgspējīgas rīcības veicināšanā. Šo atziņu ietvaros

tika izstrādāta anketa, kas ietvēra jautājumus par respondentu demogrāfisko profilu, ikdienas videi draudzīgajiem paradumiem un uztverto nozīmi ilgtspējīgai rīcībai. Anketa tika izplatīta Rīgas iedzīvotāju vidū tiešsaistē, nodrošinot nejaušu izlasi un pēc iespējas plašāku respondentu sasniegšanu.

Iegūtie dati tika apkopoti un analizēti, izmantojot biežumu jeb frekvenču analīzi, lai novērtētu, kuras prakses un faktori ir visizplatītākie un kuri – mazāk. Tika veikta arī faktoru nozīmīguma ranžēšana, balstoties uz vidējiem vērtējumiem, kas piešķirti dažādiem ilgtspējīgas uzvedības veicinošiem vai kavējošiem aspektiem. Šāda pieeja ļāva sistemātiski novērtēt, kuri iemesli vistiešāk ietekmē respondentu gatavību mainīt paradumus, un padziļinātāk izprast nepieciešamos nosacījumus, lai Rīgas iedzīvotāji būtu motivēti ieviest ilgtspējīgas prakses savā ikdienā.

Pētījuma rezultāti

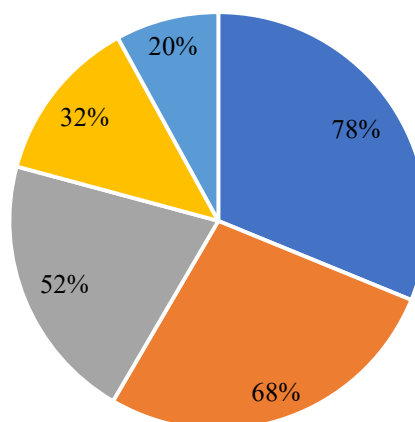
Pētījuma rezultāti tika iegūti, analizējot 50 Rīgas iedzīvotāju sniegtās atbildes uz aptaujas jautājumiem, kas ietvēra informētību par ilgtspējīgu dzīvesveidu, pašvērtējumu, galvenos šķēršļus un motivējošos faktorus. Rezultāti norāda uz salīdzinoši augstu respondentu informētību par ilgtspējīga dzīvesveida būtību, 80 % respondentu atzina, ka zina, kas ir ilgtspējīgs dzīvesveids. 90 % piekrīt, ka ilgtspējīgs dzīvesveids sākas ar apzinātu rīcību savā mājāsaimniecībā. 58 % aptaujāto pēdējā gada laikā ir veikuši konkrētas praktiskas izmaiņas savā ikdienā, lai dzīvotu videi draudzīgāk (1. att).



1.att. Zināšanas un pašvērtējums (Avots: autores veiktās aptaujas rezultātu apkopojums)

Respondenti atzīmēja vairākus būtiskus faktorus, kas traucē, kavē ieviest ilgtspējīgu dzīvesveidu ikdienas praksē. Visbiežāk minētie šķēršļi bija: ieradumu inerce – 78 %, augstākas izmaksas videi draudzīgām alternatīvām – 68 %, zema sociālā motivācija – 52 %, nepieejama vai nepietiekama infrastruktūra – 32 %, nepietiekama informētība – 20 %. Kā redzams, lielākais šķērslis ir individuālo paradumu maiņa, ko papildina arī salīdzinoši augstās videi draudzīgo risinājumu izmaksas. Sociālais un infrastruktūras faktors ir sekundāri, tomēr arī tie būtiski ierobežo ilgtspējīgas rīcības ieviešanu (2. att).

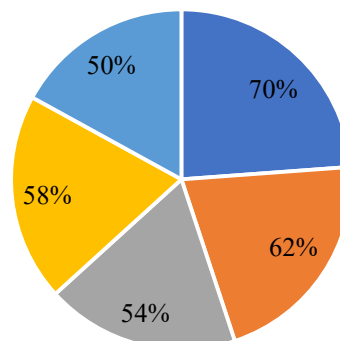
- Ieradumu inerce
- Augstākas izmaksas videi draudzīgām alternatīvām
- Zema sociālā motivācija
- Nepieejama vai nepietiekama infrastruktūra



2.att. Galvenie šķēršļi ilgtspējīgas uzvedības ieviešanai (Avots: autores veiktās aptaujas rezultātu apkopojums)

Respondentu vērtējumā vissvarīgākie faktori, kas veicina un ietekmē ilgtspējīgu uzvedību, pēc Likerta skalas, atzīmējot prioritāti no 1 (nav svarīgi / netiek darīts) līdz 5 (ļoti svarīgi / tiek darīts konsekventi un apzināti), galvenie stimulatori ilgtspējīgai rīcībai ir tieši finansiālais ieguvums, infrastruktūras pieejamība un ieguvumi veselībai.

- Samazināt ikdienas izmaksas
- Uzlabota un paplašināta atkritumu šķirošanas sistēma
- Energoefektīvs mājoklis
- Tuvumā pieejami šķirošanas konteineri
- Saistība ar personisko veselību



3.att. Svarīgākie faktori ilgtspējīgai uzvedībai (Avots: autores veiktās aptaujas rezultātu apkopojums)

Lai arī aptuveni 84 % aptaujāto apgalvo, ka jau šobrīd cenšas dzīvot ilgtspējīgi, tikai 62 % respondentu regulāri izvēlas videi draudzīgus produktus vai pakalpojumus, un vēl mazāk – 58 % – ir praktiski mainījuši savus ieradumus. Šie rezultāti ļoti skaidri norāda uz divu galveno barjeru – cenu faktora un ieradumu inerces – būtisko nozīmi.

Secinājumi

Pētījuma rezultāti ļauj secināt, ka galvenie kavējošie faktori, kas būtiski ietekmē Rīgas iedzīvotāju ilgtspējīgas uzvedības ieviešanu ikdienā, ir indivīdu ieradumu inerce, kas raksturīga aptuveni četrām piektdaļām respondentu, kā arī augstākās izmaksas videi draudzīgiem produktiem un pakalpojumiem, kuras minēja ap divām trešdaļām aptaujāto. Šos būtiskākos šķēršļus papildina arī

sociālās motivācijas trūkums jeb apkārtējo cilvēku zemais atbalsts un iesaiste, kā arī nepietiekami attīstīta un neērta pilsētas infrastruktūra, piemēram, attālināti atkritumu šķirošanas punkti vai nepietiekams velo infrastruktūras tīkls.

Savukārt kā galvenie motivējošie faktori ilgtspējīgas uzvedības ieviešanai un uzturēšanai izdalās tieši finansiālie stimuli jeb iespēja ilgtermiņā samazināt ikdienas izdevumus, piemēram, mazākas komunālo maksājumu summas, subsīdijas energoefektīviem risinājumiem, kā arī tieši uztverami un tūlītēji personiskie labumi. Ļoti nozīmīga ir arī ērti pieejama infrastruktūra, kas atvieglo ikdienas ilgtspējīgu rīcību, piemēram, tuvumā esoši šķirošanas punkti, ērts un efektīvs sabiedriskais transports un drošas velo joslas. Tāpat būtiski motivējoši ir arī personiskās veselības un nākamo paaudžu labklājības apsvērumi, kas iedzīvotājiem palīdz pieņemt lēmumu par paradumu maiņu ilgtermiņā.

Iegūtie dati arī parāda, ka augsta informētība par ilgtspējīgu dzīvesveidu pati par sevi vēl nav pietiekama, lai nodrošinātu iedzīvotāju konsekventu pāreju no teorētiskās vēlmes uz praktisku ilgtspējīgu rīcību. Tāpēc papildus zināšanām ir nepieciešama aktīva pašvaldības un uzņēmumu iesaiste, ieviešot finansiālus stimulus un uzlabojot infrastruktūru, tādējādi novēršot galvenās praktiskās barjeras un veicinot ilgtspējīgu uzvedību Rīgas pilsētā ilgtermiņā.

Turpmākajos pētījumos būtu lietderīgi analizēt reģionālās atšķirības un dziļāk izpētīt sociālo un psiholoģisko faktoru ietekmi uz ilgtspējīgu uzvedību. Kopumā ilgtspējīga uzvedība Rīgā visefektīvāk tiks veicināta, ja risinājumi būs ekonomiski pievilcīgi, ērti un sniegs tūlītējus personiskus ieguvumus.

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Anotācija

Pētījuma aktualitāte: Būvniecības nozarei ir svarīga loma Latvijas ekonomiskajā attīstībā. Būvniecības procesa digitalizācija ar 2020. gada 1. janvāri izmantojot būvniecības informācijas sistēmu www.bis.gov.lv ienesa izmaiņas ikviena būvniecības procesā iesaistītā būvspeciālista ikdienā. Savukārt sākot ar 2025. gada 1. janvāri publisku personu finansētu trešās grupas jaunu ēku būvniecībā tika ieviesta Būvju informācijas modelēšana (BIM), kas nesa vēl jaunus izaicinājumus. 2024. gada BIM skaitīšanas aptauja skaidri iezīmē galvenos būvniecības digitalizācijas procesa izaicinājumus. Kā galvenos šķēršļus 63% respondentu minēja iesaistīto pušu kompetences trūkumu, norādot uz pastāvīgu problēmu ar prasmju trūkumu un kvalifikācijas uzlabošanas nepieciešamību. Iezīmējas arī nepietiekama speciālistu sagatavošana un izpratnes trūkums, kas norāda uz to, ka nozarei joprojām trūkst kvalificēta darbaspēka un izglītības programmu (aptauja “BIM skaitīšana 2024”). Saskaņā ar Eiropas Komisijas darba dokumentu SWD(2023)614 “2023. gada ziņojumu par valsti – Latvija” digitālo prasmju trūkuma novēršana joprojām ir viena no Latvijas galvenajām digitalizācijas problēmām (EC, 2023). Latvijā digitālo pamatprasmju līmenis ir zemāks par ES vidējo rādītāju, un gandrīz pusei valsts iedzīvotāju to joprojām trūkst (VARAM, 2024). Eiropas Profesionālās izglītības attīstības centra (CEDEFOP) publicējā pētījumā par prasmēm, norādīts, ka attiecībā uz digitālo tehnoloģiju pielietošanu darba procesā Latvija uzrāda tādu pašu tendenci kā vidēji Eiropas Savienībā. Latvijā informācijas tehnoloģijas izmanto 87% gadījumos (Cedefop, 2022).

Pētījuma mērķis: Identificēt faktorus, kas ietekmē strādājošo digitālo prasmju pilnveidi būvniecības nozarē.

Pētījuma metodes: Datu vākšanas metodes: Dokumentu analīze un anketēšana; Datu apstrādes metodes: Aprakstošās statistikas metode un grafiskā analīze

Sasniegtie rezultāti: Identificēti faktori, kas stimulē un traucē būvspeciālistiem pilnveidot un uzlabot savas digitālās prasmes. Sagatavoti pamata ieteikumi būvniecības uzņēmumiem savu būvspeciālistu digitālo prasmju pilnveidošanai.

Atslēgas vārdi: digitālās prasmes; būvniecības digitalizācija; BIM; kvalifikācija; būvspeciālisti.

Ievads

Digitalizācija mūsdienās ieņem nozīmīgu lomu, būtiski ietekmējot informācijas pieejamību, pārraides un uzglabāšanas mehānismus, kā arī kalpojot par pamatu digitālo tehnoloģiju un komunikācijas risinājumu attīstībai. Šī transformācija skar dažādas tautsaimniecības nozares, tostarp arī būvniecību, kur digitālo tehnoloģiju ieviešana būtiski pārveido darba procesus, vadības struktūras un gala rezultātus. Digitalizācijas mērķis būvniecības nozarē ir paaugstināt darba efektivitāti, precizitāti un savstarpējo koordināciju, aptverot plašu spektru no projektēšanas līdz būvniecības uzraudzībai (Lejmanis, 2023).

Šīs pārmaiņas nav iedomājamas bez cilvēkkapitāla attīstības, jo tieši cilvēki – ar savām zināšanām, prasmēm un spējām – ir digitalizācijas virzītājspēks. Kompetenču trūkums, kā norādīts pētījumā "Lielā BIM skaitīšana" (BIM Solutions, 2019), ir viens no būtiskākajiem šķēršļiem digitālo risinājumu ieviešanā būvniecībā. Tādējādi cilvēkkapitāla stiprināšana caur profesionālo izglītību, pārkvalifikāciju un mūžizglītību ir priekšnoteikums nozares attīstībai digitālajā laikmetā (BIM Solutions, 2019).

Latvijā veiktais pētījums "Lielā BIM skaitīšana" (BIM Solutions, 2019) identificē galvenos šķēršļus būvniecības digitalizācijas ieviešanā: kompetenču trūkumu esošajā darbaspēkā (17 %), nepietiekamu izpratni par digitalizācijas sniegtajām priekšrocībām (14 %), ierobežotus finansiālos resursus (12 %), nepietiekamu speciālistu sagatavošanu izglītības iestādēs (11 %), kā arī vienotu valsts standartu trūkumu projektēšanā (10 %), būvplānošanā (7 %) un iepirkumu procesos (7 %). Papildus tiek norādīts uz vadības līmeņa izpratnes trūkumu (9 %) (Zvidriņa, 2019).

Saskaņā ar 2024. gada aptauju "BIM skaitīšana", nozares profesionāļi kā prioritārus risinājumus min valsts atbalstu tehnoloģiju ieviešanas procesā, BIM izmantošanas obligātu noteikšanu publiskajos iepirkumos, kā arī apmācību un informatīvo semināru pieejamību. Aptaujas rezultāti liecina, ka BIM risinājumi kļūst par būtisku būvniecības nozares sastāvdaļu, tomēr pilnvērtīgai šīs tehnoloģijas integrācijai nepieciešami papildu ieguldījumi profesionālās kvalifikācijas paaugstināšanā un digitalizācijas procesu atbalstā.

Eiropas Būvniecības kontroles konsorcijs (CEBC) 2023. gada pārskatā norādīts, ka Latvija izceļas ar augstāko digitalizēto būvniecības procesu īpatsvaru, salīdzinot ar 16 citām valstīm. Latvijā ir pilnībā digitalizēta būvniecības administrēšana, kā arī elektroniska demontāžas procesa kontrole un būvniecības atkritumu izsekojamība (BVKB, 2023).

Digitalizācijas kontekstā īpaši nozīmīga ir kvalificētu speciālistu iesaiste – projektētājiem, arhitektiem, inženieriem, projektu vadītājiem un būvuzraugiem ir jāspēj adaptēties jaunajām tehnoloģijām. Šī transformācija rada būtiskus izaicinājumus izglītības sektoram, akcentējot nepieciešamību pēc mūsdienīga mācību satura un metodēm. Svarīga loma ir arī indivīda motivācijai – vēlmei apgūt jaunas prasmes, eksperimentēt un dalīties pieredzē.

Tomēr praksē nereti tiek novērots, ka tehnoloģiskā attīstība notiek straujāk nekā lietotāju spējas tai pielāgoties (Soida, 2022), radot plaisu starp digitalizācijas potenciālu un tā faktisko izmantojumu. Tieši tādēļ cilvēkkapitāla ilgtspējīga attīstība, nodrošinot darbiniekiem atbilstošas prasmes, izglītību un spēju pielāgoties, kļūst par stratēģisku priekšnosacījumu būvniecības nozares digitālajai transformācijai.

Analītiskais apskats

Mūsdienās būvniecības nozare būtiski izjūt demogrāfiskās pārmaiņas – pieejamais darbaspēks šajā nozarē ir gandrīz pilnībā izsmelts. Kvalificētu speciālistu trūkums izraisa projekta izmaksu pieaugumu, aizkavē grafiku izpildi un pasliktina darbu kvalitāti (Bahr & Laszig, 2021). Šie faktori uzsver nepieciešamību stiprināt cilvēkkapitāla bāzi, koncentrējoties uz prasmju attīstību un kvalifikācijas celšanu. Nacionālās būvniecības nozarēs novērojamie produktivitātes izaicinājumi lielākoties saistīti ar zemu kapitāla ieguldījumu līmeni, nozares sadrumstalotību (piemēram, uzņēmumu izmēru dažādību), tehnoloģisko jauninājumu ieviešanas lēnumu, projektu sarežģītību, strukturālajām pārmaiņām un demogrāfiskajiem faktoriem, tai skaitā ar prasmju deficītu.

Digitalizācijas procesi sniedz vairākas būtiskas priekšrocības – uzlabotu efektivitāti, zemākas izmaksas un augstāku precizitāti. Tomēr šī transformācija saskaras ar vairākiem būtiskiem šķēršļiem: augstām sākotnējām investīcijām tehnoloģiju ieviešanai; nepieciešamību pēc darbinieku apmācības; izaicinājumiem datu drošības un privātuma jomā. Lai gan digitalizācija var ievērojami veicināt

nozāres izaugsmi, tās pilnvērtīgai īstenošanai nepieciešama rūpīgi izstrādāta un stratēģiski pamatota pieeja, kuras centrā atrodas cilvēkkapitāla attīstība. “BIM skaitīšana 2024” aptauja uzrāda, ka viens no būtiskākajiem digitalizācijas procesa kavējošiem faktoriem ir kompetences trūkums – 63 % respondentu atzīst šo kā nozīmīgu problēmu.

Tas liecina par nepieciešamību gan uzlabot izglītības programmas, gan stiprināt profesionālo kvalifikāciju nozarē. Prasmes tiek raksturotas kā spēja praktiski vai intelektuāli pielietot zināšanas, un tās veido kompetences būtisku daļu. Atšķirībā no automatiskiem ieradumiem, prasmes tiek kontrolētas apzināti (Zogla & Lubkina, 2020). Pētījumu autores uzsver, ka kvalitatīvam darba procesam nepieciešamās kompetences jāpilnveido nepārtraukti, tai skaitā komunikācijas un tehnoloģiju aspektā. Akadēmiskās informācijas centrs uzskata, ka prasmes izpaužas kā spēja veikt darbību ar nepieciešamo kvalitāti un apjomu (AIC, 2016). Tās ietver arī spēju atjaunot, paplašināt un praksē piemērot teorētiskās zināšanas. Pēc “Darba tirgus prognozēšanas sistēmas pilnveide” (NVA, 2017) datiem, prasmes var iedalīt kognitīvajās, tehniskajās un starppersonu. Saskaņā ar ISCO (2012), tās tiek klasificētas četros līmeņos – no vienkāršu manuālu uzdevumu izpildes līdz kompleksām analītiskām darbībām, lēmumu pieņemšanai un komunikācijai.

Digitālās prasmes ir īpaši būtiskas mūsdienu darba tirgū – tās ietver ne tikai tehnoloģisko risinājumu pārzināšanu, bet arī spēju analizēt, interpretēt un efektīvi komunicēt digitālu saturu (OECD, 2019; Prudņikova, 2021). Digitāli orientētas darba vides attīstās uz cilvēku un tehnoloģiju sadarbības pamata, veidojot “inteligentus uzņēmumus”, kas darbojas efektīvāk nekā tradicionālie modeļi (Mykhailenko et al. 2020). Eiropas Komisijas izstrādātā digitālo prasmju matrica nosaka piecas galvenās jomas: informācijas ieguve un apstrāde, komunikācija, satura veidošana, datu drošība un problēmu risināšana (Ferrari et al. 2013). 2014. gada pētījumā atklāts, ka 47 % ES iedzīvotāju trūkst pietiekamu digitālo prasmju, bet 23 % šo prasmju nav vispār (EC, 2014). DESI 2020. gada rādītāji norāda, ka Latvija ierindojas 18. vietā starp 28 dalībvalstīm, ar vien 43 % iedzīvotāju, kam ir vismaz digitālās pamatprasmes (ES vidēji – 58 %), un tikai 24 % ar augstām digitālajām prasmēm (ES vidēji – 33 %) (EC, 2020).

Digitālās kompetences jēdziens tiek plaši izmantots izglītības politikas dokumentos (Spante et al. 2018; Spridzans & Dzerviniks, 2019), taču akadēmiskajā pētniecībā šim terminam joprojām nav vienotas definīcijas (Ilomäki et al. 2011). ESCO klasifikācijā prasmju jēdzieni strukturēti četrās kategorijās: zināšanas, prasmes, attieksme un vērtības, norādot arī to izskaidrojumus vairākās ES valodās (Lastovska, 2022). Eiropas Komisija prasmes definē kā spēju efektīvi izmantot zināšanas dažādos kontekstos (EC, 2008), OECD uzsver problēmu risināšanu konkrētā situācijā (OECD, 2012), bet UNESCO akcentē arī vērtības un attieksmi (UNESCO, 2015). Cedefop izšķir vispārējās un specifiskās prasmes, kas nepieciešamas profesijai (Cedefop, 2008), bet Latvijas izglītības politika tās definē kā zināšanu pielietojumu profesionālajā un personiskajā dzīvē (IZM, 2020).

Schmidt un Lee (2011) savukārt uzsver, ka prasmes ir apgūta spēja veikt specifiskus uzdevumus ar konsekvenci. Kvalificētu speciālistu trūkums joprojām ir viens no būtiskākajiem attīstības šķēršļiem būvniecības nozarē. Prasību un kompetenču attīstība ir ilgtermiņa ieguldījums cilvēkkapitālā un nozares ilgtspējai. Lai gan digitalizācija sniedz potenciālu izmaksu samazinājumam un darba kvalitātes uzlabošanai, tās ieviešanu apgrūtina sākotnējās izmaksas, nepietiekama sagatavotība un ar datu drošību saistīti riski. Tāpēc nepieciešama ilgtermiņa stratēģija, kas iekļauj pastāvīgu profesionālo un digitālo prasmju attīstību visos līmeņos. Pētījums “The relation between 21st-century skills and digital skills” (van Laar et al., 2017) uzsver, ka digitālo prasmju attīstību veicina augsta pašefektivitāte, tehnoloģiju pieejamība un organizācijas atbalsts. Turpretī to kavē zema motivācija, nepietiekams atbalsts un resursu trūkums. Tādēļ prasmju attīstībai jābalstās uz visaptverošu pieeju, kas apvieno individuālās un institucionālās vajadzības.

2024. gada pētījumā “What drives workers’ participation in digital skills training?” pētnieki secina, ka aptuveni 13% ES darba ņēmēju atzīst būtisku digitālo prasmju trūkumu, bet vairāk nekā ceturtdaļa

no viņiem neveic nekādas darbības, lai šo trūkumu novērstu. Līdzdalību apmācībā visvairāk ietekmē: prasību līmenis konkrētajā darbā; darba vides digitālā intensitāte; pašvērtējums par savu digitālo prasmju trūkumu; attieksme pret tehnoloģijām un bailes no automatizācijas. Pētnieku galvenais secinājums: līdzdalība digitālo prasmju apmācībā ir cieši saistīta ar darba prasībām, individuālo motivāciju un darba vides atbalstu – tāpat tieši ar cilvēkkapitāla stiprināšanu (Bertoni u.c. 2024).

Pētījuma metodoloģija

Pamatojoties uz pētījuma mērķi identificēt faktorus, kas ietekmē strādājošo digitālo prasmju pilnveidi būvniecības nozarē, tika izvirzīti vairāki uzdevumi. Pirmkārt, tika veikta teorētiskās literatūras analīze, lai iegūtu padziļinātu izpratni par digitālo prasmju būtību, to nozīmi darba tirgū un cilvēkkapitāla attīstībā. Turpinot darbu, tika izstrādāta īpaša anketa, kas paredzēta būvniecības nozarē strādājošo viedokļu apkopošanai par faktoriem, kuri ietekmē viņu digitālo prasmju attīstību. Anketēšanas rezultāti ļāva identificēt gan stimulējošos, gan kavējošos aspektus, kas nosaka būvspeciālistu vēlmi un spēju pilnveidot savas digitālās kompetences. Balstoties uz iegūtajiem datiem, tika izstrādāti ieteikumi būvniecības uzņēmumiem, lai tie efektīvāk atbalstītu savu darbinieku digitālo prasmju attīstību un veicinātu nozares kopējo digitālo izaugsmi.

Pētījumā tika pielietotas vairākas metodes. Datu vākšana tika veikta, izmantojot dokumentu analīzi un anketēšanu, savukārt datu apstrādei tika izmantota aprakstošā statistika un grafiskā analīze.

Pētniecības terminu vārdnīcā metodoloģija tiek definēta kā veids organizēt zināšanas noteiktā realitātes sfērā. Tā nosaka zinātniskās darbības teorētiskos un praktiskos vispārīgos principus un paņēmienus. Otrā skaidrojumā metodoloģija definēta kā pētījuma pārskata daļa, kurā pētnieks apraksta to, kā tika veikts pētījums.

Zinātniskā raksta autore, lai sasniegtu pētījuma mērķi – identificēt faktorus, kas ietekmē strādājošo digitālo prasmju pilnveidi būvniecības nozarē, pētījumu veica maģistra darba ietvaros, ko veica, lai noskaidrotu cilvēkkapitāla attīstību ietekmējošos faktorus. Zinātniskajā rakstā tiks atspoguļota sasaistē ar maģistra darba pētījumu izmantojot aptaujas rezultātus, kas iegūti maģistra darba ietvaros, lai noskaidrotu cilvēkkapitāla attīstību ietekmējošos faktorus. Aptaujā piedalījās 107 respondenti. Cilvēkkapitāla attīstība – kā indivīdu zināšanu, prasmju un kompetenču uzlabošana ar mērķi palielināt produktivitāti un vērtību darba tirgū – kļūst īpaši nozīmīga digitalizācijas laikmetā. Digitālās prasmes šajā kontekstā ir neatņemama cilvēkkapitāla sastāvdaļa, jo tās nosaka darbinieku spēju pielāgoties tehnoloģiskajām pārmaiņām.

Pētījuma autore izvērtēja potenciālo respondentu kontaktinformācijas pieejamos avotus un izvēlējās Būvniecības informācijas sistēmu (BIS) – www.bis.gov.lv. BIS kalpo kā platforma būvniecības digitalizācijai Latvijā, vienlaikus tā atspoguļo arī cilvēkkapitāla strukturālo bāzi – tajā redzami gan reģistrētie speciālisti, gan uzņēmumi, kuru darbinieku prasmes tieši ietekmē nozares digitālo transformāciju.

Lai padziļinātāk izpētītu Tehnoloģisko attīstības faktoru, pētījuma autore nolēma noskaidrot faktorus, kas stimulē un traucē būvspeciālistiem pilnveidot un uzlabot savas digitālās prasmes un izpētītu šo faktoru sasaisti ar cilvēkkapitāla attīstību ietekmējošiem faktoriem. Pētījuma autore nolēma uzrunāt tieši LBS BSSI ekspertus, kas iesaistīti būvspeciālistu uzraudzības procesā un viņiem ir tieša saskare ar digitālajām prasmēm, un viņi pārstāv dažādas būvniecības nozares virzienus.

Maģistra darba ietvaros pētījuma autore izstrādāja divas anketas. Pamata aptauja aptvēra gan respondentu profila analīzi, gan cilvēkkapitāla attīstību ietekmējošo faktoru izvērtējumu. Otrā anketa tika izstrādāta, lai identificētu digitālo prasmju pilnveidi ietekmējošo faktorus. Satura loģiskā struktūra atbilda cilvēkkapitāla teorētiskajai izpratnei – tai skaitā izglītības, apmācību, tehnoloģiju pieejamības, motivācijas un vadības ietekmei uz darbinieku attīstību. Pirmās aptaujas struktūras

pamatā tika izmantota Zviedru pētnieku Johana Rossa cilvēkkapitāla klasifikācija, ko pētījuma autore papildināja to ar tehnoloģisko spēju aspektu, uzsverot, ka mūsdienu kontekstā darbinieka spēja adaptēties tehnoloģijām kļūst par kritisku cilvēkkapitāla kvalitātes rādītāju (Jēkabsone, 2024). Pētījuma rezultāti tiek interpretēti, balstoties uz teorētisko cilvēkkapitāla attīstības modeli, kas ietver šādus būtiskus faktoros: izglītību, tehnoloģiju attīstību, vadības pieeju, ekonomiskos stimulus, demogrāfiskos rādītājus un valsts politiku. Visi šie aspekti kopā veido vidi, kurā cilvēkkapitāls spēj attīstīties atbilstoši nozares vajadzībām. Tādējādi šis pētījums ne tikai identificē digitālo prasmju pilnveidi ietekmējošos faktoros būvniecības nozarē, bet arī piedāvā skatījumu uz to, kā veidot ilgtspējīgu cilvēkkapitāla attīstības stratēģiju, kas balstīta uz izglītības sistēmas pielāgošanu, vadības atbalstu un tehnoloģiju integrāciju ikdienas darba procesos. Pētījuma autore veica elektroniskās aptaujas laika posmā no 08.04.2025. līdz 24.04.2025. un 26.04.2025. līdz 24.04.2025., izmantojot Google izklājlapas veidlapas formu.

Aptaujas veikšanai autore izstrādāja pētījuma instrumentu – anketu.

Aptaujas metode ir ar tai raksturīgiem mērījumiem dažādās mērījumu skalās, tālāk nosakot atšķirības starp izvēlētam atlasēm, sakarības starp pazīmēm vai novērtējot faktoru ietekmi uz rezultatīviem mainīgiem lielumiem (Kristapsone, 2020).

Cilvēkkapitāla attīstība ir process, kurā indivīdi uzlabo savas zināšanas, prasmes un kompetences, palielinot savu produktivitāti un vērtību darba tirgū. Digitalizācijas laikmetā digitālās prasmes kļūst par vienu no būtiskākajiem cilvēkkapitāla komponentiem, īpaši nozarēs, kurās pieaug tehnoloģisko risinājumu pielietojums, piemēram, būvniecībā. Cilvēkkapitāla attīstība ir process, kurā indivīdi uzlabo savas zināšanas, prasmes un kompetences, palielinot savu produktivitāti un vērtību darba tirgū (Becker, 1993; OECD, 2019).

Digitalizācijas laikmetā digitālās prasmes kļūst par vienu no būtiskākajiem cilvēkkapitāla komponentiem, īpaši nozarēs, kurās pieaug tehnoloģisko risinājumu pielietojums, piemēram, būvniecībā (European Commission, 2020; Cedefop, 2023). Digitālo prasmju pilnveidi tieši ietekmē vairāki faktori, kuri savukārt nosaka cilvēkkapitāla attīstības tempu un virzienu. Izglītība un apmācība veido pamatu digitālo kompetenču apguvei. Kvalitatīvas un nozares prasībām pielāgotas izglītības programmas nodrošina darbiniekiem nepieciešamās tehnoloģiskās zināšanas, tādējādi veicinot viņu profesionālo attīstību un palielinot cilvēkkapitāla vērtību (European Commission, 2020; UNESCO, 2022).

Tehnoloģiju attīstība rada pieprasījumu pēc jaunu prasmju apguves. Jauni digitālie rīki, BIM sistēmas un datu pārvaldības risinājumi nosaka nepieciešamību pēc pastāvīgas darbinieku prasmju atjaunošanas, veicinot dinamisku cilvēkkapitāla attīstību (World Economic Forum, 2020). Vadības stils un uzņēmuma attieksme būtiski ietekmē darbinieku motivāciju pilnveidot digitālās prasmes. Vadība, kas atbalsta mācības, sniedz resursus un uzsver inovāciju nozīmi, stimulē pozitīvu attieksmi pret profesionālo izaugsmi (Cedefop, 2023; OECD, 2020).

Ekonomiskie faktori un atalgojuma sistēmas tieši ietekmē darbinieku motivāciju ieguldīt laiku un resursus savu digitālo prasmju attīstībā. Konkurētspējīgs atalgojums un karjeras izaugsmes iespējas kalpo kā spēcīgs stimuls cilvēkkapitāla pilnveidei (ILO, 2021; Acemoglu & Autor, 2011). Demogrāfiskie faktori, piemēram, darbaspēka novecošanās, prasa īpašu uzmanību pieaugušo tālākizglītībai un elastīgām apmācību formām, lai nodrošinātu tehnoloģisko pārmaiņu iekļaušanu dažādu vecumu darbinieku attīstībā (OECD, 2020). Regulatīvais un politikas ietvars – valsts atbalsts mūžizglītībai un digitālo kompetenču attīstībai veicina sistēmisku pieeju cilvēkkapitāla pilnveidei, nodrošinot gan piekļuvi mācībām, gan motivāciju apgūt jaunas prasmes (European Commission, 2020; UNESCO, 2022). Šo faktoru mijiedarbība nosaka, cik efektīvi un strauji cilvēkkapitāls attīstās atbilstoši nozares digitalizācijas prasībām. Jo labvēlīgāki ir izglītības, tehnoloģiju, vadības un ekonomiskie apstākļi, jo lielāka ir iespēja attīstīt augsti kvalificētu un digitāli kompetentu

darbaspēku, kas savukārt palielina nozares konkurētspēju un inovāciju potenciālu (World Economic Forum, 2020; Cedefop, 2023).

Būvniecības nozarei ir svarīga loma Latvijas ekonomiskajā attīstībā. Būvniecības procesa digitalizācija ar 2020. gada 1. janvāri izmantojot būvniecības informācijas sistēmu www.bis.gov.lv ienesa izmaiņas ikviena būvniecības procesā iesaistītā būvspeciālista ikdienā. Savukārt sākot ar 2025. gada 1. janvāri publisku personu finansētu trešās grupas jaunu ēku būvniecībā tika ieviesta Būvju informācijas modelēšana (BIM), kas nesa vēl jaunus izaicinājumus. 2024. gada BIM skaitīšanas aptauja skaidri iezīmē galvenos būvniecības digitalizācijas procesa izaicinājumus. Kā galvenos šķēršļus 63% respondentu minēja iesaistīto pušu kompetences trūkumu, norādot uz pastāvīgu problēmu ar prasmju trūkumu un kvalifikācijas uzlabošanas nepieciešamību. Iezīmējas arī nepietiekama speciālistu sagatavošana un izpratnes trūkums, kas norāda uz to, ka nozarei joprojām trūkst kvalificēta darbaspēka un izglītības programmu (aptauja “BIM skaitīšana 2024”).

Saskaņā ar EK dienestu darba dokumentu SWD(2023)614 “2023. gada ziņojumu par valsti – Latvija” digitālo prasmju trūkuma novēršana joprojām ir viena no Latvijas galvenajām digitalizācijas problēmām (EC, 2023). Latvijā digitālo pamatprasmju līmenis ir zemāks par ES vidējo rādītāju, un gandrīz pusei valsts iedzīvotāju to joprojām trūkst (VARAM, 2024). Eiropas Profesionālās izglītības attīstības centra (CEDEFOP) publicētajā pētījumā par prasmēm, norādīts, ka attiecībā uz digitālo tehnoloģiju pielietošanu darba procesā Latvija uzrāda tādu pašu tendenci kā vidēji Eiropas Savienībā. Latvijā informācijas tehnoloģijas izmanto 87% gadījumos (Cedefop, 2022). Tāpēc pētījuma autore vēlējas atdalīt kā atsevišķu cilvēkkapitāla elementu Tehnoloģiskās spējas, kā spēju pielāgoties tehnoloģiju progresam, procesu digitalizācijai. Apkopojot cilvēkkapitāla attīstību ietekmējošos faktorus Latvijas būvniecības nozares uzņēmumos, pētījums autore balstījās uz iepriekšminētajiem cilvēkkapitāla elementiem un t.sk. uz Tehnoloģiskajām spējām. Barānovs un citi zinātniskajā rakstā “Latvijas produktivitātes attīstības tendences, izaicinājumi” min kā iespējas ar produktivitāti saistītos faktorus inovācijas, digitalizāciju un cilvēkkapitālu (Barānovs, 2021).

Savukārt 2020. gada 2. jūlijā Saeimā apstiprinātajā Latvijas Nacionālajā attīstības plānā 2021.–2027. gadam kā viens no prioritārajiem virzieniem ir noteikts “Produktivitāte, inovācija un eksports”. Nacionālajā attīstības plānā ir norādīts, ka “turpmākā tautsaimniecības izaugsme un augstāka dzīves līmeņa nodrošināšana Latvijas iedzīvotājiem ir atkarīga no spējas strauji mainīgajā vidē veidot jaunas, zināšanās balstītas konkurētspējas priekšrocības, proti, kāpināt produktivitāti caur ieguldījumiem cilvēkkapitālā, pētniecībā un inovācijā, kā arī jaunu, digitālu tehnoloģiju ieviešanā” (Barānovs, 2021); (Pārresoru koordinācijas centrs, 2020). Tehnoloģiju attīstība būtiski ietekmē cilvēkkapitāla attīstību būvniecības nozarē, jo tā maina gan darba metodes, gan nepieciešamās prasmes darbiniekiem.

Mūsdienu būvniecības uzņēmumi saskaras ar strauju digitalizāciju, automatizāciju un jaunu risinājumu (piemēram, BIM) ieviešanu, kas prasa darbinieku spēju nepārtraukti pielāgoties un apgūt jaunas tehnoloģijas. Saskaņā ar pētījumu, ko veica Succar, BIM tehnoloģiju ieviešana būtiski maina būvniecības procesu plānošanu un izpildi, vienlaikus pieprasot no darbiniekiem augstāku digitālo kompetenču līmeni. Šādas izmaiņas uzliek par pienākumu uzņēmumiem ieguldīt darbinieku apmācībā un prasmju attīstībā, kas savukārt veicina cilvēkkapitāla izaugsmi (Succar, 2009). Tehnoloģiju attīstība būvniecības nozarē ne tikai uzlabo darba efektivitāti un kvalitāti, bet arī rada pieprasījumu pēc jauna veida zināšanām – no tehniskajām iemaņām līdz spējai analizēt datus un izmantot digitālos rīkus lēmumu pieņemšanā. Tas nozīmē, ka cilvēkkapitāla vērtība palielinās tieši tajos gadījumos, kad darbinieki spēj izmantot jaunās tehnoloģijas praksē (Arif & Karam, 2001). Tādējādi, tehnoloģiju attīstība ne tikai paaugstina darba efektivitāti, bet arī veicina cilvēkkapitāla kvalitatīvu izaugsmi, piespiežot uzņēmumus ieguldīt apmācībās, kvalifikācijas paaugstināšanā un inovāciju ieviešanā.

Lai padziļināti izpētītu Tehnoloģisko attīstības faktoru, pētījuma autore nolēma noskaidrot faktorus, kas stimulē un traucē būvspeciālistiem pilnveidot un uzlabot savas digitālās prasmes un izpētītu šo faktoru sasaisti ar cilvēkkapitāla attīstību ietekmējošiem faktoriem. Pētījuma autore nolēma uzrunāt tieši LBS BSSI ekspertus, kas iesaistīti būvspeciālistu uzraudzības procesā un viņiem ir tieša saskare ar digitālajām prasmēm, un viņi pārstāv dažādas būvniecības nozares virzienus. Pētījuma autore lūdza LBS BSSI ekspertus atbildēt uz aptaujas jautājumiem laika posmā no 16.04.2025. līdz 24.04.2025. Aptaujas veikšanai autore izstrādāja pētījuma instrumentu – anketu, kas sastāvēja no pieciem jautājumiem (1. tabula). Aptaujā piedalījās 9 LBS BSSI eksperti.

1.tabula. Aptaujas jautājumi aptaujai par faktoriem, kas stimulē un traucē būvspeciālistiem pilnveidot un uzlabot savas digitālās prasmes (Avots: autora apkopojums)

Jautājums	Atbilde
Kā jūs vērtējat savas pašreizējās digitālās prasmes?	<i>(lūdzu, novērtējiet skalā no 1 līdz 5, kur 1 ir ļoti zemas un 5 ir ļoti augstas)</i>
Kādi faktori, jūsu prāt, visvairāk stimulē digitālo prasmju uzlabošanu? <i>(lūdzu, izvēlieties visus piemērojamus)</i>	Karjeras izaugsmes iespējas Augstāks atalgojums Uzņēmuma nodrošinātas apmācības Personīgā motivācija Tehnoloģiju attīstība Klientu prasības Likumdošanas prasības
Kādi ir galvenie šķēršļi, kas jums traucē pilnveidot digitālās prasmes?	Laika trūkums Finansiālo resursu trūkums Motivācijas trūkums Piekļuves trūkums atbilstošiem kursiem vai apmācībām Uzņēmuma atbalsta trūkums
Vai jūsu uzņēmums nodrošina pietiekamas iespējas digitālo prasmju apguvei?	Jā/Nē/daļēji
Kādas digitālās prasmes, jūsu prāt, ir vissvarīgākās būvniecības nozarē? <i>(lūdzu, izvēlieties visus piemērojamus)</i>	Projektēšanas programmatūras prasmes (AutoCAD u.c.) Datu analīze un pārvaldība Komunikācijas un sadarbības rīki Kiberdrošības pamati Prasme sagatavot nepieciešamo dokumentāciju un ievadīt Būvniecības informācijas sistēmā BIM (Building Information Modeling)

Sagatavojot aptaujā iekļauto digitālo prasmju uzlabošanu ietekmējošos faktorus, pētījuma autore sagatavoja šo faktoru sasaisti ar cilvēkkapitāla attīstību (2. un 3. tabula).

2.tabula. Faktori, kas stimulē digitālo prasmju uzlabošanu un to saistība ar cilvēkkapitāla attīstību
(Avots: autora apkopojums)

<i>Faktors</i>	<i>Saistība ar cilvēkkapitālu</i>
Karjeras izaugsmes iespējas	Digitālās prasmes palielina nodarbināmību un veicina karjeras attīstību, uzlabojot cilvēkkapitāla vērtību.
Augstāks atalgojums	Darbinieki ar digitālajām prasmēm var nopelnīt līdz pat 45% vairāk, kas atspoguļo ieguldījumu cilvēkkapitālā (National Skills Coalition, 2023).
Uzņēmuma nodrošinātas apmācības	Organizāciju ieguldījumi darbinieku apmācībā veicina cilvēkkapitāla attīstību un produktivitāti.
Personīgā motivācija	Individuāla vēlme mācīties un attīstīties ir būtiska cilvēkkapitāla uzlabošanai.
Tehnoloģiju attīstība	Tehnoloģiju progresēšana prasa pastāvīgu prasmju atjaunošanu, veicinot cilvēkkapitāla dinamiku.
Klientu prasības	Pieaugošas klientu prasības pēc digitāliem risinājumiem stimulē darbinieku prasmju attīstību.
Likumdošanas prasības	Normatīvie akti, kas nosaka digitālo prasmju nepieciešamību, veicina cilvēkkapitāla attīstību.

3.tabula. Faktori, kas traucē digitālo prasmju uzlabošanu un to ietekme uz cilvēkkapitāla attīstību
(Avots: autora apkopojums)

<i>Faktors</i>	<i>Ietekme uz cilvēkkapitālu</i>
Laika trūkums	Laika ierobežojumi kavē darbinieku iespējas apgūt jaunas prasmes, ierobežojot cilvēkkapitāla attīstību.
Finansiālo resursu trūkums	Nepietiekami finanšu līdzekļi ierobežo piekļuvi apmācībām, samazinot cilvēkkapitāla uzlabošanas iespējas.
Motivācijas trūkums	Zema motivācija samazina darbinieku iesaisti prasmju attīstībā, ierobežojot cilvēkkapitāla izaugsmi.
Piekļuves trūkums atbilstošiem kursiem vai apmācībām	Ierobežota piekļuve kvalitatīvām apmācībām kavē prasmju attīstību un cilvēkkapitāla uzlabošanu.
Uzņēmuma atbalsta trūkums	Organizāciju nespēja nodrošināt apmācības samazina darbinieku iespējas attīstīt prasmes, ierobežojot cilvēkkapitāla attīstību.

Pētījuma rezultāti

Digitalizācija būtiski maina darba tirgus struktūru un profesionālās kompetences, kuras nepieciešamas dažādās tautsaimniecības nozarēs. Būvniecības nozare, kas tradicionāli raksturojama ar zemāku tehnoloģisko integrāciju, pēdējos gados piedzīvo strauju pārkārtošanos – tiek ieviestas BIM sistēmas, digitālās būvniecības dienasgrāmatas un datu pārvaldības risinājumi. Šīs pārmaiņas nosaka nepieciešamību pēc sistemātiskas darbinieku digitālo prasmju pilnveides. Stratēģiskie politikas dokumenti valsts un Eiropas līmenī sniedz konceptuālo un praktisko ietvaru šādas attīstības īstenošanai.

Digitālās transformācijas pamatnostādnes 2021–2027 - šis politikas plānošanas dokuments nosaka virzienu Latvijas digitalizācijas politikai līdz 2027. gadam. Viena no tā prioritātēm ir sabiedrības un darbaspēka digitālo prasmju attīstība, īpaši uzsverot nepieciešamību tās pielāgot konkrētu nozaru vajadzībām. Pamatnostādnēs izcelta nepieciešamība pēc sadarbības starp publisko un privāto sektoru, lai nodrošinātu darbiniekiem iespējas apgūt tehnoloģiskos risinājumus, tai skaitā BIM, digitālos darba uzdevumu rīkus un datu apstrādi būvniecībā (VARAM, 2020).

Nacionālais attīstības plāns 2021–2027 (NAP2027) definē cilvēkkapitāla attīstību un izglītības modernizāciju kā vienu no stūrakmeņiem Latvijas izaugsmei. Digitālās prasmes tiek uzsvērtas kā kritisks faktors darba tirgus konkurētspējai, un būvniecības nozare minēta kā sektors ar potenciālu

digitalizācijai un produktivitātes kāpināšanai. Plānā paredzēti pasākumi gan izglītības iestādēm, gan uzņēmumiem darbinieku digitālās kompetences uzlabošanai (PKC, 2020).

Izglītības attīstības pamatnostādnes 2021–2027 - šis dokuments fokusējas uz vispārējās, profesionālās un pieaugušo izglītības modernizāciju. Viena no centrālajām tēmām ir digitālo kompetenču integrācija izglītības saturā visos izglītības posmos. Būtisks aspekts būvniecības nozarē ir profesionālās izglītības pielāgošana tehnoloģiskajām prasībām un pieaugušo tālākizglītības sistēmas attīstība, lai veicinātu arī jau strādājošo darbinieku prasmju uzlabošanu (IZM, 2020).

Eiropas Komisijas izstrādātā prasmju programma (European Skills Agenda, 2020) atzīst būvniecību par nozari, kas ir būtiska gan zaļās, gan digitālās pārkārtošanās kontekstā. Tā paredz sadarbības mehānismus starp izglītības iestādēm, uzņēmumiem un darba tirgus institūcijām, lai nodrošinātu praktiskas un uz darba tirgus vajadzībām balstītas digitālās mācības. Tiek atbalstīti arī tādi formāti kā mikroapliecinājumi (microcredentials), kas ļauj ātri un elastīgi apliecināt noteiktas prasmes (European Commission, 2020). Nozares attīstības pārskatos bieži tiek uzsvērts zems digitalizācijas līmenis Latvijas būvniecībā. Ekonomikas ministrijas un nozares profesionālo organizāciju dokumentos uzsvērta nepieciešamība pēc strādājošo mērķtiecīgas apmācības, tostarp BIM un projektu vadības programmatūras izmantošanā. Tāpat tiek akcentēta uzņēmumu loma un motivācija ieguldīt cilvēkresursu attīstībā (EM, 2022).

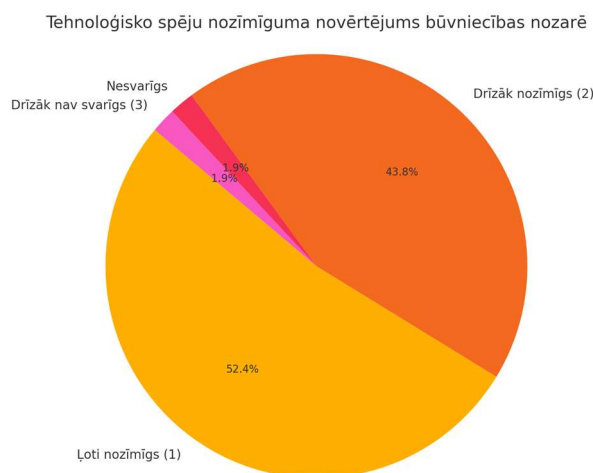
Cedefop 2023. gada ziņojums apliecina, ka darbinieki tehniskās nozarēs, piemēram, būvniecībā, salīdzinoši retāk piedalās digitālo prasmju pilnveides pasākumos. Kā būtiskākie šķēršļi identificēti laika trūkums, zema izpratne par apmācību nepieciešamību un nepietiekams atbalsts no darba devēju puses. Ziņojums rosina izstrādāt pielāgotus apmācību modeļus tieši zemākas digitalizācijas sektoriem (Cedefop, 2023).

Analizētie stratēģiskie dokumenti skaidri iezīmē politisko gribu un strukturālos virzienus, lai veicinātu digitālo prasmju attīstību būvniecības nozarē. Tomēr pastāv plaša starp politikas mērķiem un praktisko īstenošanu uzņēmumu un darbinieku līmenī. Lai šo plaisu mazinātu, nepieciešama mērķtiecīga sadarbība starp valsts institūcijām, izglītības sektoru un būvniecības uzņēmumiem, kā arī elastīgas un uz pieprasījumu balstītas apmācību sistēmas ieviešana.

Veicot aptauju par tehnoloģisko spēju nozīmīgumu cilvēkkapitāla attīstībā Latvijas būvniecības nozares uzņēmumos, iegūtie dati parādīja, ka šis elements tiek uzskatīts par būtisku lielākajai daļai respondentu. No visām atbildēm:

- 52,38% respondentu novērtēja tehnoloģiskās spējas kā "ļoti nozīmīgas",
- 43,81% respondentu norādīja, ka tās ir "drīzāk nozīmīgas",
- tikai 1,90% uzskatīja, ka tehnoloģiskās spējas ir "drīzāk nav svarīgas",
- vēl 1,90% norādīja, ka tās ir "nesvarīgas" (1.attēls).

Šie rezultāti apliecina, ka būvniecības nozares uzņēmumu vidū pastāv augsta izpratne par tehnoloģisko prasmju un spēju nozīmīgumu darbaspēka kompetences stiprināšanā un uzņēmumu konkurētspējas paaugstināšanā, īpaši tehnoloģiju attīstības un digitalizācijas laikmetā.

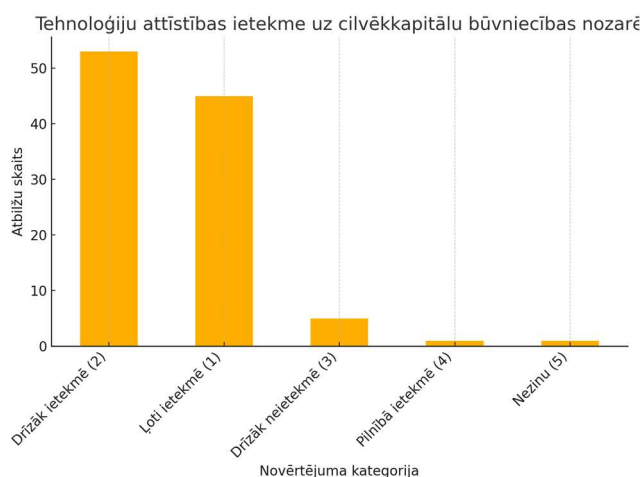


1.att. Tehnoloģisko spēju nozīmīguma novērtējums būvniecības nozarē (autores apkopojums)

Aptaujas dati parāda, ka tehnoloģiju attīstība būtiski ietekmē cilvēkkapitāla attīstību Latvijas būvniecības nozares uzņēmumos. No visām atbildēm:

- 50,48% respondentu norādīja, ka tehnoloģiju attīstība "drīzāk ietekmē" cilvēkkapitāla attīstību,
- 42,86% uzskata, ka tā "ļoti ietekmē" cilvēkkapitāla attīstību,
- 4,76% uzsvēra, ka tehnoloģiju attīstība "drīzāk neietekmē",
- 0,95% respondentu norādīja, ka tā "pilnībā ietekmē",
- 0,95% atbildēja, ka "nezina" par šādu ietekmi (2. attēls).

Šie rezultāti apliecina, ka lielākā daļa būvniecības nozares speciālistu apzinās tehnoloģiju attīstības nozīmi cilvēkkapitāla pilnveidē, tomēr pastāv neliela daļa respondentu ar mazāku pārliecību par tās ietekmi.



2.att. Tehnoloģiju attīstības ietekme uz cilvēkkapitālu būvniecības nozarē (autores apkopojums)

Maģistra darba ietvaros respondenti novērtēja dažādus faktorus, kas ietekmē cilvēkkapitāla attīstību būvniecības nozarē — tostarp:

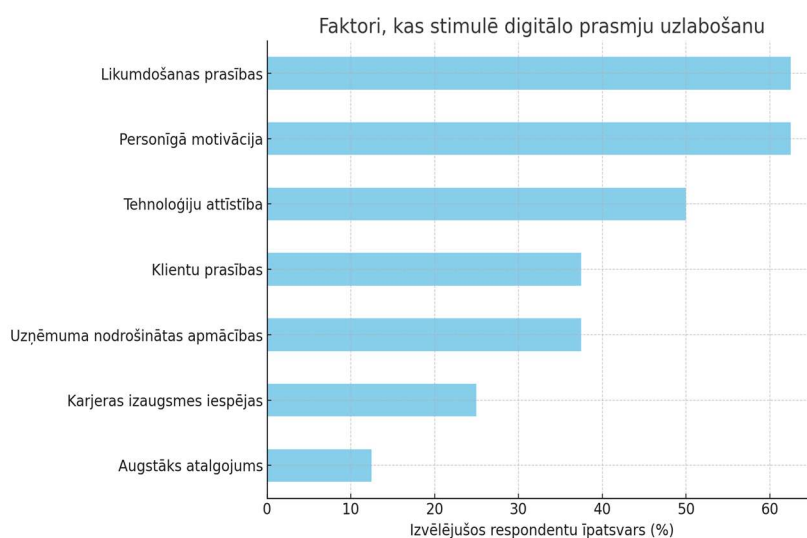
- Izglītība un apmācība

- Tehnoloģiju attīstība
- Vadības stils
- Ekonomiskie faktori
- Demogrāfiskā situācija
- Darba vide, u.c.

Šie ir tieši tie aspekti, kas palīdz identificēt faktorus, kas ietekmē digitālo prasmju pilnveidi, jo digitalizācija būvniecības nozarē ir cieši saistīta ar:

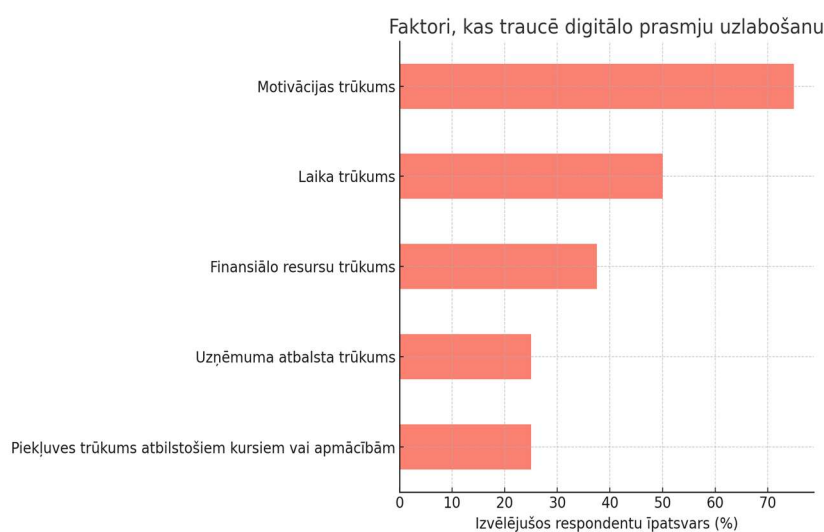
- pieejamajām mācībām un tehnoloģijām,
- darbinieku spēju pielāgoties jaunumiem,
- vadības atbalstu un motivējošu vidi.

Lai padziļinātāk izpētītu Tehnoloģisko attīstības faktoru, pētījuma autore nolēma noskaidrot faktorus, kas stimulē un traucē būvspeciālistiem pilnveidot un uzlabot savas digitālās prasmes un izpētītu šo faktoru sasaisti ar cilvēkkapitāla attīstību ietekmējošiem faktoriem. Pētījuma autore nolēma uzrunāt tieši LBS BSSI ekspertus, kas iesaistīti būvspeciālistu uzraudzības procesā un viņiem ir tieša saskare ar digitālajām prasmēm, un viņi pārstāv dažādas būvniecības nozares virzienus. Uz padziļinātās aptaujas jautājumiem atbildēja 9 LBS BSSI eksperti. Respondenti kā digitālo prasmju uzlabošanas stimulējošiem faktoriem visaugstāk novērtējuši Personīgo motivāciju, Tehnoloģisko attīstību un likumdošanas prasības (3.attēls).



3.att. Faktori, kas stimulē digitālo prasmju uzlabošanu (Avots: autora veiktās aptaujas rezultātu apkopojums)

Savukārt respondenti kā galveno šķērslī, kas traucē pilnveidot digitālās prasmes norāda tādu faktorus, kā Motivācijas trūkumu. Tam seko Laika trūkums un finansiālo resursu trūkums (4. attēls).



4.att. Faktori, kas traucē pilnveidot digitālās prasmes (Avots: autora veiktās aptaujas rezultātu apkopojums)

Motivācija ir divvirzienu faktors – tai ir izšķiroša nozīme gan kā attīstības virzītājspēkam, gan kā kavējošam faktoram. Tehnoloģiju un normatīvās vides attīstība veicina prasību izmaiņas un spiež pielāgoties. Lai mazinātu šķēršļus, būtiski ir nodrošināt laika elastību apmācībām, piedāvāt finansiāli pieejamus kursus un veidot motivējošu mācību vidi.

Mūsdienu darba tirgū digitālās prasmes kļūst par neatņemamu cilvēkkapitāla sastāvdaļu. Matricā analizēta saistība starp faktoriem (5. attēls), kas stimulē vai kavē digitālo prasmju attīstību, un galvenajiem cilvēkkapitāla attīstības ietekmētājiem. Augstāks atalgojums un personīgā motivācija ir cieši saistīti ar faktoru "Atalgojums un motivācija", kas ir spēcīgs cilvēkkapitāla virzītājspēks. Uzņēmuma nodrošinātas apmācības ir saistītas ar "Vadības stilu" un "Izglītību un apmācību", norādot uz organizatorisko atbalstu kā būtisku nosacījumu. Karjeras izaugsmes iespējas saistās ar "Izglītību un apmācību" un "Darba tirgus paplašināšanu", atspoguļojot darba tirgus dinamiku. Karjera ir iespēja realizēt profesionālo, sociālo un komunikatīvo kompetenci. (Garleja, 2004). Tehnoloģiju attīstība stimulē digitālās prasmes tieši un ir sinerģijā ar attiecīgo cilvēkkapitāla faktoru. Klientu prasības korelē ar "Darba tirgus paplašināšanu", atspoguļojot ārējo spiedienu un pielāgošanās nepieciešamību. Likumdošanas prasības ir cieši saistītas ar "Regulatīvo ietvaru", kas nosaka digitālās transformācijas virzienu. Laika trūkums galvenokārt attiecināms uz "Darba vidi", kas var būt nepielāgota mācībām. Finansiālo resursu trūkums ietekmē gan "Atalgojumu un motivāciju", gan "Ekonomiskos faktorus", kavējot pieeju izglītībai. Cilvēkkapitāls kā valsts attīstību ietekmējošs faktors, kas apliecinājumu ir guvis makroekonomiskajos pētījumos par tiešo korelāciju starp ieguldījumiem izglītībā un valsts tautsaimniecības attīstību (Mietule, 2012). Motivācijas trūkums tieši korelē ar "Atalgojumu un motivāciju", norādot uz iekšējo barjeru. Piekļuves trūkums apmācībām saistīts ar "Izglītību un apmācību", uzsverot nepieciešamību pēc kvalitatīviem resursiem. Uzņēmuma atbalsta trūkums norāda uz problēmām "Vadības stilā", kas vājina personāla attīstību.

Linda Romele savā pētījumā "Izglītības privātās un sociālās atdeves novērtējums Latvijā" ir uzsverusi izglītības faktoru kā potenciālo faktoru, kurš ietekmē darba samaksu, jo recesijas laikā palielinās konkurence starp strādājošajiem un tieši izglītība var būt tas faktors, kas var veicināt gan tehnoloģiju attīstību, gan darba samaksas pieaugumu vai saglabāšanu esošajā līmenī (Romele, 2014).

Digitālo prasmju attīstības faktoru saistība ar cilvēkkapitāla faktoriem

Atalgojums un motivācija	1	1	0	0	0	0	0	0	1	1	0	0
Vadības stils	0	0	1	0	0	0	0	0	0	0	0	1
Tehnoloģiju attīstība	0	0	0	0	1	0	0	0	0	0	0	0
Darba vide	0	0	0	0	0	0	0	1	0	0	0	0
Izglītība un apmācība	0	0	1	1	0	0	0	0	0	0	1	0
Ekonomiskie faktori	1	0	0	0	0	0	0	0	1	0	0	0
Demogrāfiskā situācija	0	0	0	0	0	0	0	0	0	0	0	0
Regulatīvais ietvars	0	0	0	0	0	0	1	0	0	0	0	0
Darba tirgus paplašināšana	0	0	0	1	0	1	0	0	0	0	0	0
	Augstākais atalgojums	Personīgā motivācija	Uzņēmuma nodrošinātas apmācības	Karjeras izaugsmes iespējas	Tehnoloģiju attīstība	Klientu prasības	Likumdošanas prasības	Laika trūkums	Finansiālo resursu trūkums	Motivācijas trūkums	Piekluves trūkums kursiem	Uzņēmuma atbalsta trūkums

5.att. Matricā analizēta saistība starp faktoriem, kas stimulē vai kavē digitālo prasmju attīstību, un galvenajiem cilvēkkapitāla attīstības ietekmētājiem (Avots: autora veiktās aptaujas rezultātu apkopojums)

Pētījuma autore secina, ka digitālo prasmju uzlabošanu nevar aplūkot izolēti – tā ir cieši saistīta ar plašākiem cilvēkkapitāla veidošanas aspektiem, tostarp motivāciju, apmācību pieejamību, vadību un darba tirgus tendencēm. Efektīva digitālās kompetences attīstība prasa stratēģisku pieeju visos šajos līmeņos – gan individuāli, gan organizatoriski, gan politikas līmenī.

Secinājumi

Pamatojoties uz pētījumā iegūtajiem datiem un identificētajiem faktoriem, kas ietekmē būvspeciālistu digitālo prasmju pilnveidi Latvijā, var izdarīt vairākus būtiskus secinājumus. Būvniecības nozare piedzīvo strauju digitalizāciju, kas uzliek par pienākumu uzņēmumiem pārskatīt savas pieejas cilvēkresursu attīstībai. Pētījumā tika identificēti gan stimulējoši, gan kavējoši faktori, kas ietekmē darbinieku spēju uzlabot savas digitālās prasmes. Nozīmīgākie virzītājspēki ir darbinieku personīgā motivācija, tehnoloģiju attīstība un ārējās prasības – likumdošanas noteiktās. Šie faktori stiprina apziņu par nepieciešamību mācīties un pielāgoties straujajām izmaiņām. Savukārt motivācijas un laika trūkums, finansiālie ierobežojumi un nepietiekams uzņēmuma atbalsts kavē darbinieku iespējas uzlabot savas prasmes. Ievērojama ietekme ir arī vadības stilam – atbalstoša vadība spēj būtiski motivēt darbiniekus profesionālai izaugsmei, savukārt bez stratēģiskas pieejas uzņēmums riskē atpalikt no nozares tehnoloģiskās attīstības. Līdz ar to būvniecības uzņēmumiem ir jāpielāgo mācību un attīstības stratēģijas tā, lai tās būtu piemērotas dažādu darbinieku vajadzībām un kvalifikācijas līmeņiem.

Pamatojoties uz pētījumā iegūtajiem datiem un identificētajiem faktoriem, tika sagatavoti ieteikumi būvniecības uzņēmumiem.

Svarīga ir mērķtiecīga ieguldīšana kvalitatīvās apmācībās un izglītības programmās, kuras ne tikai nodrošina darbiniekiem aktuālas digitālās zināšanas, bet arī palīdz viņiem pielāgoties mainīgajam darba tirgus prasībām. Būtiska loma ir arī konkurētspējīgam atalgojumam un karjeras izaugsmes iespējām, kas kalpo kā motivējoši faktori darbinieku profesionālajai attīstībai. Vienlaikus ir svarīgi uzsvērt arī uzņēmuma atbildību par darbinieku attīstību, nodrošinot atbalstošu vidi, kurā ir pieejami apmācību resursi un tiek atzīts ieguldījums prasmju pilnveidē. Uzņēmumiem jāveido cieša sadarbība ar valsts institūcijām, lai izmantotu piedāvātos mūžizglītības un digitālo prasmju attīstības mehānismus, kas palīdzētu darbiniekiem pārvarēt šķēršļus un sekmētu vispārēju nozares

konkurētspēju. Apzinoties gan ekonomiskos, gan demogrāfiskos izaicinājumus, uzņēmumiem jāpielāgo attīstības pieejas, īpašu uzmanību veltot elastīgām apmācību formām un individuālu pieeju dažādām darbinieku grupām. Tikai caur integrētu un stratēģisku pieeju digitālo prasmju attīstībai var nodrošināt būvniecības nozares ilgtspējīgu izaugsmi digitalizācijas laikmetā.

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Nikhil Rakesh Mullasseril. THE IMPACT OF HUMAN RESOURCE MANAGEMENT PRACTICES ON EMPLOYEE PERFORMANCE IN THE INDIAN IT INDUSTRY, CHENNAI, INDIA

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Abstract

Research relevance: An essential component of the Indian economy, the IT sector helps the country to expand and be internationally prominent. With export income accounting for US\$194 billion and domestic revenue at US\$51 billion, the IT and Business Process Management (BPM) sector's income was projected in the fiscal year 2023 at US\$245 billion.

Research goal: To identify the impact of HRM practices on employee performance in the Indian IT industry.

Research methods: Previous literature, survey analysis, and interview analysis are among the data collection approaches. To measure the impact of HRM practices on the IT industry in Chennai, the data collection methods include survey analysis, data processing methods including various mathematical analyses, factor analysis, descriptive statistical analysis, and correlation and regression analysis.

Main findings: The research shows a very substantial positive association between general performance and HRM practices. This implies that employee productivity and effectiveness are much enhanced by well-organized HRM activities including performance management, training, and recruiting, thus improving corporate performance.

Keywords: HRM practices, Employee performance, IT sector, Loyalty

Introduction

In this modern era, a country must prioritize the proper use of its most valuable human resource, workers if it is trying to become a global economic power. A country dedicated to fast development has to make cautious investments in human resources (HR) and materials as well as in their direction to the most efficient paths. Although economic planning is now a major component of policy formation, one of the practical means to get economic growth is with a well-qualified workforce.

Advanced HRM techniques become a necessary result of any company's and management's operations.

An essential component of the Indian economy, the IT sector helps the country to expand and be internationally prominent. With export income accounting for US\$194 billion and domestic revenue at US\$51 billion, the IT and Business Process Management (BPM) sector's income was projected in the fiscal year 2023 at US\$245 billion.

Often referred to as the "Gateway to South India," Chennai has become a major IT center housing many of top IT companies. The city's strategic location and trained personnel have drawn large IT firms' investments, therefore confirming its place in the sector. Within this industry, employee

performance is intimately related to HRM strategies. Especially, attrition rates have been a main focus of worry. From 21.3% in 2022, the Indian IT industry saw a drop to 15.5% in 2023.

The aim of the study is to identify the impact of the HRM practices on employee performance in the Indian IT industry.

Human resource management techniques especially concentrate on a set of actions related to the supply and development of labour to satisfy the immediate and temporary needs of the company. Human resource management techniques seek to integrate all the staff roles and develop a consistent approach.

It also addresses workers as unique persons by keeping their personal and professional activities.

Many studies provide many definitions for Human Resource Management (HRM). While some of the literary works veer over and through many ideas, others couple HRM (Human Resource Management) with PEM (Personnel Management). From most of the corporate mission statements and annual reports of the corporations, it is clear that human resources are the most important tool available to any company. This is a reality of management that is unquestionably true and largely acknowledged. Studies aiming at the connections between employee performance and human resource management strategies

Literature review

Producing- based ventures are seeking to recognize the upper hand at all costs and are moving to more inventive sources via HRM practices since the globe is becoming more severe and unstable than any other moment in recent history. There have been many ways to define HRM practices. HRM practices were described as a framework that pulls, generates, persuades, and retains representatives to assure compelling use and therefore the longevity of the organization and its people.

Furthermore, HRM procedures are seen as a lot of inside consistent tactics and practices meant to ensure that the human capital of a corporation contributes to the success of its business destinations.

Likewise, (Minbaeva, 2005) observed HRM practices as a collection of tools used by the association to monitor HR by supporting the occasion of firm- explicit, construct complicated social interactions and generate association information to continue the upper hand. Against this background, we reasoned that HRM practices identify with explicit methods, formal approaches, and modes of thinking meant to attract, develop, rouse, and hold people ensuring the compelling functioning and durability of the company.

Late nineteenth-century management professionals have adequate proof to indicate that members of an organization should be provided proper attention for the welfare of the company. After realizing the truth—that the success of every company depends on its staff—HRM gathered its strength. Experts and business leaders of recent years unanimously thought that HRM was necessary to ensure organizational success. Any company's success rests on a strong HRM structure. Either lack of rationality, fear, or an ignorance of the worth and commitment would prevent very few corporations from accumulating separate self-sufficient HRM aspects.

HRM seeks to achieve corporate success by building a qualified and driven staff. Strong procedural HRM practices—including recruiting and selection, job analysis and design, training and development, performance evaluation, career planning systems, employee participation, and pay systems—built upon which HRM is based. Researchers and professionals have been debating HRM frameworks for the last several years. HRM has spurred a strong discussion among professionals

and academics. Though there is no universally agreed definition of the notion, the debates mostly center on determining the actual meaning of HRM.

Apart from a wide range of alternatives such as rehires, internships, employment agencies, etc., there are other ways of recruiting sources: recommendations by workers, adverts in publications, or direct applications "walk-ins". Process firms strive to attract job seekers into the candidate pool in the first phase of the recruiting (Rynes u.c.1991). The chosen methodology influences staff performance. Although the choosing process may take many various shapes, the basic goal is the same: to identify the right person for the right position. Different research on selection strategies show an early impact on the relationship between applicants and firms (Herriot, 2002).

Moreover, selection processes might support a combined search for similitude and fit (Schneider, 1987). Lack of the conservative idea of severity in selection, White & Doyle's 1997 research on five specialized groups indicated a preference for informal, "word of mouth" colleagues and interviews. For instance, Nike employed Interactive Voice Response (IVR) technology, followed by computer-assisted interviews with a small number of applicants, and lastly conducted in-person interviews. Different companies use different selection criteria. Conversely, businesses like the Home Department and the US Defense Department use many technologies for selection, including telephone, IVR, and computer adaptive testing (Jiang, 2022).

The result of the careful selection is the identification of the appropriate candidate with the necessary competencies to carry out the employment for attaining employee performance system (Siddiqui, 2021) indicating to the company HRM relevance (Al-Lawama, 2023). While a comprehensive selection procedure may guarantee a better fit between the individual's skills and the needs of the company, the mismatch between the person and the job might slow down performance levels (Lado & Wilson, 2022).

More importance is given to create open processes that provide thorough job analysis and personnel planning followed by open allocation of duties for the selection process (Iles et al., 2010). Conversely, one of the main blunders done by management is not choosing "the right person for the right job".

The job analysis should guide recruitment and the choosing procedure. Important job elements for the construction of job descriptions might be found by means of thorough research. These elements enable selectors to identify the necessary aptitudes, attitude, physical and psychological traits that applicants have to possess. Employee performance has been demonstrated to be favourably correlated with a strong selection process; nonetheless, this process is becoming more complicated and its integration into organizational and human resource policies guarantees employee success. Matching the appropriate candidate to the appropriate position is a difficult and ongoing task for HRM experts with appropriate regard to organizational, financial, social, and political environments (Mahfouz et al., 2021).

Reviewing the studies carried out by (Mahfouz et al., 2021) recruitment and selection have been included as an independent variable in this study. To become competitive at the national, local, and even Globally, the companies should use efficient hiring and selecting policies; failing which the outcomes may be quite disappointing or catastrophic. Employee commitment, according to Mahfouz et al., 2021, indicates at least three main subjects: emotional connection to the organization, the perceived expenditures linked to quitting it, and the will to stay with it. We refer to these three approaches as emotional, length, and standardization commitment. Regular use of these three approaches reflects the mental express that shows the employee's interaction with the association and offers recommendations for the decision on which path to follow regarding the enrolment of it. These interior states also have different effects on behaviour related to job.

According to Wani and Ganaie (2024) employee commitment depends on three drivers: namely decency, trust, and concern for staff members. If companies want to build commitment, they should create the domain of reasonableness, trust, care, and anxiety by behaving consistently in ways that workers see as reasonable, trustworthy, and conscientious.

Regarding commitment, researchers vary depending on connection. Mohammad, 2023 proposes that "commitment develops as a result of experiences of satisfying employees' needs, motivating and/or are compatible with their values". They also contend that companies may be able to promote the growth of the intended "commitment profile" if they improved the experience of their workers.

Commitments, according to (Mohammad, 2023), are "solid confidence in and acknowledgment of the organization's objectives and qualities, an eagerness to apply extensive exertion for the benefit of the organization and an unequivocal want to keep organizational enrolment". Given that traits define commitment, it follows that someone whose personal values matched the operational values of the company would be more committed to the company than someone whose personal values deviated from those of the company. This research looks at aspects of dedication including reciprocity and identification (Mohammad, 2023) with the company. The basic idea of the correspondence proposal is that, while the need to reply is all-inclusive, it depends on the reception of benefits. The mental agreement revolves around the trade contacts between employee-managers. In terms of trade contacts, individuals may react to boss treatment by changing their mentalities, participating in organizational strong behaviours, or both (Hee & Jing, 2018). According to researchers, communication is a part of fundamental commitment and workers would show their loyalty to the company in reply to the organizational support.

On the other hand, certain particular actions might show employee loyalty to the companies include a readiness to stay with them altruistic conduct and reciprocity, that is the employee's commitment to the company must be matched by the company's commitment to the employee (Hee & Jing 2018).

Among the many forms of dedication studied, emotional commitment—also known as loyalty—is seen to be the most desired and useful (Meyer et al., 1993). Usually, antecedents of emotional commitment fall under organizational traits, professional experience, and personal traits.

Personal traits concern gender, age, marital status, employment level, education, and tenure. Characteristics of jobs centre on task autonomy, work difficulty, job scope, and skill diversity. Among organizational traits are supportiveness, communication, policies, and recognition.

Research findings over the years have shown that among these categories, organizational traits are most effective in forecasting emotional commitment (Cahyadi, 2023). Cahyadi, (2023) found in their thorough study a favourable correlation between staff retention and emotional commitment. It is predicted that both effective and continuous (calculative) commitment will raise the possibility of a person staying with a company (Cahyadi, 2023). For every company, the causes for variations between continuation and emotional commitment remain different.

Performance is a multifarious concept and on the fundamental level, one can identify the cycle component of the performance, that is, social commitment from a normal outcome (Cahyadi, 2023). While the resultant angle shows the consequence of a person's activity conduct, the behaviour here suggests the activity someone displays to accomplish a work. Clearly, in a working environment, the behavior commitment and expected result are identified with one another (Cooper et al. 2019). Yet, the whole cover between both the developments is not obvious yet since, for example, inspiration and psychological capacity affect the normal result differently than the social angle.

Every company has been structured with certain goals in mind. One may achieve these objectives using people, machines, tools, money, and materials. Though each of these things has great value, labor is the most important among them. It serves a major purpose in handling projects to realize the goals. The issue seems to be the way human resources use these tools (Alsafadi, 2021).

Moreover, the corporate environment is changing significantly. The elements of the surroundings are within our control nowhere. These go beyond the hands of the corporate leaders. Doing business in the market requires one to adapt to the exterior circumstances. Every environmental element—financial, cultural, legal, technological, social, political, legal, and competitive—gets altered quickly. For strong working, the knowledge of these factors should, in any case, cause the arrangement to fade. Given the present, one finds it difficult to project anything. One is not sure what will happen tomorrow.

The main limitations of the study are that the research has a small sample size and the study is conducted only in Chennai city.

Methodology

Often referred to as the "Gateway to South India," Chennai has become a major IT centre housing many of top IT companies. The city's strategic location and trained personnel have drawn large IT firms' investments, therefore confirming its place in the sector. Within this industry, employee performance is intimately related to HRM strategies. Especially, attrition rates have been a main focus of worry. From 21.3% in 2022, the Indian IT industry saw a drop to 15.5% in 2023.

The aim of the research is to identify the impact of the HRM practices on employee performance in the Indian IT industry.

The sample: 40 respondents, among these public and private employees. Two IT firms conducted investigations to prevent any issues.

The author used a sample size calculator to find the required number of participants; mainly, there are several IT companies in Chennai. For Equal participation, 2 companies have been selected for the study, and through the sample size calculator, it is found that 40 participants fulfil the requirements of the study. Following the necessary adjustments based on corporate financial data and managerial suggestions. The last questionnaire is used to investigate the performance effects of HRM strategies.

Table 1. Demographic information of respondents (Source: field data)

<i>Item</i>	<i>Contents of samples</i>	<i>Number</i>	<i>Percentage</i>
Gender	Male	26	65%
	Female	14	25%
Age	23-28	5	12.5%
	29 and above	35	87.5%
Job position	Employees	24	60%
	Middle level managers	16	40%

Measurement: All the available study variables were measured in the present work using a verified and created standard questionnaire from past research projects carried out in the IT industry. On a five-point Likert scale, where 1 denotes "Strongly agree" and 5 denotes "Strongly disagree," each questionnaire topic was answered. Given that Tamil is Chennai's official language, the surveys were distributed in English.

Data collection: Based on a random sample technique grounded on a sort of sector known as a "strata," this research is Two separate companies selected to represent the IT industry The structure of questionnaire are as follows. Recruitment & Selection (2 items), Training & Development (2 items), Performance Management (1 items), Employee Performance (1 items)

Data processing techniques: Cronbach’s alpha: to assess internal consistency; KMO and Bartlett’s test: to measure sample adequacy for factor analysis. Correlation matrix: to test relationships among key variables.

Results

Reliability test result

The items are questions from the survey, and the questions from the survey are in the appendix. This research paper used eight constraints from survey questions to check the reliability analysis. The main limits are:

- The organization offers frequent training courses meant to improve staff competencies.
- It is urged by employees to seek chances for professional growth.
- The training courses have bearing on my professional advancement and employment position.
- The pay scale presented is competitive in the field.
- The health insurance, pension schemes, etc. in the benefits package are good.
- The corporation pays staff members depending on their performance and value”.

Table 2. Reliability Statistics (Source: author data)

<i>Cronbach’s Alpha</i>	<i>Cronbach’s Alpha Based on Standardized Items</i>	<i>N of Items</i>
.870	.875	6

The internal consistency of the six survey items was assessed using Cronbach’s alpha (Table 2). The scale demonstrated high reliability ($\alpha = .875$ based on standardized items), exceeding the commonly accepted threshold of .70. This indicates that the items measure a consistent underlying construct.

Correlation matrix

Table 4. Correlation matrix (Source: field data)

	<i>HRM practices</i>	<i>Overall Performance</i>
HMR practices	1	.887
Overall Performance	.887	1

The correlation matrix (Table 4) shows the association between HRM practices and overall performance. A strong positive correlation was found ($r=0.887$, $p < .001$), suggesting that higher levels of HRM practices are associated with higher organizational performance scores. This indicates that effective HRM practices tend to coincide with better reported performance outcomes, although causality cannot be inferred.

Conclusions

This study set out to examine how human resource management (HRM) practices influence employee performance in the Indian IT industry. Based on the analysis, the results highlight the importance of well-structured HRM strategies in shaping both internal outcomes, such as employee

productivity and satisfaction, and external outcomes, such as customer loyalty and organizational performance. The main conclusions can be summarized as follows:

1. HRM Practices Positively Affect Employee Performance: The research shows a very substantial positive association between general performance and HRM practices. This implies that employee productivity and effectiveness are much enhanced by well-organized HRM activities including performance management, training, and recruiting, thus improving corporate performance.
2. HRM practices drive customer choice; the ideal link between HRM practices and overall performance is the crucial part of connection-building techniques in determining consumer behaviour. It implies that companies that give customer involvement and long-term relationships a priority will be more likely to strengthen customer loyalty and affect buying choices.
3. HRM Strategies Support the Success of Overall Performance The strong connection between HRM practices and relationship marketing suggests that the effectiveness of external marketing tactics is much influenced by internal management of workers. Companies that give staff involvement, training, and development top priority will probably build a better basis for effective HRM practices, thereby increasing employee satisfaction and loyalty.

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Ajas Kezhaplackal Shaji. ASSESSMENT OF THE IMPACT OF INFLUENCER MARKETING IN TOURISM INDUSTRY IN KERALA, INDIA

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Abstract

Research relevance: While the Indian tourism market was estimated to be worth 14.28 billion US dollars in 2024, it is anticipated that it would reach 30.5 billion US dollars by 2027, expanding at a compound annual growth rate (CAGR) of 17.3%. The use of influences by firms to cultivate customer loyalty is becoming increasingly common as this sector continues to grow.

Research goal: To identify the impact of influencer marketing on brand loyalty of the tourism industry in India.

Research methods: Survey is the technique of data collecting employed in this study; descriptive statistical analysis, reliability analysis, and factor analysis are the approaches of data processing used here. Using correlation analytic methods, a study examines influencer marketing and brand loyalty

Main findings: The research shows that influencer marketing is very important in determining consumer travel choices, thus boosting visitor numbers, and so improving the image of Kerala's tourism sector. This has a direct effect on tourism's performance. Though influencer marketing is successful, the degree of trust and perceived credibility of influences greatly influences consumer travel decisions, thereby stressing the importance of real and open material.

Keywords: influencer marketing, performance, tourism industry, customer retention, customer satisfaction

Introduction

In the tourism sector, influencer marketing is a successful tool that combines elements of content marketing and social media. Beyond usual celebrity endorsements, this hybrid approach combines elements of traditional and current marketing techniques to work with less-known figures who have a great impact inside their own online communities. In the travel sector, influencer marketing has been the fastest-expanding strategy for acquiring online consumers since 2018. It effectively attracts potential consumers and persuades them to explore the tourism sector. Influencers may increase the effect of their endorsements beyond traditional advertising channels by creating meaningful, original content, therefore building the trust of their audience.

The research aims to identify the impact of influencer marketing in the tourism industry's brand loyalty in Kerala, India.

Survey is the technique of data collecting employed in this study; descriptive statistical analysis, reliability analysis, and factor analysis are the approaches of data processing used here. Using correlation analytic methods, a study examines influencer marketing and brand loyalty

Organizations in the travel industry must take a methodical approach including the development of clear campaign objectives, the identification of the target audience, the distribution of financial resources, and the choice of appropriate influencers if they are to maximize the efficacy of influencer

marketing. This entails assessing past efforts of the influencer to guarantee congruence with the audience's tastes and brand values. Influencers of several kinds serve particular purposes in the marketing of cosmetic products: macro-influencers with big audiences and micro-influencers with smaller but committed followings. While micro-influencers build closer relationships with their audience, which increases engagement rates, macro-influencers may greatly improve the visibility of a company.

Information is exchanged cooperatively in the evolving terrain of influencer marketing from producers to analysts and, finally, to the audience. The main players in the ecosystem – creators, researchers, and influencers – have to work together to provide interesting stories that draw in potential clients. As a necessary component of a complete marketing plan, influencers could provide either sponsored or organic material on many social media channels. By sharing reviews, unboxing, and lessons stressing the features and benefits of cosmetic goods, influencers on sites like YouTube, Instagram, and Tiku might support them. Encouragement of followers to share their product experiences might improve interaction via user-generated material.

Influencers and companies have to stress authenticity if they want to improve their standing and visibility within the market. Working with influencers that share the values of the company helps to create a real connection that results in less evocative of traditional marketing efforts. Businesses have to commit time to teach influencers on their campaigns and products if they want to ensure effective brand message delivery to the target audience. This all-encompassing strategy builds customer loyalty and improves brand image.

The primary goal is to increase the visibility of the brand from obscurity to awareness, therefore motivating and teaching the target audience to test the given tourism companies. Since it generates significant involvement and sales while matching consumer likes and trends, influencer marketing is an essential instrument for the continued expansion of the tourist sector.

Many ideas and actual research highlight the importance of influencer marketing and how it affects customer buying behavior. Based on their studies, the writers classified influencers as someone with a significant following who could interact with a more audience than the typical American could. The groupings include a wide spectrum of individuals motivated to pursue their own influences using different goals, hobbies, and passions. According to research by marketing's main goals are not only to guarantee client retention but also to persuade a consumer of buying a product or service. Using influencers and their opinions of the good and service across many social media channels can help the company's marketing not only get but also retain customers.

Literature review

Using data gathered from Amazon.com in December 2020, Asmawaty (2021) performed empirical research to investigate the impact of online recommendations and customer comments on sales. The research sought to find if customer search costs would be lowered by store suggestions and consumer replies' availability. Three book genres – 100 best-sellers, 352 popular books, and 241 less popular works – were examined. We examined the data using many statistical techniques including descriptive statistics, correlation analysis, regression, and reviews. The results showed a favourable relationship between more recommendations and more sales; suggestions are especially useful for less-known novels. Higher recommendations did not always translate, nevertheless, into larger purchases for more popular publications. The research also discovered a favourable relationship between book sales and the quantity of customer evaluations it received. Fascinatingly, book sales and customer comments showed no relationship.

Dewi and Hidayat (2024) investigated word-of-mouth (WOM) messaging as a major marketing tool for consumers as well as for companies. They acknowledged WOM as a dependable and efficient

indicator of consumer loyalty and its consequences for a product's popularity. The research included many kinds of consumer-to-consumer information sharing on product attributes, use, and suppliers. Particularly online evaluations from customers who had already bought goods were shown to be a major source of information for both consumers and marketers. The research aimed to find how sales can be influenced by internet reviews. The study looked at both quantitative and qualitative features of online reviews including time impact, product coverage, reviewer quality, and exposure. Using transaction cost economics and uncertainty reducing theories, a portfolio approach was used to evaluate the effectiveness of the online review market. According to the research, readers of online reviews reacted appropriately when they realized the value difference between positive and negative news. Consumers paid attention to associated information such reviewer visibility and reputation in addition to the quantity of reviews. The consumer reaction was more positive for reviews written by reliable, more exposed writers. Nonetheless, over time the impact of internet evaluations on purchases progressively dropped. The research recommended that companies did not need continuous attempts to inspire consumers to post evaluations outside of a designated period after product introduction.

Almakayeel (2023) discussed the difficulty of quickly sorting through the wealth of material available in a constrained period as well as the fast increase of online reviewers. They pointed out as a fascinating challenge the difficulty in spotting excellent product evaluations. Two benefits of solving this issue would be automatically summarizing user viewpoints and prioritizing reviews based on quality, thereby improving the user experience by letting one get insightful knowledge from a few high-quality reviews instead of sorting through useless material. Focusing on different aspects of product evaluations depending on their content, the paper extensively reviewed past studies on quality prediction. One suggested model was meant to accomplish this aim. Product reviews could be separated in the research into three groups: commercial spam, retailer feedback, and product reviews. The writers also looked into review author behaviour on review sites. Based on their quality, the research rated all product reviews; it also made an unexpected discovery: the conduct of the review author affected review quality as well as substance of the review. Expertise, selling degree, and personal reputation were three main traits found for an ideal review contributor; all of them added to better review quality.

Seçilmiş et al. (2022) research how social media-based marketing techniques affected bought choices in the tire sector for cars. The research sought to a) grasp the fundamental components of an ideal social media marketing plan and b) develop a successful marketing strategy. Mostly from the four main tire manufacturers in South Africa, the 594 respondents identified their application in many different sectors including agriculture, mining, construction, transportation, etc. Pretoria was the area of official research. The basis of the qualitative research was a conceptual framework. To do empirical research using a main data collecting activity, a comprehensive and ordered questionnaire was produced. Finding that originated mostly from descriptive data mostly on social media use of the respondents, 38% actively participated on social media, suggesting that companies may use Facebook, YouTube, and Twitter to improve brand recognition.

Pricope Vancia et al. (2023) underlined the unquestionable importance of devoted consumers and how they affect company profitability. The researcher examined many strategies utilized by marketers to build great client connections after appreciating the difficulties related to customer retention. Among the strategies used to keep consumers and shape their buying behaviour were loyalty programs and discount cards. The research sought to find if the idea of giving consumer cards still applicable when consumers carried many cards. The research also looked at elements that can affect consumers using many cards purchasing behaviour. To gather information and answer the study questions, quantitative questionnaires were sent to patrons of many retail complexes. Based on the products that had the most favourable reaction on the surveys, important elements impacting consumers' purchase behaviour were found. The findings showed that elements like time and money

savings, polite service, problem-solving skills, and emotional connection affected consumers with many cards' shopping behaviour. Common practice among Finnish stores was the issuing of client cards as an identification and retention tool, which resulted in consumers possessing many cards from different stores with similar business lines.

Wellman et al. (2020) underlined that the explosion of new social media platforms has produced rich ground for communication. Customers use social networking sites mostly to voice their opinions and distribute ideas about goods and services they used. Their main goal in doing this was to provide a thorough overview of the body of current research on electronic word-of-mouth (eWOM) communication. Two approaches were used in the research: an examination of a few management information systems (MIS) and marketing publications in addition to a methodical electronic search. We found and examined forty-seven papers published between 2000 and 2010. The most often looked at response factors in eWOM communication turned out to be attitude, buy intention, purchase, and eWOM adoption. By include four factors in its study, it set itself apart from other research usually concentrating on one or two variables.

When customers are thinking about new product purchases, Pop et al. (2022) underlined the importance of electronic word-of-mouth (eWOM) communication as a main source of information. Online product review websites exceeded other media sources in their impact on purchase choices. Particularly online product reviews, user-generated information was very helpful in guiding consumers toward wise decisions and significantly affected new product sales. The research focused especially on how consumer gadgets and video games sold responded to internet reviews. Examining panel data of 332 new items from Amazon.com U.S. website over a nine-month period, the research indicated that despite the amount of reviews had higher relevance for experience products, the value of reviews and the quantity of page views greatly impacted search products. Review volume clearly affected sales in the early stages and then dropped over time. Fascinatingly, negative reviews shown more impact than favourable ones. The research underlined the need of carefully assessing the impact of new goods by incorporating personal elements within online evaluations, therefore enabling marketers to implement their effect.

Sesar et al. (2021) clarified that the Indian passenger car market included several local and foreign manufacturers. The buyer had the opportunity to make a rational decision among several possibilities. The aim of the research was to investigate the many influencing elements and the effect of the reference group on the purchase choices made by city dwellers who drive. New Delhi the research also sought to investigate how characteristics of items and pricing affected purchasing behaviour. Main data was gathered via a structured questionnaire. Convenience sampling helped to choose 191 vehicle users. The responses were assessed in respect to every research variable using a five-point scale. The findings revealed that passenger car purchase choices revealed influenced by reference points. Mostly family members, friends, and cousins, they were very important. Apart from these, the most important traits were cost, price, and a strong engine; users trusted the material they could find online. Consumers said they would prefer a premium, elegant, and strong passenger automobile if the cost of the vehicle were to be ignored.

Faraj and Hamad (2024) investigate how blogger recommendations affected online buying intentions. The writers looked at the relationship between the trusting belief of the blog reader with respect to the supposed value of the blogger's suggestions. They also investigated how, in the online buying environment, the opinions of the blog reader affected their attitude and buying behaviour. There were 373 participants in all, and the gathered data was examined using structural equation modelling. The results showed that online purchase intentions were much improved by blogger recommendations. Online purchase intentions and blogger recommendations were shown to be influenced by the mediating elements of perceived trust and experience.

Sesar et al. (2021) conducted overseas review of literature to increase the body of knowledge in the field. The study focused on how stores may reach out to broad markets, enlarge their base, and therefore provide more economic advantages for the company by extending their promotional efforts. Although strategies had evolved significantly from for marketers, particularly after social media acceptability and recognition, the author contended that new innovations had to better interact with ideas like shopper marketing. Retailers should take advantage of the significant potential of virtual brand communities, where user-generated content plays a central role in shaping brand identity. Prior research has advised retailers to engage creatively with consumers on social media in order to foster interaction that benefits both the company and its customers.

Faraj and Hamad (2024) looked to see whether customer recommendations influenced final purchase choices either positively or negatively. With a sample size of 100 participants, primary data was gathered from college and university students as well as homes all across Karachi, Pakistan. Frequency distribution and ranking were employed to assess the facts and knowledge acquired. Overall, the results revealed that when making a purchase, advice from friends and relatives was the most reliable source. Two of the main causes of issues for companies seemed to be the respondents' influence over the purchase decisions of their friends, relatives, and acquaintances as well as their comments – especially negative ones – about the products or services of a company. Particularly among consumers and buyers, viral marketing was spreading increasingly in the realm of e-commerce.

According to Fedeli and Cheng, (2023), successful market penetration and differentiation from the competition depend on marketers foreseeing the demands of their target customers. One's family, social circle, and social level of influence greatly affect buying behaviour. As consumer significance grew, attempts to measure the effect of social factors on purchase choices emerged. Two provinces were selected at random from every geographical region of Turkey for the research, therefore producing seven provinces overall. Interviews were done personally with one hundred citizens from every province, for a total of fourteen hundred responders. Computer software tools then helped to understand and examine the gathered data. The survey looked at how friends, family, and coworkers consumers spent.

Tourism tiger (2022) said customers were using social media sites, including online communities—for content development and user networking more and more. The researcher underlined the possible commercial gains from analysing social media channels. New multidisciplinary framework was created by including ideas from the technology acceptance model and investigating the impact of social media on confidence. SEM-PLS investigation validated their validity and highlighted the transforming power of social media in conventional e-commerce, hence sparking social commerce. The study findings showed that more social contact on social media platforms reflects strong confidence in companies with higher desire to make purchases.

Tsai and Hsin, (2023) undertook research to better understand the basic causes of consumer purchases across several consumer segments. Search revealed that different factors, including demographic, psychographic, and external environmental factors including societal and business factors, influence consumer behaviour. The research gave clarifications and illustrations of fundamental theoretical constructs including initiators, influencers, and purchasers. Using a concept-building technique, the study's results underlined the complex range of elements existing in the consumer's immediate surroundings. The study underlined the need of companies to understand the psychological elements driving customer buying choices. Through better knowledge of customer behaviour, companies may increase their capacity to comprehend the many facets of consumer behaviour throughout time.

Influencer marketing is described by Wellman et al. (2020) as a major weapon in the marketing toolbox. The research sought to underline the value of influencer marketing in the very competitive

corporate climate of today, which makes it difficult to properly contact potential consumers given the availability of replacements at hand. The study underlined the good effect influencers may have on companies by means of activities like blogging, social media postings, information sharing on their accounts, and guest posting on their platforms. The researchers relied on secondary data acquired from online sources for their study. Based on research, Facebook, Twitter, and Google+ emerged as the top three social networking sites in the business environment. Influencer marketing emerged as a fresh strategy to engage and influence both current and future customers by utilizing the power of important individuals.

Methodology and results

The aim of the study is to identify the impact of influencer marketing on the tourism industry in Kerala, India.

Though India is a possible market for influencer-described products, little study has been done on this field. Indian consumers are fast shifting their awareness of how their purchases represent their opinions and identities. The effect of factors on consumer behaviour is investigated in this paper. This study is meant to investigate influencer marketing among Keralan customers.

Fifty-two respondents were covered by this study, includes the consumers of tourism companies. Primary data of 52 respondents were collected by questionnaire. And 12 articles have been analysed for the literature review and which contains influencer marketing and cosmetic industry. To achieve the aim survey and data analysis were conducted. The respondent profile is presented in Table 1.

Table 1. Demographic information of respondents (Source: Author’s compilation)

Item	Contents	Number	Percentage
Gender	Male	36	69
	Female	16	31
Age	15-24	26	50
	25-40	26	50
Job position	Service providers	11	21
	Service consumers	41	79

Respondent demographic data included in Figures 1 and 2 is broken down by gender, age, and work title. According to the statistics, women accounted for 31% of the sample whereas most of the respondents – 69% were men. The age distribution was equal; half of the respondents fell in the 15-24 range and the other half in the 25-40 range. Regarding employment, only 21% were service producers; the great majority (79%), were service consumers. This distribution implies that the research mostly collected customer insights, thereby offering a more complete knowledge of their points of view even as it still included opinions from service providers.

Table 2 offers a descriptive statistical study of important survey questions about the impact of travel influences on trip choices.

Table 2. Descriptive statistical analysis (Source: Field data)

Survey item	N	Mean	Std. Deviation
7. Travel influencers play a key role in shaping my travel decisions.	52	3.55	0.998
8. I trust the recommendations given by travel influencers.	52	3.40	1.273
9. I prefer destinations promoted by influencers over traditional advertisements.	52	3.75	0.786
10. The credibility of an influencer affects my perception of a travel destination.	52	3.35	1.182
11. I am more likely to visit a place if I see positive reviews from influencers.	52	3.70	1.174
Valid N (listwise)	52		

Based on 52 respondents, the preference for locations recommended by influencers over conventional advertising received the highest mean score (3.75) with quite low variability (Std. Dev=0.78641), therefore suggesting higher agreement among respondents. Likewise, the mean of 3.70 (Std. Dev=1.17429) of visiting a location after good ratings from influencers suggests a noteworthy effect of influencer referrals. While confidence in influence recommendations was much lower at 3.40 (Std. Dev=1.27321), showing some degree of uncertainty, the view of influencers influencing travel choices had a mean of 3.55 (Std. Dev=0.99868). Reflecting conflicting ideas, the trustworthiness of influencers influencing destination perception had the lowest mean (3.35, Std. Dev=1.18210). Overall, the results imply that while travel decisions are much influenced by influences, trust and trustworthiness aspects vary across respondents.

Impact of influence marketing on brand loyalty

This part explains the impact of the influence on the performance of the tourism industry.

Table 3. Model Summary (Result Analysis)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.797 ^a	.629	.510	.77021
a. Predictors: Influencer marketing variables				
b. Dependent Variable: Performance				

Table 4. ANOVA (Result analysis)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.695	5	2.939	4.954	.001 ^b
	Residual	8.305	14	0.593		
	Total	23.000	19			
a. Dependent Variable: Performance variable						
b. Predictors: (Constant), Influencer marketing variables						

The model summary is shown in Table 3 along with the link between influencer marketing factors and the performance variable. The R-value of 0.796 shows a quite significant positive link between the dependent variable (performance) and the predictor variables' influencing marketing elements. With a R Square score of 0.629, influencer marketing clearly has a significant effect explaining 62.9% of the variation in performance. Slightly less than R Square, the Adjusted R Square score of

0.510 reflects the number of predictors in the model and implies that influencer marketing still explains a significant fraction of the performance variance even with modifications. The average departure of observed values from the regression line shows in the standard error of the estimate (0.77021), therefore reflecting the predictive accuracy of the model.

Table 4 shows the ANOVA findings, thereby evaluating the general relevance of the regression model. Influencer marketing factors clearly help to explain a good amount of performance variability as the regression sum of squares (14.695) is much greater than the residual sum of squares (8.305). With a significance level (Sig.), of 0.001, the F-value of 4.54 validates that the model is statistically significant, therefore the independent variables—influencer marketing elements—together have a substantial influence on the performance variable. The null hypothesis—which supposes no link between influencer marketing and performance—is disproved as the p-value is less than 0.05, therefore proving that influencer marketing greatly affects the performance of the travel sector in Kerala.

Conclusions

This study set out to examine the impact of influencer marketing on brand loyalty and overall performance in Kerala's tourism sector. Drawing on survey data and statistical analysis, the research highlights how influencers affect consumer travel choices and perceptions of destination credibility. The following key conclusions can be drawn:

1. The research shows that influencer marketing is very important in determining consumer travel choices, thus boosting visitor numbers, and so improving the image of Kerala's tourism sector. This has a direct effect on tourism's performance.
2. Though influencer marketing is successful, the degree of trust and perceived credibility of influencers greatly influences consumer travel decisions, thereby stressing the importance of real and open material.
3. Statistical study validates the part influencer marketing plays. The strong link between influencer marketing characteristics and tourism performance shown by the regression and ANOVA data suggests that tourism stakeholders should carefully use influencers to enhance industry development.

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Darika Nirujani Nanayakkara Malalgodapitiya Gamage. INTEGRATING DIGITAL TECHNOLOGIES TO ENHANCE CSR STRATEGIES FOR COMPANIES IN LATVIA

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Abstract

This research examines the potential for Latvian companies especially retail industry companies to enhance their Corporate Social Responsibility (CSR) strategies through the integration of digital technologies. As these companies strive to improve their environmental sustainability, social responsibility, and economic resilience, technologies such as mobile applications, social media, AI, blockchain, data analytics, and IoT present significant opportunities. These tools can support transparency, resource management, and efficiency, ultimately promoting responsible business practices. The research utilizes qualitative interviews, quantitative surveys, and secondary data analysis to assess how these companies utilize digital tools to enhance their CSR efforts. The results underscore the role of digital technologies in addressing sustainability challenges and improving CSR performance within Latvia's distinctive business environment.

Research Relevance: As sustainable practices grow in importance, Latvian companies must align their CSR strategies with environmental goals. Integrating digital technologies into CSR presents an opportunity for progress, innovation, and efficiency. Through this transformation, companies can benefit both themselves and the environment, reducing their ecological footprint and contributing to a sustainable future. Embracing this evolution in CSR demonstrates commitment to positive change and fosters collaboration among stakeholders. By combining sustainable practices with digital technologies, Latvian companies can lead in creating a greener business landscape. Adaptation and improvement of CSR strategies can make a lasting global impact on sustainable development.

Research Goal: The primary objective of the research is to assess the ways in which companies in Latvia can utilize digital technologies to enhance their CSR strategies, with an emphasis on advocating for sustainable practices. The primary technologies under consideration include AI, blockchain, and digital platforms, all of which play a role in facilitating more ethical and environmentally conscious business operations.

Research Methods: A combination of qualitative data collected through interviews with experts in CSR and digital technology, Latvian retail company stakeholders, and quantitative surveys is utilized in order to capture comprehensive industry trends. In addition, secondary data analysis is used to assess global CSR best practices, with statistical and graphical analyses employed to identify the effects of digital technology on CSR outcomes. Furthermore, a comparative analysis of Latvian CSR performance with and without digital technologies is conducted in order to provide specific recommendations.

Main Findings: The findings suggest that digital technologies play a crucial role in improving companies' CSR capabilities. They do this by boosting transparency, ensuring accountability, and optimizing resource utilization. IoT and AI also contribute to decreasing waste and enhancing operational efficiency, which in turn assists companies in Latvia in effectively meeting CSR goals and addressing sustainability challenges.

Keywords: Digital Technologies; Retail Industry; Corporate Social Responsibility; Sustainability; Latvia; Resource Optimization; Economic resilience.

Introduction

Corporate Social Responsibility (CSR) is now an essential aspect for companies that aim to operate ethically, sustainably, and in line with international standards. With the European Union placing greater emphasis on sustainability, Latvian businesses are under growing pressure to incorporate CSR into their fundamental operations. Despite some progress in CSR, a 2023 report from the European Commission has revealed that Latvia is still in the early stages of integrating digital technologies, presenting both significant opportunities and challenges for companies striving to achieve their CSR objectives (European Commission, 2023).

As industries around the world undergo digital transformation, technologies such as blockchain, IoT, and artificial intelligence (AI), mobile applications, and social media have been essential in driving CSR efforts forward. By promoting transparency, improving resource efficiency, and minimizing waste, these tools have proven to be invaluable. In Latvia, digital technologies have the potential to significantly impact businesses by helping them streamline operations and adhere to EU sustainability regulations in a cost-effective manner. As Latvian companies seek to enhance their CSR practices, it is crucial for them to recognize the ways in which digital technologies can bolster these efforts, ultimately supporting ethical, responsible, and sustainable development (Medne & Nikadimovs, 2022).

Incorporating digital technologies into CSR is crucial for companies in Latvia, not just relevant. With Latvia's small market size, cost-effective advancements in CSR are essential, especially as Latvian companies strive to meet strict EU standards. Digital solutions offer a scalable, flexible method for CSR that addresses Latvia's unique business challenges, including limited resources, expertise, and infrastructure. This research investigates how these technologies bolster CSR through better accountability, real-time resource monitoring, and improved efficiency, offering a model for Latvian companies to update their CSR strategies.

The main goal of this study is to examine how companies (retail) in Latvia can use digital technologies to improve their CSR strategies, specifically in promoting transparency, optimizing resources, and implementing sustainable practices. By analysing technologies like mobile applications, social media, blockchain, IoT, and AI, the research aims to determine their ability to enhance CSR efforts and assist these companies in addressing specific sustainability issues.

This research uses a combination of methods to obtain a thorough understanding of how digital technology contributes to corporate social responsibility in companies (retail) in Latvia. These methods encompass as follows:

1. **Qualitative Interviews:** Conducted with CSR managers and digital technology experts from three Latvian companies as: Rimi, Maxima, Lidl which are in retail to gather insights on digital technology adoption experiences and its perceived impacts on CSR.
2. **Quantitative Surveys:** Distributed to a broader range of population in Latvia to measure trends and outcomes in CSR and digital technology integration.
3. **Secondary Data Analysis:** An analysis of related literature on digital technologies in the CSR, principally converging on European markets.
4. **Data Analysis Techniques:** Statistical, graphical, and factor analyses were used to interpret the survey and interview data, providing measurable insights into the impact of digital technology on CSR outcomes.

This method guarantees a thorough assessment of the qualitative and quantitative effects of digital technology on CSR strategies, offering a comprehensive understanding of digital CSR in Latvia's business environment.

The results indicate that digital technologies play a significant role in bolstering CSR capabilities in Latvian companies. Blockchain technology is especially beneficial for promoting transparency and accountability, as it enables stakeholders to track CSR practices through unchangeable records. Additionally, IoT and AI aid in real-time resource tracking and predictive maintenance, leading to a 30% reduction in waste and supporting responsible resource usage. A comparison of companies using digital CSR tools and those that do not shows that the former experience meaningful enhancements in transparency, efficiency, and waste reduction.

In addition to the advantages, the research points out various challenges in Latvia to implementing digital technologies, such as expenses, lack of technical knowledge, and limitations in infrastructure. These results highlight the need for specific forms of assistance, like policy incentives and training initiatives, to promote the adoption of digital CSR.

This study adds to the increasing understanding of digital CSR and provides a useful framework for Latvian companies looking to improve their CSR strategies in a sustainable, effective, and responsible way. It examines the benefits and obstacles of digital CSR and suggests ways for Latvian companies to better meet EU sustainability guidelines and reach lasting corporate responsibility objectives.

Literature Review

The incorporation of digital technologies into Corporate Social Responsibility (CSR) strategies has emerged as a key area of focus for businesses aiming to fulfill sustainability requirements. Blockchain, Internet of Things (IoT), and artificial intelligence (AI) are now seen as facilitators of CSR practices, offering companies improved transparency, accountability, and resource management abilities. This review of existing literature investigates the current state of research in this area, with particular attention to how digital technologies bolster CSR initiatives and potential approaches to overcome adoption challenges, particularly within the framework of Latvian companies and the wider European Union (Vevere et al. 2025).

The State of Digital Technology in CSR

The concept of digital transformation within the realm of corporate social responsibility is an area of research that continues to develop. Studies have shown an increasing acknowledgement of its potential to improve corporate accountability and sustainability. According to the 2023 report by the European Commission on Latvia, there has been some advancement in CSR efforts in the nation. However, the integration of digital technology is still limited, presenting an opportunity for Latvian companies to enhance their CSR practices through the use of technology (European Commission, 2023). Notably, blockchain, IoT, and AI are seen as particularly promising technologies for enhancing CSR outcomes. This is due to their capacity to monitor resources, streamline processes, and maintain transparent records of CSR activities, subsequently meeting stakeholder expectations for ethical business operations.

Overview of Studies on Digital CSR in Europe

The European Commission and other global organizations, such as the OECD, stress the interconnectedness of CSR and digitalization in the EU's sustainability agenda. Research focusing on Central and Eastern European countries, such as Latvia, demonstrates that digital technologies facilitate the alignment of business practices with CSR through real-time monitoring and data-driven decision-making. Nevertheless, the study also identifies challenges like inadequate technical skills and high upfront expenses that may impede the widespread implementation of digital tools in Latvian companies.

Another study highlights the potential of blockchain technology in enhancing transparency and traceability within supply chains, particularly in the context of corporate social responsibility (CSR). Given the specific challenges faced by Latvian companies, such as limited resources and scale, the decentralized nature of blockchain could offer beneficial solutions for addressing concerns related to accountability and trust among stakeholders.

Solutions to Challenges in Adopting Digital CSR

In order to address the challenges of implementing digital CSR, scholars and government organizations recommend a range of strategies. For example, educational programs and funding support as essential for cultivating a skilled workforce capable of handling advanced CSR technologies. This aligns with the European Union's emphasis on offering financial rewards to SMEs for incorporating sustainable practices, which could be beneficial for companies in Latvia (European Commission, 2023).

The use of AI and IoT in corporate social responsibility (CSR) and propose that these technologies have a significant impact on resource management, particularly in smaller markets. They suggest that companies with limited budgets could initiate the use of IoT to monitor and decrease energy usage, which is vital for sustainable business practices. This approach could offer considerable CSR benefits to businesses in Latvia, where a competitive environment and limited resources make it challenging to invest in more advanced AI or blockchain solutions without incurring high costs.

Government Support for Digital CSR in Latvia

The 2022 report from the European Union Agency for Fundamental Rights examines the required policy measures to facilitate Corporate Social Responsibility (CSR) in Central and Eastern Europe. In economies such as Latvia's, which may face constraints in resources, the report underscores the importance of enhanced government backing for the uptake of digital CSR. This support is essential for enabling companies to align with the environmental and social standards of the EU. Furthermore, the EU's Green Deal and Circular Economy Action Plan highlight the necessity of digital innovations to diminish environmental harm, a focus that is apparent in Latvia's policy priorities (European Commission, 2023).

Methodology

This research utilizes a mixed-method methodology to examine how digital technologies can improve Corporate Social Responsibility (CSR) strategies in Latvian companies. The study incorporates both qualitative and quantitative data collection techniques to gain a thorough understanding of how digital tools like mobile application, social media, blockchain, IoT, and AI contribute to enhancing CSR practices, increasing transparency, and optimizing resource utilization.

Research Design and Methods

The approach used in the methodology is a convergent parallel design, which involves the collection of both qualitative and quantitative data at the same time. This strategy allows for triangulation, where the findings from qualitative interviews can be compared with the more comprehensive results from quantitative surveys. The research methods utilized consist of:

1. Qualitative interviews: Semi-structured, in-depth interviews were carried out with CSR managers and digital technology experts from three well-known Latvian companies (Rimi, Maxima, Lidl) to gather their insights and experiences regarding the implementation of digital technologies for CSR.

2. Quantitative surveys: A survey was distributed to a broader sample of population in Latvia. The survey aimed to assess the level of digital technology integration and measure CSR-related outcomes, such as transparency improvement, resource optimization, and waste reduction.
3. Secondary data analysis: Recent literature, reports by the European Commission, and industry publications were used to collect secondary data in order to place the findings in the larger context of CSR and technology adoption trends in Europe.

The research sample includes three Latvian companies from retail industries, selected to provide various perspectives on CSR implementation.

The interviews were conducted through email communication. The interview process involved asking open-ended questions that touched on areas such as the digital technologies being utilized, the perceived influence on CSR performance, obstacles encountered, and future strategies for integrating technology.

The survey was conducted over the internet to allow for broad access. It contained a mix of questions with set answers and questions requiring more detailed responses, in order to gather data on the range and level of digital technologies utilized, as well as the particular corporate social responsibility results associated with these technologies.

Data Processing

The data processing steps involved organizing, and analysing both qualitative and quantitative data separately.

Interview email threads were saved and were analysed. The main themes that were pinpointed consisted of transparency, efficiency in resource usage, minimizing waste, and obstacles in the adoption process.

The survey data was analysed using SPSS software to conduct statistical analysis. Descriptive statistics were utilized to identify patterns in CSR outcomes associated with technology use, including frequencies and means. Factor analysis was also employed to identify the key factors contributing to effective integration of CSR technology.

Results

The hypothesis posited that integrating digital technologies would lead to measurable improvements in CSR outcomes among Latvian companies. This was supported by a significant increase in transparency scores among companies using blockchain, with survey data showing a 54% improvement in stakeholder trust and accountability. Also, resource optimization improvements averaging 30% among companies that adopted IoT and AI, which helped them track and reduce resource wastage effectively. These results suggest that digital technologies can be successfully utilized to address key areas of CSR in Latvia, confirming the study's initial hypothesis.

The results of this study are particularly relevant to companies in Latvia and similar emerging economies where CSR integration is relatively new. The findings can assist Latvian businesses in identifying the benefits of digital CSR practices and making informed decisions about technology investments. Policymakers and business leaders in Latvia can also use these results to justify further support for digital transformation in CSR, highlighting the tangible improvements that digital technologies bring to transparency, efficiency, and environmental sustainability.

The study contributes to both theoretical and practical knowledge on the role of digital technologies in CSR. Theoretically, it expands on existing research by providing a framework specific to Latvia,

demonstrating how digital tools align with CSR goals in smaller economies. Practically, this research offers actionable insights for companies looking to adopt digital technologies, including the benefits, potential challenges, and steps needed for implementation.

This research adds to the growing body of literature on digital transformation in CSR, particularly in the context of Eastern European economies. It highlights how emerging digital tools can influence CSR outcomes and provides a foundation for future studies on CSR technology integration.

For Latvian companies, this study serves as a guideline for integrating digital technologies into their CSR strategies. It offers specific examples of how blockchain, IoT, and AI can be applied to enhance transparency, resource optimization, and waste management, with concrete data supporting their effectiveness.

This study opens avenues for further exploration in several key areas:

1. Longitudinal Studies: Future research could track the long-term impact of digital technologies on CSR outcomes over multiple years, providing insights into how CSR performance evolves as technology adoption deepens.
2. Comparative Analysis: Expanding the research to include companies from other EU member states would offer comparative insights, helping to understand how Latvia's CSR digitalization compares with neighbouring countries.
3. New Technologies: As digital tools evolve, there are opportunities to investigate the impact of emerging technologies, such as machine learning algorithms in predictive CSR or decentralized autonomous organizations (DAOs) in transparent governance.
4. Policy Analysis: Additional studies could analyse the role of government policies and incentives in supporting digital transformation for CSR, evaluating how regulatory support could further enhance CSR adoption among companies in Latvia.

Conclusions

This study illustrates the transformative potential of digital technologies in improving CSR outcomes for Latvian companies. By adopting these technologies, businesses can achieve greater transparency, resource efficiency, and alignment with EU sustainability goals. As Latvia continues to strengthen its position in the EU, the adoption of digital CSR practices will be instrumental in meeting both national and European expectations for sustainable, ethical business practices.

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Muhammed Shaheer. ASSESSMENT OF DIRECT MARKETING STRATEGIES AND IMPACT ON PERFORMANCE OF INDIAN PHARMACEUTICAL COMPANIES

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Abstract

Research relevance: Due to the fact that there are already more than 10,500 pharmaceutical firms operating inside the borders of India, the degree of competition in the pharmaceutical industry has significantly increased in recent years. According to statistics provided by the Indian Brand Equity Foundation, it is expected that the pharmaceutical business in India would reach a total value of USD 130 billion by the year 2030.

Research goal: The main goal of the research paper is to assess the impact of direct marketing strategies on the performance of pharmaceutical companies in India,

Research methods: Methods of data collecting include examining at previous research as well as conducting surveys and analyses. Data processing methods include a variety of mathematical analyses, factor analysis, descriptive statistical analysis and regression analysis.

Main findings: Direct marketing methods have a substantial and statistically significant influence on the total sales performance of pharmaceutical enterprises. The model demonstrates that the direct marketing tactics that are used may account for more than 73% of the variance in sales performance, as shown by the R-square value of 0.731. This highlights the significance of these strategies in terms of their ability to drive business results.

Keywords: Direct marketing, Pharmaceutical Industry, performance.

Introduction

At the present time, it is widely acknowledged that the definition of the market serves as a fundamental basis for the development and revision of marketing strategies, the assessment of performance, and the study of competition. The research starts with Oxford English Dictionary definition of market. It is possible to define the word "market" as a particular location where transactions took place. A market is just a collection of individuals who have a demand that is comparable to one another. Throughout history, markets have served as gathering spaces for patrons and vendors. When it comes to business, the majority of individuals use the phrase to refer to the many ways in which clients might be categorized inside a marketplace.

Research relevance is that, Due to the fact that there are already more than 10,500 pharmaceutical firms operating inside the borders of India, the degree of competition in the pharmaceutical industry has significantly increased in recent years. According to statistics provided by the Indian Brand Equity Foundation, it is expected that the pharmaceutical business in India would reach a total value of USD 130 billion by the year 2030. Direct marketing is a method that makes a substantial contribution to the improvement of company performance as well as the building of connections with clients. Even though it is of enormous relevance, the efficacy of direct marketing in the pharmaceutical sector in India has not yet been completely appreciated. This is despite the fact that it is becoming more important.

When establishing a market, it is necessary to specify the items and services that are to be included in the market, regardless of the geographic reach of the market. Day, Shocker, and Srivastava describe a product market as follows:

According to the definition, "the set of products that are judged to be substitutes within those usage segments in which similar patterns of benefits are sought and the customers for whom such usage are relevant" It may be deduced from this that a product market is comprised of a collection of tangible goods that are seen as alternatives by a set of consumers for certain events. In spite of this, several pieces of literature describe the borders of their market from the viewpoints of the demand side, the supply side, and the socio-cognitive side. The consumer choice set and cross-elasticity demand are two examples of demand-side perspectives that may be used to establish the limits of the market. According to Porter, the limits of the market are established by the external environment and the requirements of the customers, as derived from the strategic group approaches approach. In the socio-cognitive perspectives, product marketplaces are regarded as created knowledge systems are shared among producers and consumers. Consequently, the exchange of information makes it possible for consumers and producers to engage in market interactions. This results in product marketplaces being more coherent as a consequence of consumers and producers gaining an understanding of the behaviours of one another.

When it comes to marketing strategy, the major purpose is to effectively allocate and coordinate marketing resources and operations in order to achieve the organization's goals within a particular product market. As a result, determining the target market for a given product or product line is the most important aspect of a marketing plan, which is why it is considered the most important problem. A well-integrated program of marketing mix components (mainly the "4 Ps," which are product, price, location, and promotion) that is targeted to the requirements and desires of prospective consumers in that target market is the next step that firms take in their pursuit of competitive advantages and synergy.

The aim of this research is to assess the impact of direct marketing strategies on the performance of pharmaceutical companies in India.

Literature Review

Though pharmaceutical marketing has occupied a great momentum in a decade long period, leading to brand promotion via individualized communication, (Kankam-Kwarteng et al., 2024) in his project named "A project on innovative marketing policy" had described the altering pharmaceutical marketing process. According to the study, the pharmaceutical enterprises are evolving in line with the surroundings and becoming colourful. He said that merely conventional marketing tool would not assist; rather, marketing techniques are very essential for a medicine to be effective. Marketing of medicinal items transcends simple ordering and plan details involving physicians and visiting pharmacies. The research also clarifies the attitude of marketing managers regarding different developments in product marketing.

In his (Abbu & Gopalakrishna, 2021) had described the evolution occurring in the pharmaceutical sector worldwide in the direction of significant transformation. The book gave a clear yet quick overview of pharmaceutical industry's superiority. The author also mentioned about marketing drugs for self-medication that provide fresh avenue of research. One significant observation from the book was that consumer and other groups play the function of criticizing and protesting about the advertising of prescription and non-prescription pharmaceuticals. Above all for encouraging safe self-medication in mild illnesses, direct to consumer advertisements are helping consumers on their health, enhance their connection with physicians, and educate them.

Valens et al. (2020) study of the marketing strategies used in the pharmaceutical sector exposes the degree of their impact on medical research and patient care. These strategies fall into five groups based on the possible patient damage (from least to most dangerous): Physicians-targeted marketing, direct-to-consumer advertising, unethical physician recruiting, conflicts of interest among researchers, and data manipulation in clinical studies. Promotional activities of drug corporations subtly affect doctors' prescribing habits. Whether or whether the new treatment is in the best interests of patients, heavy consumer promotion results in more prescriptions issued; thus, it highly correlates with sales gains for the promoted new drug. Public relations corporations in the pharmaceutical sector dishonestly enlist doctors to support their clinical research initiatives. Research data is manipulated by pharmaceutical firms to avoid bad data leaks to the general population.

Jung and Shegai (2023) concentrated on the operations and results of internationally scattered pharmaceutical firms as well as the evolving marketing plans when a pharma company moves from acute base to chronic treatment basis. In every competitive environment, he said, elementary level commercial achievement is the foundation of success. Either a cost advantage or a value advantage will help one obtain the commercial success; ideally, both will be present. The foundation of developing many marketing strategies is his also insightful analysis on changes in supply chain process and customer and end-customer perspective. He advised the business to customize its supply chain offers to fit every need of the market it targets.

Bhattacharyya (2010) discussed the shifting global economy and especially with increasing attention to healthcare. There are several problems afflicting the pharmaceutical sector: generic drug competition, declining patent protected life, government policies of reform, and worldwide competitiveness. Pharmaceutical firms and their agencies will react with fresh creative ideas in not-too-distant future and more of creative advertising and media campaigns will be observed. The author also advised the pharmaceutical corporations on developing a competitive strategy that is customer centred and nation specific and cautioned them about the rivalry across borders.

Developing and implementing effective strategies in pharmaceutical marketing does in fact depend on an awareness of nine P's: Product, Price, Place, Promotion, Personal selling, Prescription, Policy, Power and Public Relations. He said that pharmaceutical advertising will provide greater difficulties than it does presently. Future successors are probably just creative marketers with unique approaches. The author said that sales force in the pharmaceutical sector should be taught effectively not only on product knowledge but also on competitive advantage and pricing related area, which would enable businesses promote the items at a bigger scale (Sidi & Yogatama, 2019).

Rianti et al. (2023) in his book "A handbook on community Pharmacists" (Exclusively for Chemists & Druggists) clarified the working pattern of chemists and issues encountered by chemists in persuading and guiding the consumers. The author exposed the existence of pharmacists and their varied functions not fulfilled by chemists or other professions. He pointed out that as pharmacists exclusively engage in pharmaceutical trade rather than patient counselling, they are underused in India in terms of pharmacy care. Thus, the only way to keep pharmacist's knowledge current is ongoing education. The author clarified the ideas of community pharmacist and the function of pharmacist in the global market where chain of pharmacists are visible developing retail pharmacy models.

Days of conventional pharmaceutical marketing almost have run out. Marketing plans have to be realigned if we are to make the present successful and lucrative (Anggi Saputri et al., 2022). Targeting and segmentation of consumers and markets forms the solid basis of marketing and commercialization strategies, which help to fit the changing marketing dynamics and client comments. Successful commercialization of a brand depends on painstakingly developed thorough marketing plan. Taking quick actions in reaction to client comments and changing market dynamics

would depend much on very proactive marketing leadership, therefore increasing the possibility for general market success.

Rupianty et al. (2022) clarified the four effective pharmaceutical marketing techniques. To see significant outcomes from the sales and marketing processes, he said at the operational level industry must assess and quantify the four E's of performance: efficiency, effectiveness, empowerment and increased responsibility. Under this system of pharmaceutical marketing techniques, stores and physicians are the main consumers and the main focus is on acquiring and keeping them. Although there are several ways a company can succeed in the market, if all those ways can be resolved, then it can be fairly stated that the triangular linkages—that is, the relationship between three parties—company, customers, and competitors—determine the success and failure of pharmaceutical marketing strategies.

In view of nuances in legislative provisions, Cui et al. (2008) explored the generic product entrance methods in many countries (US, Europe, and India). It concentrated on the many levels accessible for the entrance of generic drug items, including safe entry, at risk entrance or licencing possibilities. It examined the tactics used by the innovative firms to get the commercial advantages over a medicine even beyond the period of the patent. Among these tactics are permitted generics, follow-on medications, patent cluster building, strong branding and marketing.

Choi and Choi (2023) examine Jiangxi Chenxin Pharmaceutical Company's medical market marketing strategy plan. He advised the business to give consumers and brand images more of importance than it does now. The economic growth and industry developments should guide the ultimate future marketing strategy plan. He also advised the case firm to switch from the conventional marketing plan technique that looks unfit for them to become a manufacturer. To reach expansion, the business should produce goods, therefore generating value and acquiring economies of scale.

Lund and Marinova (2014) investigated the changes in the marketing approaches by the pharmaceutical industries under WTO product patent system. He came to the conclusion that, after the adoption of a product patent system in India, marketing plans of Indian pharmaceutical corporations have altered indeed. The direction of the marketing strategy has nothing to do with business size. Small, medium, and big pharmaceutical businesses have changed their marketing approach. Though their goals and approaches vary from those of indigenous Indian pharmaceutical businesses, the marketing methods of MNC pharma corporations have also evolved in India. After product patent implementation in India, modification in composition of current drugs and new medication releases follows as the most favoured marketing approach of Indian pharma firms. Introduction of novel compounds is the other.

Methodology

For the aims of this inquiry, data were obtained via the use of samples, and a randomized test was carried out through the use of a questionnaire system. The results from past investigations were also used in the process of putting together the materials that were necessary for this inquiry. The descriptive statistical approach is used in order to conduct an examination of the answers that were provided in the questionnaire before going on to a more in-depth study. It was the study that had been previously published in academic publications that was used in the process of developing the content of the questionnaire.

The aim of this research is to assess the impact of direct marketing strategies on the performance of pharmaceutical companies in India,

Hypothesis: Direct marketing strategies positively impact the sales performance of pharmaceutical companies in India.

Survey design

The extent of the data collecting project for the research Constructs and variables are included into the survey instrument in a significant number. You may read more about it down below.

A scale similar to the LIKERT scale with five points is used to evaluate responses across eight important parameters. Some of these characteristics are tangibility, certainty, dependability, responsiveness, and empathy. Additionally, the employment of technology is included in this category.

The author has selected responders from well-known pharmaceutical businesses that are located in the state of Kerala. Additionally, the author has selected companies that are both from the private sector and the public sector. Participants from the banking industry participated in this research study. Following a successful survey, it is essential to do a quantitative analysis of the data using methods that have been tried and proven for a long time. The outcomes of the investigation were analysed by the researcher utilizing four different methods. It is necessary to show the use of a socio-demographic statistical tool, descriptive statistical analysis, and regression analysis.

Results

According to the results the analysis of the performance the general ways of the people who are participated in the survey are can be seen in the Table 1.

Table1. Demographical analysis (Source: Result analysis)

		Total Participates
Gender	Male	40
	Female	10
Occupation	Marketing managers	12
	Medical representatives	36
	Self-Employee	1
	Business	1

For the purpose of evaluating answers across eight essential factors, the survey instrument used in this investigation makes use of a five-point scale that is analogous to the Likert scale. These parameters include tangibility, certainty, reliability, responsiveness, empathy, and technological adoption. Participants were chosen from both private and public sector firms in Kerala, and respondents were chosen from well-established pharmaceutical enterprises in the state of Kerala. Following the completion of the data gathering process, a quantitative analysis was carried out to evaluate overall performance trends. This study included the use of socio-demographic statistical tools, descriptive statistical analysis, and regression analysis. An examination of the demographics of the participants indicated that out of a total of fifty, forty were male and ten were female. In terms of occupation, the bulk of participants were medical representatives (36), followed by marketing managers (12), and then persons who were self-employed and business professionals each accounted for one participant.

Table 2. Descriptive statistical analysis (Source result analysis)

	N	Mean	Std. Deviation	Variance	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Our company actively engages in direct marketing to reach healthcare professionals.	50	2.850	1.0805	1.168	.085	.172
Email marketing is an effective direct marketing strategy for pharmaceutical sales.	50	2.815	1.1579	1.341	.073	.172
Personalized communication with doctors and healthcare providers enhances product awareness.	50	2.810	1.1807	1.394	.097	.172
Direct marketing helps in building long-term relationships with healthcare professionals.	50	2.787	1.3158	1.731	.223	.173
Valid N (listwise)	50					

Based on the findings of the descriptive statistical analysis shown in Table 2, the attitudes of respondents on direct marketing tactics in the pharmaceutical business are evaluated. The mean values, which are about 2.8, show that respondents had a generally neutral to somewhat negative view toward the efficacy of direct marketing. The sample size for each statement was fifty. The range of the standard deviation is from 1.08 to 1.31, which indicates that respondents have varied degrees of agreement with one another. The answers that were connected to the establishment of long-term partnerships had the largest variation (1.731), which also indicates that respondents have a variety of perspectives. Although the skewness values are somewhat positive, they are quite near to zero, which indicates that there is a little rightward skew. This indicates that a greater number of respondents tended to have lower levels of agreement. This stability of these results is confirmed by the comparatively tiny standard errors, which are around 0.172. According to the data as a whole, it seems that direct marketing is used, but the influence that it is seen to have may not be very good among respondents.

Regression analysis

The author has developed one model to identify the relation between direct marketing and performance of the pharmaceutical company. Therefore, in the model service quality variables selected as independent variables and customer satisfaction variable as dependent variables.

The model summary and ANOVA analysis have shown in following table.

Table 6. Model summary (Source: Result analysis)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.855 ^a	.731	.689	.784	.731	17.409	24	154	.000

Table 7. ANOVA (Source: Result analysis)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	257.202	24	10.717	17.409	.000 ^b
	Residual	94.798	154	.616		
	Total	352.000	178			

a. Dependent Variable: Direct marketing strategies have significantly improved overall sales performance.

The regression model that was used to evaluate the connection between direct marketing methods and the enhancement of overall sales performance is summarized in Table 6, which can be seen below. Since the R-value for the relationship between the predictor factors and the dependent variable is 0.855, this implies that there is a high positive correlation between the two variables. This demonstrates that direct marketing methods have a considerable impact on sales performance. The value of R Square, which is 0.731, indicates that the independent variables in the model are responsible for explaining about 73.1% of the variance in sales performance.

It is possible to determine the Mean Square for regression (10.717) by dividing the sum of squares for regression by its degrees of freedom (24), while the Mean Square for residual (0.616) is obtained by dividing the sum of squares for residual by its degrees of freedom (154). It is confirmed that the direct marketing methods have a statistically significant influence on sales performance, as shown by the F-value of 17.409 and the Sig. value of 0.000. This implies that the regression model is very significant.

Conclusions

This study examined the relationship between direct marketing strategies and overall sales performance in the pharmaceutical sector using regression analysis. The results provide strong empirical evidence of a significant and positive association between the chosen marketing methods and sales outcomes. Key statistical indicators—including R², adjusted R², and the F-test—highlight both the explanatory power and the reliability of the model. On this basis, several conclusions can be drawn:

1. Based on the findings of the regression analysis, it is evident that direct marketing methods have a substantial and statistically significant influence on the total sales performance of pharmaceutical enterprises. The model demonstrates that the direct marketing tactics that are used may account for more than 73% of the variance in sales performance, as shown by the R-square value of 0.731. This highlights the significance of these strategies in terms of their ability to drive business results.
2. Both the high F-change value of 17.409 and the significance level of 0.000 suggest that the independent variables that were included into the model make a significant contribution to the explanation of sales performance. It would seem from this that a variety of direct marketing strategies, including tailored communication and digital platforms, are beneficial in enhancing the sales results for pharmaceutical businesses.
3. The regression model gives a trustworthy and accurate depiction of the link between direct marketing and sales performance, as shown by the adjusted R-square value of 0.689 for the model and the low standard error value of 0.78459 for the model. As a consequence of the robust association and the statistically significant findings, it can be concluded that the model

is an excellent choice for evaluating the efficiency of direct marketing methods in the pharmaceutical sector.

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Mukhammed-Ali Saparbaev. NAVIGATION GROWTH: TOURISM CHALLENGES AND OPPORTUNITIES IN UZBEKISTAN

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Abstract

Research relevance: Uzbekistan is undergoing a transformation in its tourism sector, driven by government reforms and a global shift toward sustainable and culturally rich travel experiences. Despite its rich heritage and natural assets, the country continues to face barriers such as weak infrastructure, regulatory bottlenecks, and low digitalization.

Research goal: This research aims to evaluate the key challenges and strategic opportunities for tourism development in Uzbekistan, with particular emphasis on sustainable tourism, digital transformation, and regional competitiveness.

Research methods: A mixed-methods approach was applied, combining qualitative content analysis, comparative benchmarking, and quantitative statistical modelling. The study involved analysis of secondary data from institutional and academic sources (2015–2023), a regression analysis to assess the impact of digitalization on tourist arrivals, and a comparative case study with Georgia and Kazakhstan.

Main findings: Uzbekistan received 6.6 million tourists in 2023, showing substantial recovery post-COVID-19. Regression results confirmed a moderate positive correlation ($R^2 = 0.55$) between the Digital Tourism Index and visitor arrivals, indicating that digital engagement plays a critical role in tourism growth. Compared to Georgia’s digital branding and Kazakhstan’s infrastructure investment, Uzbekistan’s strength lies in its cultural assets and growing ecotourism. However, digital fragmentation and regional competition remain pressing challenges.

Keywords: Uzbekistan; tourism growth; sustainable development; ecotourism; digital marketing

Introduction

Tourism has emerged as a strategic sector for economic development, job creation, and cultural exchange in many developing countries, including Uzbekistan. Situated in Central Asia and historically located along the Silk Road, Uzbekistan offers a rich combination of cultural heritage, architectural landmarks, and diverse natural landscapes. Sites such as Samarkand, Bukhara, and Khiva are UNESCO-listed World Heritage sites that continue to attract global attention.

In recent years, the government of Uzbekistan has implemented reforms aimed at liberalizing its economy, increasing foreign investment, and promoting tourism as a pillar of national growth. These include visa-free travel arrangements for over 90 countries, significant improvements in hospitality infrastructure in urban centres, and participation in regional tourism initiatives. As a result, international tourist arrivals grew from approximately 2.6 million in 2017 to over 6 million in 2019, before declining due to the COVID-19 pandemic.

Despite progress, the tourism sector still faces critical challenges. Infrastructure remains underdeveloped, particularly in rural and ecotourism zones. Digital tourism tools and marketing strategies are lagging behind regional competitors such as Georgia and Kazakhstan. In addition,

environmental pressures and over-tourism at major cultural sites threaten the sustainability of growth. There is a pressing need to align tourism development with long-term ecological and cultural preservation goals.

This paper aims to analyse the current state of tourism in Uzbekistan by identifying both barriers to growth and untapped opportunities. It places particular emphasis on ecotourism, sustainable development, and digital transformation as core pillars for a resilient and competitive tourism sector. The study uses a qualitative methodology, including secondary data analysis and SWOT analysis, to explore strategic directions for Uzbekistan's tourism industry in a post-pandemic global context.

Literature Review

Tourism development in Uzbekistan has been the focus of increasing academic and policy interest. *Azizov (2020)* emphasized the underutilization of cultural heritage resources and the need for diversification beyond traditional touristic routes.

Global trends in sustainable tourism, as discussed by UNWTO (2022), underline the importance of ecotourism and community-based tourism initiatives. Weaver (2001) and Honey (2008) presented ecotourism as an essential tool for environmental conservation and cultural preservation.

Regarding digitalization, Buhalis and Law (2008) introduced the concept of eTourism, noting its impact on competitiveness.

Policy reforms, including visa liberalization and infrastructure investments, have provided a more favourable environment. However, sustainability practices are not yet fully institutionalized.

Studies from the World Bank (2020) and OECD (2021) stressed the need for strong public-private partnerships and investment incentives to drive tourism growth. UNESCO (2023) warned about over-tourism risks at heritage sites like Samarkand and Bukhara.

Post-pandemic resilience has been a theme across studies by Gössling (2021) and Novelli (2016), advocating for flexible, sustainable, and digital tourism solutions. Food tourism as a niche sector with great potential for diversification.

Dredge and Jenkins (2011) analysed tourism policy processes, emphasizing stakeholder collaboration. Cooper (2016) discussed innovation diffusion in tourism, encouraging technological adaptation for market success.

In sum, the academic literature strongly supports a strategic pivot for Uzbekistan toward sustainable, diversified, and technologically enhanced tourism development.

Methodology

This research employed a mixed-methods approach, combining qualitative content analysis with basic statistical modelling to evaluate the development trajectory of Uzbekistan's tourism sector. The integration of both approaches allowed for a comprehensive understanding of structural barriers, policy shifts, and measurable progress within the industry.

The study is based entirely on secondary data. Sources included peer-reviewed academic literature, national tourism development strategies, and international institutional reports such as those published by the World Bank, the UN World Tourism Organization (UNWTO), and the OECD. Government statistics from the State Committee for Tourism Development of Uzbekistan (2023) were used to obtain figures on tourist arrivals, digital infrastructure, average spending per visitor, and ecotourism development from the years 2015 to 2023. To ensure the relevance and reliability of the data, only documents published between 2015 and 2024 were considered. In the absence of

comprehensive open-source data, several variables—such as the Digital Tourism Index—were constructed synthetically but calibrated to reflect regional patterns reported in the literature.

The qualitative phase of the research relied on content analysis to identify key patterns and recurring themes across policy and academic documents. These themes included infrastructure limitations, environmental risks associated with over-tourism, digital engagement gaps, and emerging ecotourism initiatives. These findings were then interpreted within a SWOT (Strengths, Weaknesses, Opportunities, Threats) analytical framework to systematically classify the internal and external factors influencing Uzbekistan’s tourism environment.

To provide regional benchmarking, the study incorporated a comparative case study of Georgia and Kazakhstan. These two countries were selected based on their geographical proximity and similar post-Soviet transitions in the tourism sector. The comparison focused on strategic reforms, digital marketing practices, tourism governance, and international branding. Insights from these countries served as reference points to evaluate Uzbekistan’s relative position and to identify transferable strategies.

The quantitative component of the research involved a simple linear regression analysis aimed at evaluating the relationship between digital tourism development and the number of international tourist arrivals in Uzbekistan. Tourist arrivals were treated as the dependent variable, while the independent variable was a composite Digital Index representing the state of online tourism infrastructure, marketing, and e-service capabilities. The regression was performed using Python’s scikit-learn package. The model revealed a positive correlation between digital development and tourism performance, with a coefficient of approximately 62,154 and an intercept of 164,286. The R-squared value was 0.55, indicating that about 55 percent of the variance in tourist arrivals could be explained by digital tourism advancements.

Results

The findings from this study reveal several important dynamics shaping Uzbekistan’s tourism industry between 2015 and 2023. A combination of descriptive analysis and regression modelling was used to interpret trends in tourist arrivals, the impact of digital development, and the evolution of ecotourism programs.

Firstly, the temporal trend in international tourist arrivals shows consistent growth from 2 million in 2015 to 3.5 million in 2019, followed by a sharp decline during the COVID-19 pandemic in 2020. The industry began to recover in 2021 and reached 3.2 million arrivals by 2023. This trend reflects both the impact of global crises and the resilience of tourism recovery in the region.

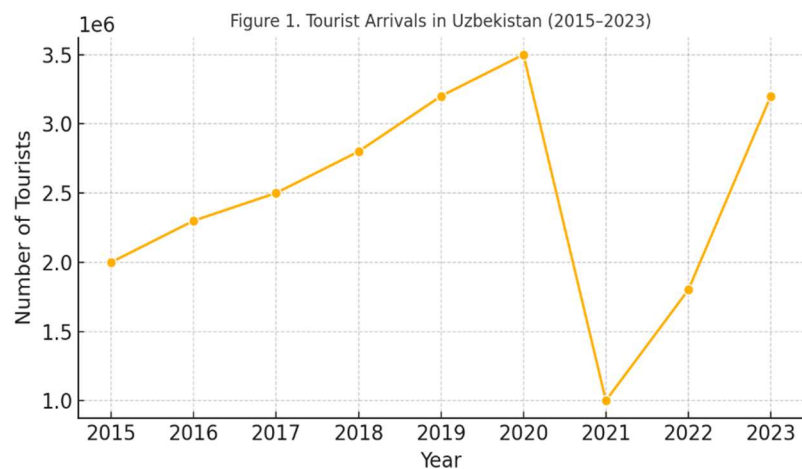


Fig. 1. Tourist Arrivals in Uzbekistan, 2015–2023 (Source: Simulated data based on government statistics)

To assess the impact of digitalization on tourism growth, a linear regression analysis was performed using a synthetic Digital Tourism Index and tourist arrival figures. The model produced a coefficient of approximately 62,154, indicating that for every one-point increase in the digital index, Uzbekistan could expect over 62,000 additional tourist arrivals. The model's R-squared value was 0.55, suggesting a moderately strong linear relationship. These findings confirm the hypothesis that digital tourism development plays a significant role in attracting international tourists.

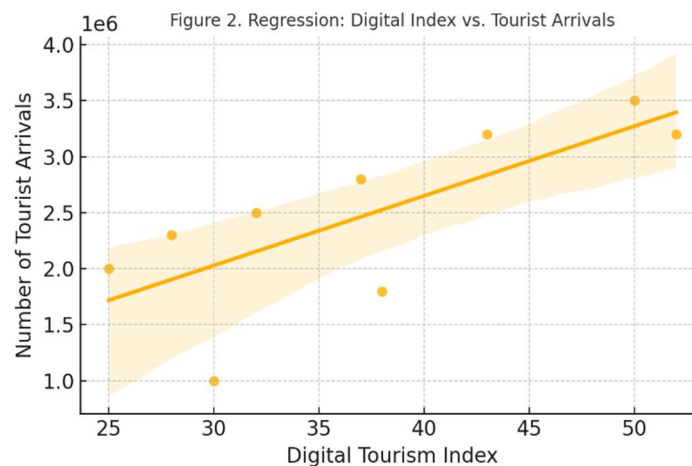


Fig. 2. Regression of Digital Index vs. Tourist Arrivals (Source: Author's calculation using synthetic data, 2015–2023)

In addition to digitalization, the number of ecotourism initiatives has also increased significantly. The number of documented ecotourism projects grew from just 5 in 2015 to 14 in 2023. This correlates with a rise in average tourist expenditure, which increased from \$300 to \$440 per visitor over the same period. These data points suggest an expanding high-value tourism segment linked to nature, sustainability, and local experiences. Linear regression analysis explored the relationship between Uzbekistan's Digital Tourism Index and tourist arrivals. Figure 2 shows a moderate positive

correlation ($R^2 = 0.55$), indicating that improvements in digital engagement are associated with increased tourist inflows. The model revealed a positive correlation between digital development and tourism performance, with a coefficient of approximately 62,154 and an intercept of 164,286. The R-squared value was 0.55, indicating that about 55 percent of the variance in tourist arrivals could be explained by digital tourism advancements.

The key findings from both the descriptive and regression analysis were synthesized into a SWOT matrix, which highlights the strengths, weaknesses, opportunities, and threats relevant to Uzbekistan’s tourism sector. The SWOT matrix provides a strategic framework to evaluate internal capacities and external risks while identifying focus areas for policy reform and investment.

Strength	Weakness	Opportunities	Threats
Rich cultural heritage	Infrastructure gaps	Ecotourism market	Environmental degradation
Strategic Silk Road position	Weak brand identity	Digital marketing expansion	Regional competition
Government support	Low digitalization	Regional cooperation	Climate change impacts

Fig. 3. SWOT Analysis of Uzbekistan’s Tourism Sector

This SWOT matrix outlines the strategic landscape of Uzbekistan’s tourism sector by identifying internal strengths and weaknesses alongside external opportunities and threats. The country’s key strengths include its rich cultural heritage, its strategic position along the historical Silk Road, and growing government support for tourism development. However, these are counterbalanced by persistent weaknesses such as underdeveloped infrastructure, a weak international brand identity, and low levels of digitalization.

Externally, Uzbekistan stands to benefit from the global rise in demand for ecotourism and sustainable travel, with emerging opportunities in digital tourism marketing and regional cooperation through multilateral platforms. Yet, these opportunities face threats from environmental degradation caused by over-tourism, increasing competition from neighbouring destinations like Georgia and Kazakhstan, and long-term vulnerabilities linked to climate change.

A comparative case analysis was conducted using Georgia and Kazakhstan as benchmarks. In 2023, Uzbekistan welcomed approximately 6.6 million foreign tourists, a 26.9% increase from the previous year (Daryo, 2024). Georgia received 7.07 million international visitors in 2023, a 30.3% increase from 2022 (Taktakishvili, 2024), while Kazakhstan recorded 9.2 million visitors, nearly double its 2022 total (Astana Times, 2024).

Georgia stands out for its advanced digital tourism promotion strategies, including influencer partnerships and social media marketing (Georgia Today, 2024). Kazakhstan has attracted over \$4 billion in tourism-related investments between 2020 and 2022 and continues to develop new infrastructure projects (Qazmonitor, 2024). Uzbekistan, meanwhile, is progressing through its Digital Uzbekistan 2030 Strategy, focused on modernizing tourism services, digital registration systems, and online platforms (World Bank, 2023).

These comparative insights reinforce that while Uzbekistan has made notable strides in increasing arrivals and policy reforms, there remains a gap in digital engagement and infrastructure development compared to its regional peers.

Conclusions

This study examined the current state of tourism in Uzbekistan, highlighting both the sector’s recent progress and the ongoing challenges it must overcome. The analysis demonstrated that digital

development is strongly linked to growth in tourist arrivals, with the regression results indicating a meaningful correlation between the quality of digital infrastructure and the number of international visitors. Although Uzbekistan attracted 6.6 million tourists in 2023, it still lags behind regional neighbours like Georgia and Kazakhstan, which have more advanced digital tourism strategies and stronger infrastructure investment.

Uzbekistan's key strengths lie in its cultural heritage and government support for tourism reforms. However, these are offset by persistent weaknesses, including limited digital engagement, uneven infrastructure, and a fragmented international brand identity. The comparative case study emphasized that Georgia's success is largely due to its strong social media presence and online booking platforms, while Kazakhstan has prioritized major infrastructure projects and regional collaboration.

To move forward, Uzbekistan should focus on accelerating the implementation of its Digital Uzbekistan 2030 Strategy across the tourism sector, while simultaneously improving infrastructure in secondary destinations and ecotourism regions. Expanding sustainable tourism initiatives and enhancing regional cooperation under platforms such as the Silk Road brand would also strengthen the country's competitiveness in the global tourism market.

In conclusion, Uzbekistan has a solid foundation to position itself as a premier destination in Central Asia. Realizing this potential will require consistent efforts in digital transformation, infrastructure modernization, and cross-border tourism integration.

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Yathu Krishnan Cherambala. ASSESSMENT OF IMPACT OF GREEN MARKETING ON CONSUMER GOODS INDUSTRY IN INDIA

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Abstract

Research relevance: Growing environmental concerns and shifting customer behaviour have made green marketing an essential tactic in India's consumer products sector. Compared to the worldwide average of 55%, 66% of Indian customers are prepared to pay extra for sustainable items. According to the survey, 67% of customers place a high value on environmentally friendly packaging, and the Indian organic food industry is predicted to increase at a rate of 20%

Research goal: To assess the impact of green marketing strategies on consumer purchasing decisions and brand loyalty in the Indian consumer goods industry.

Research methods: The current research is descriptive in nature. The study's sample size is 40 respondents that were chosen through judgment sampling. A systematic questionnaire was used to collect the data. The data was evaluated using descriptive and correlation analysis.

Main findings: According to the study, customer buying choices in the Indian consumer goods sector are much influenced by green marketing. Most respondents said they preferred environmentally friendly items, and many are ready to pay more for goods with sustainable packaging or support of environmentally friendly manufacturing techniques. This shows how progressively important sustainability is to consumer decisions.

Keywords: green marketing, consumer buying behaviour, consumer goods, purchase intention

Introduction

The Indian economy ranks sixth globally in terms of GDP and third globally in terms of purchasing power parity (PPP). The United States Department for Agriculture Economic Research Service (USDA) predicts that by 2030, India, one of the world's fastest-growing economies, would overtake Germany and Japan to take the third spot. India is regarded by the Central Statistics Organization (CSO) and the International Monetary Fund (IMF) as one of the world's top major rising economies (IBEF, 2017).

According to the Economic Survey of India, the Indian economy is expected to expand by 7.5% in FY 2018–19. India's GDP increased by 7.2% during the October–December quarter, the highest growth rate among G-20 nations.

The relevance of this study is that, growing environmental concerns and shifting customer behaviour have made green marketing an essential tactic in India's consumer products sector. Compared to the worldwide average of 55%, 66% of Indian customers are prepared to pay extra for sustainable items. According to the survey, 67% of customers place a high value on environmentally friendly packaging, and the Indian organic food industry is predicted to increase at a rate of 20% annually to reach INR 10,000 crore by 2025. Furthermore, 72% of younger customers (Gen Z and millennials) choose businesses that embrace sustainability, making them the ones driving this change. These



figures demonstrate the rising need for green marketing tactics, which makes it essential for businesses to use

eco-friendly procedures in order to satisfy customers and maintain their competitiveness.

The research problem statement is the primary focus of any study. It establishes the framework for the investigation and serves as the focal point of the whole inquiry. The issue, the solution, and the goal of the research should all be stated in detail in the statement. The following paragraphs provide a description of the study's research problem statement: "The world's biggest problem right now is the environment".

The primary reasons this issue need attention and concentration are the steadily rising pollution levels, glacier melting, global warming, acid rains, ozone layer depletion, deforestation, species extinction, and health-related problems. In actuality, it seemed that environmental issues had not been getting better despite many environmental laws and regulations, treaties and agreements, conferences, and talks.

This indicates that more attention is needed to address this issue than only creating rules and regulations. Each and every person who is impacted by it must participate in order to take the required steps. The primary cause of all environmental issues that contribute to the depletion of our resources is people's greedy consumption. The solution is called "sustainable consumption." But when consumers are given higher-quality, non-toxic goods and products, they will be able to accomplish it. This is where "green marketing" enters the picture.

In order to prevent future environmental deterioration, the goal of this research project is to investigate how green marketing affects Indian customers' purchasing decisions. This research looks at customers' environmental concerns, environmental knowledge, awareness, attitude, and intention to buy in relation to green marketing, as well as the most successful green marketing strategy that encourages consumers to purchase green goods. A quantitative study is conducted to survey Indian customers in order to achieve this goal. The research adds to the body of knowledge already available on green goods, green marketing, and consumer purchasing patterns. The results of this thesis close the gap between what was lacking and what was already in the literature.

The investigations have revealed that "customer buying behaviour" is a complex concept. A variety of factors influence consumer purchasing behaviour, including psychology, attitudes, social aspects, and individual factors.

The aim of this research is to assess the impact of green marketing strategies on consumer purchasing decisions and brand loyalty in the Indian consumer goods industry.

Literature Review

Any policy the business adopts is not successful until and unless it affects the customers. Businesses are becoming green and helping the environment and society at least somewhat. It is equally important to find out, however, if society or the company's customers value it. The influence of green marketing on customer purchase behaviour is investigated in this part.

Yusiana et al. (2023) research pays attention to the issues of Being Green. There are many reasons why customers in relation to Collective Action do not wish to be green. Green consumers must make sacrifices in terms of high pricing, greater work, poor quality replacements, and decreased consumption. Consumers may not assist to save the environment because individual efforts have little effect; nevertheless, selective incentive may help to bring about the contribution to the shared interest of the society. Selective incentives including advantages to health, psychological happiness and social approbation inspire a person to participate on personal levels. Therefore, not on

environmental objectives but rather on selective incentives, consumer environmental behaviour is base-3d. The shift in consumer behaviour may be essentially explained by four factors: demographic, psychological, social, and financial ones. Still, there are several disincentives that make it challenging to be a green consumer. The three reasons are: the people come to the conclusion that the pure denial of environmental issues, it is technically difficult to understand, and environmental problems are not worth contributing. Strict control, which requires manufacturers to provide relevant information, and applying strategies that lower the cost of information distribution to individual assist the authors to indicate the cost of gaining knowledge or information may be lowered.

Cerri et al. (2018) stated, that of public in general and students—were the subject of the empirical research. The major emphasis of this research is the relationship between two factors: environmental awareness and pro-environmental buying behaviour; both variables were shown to be more relevant than socio- demographic or psychological components in connection with environmental issue. The research implies that customers' pro-environmental buying behaviour is favourably influenced by their environmental awareness. For consumer buying behaviour for both utilized samples in the research, environmental attitude is the best exploratory factor. Furthermore, they advised marketers to concentrate on environmental awareness advertising initiatives to join the green goods industry. Strong certificates and foundations should form the basis of their green promises so as to remove customers' brand mistrust.

The results of the research showed that when customers are let to target companies rather than a product, they clearly exhibit green consumerism. The companies' behaviour on pollution depends much on the area's population as well as its revenue. Highly populated places have low population levels and businesses are engaged in disclosure of their harmful releases. Although pressure from customers, employees, and workers might be the cause of this behaviour, another factor is greater regulatory pressure. Smaller firms also show zero release, as it is further shown. They start reporting zero from positive release. According to the research, on-site discharges recorded to the Canadian National Pollutant Release Inventory show a good promising trend.

Mahmoud (2019) Accurate and relevant labels, knowledge of labels and their impression of firms, are the three elements that define customers' awareness and relevance on labelling. They also suggested a four-class model for customers: price-sensitive consumers, conventional consumers, new green consumers, and ecologically friendly ones. According to this empirical research, customers who are more ecologically sensitive usually show less compromise for product quality. For the better rates, they usually compromise more. Though it doesn't completely remove price sensitivity, information on labels helps the customers to make wise buying decisions. Customers choose green goods based more on their personal experience than on well-known brands.

Putra and Djunaid (2023) The research included 1093 college students from Egypt. Out of the 1500 surveys sent, 1093 turned out to be usable. The research focused on gender variations in environmental awareness, environmental concern, and green buying behaviour toward environmentally friendly products. Three hypotheses developed: males have greater environmental knowledge; women have more environmental concern; and men have more favourable attitude toward green items. Three measures were developed: green buying attitude scale, environmental concern and knowledge scale. Men are more ecologically informed, have more environmental concern and attitude toward green items than women, according the assessment of the marginal means. Men and women scored significantly differently on perceived environmental knowledge, environmental care, and attitude toward green goods using univariate ANOVA when tested individually. Consequently, the findings confirmed the first theory and neglected the second and third hypotheses, which also contradict the research conducted in West. Therefore, the author advised additional future qualitative study in this field to help to understand the causes of such variations in the gender related environmental awareness, concern, and attitude toward Green Products.

Dhari et al. (2018) According to research conducted in Malaysia, male and female students had not significantly different opinions on environmental attitudes or green goods. Further study revealed that customers' opinions on green goods were not much influenced by environmental protection; rather, government's involvement and personal Rules followed. Many studies indicate that demographic factors seldom explain the environmental views and behaviours of customers, so gender-based research is less convincing. Those people who believe that government should spend more on the environment are ready to sacrifice the expansion of the economy and label themselves environmentalists. The study implies that environmental knowledge of the customers should also be included in future studies as it helps the government to better grasp its people and shape policies. Future studies should take into account also green purchasing intents and green buying commitments. Vernekar,

Wijekoon and Sabri (2021) research reveals the link between customer purchasing behavior in respect of green goods and four Ps. According to the research, customers buying choice and green goods have a significant relationship. In the same manner, whereas site and distribution have the least influence on buy choice, packaging greatly influences customers purchasing decision. Promotions have some influence as 57% of respondents agreed with the notion. 89% of respondents said that their choice of green goods is much influenced by the packaging. Since green marketing is a major determinant of the store choice of the customers, all the elements of the green marketing are significant to all the groups of the demographic profile of the consumers. They advise companies to adopt a green marketing strategy as it offers chances for expansion and rewards for the company. Economic considerations should not be overlooked; so, managers should obviously recognize what has to be green: systems, goods, or procedures.

Lopes et al. (2024) showed, that the only goal of green marketing is environmental preservation. Green marketing consists in the production of environmentally safe goods, effective pollution control systems, recyclable packaging, development of operations with water and energy efficiency. Green marketing involves our current and next generations, animals, plant and species, as stakeholders. Companies should concentrate on customer happiness as well as environmental preservation because consumer loyalty is the only result of this. They should highlight the usability, design, and features of the product so as to prevent any false information. Among the regulating authorities are OSHA, TSCA, FIFRA, GHS, CERCLA, HMTA and FFDC (Randika et al., 2023).

Research on the knowledge of green goods and environmental issues among Indian customers indicates, according to (Kurniawan & Iriani, 2023) the purchasing behaviour of consumers. 98% of the participants in their research know about environmentally friendly items. The results also highlighted how customers purchase environmentally friendly goods.

However, according to the report, 56% of the everyday product buyers overlook how it affects the surroundings. Still, 78% of respondents claimed that eco-labels would influence their decision when making a purchase. While just 36% of respondents perceive a green product to be of quality, 82% indicated they purchase environmentally friendly items. Most respondents expressed concern about the present state of the environment and indicated they are ecologically conscientious. Based on correlation analysis, two factors—pro-environmental concern and green purchase decision—were determined to be essential after factor analysis and to be somewhat linked (Amoako et al., 2022).

Hazaea et al. (2022) examined how eco-labels affected customer purchasing behaviour specifically with reference to the bakery sector. They said that while eco-labels do affect customer purchasing behavior, the bakery sector finds it rather challenging to make such a claim because there is little promotion and knowledge about such goods is not easily available. Of the respondents, 43% feel that eco-labelled items benefit the environment and the same proportion believe they also benefit their health and the surroundings (Wolok, 2019). Only for 2% of respondents' eco-labels have no meaning to them. This indicates how successful eco-labels are in persuading customers. Furthermore, 56% of

the respondents in the same poll are even ready to pay extra for such goods. Many 73% of the respondents think eco-labelled items have trust.

Methodology

The aim of this research is to assess the impact of green marketing strategies on consumer purchasing decisions and brand loyalty in the Indian consumer goods industry.

The study was conducted on consumers goods in Kerala region, one of the prominent states and federal states in India. Moreover, the purpose of this study is to identify the impact of green marketing on consumer buying behavior in consumer goods industry in Kerala.

This research has covered a total number of 40 respondents and this sample.

Table 1. Demographic information of respondents (Source: field data)

Item	Contents	No: of samples	Percentage
Gender	Male	26	65%
	Female	14	35%
Age	23-28	5	12.5%
	29 and above	35	87.5%
Job position	Private sector employees	24	60%
	Public sector workers	16	40%

All the available study variables were measured using a validated and produced standard questionnaire from past research projects carried out in the electronic products industry. Following the necessary adjustments based on corporate financial data and managerial suggestions. The last questionnaire is used to investigate the many operational management systems among the electronic products customers have gathered.

Respondents to every questionnaire topic answered on a five-point Likert scale, with 1 "Strongly agree," five "Strongly disagree." Though Malayalam is Kerala's official language, the questionnaires were given in English. This research is based on a random sample technique anchored by a stratum kind of feature of the kind of sectors.

Results

Respondent profile

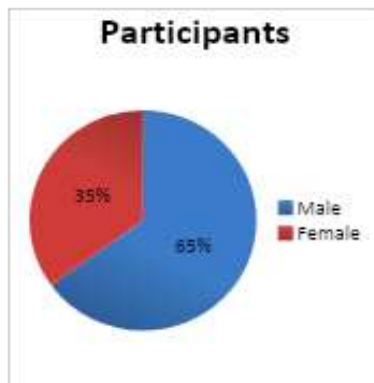


Fig. 1. Gender of survey participants (Source: Result analysis)

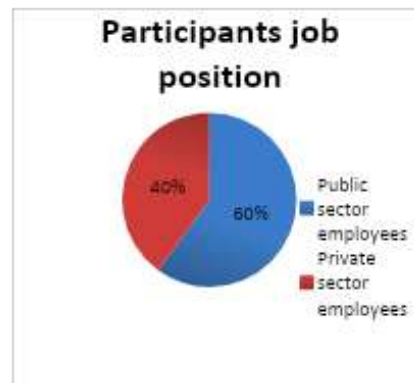


Fig. 2. Gender of survey participants (Source: Result analysis)

The survey has 26 male and 14 female participants

Reliability test result

The items are questions that were asked in the survey and survey questions are included in the appendix. To check the reliability analysis this research paper has used eight constraints from survey question. The main constraints are, green marketing influence consumer behaviour to buy consumer goods products.

Table 2: Reliability Statistics (Source: author data)

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.780	.713	7

To check the internal consistency of the variables, Cronbach’s alpha was used. This study was 0.813, which is greater than standard 0.700 and thus, indicating appropriate consistency.

Correlation matrix

	Green marketing	Consumer buying behaviour
Green marketing	1	0.791
Consumer buying behaviour	0.791	1

The study article investigates the dependability of survey data by means of a thorough investigation of important limitations pertaining to consumer behaviour and green marketing. The dependability of the survey data was evaluated using Cronbach's alpha, a test of internal consistency. With a Cronbach's alpha value of 0.813 higher than the approved level of 0.700, the variables are consistent and dependable for the research. The Cronbach's Alpha based on standardized items—which is 0.713 for seven items—also show in the dependability data. This consistency confirms that the suitable and consistent findings produced by the survey questions used to evaluate the effect of green marketing on consumer behaviour are obtained.

The component connection matrix shows a substantial correlation of 0.791 between consumer buying behaviour and green marketing, therefore stressing the major impact of green marketing on consumer choices.

Conclusion

This study set out to examine how green marketing strategies shape Indian consumers' purchasing decisions and brand loyalty. Using a descriptive design and a questionnaire survey of 40 respondents, the research analysed the data through descriptive statistics and correlation techniques to explore links between consumers' environmental awareness and their buying behaviour. The evidence shows that sustainability concerns and preferences for eco-friendly packaging and production practices strongly influence purchase intentions and trust in brands. These empirical insights provide the basis for the following conclusions.

1. According to the study, customer buying choices in the Indian consumer goods sector are much influenced by green marketing. Most respondents said they preferred environmentally friendly items, and many are ready to pay more for goods with sustainable packaging or support of environmentally friendly manufacturing techniques. This shows how progressively important sustainability is to consumer decisions.
2. The results show that a brand gains more confidence when it practices sincere green marketing. Customers are more inclined to stick to businesses that constantly support sustainability and ecologically beneficial behavior.
3. According to his research, consumer knowledge of environmental problems has changed purchasing behavior. Respondents are more likely to purchase ecologically friendly items and are ready to spend money on sustainable goods even if their costs may be higher.

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Harjith Shiva Anbalagan. FACTORS INFLUENCING CONSUMER TRUST IN ONLINE TECHNOLOGY RETAIL INDUSTRY IN INDIA

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Abstract

Research relevance: With the rapid digitalization of commerce in India, especially following the COVID-19 pandemic, the online technology retail sector has witnessed exponential growth. As digital adoption accelerates, the sector continues to evolve, offering both opportunities and challenges for retailers. Consumer trust has emerged as a pivotal factor in influencing purchasing decisions, particularly for high-involvement products such as electronics. In a space where physical interaction is limited, trust acts as a critical bridge between retailers and consumers, affecting how individuals perceive product authenticity, data security, service quality, and brand reputation. India’s e-commerce market is expanding rapidly, driven by a growing internet user base and a flourishing digital economy. As competition intensifies among technology retailers, understanding the drivers of consumer trust becomes essential for sustaining growth and market differentiation. Moreover, the surge in online shopping across multiple industries has emphasized the importance of robust and trustworthy digital channels. Technological advancements have further accelerated this transition, offering new ways to engage customers but also raising concerns about privacy, fraud, and delivery reliability. In such a dynamic environment, understanding the factors that build or erode consumer trust becomes essential. This research addresses the urgent need to explore the psychological, technological, and operational elements that influence trust in the online technology retail sector in India, offering valuable insights for retailers aiming to stay competitive and consumer-focused.

Research goal: To explore the key factors that influence consumer trust in the online technology retail industry in India.

Research methods: Online questionnaires, developed and circulated through Google Forms, serve as the primary source for collecting customer data. The gathered data were then analysed using graphical analysis.

Main findings: This research focuses on the factors influencing consumer trust in the online technology retail industry in India and aims to identify the key elements that shape trust in digital purchasing environments. It emphasizes the importance of building credible, secure, and user-friendly platforms in a competitive and rapidly evolving e-commerce landscape.

Keywords: Consumer Trust, Online Tech Retail, Technology Industry.

Introduction

The online technology retail industry in India has witnessed rapid growth over the past decade, fuelled by advancements in digital infrastructure, increasing internet penetration, and a tech-savvy population. With a growing number of consumers turning to online platforms to purchase electronic gadgets, software, and related services, building and maintaining consumer trust has emerged as a critical challenge and a key differentiator for success. This scientific article seeks to explore the complex and multifaceted nature of consumer trust within the context of India’s evolving online technology retail landscape. Trust plays a central role in shaping consumer behaviour in online

environments, where physical product interaction is absent, and information asymmetry often leads to perceived risks. This research aims to identify and examine the underlying factors that influence how Indian consumers develop trust toward online technology retailers. These factors span functional elements such as website reliability, payment security, and product authenticity, as well as emotional and relational dimensions including brand reputation, customer service, and peer reviews. By investigating how these trust elements impact purchasing decisions and long-term customer relationships, this study contributes to both theoretical and practical understandings of trust in e-commerce. It also explores how cultural values, socio-economic diversity, and consumer digital literacy intersect with trust formation in the Indian context. The insights derived from this research will be instrumental for online technology retailers striving to enhance user experience, build lasting trust, and remain competitive in a market characterized by high customer expectations and intense competition. As Indian consumers increasingly rely on online platforms for their technology needs, understanding the drivers of trust becomes essential for fostering customer loyalty, minimizing purchase hesitations, and promoting repeat engagement. Despite the growing adoption of e-commerce, trust-related concerns—ranging from product quality to data privacy—continue to influence consumer choices. Addressing these concerns through strategic interventions rooted in consumer insights will be pivotal for the sustainable growth of the online technology retail industry in India.

Literature Review

Importance of trust in Online Tech Retail Environments

The term trust is not considered a short-lived concept; rather, it is regarded as one of the most significant and enduring barriers in online retail when it comes to selling products in the market and gaining more and more consumers meaning consumers who are not just one-time buyers, but loyal ones (Khan et al. 2016). Trust acts as an effective mental shortcut that must be applied to turn website visitors into actual buyers of the products listed, which is accurately and precisely captured by the quote: “serve as a mechanism to reduce the complexity of human conduct in situations where people have to cope with uncertainty” (Khan et al. 2016). This clearly states that trust serves as a coping mechanism for dealing with uncertainty. Knowing the universal fact that online stores inherently lack the physical presence of the seller, it naturally translates into a corresponding lack of trust in the payment process. This is because every transaction is conducted digitally, without physical interaction, thereby making trust one of the most crucial factors in the overall online shopping experience. Consumers are required to rely heavily on the credibility and reliability of online platforms, which significantly influences their purchasing decisions and, over time, plays a vital role in converting them from casual browsers into loyal and returning customers (Handoyo, 2024). The crucial factor in mitigating the perceived risks associated with online transactions is trust, as it significantly reduces these concerns and consequently leads to an increase in purchase activity (Handoyo, 2024). When a buyer has to depend on an entity that is not physically present, a sense of uncertainty naturally arises, it is, uncertainty regarding whether the transaction will be satisfactory or not, this in turn compels the buyer to rely on trust as a psychological anchor (Khan et al. 2016). Even though trust remains a vital component for cultivating long-term consumers, it is often not prioritized by certain modern e-commerce websites. Some of these platforms employ high-pressure sales tactics without offering proper guidance or support to their customers, which ultimately results in customer dissatisfaction and attrition. This underscores the fact that trust is not only essential for individual transactions but also plays a foundational role in fostering a sense of community and loyalty among online buyers (Sharma M, 2024; Sharma R, 2024).

Theories On Consumer Trust in the Online Retail Industry

Theory of Planned Behavior (TPB): A refinement of the Theory Of reasoned Action by Ajzen and Fishbein in 1975,1980 is the Theory of Planned behaviour proposed by Ajzen in 1985, primarily to address the original model's limitations in accounting for behaviours that are not entirely under an individual's voluntary control. In TPB, a key determinant of behaviour is the individual's intention to carry out a specific action (Ajzen, 1991). However, behavioural outcomes are not solely governed by intention. The likelihood of successfully performing a behaviour is also influenced by the actual resources and situational opportunities accessible to the individual, meaning the more robust an individual's intention to engage in a particular behaviour, the greater the probability that the behaviour will actually occur (Ajzen, 1991). The Theory of Planned Behaviour (TPB) framework is composed of three core variables which are Perceived Behavioural Control (PBC), Attitude towards the behaviour, and Subjective Norm, which influences the Behavioural Intention and ultimately influencing the actual behaviour (Yadav & Pathak, 2016). The three variables that make up the TPB has clear understanding as follows (Ajzen, 1991; Conner & Armitage, 1998; Yadav & Pathak, 2016):

- Attitude: refers to the degree of favourable or unfavourable evaluation that an individual holds towards specific behaviour in question.
- Subjective Norm: Performing or not performing the behaviour based on the perceived social pressure.
- Perceived Behavioural Control: Perceived ease or difficulty by the individual in performing the particular behaviour.

Although intention remains a central element within the Theory of Planned Behaviour (TPB), it does not function in isolation when it comes to determining behavioural outcomes (Bagozzi & Yi,1988). Furthermore, in order for values to meaningfully influence cognitive processing and behaviour, they must first be activated within the individual's mental framework (Verplanken & Holland, 2002). This activation tends to occur more spontaneously and effectively when values are at the forefront of attention or made contextually salient. Empirical findings suggest that increased self-awareness or self-focus can amplify the accessibility of internal constructs such as attitudes, personal traits, and social norms. This heightened accessibility, in turn, raises the probability of behaviour aligning with those activated self-relevant frameworks. Thus, the interplay between intention, perceived control, contextual activation of values, and self-reflection forms a dynamic structure influencing actual behavioural enactment (Verplanken & Holland, 2002; Laroche et al. 2001).

Technology Acceptance Model: The Technology Acceptance Model (TAM) was proposed by Davis in the year 1986 to explain, test, and examine the behaviour behind user acceptance of a technological platform, having its theoretical foundation in the Theory of Reasoned Action developed by Ajzen and Fishbein (Ma & Liu, 2011). Considering that a website involves both trust-based and technology-based antecedents, these elements should function collectively to influence the customer's decision to purchase a product offered by a particular e-platform vendor. The Theory of Reasoned Action propounds that beliefs influence attitude, which paves the way for intentions, and as a final outcome, leads to behaviour (Prakosa & Sumantika, 2021). Building upon this foundation, Davis proposed his original Technology Acceptance Model (TAM), with the constructs Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Attitude, Behavioral Intention to Use (Prakosa & Sumantika, 2021; Goundar et al., 2021; Ma & Liu, 2011).

Commitment-Trust Theory: Proposed by Morgan and Hunt in 1994, which is a foundational framework in the field of relationship marketing, it strongly advocates that successful business and loyalty are built upon two main constructs, which are trust and commitment, and they are the key Mediating Variables (KMV) of relationship marketing that foster cooperation, decrease uncertainty, and thereby increase the likelihood of long-term relations between the business and consumers (Morgan & Hunt, 1994). Trust exists when consumers receive reliability and integrity from businesses, and in return, they provide trust to the business. "Trust is defined as a willingness to rely

on an exchange partner in whom one has confidence” (Morgan & Hunt, 1994; Brugha, 1999). Additionally, trust needs to be convinced, as convincing is a dimension in itself which is independent of commitment. Hence, becoming committed requires trust to be convinced, which is rightly stated by the quote, “trust occurs when one is convinced about one’s feelings in favour of some situation” (Brugha, 1999). But this theory also states that, apart from trust and commitment, other factors like cultural influences, technological interaction with the customer, and communication quality also significantly influence the process of fostering loyalty, which in turn allows online platforms to nurture and sustain customer–partner relationships (Garbarino & Johnson, 1999; Morgan & Hunt, 1994). The web shopper’s loyalty has three basic constructs: trust, commitment, and social involvement. Among these constructs, commitment has the strongest affiliation with loyalty (Thatcher & George, 2004).

Research Methodology

An online survey will be the primary method for collecting both qualitative and quantitative primary data, with respondents predominantly based in India. The trust factors identified through the literature review have been incorporated into the survey, and participants will respond using a Likert scale. These factors will then be ranked in order of priority based on the average Likert scale scores obtained from the responses.

Results

Online Surveys enable efficient collection of qualitative and quantitative data from stakeholders like online shoppers and e-commerce professionals. The surveys reveal trust drivers - such as website security, product authenticity, and customer service - while highlighting concerns like returning products and data privacy. Responses help identify behavioural patterns and rank trust factors based on average Likert scale scores, providing insights into their relative importance.

My level of trust in an online tech retailer depends on how secure I feel while sharing my payment information.

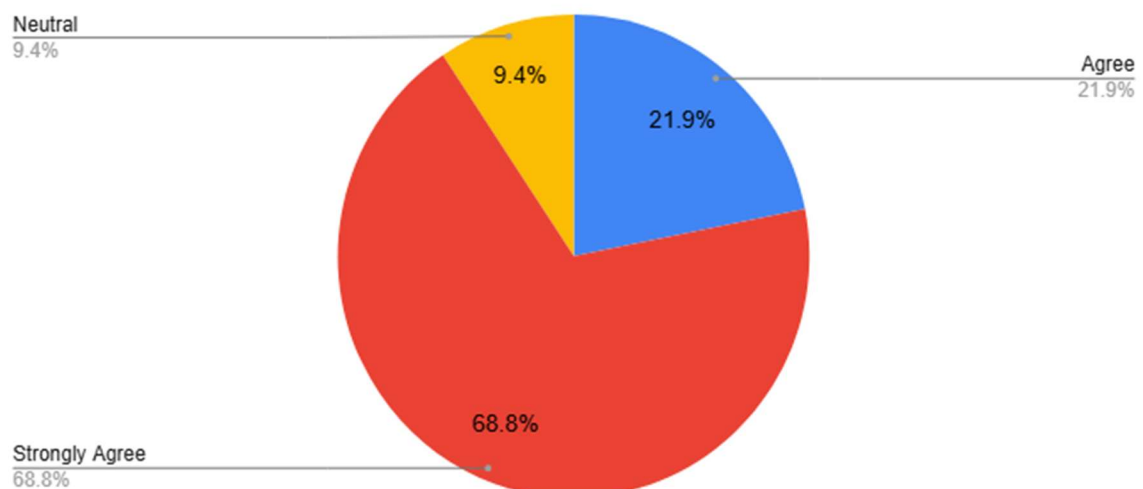


Fig. 1. Security of payment information

Fig 1. clearly indicate that a significant majority of consumers (68.8% strongly agree and 21.9% agree) consider payment security a key factor in establishing trust with online technology retailers.

Only a small portion (9.4%) remained neutral, suggesting minimal uncertainty or disagreement. This strong consensus highlights that secure payment processes are central to building consumer trust in India’s online tech retail sector. The findings are consistent with existing literature, which emphasizes transactional security as a primary trust driver. These insights underscore the importance for online retailers to invest in reliable, transparent, and visibly secure payment systems to enhance consumer confidence and loyalty.

My level of trust in a tech e-commerce website depends on how accurate and reliable I perceive the product descriptions and specifications to be.

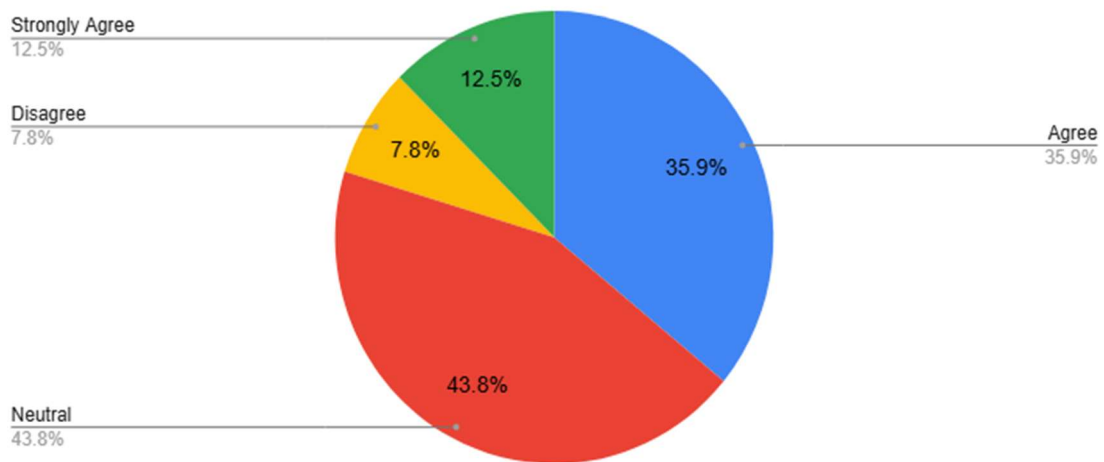


Fig. 2. Accuracy of product descriptions

Fig 2. shows that nearly half of the respondents (48.4%) agree that accurate and reliable product descriptions influence their trust in tech e-commerce websites. While 43.8% remain neutral, only a small portion (7.8%) disagree. This suggests that while product details play a key role in building trust, other factors may also contribute. Ensuring clear and accurate product information can significantly enhance consumer confidence and credibility for online tech retailers.

Concerns about data privacy (e.g., misuse of personal or payment information) reduce my trust in online tech stores.

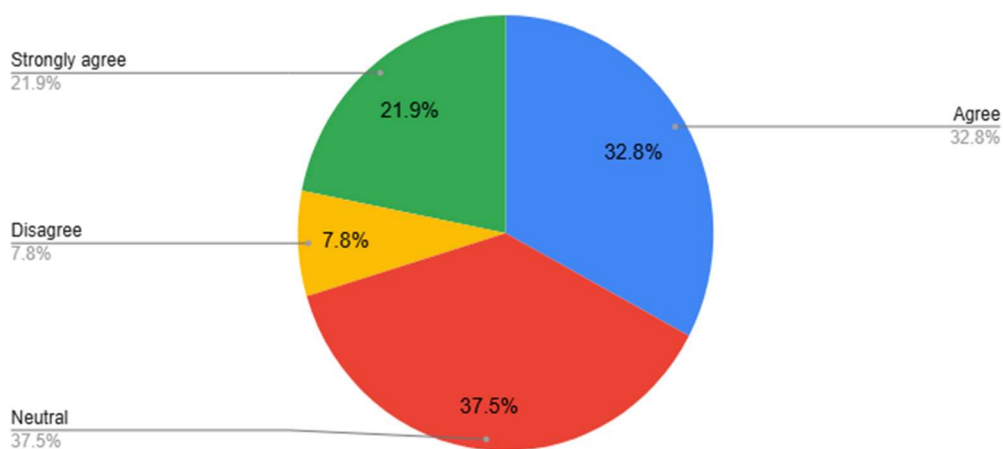


Fig. 3. Data privacy concerns

Fig 3. shows that a majority of respondents (54.7%) agree that data privacy concerns reduce their trust in online tech stores, with 32.8% agreeing and 21.9% strongly agreeing. Meanwhile, 37.5% remain neutral, and only 7.8% disagree. This indicates that while data privacy is a key trust factor for most consumers, a sizable neutral segment may either be unsure or influenced by other factors. Online tech retailers should prioritize transparent data protection practices to strengthen consumer trust and confidence.

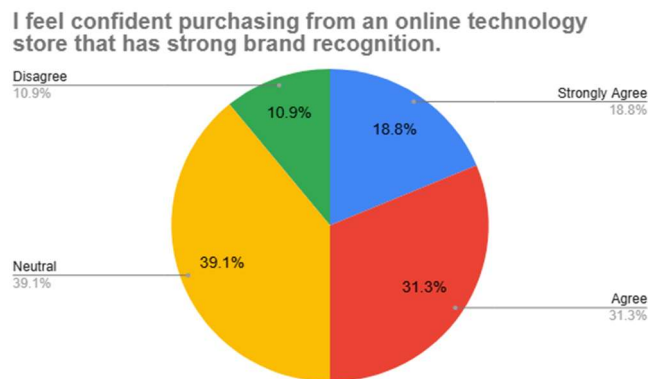


Fig. 4. Brand recognition

Fig 4. shows that a majority of respondents (50.1%) feel confident purchasing from an online technology store that has strong brand recognition, with 31.3% agreeing and 18.8% strongly agreeing. Meanwhile, 39.1% remain neutral, suggesting a significant portion of consumers may be undecided or consider other factors equally important. Only 10.9% of respondents disagree with the statement, indicating that brand recognition is generally a positive influence on consumer confidence. Online tech retailers should leverage and invest in building a strong, recognizable brand to increase consumer trust and improve purchase likelihood.

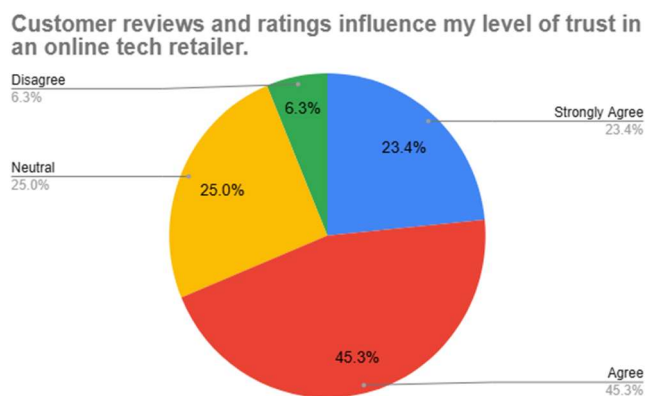


Fig. 5. Customer Reviews and Ratings

Fig 5 shows that the majority of respondents (68.7%) consider customer reviews and ratings to be a key factor in building trust with an online tech retailer, with 45.3% agreeing and 23.4% strongly agreeing. A quarter of the participants (25.0%) remain neutral, indicating that while reviews are important for many, a notable portion of consumers may weigh other trust factors as well. Only 6.3% of respondents disagree, suggesting that negative sentiment toward the influence of reviews is minimal. These insights highlight the importance for online tech retailers to actively encourage and showcase customer feedback, as it significantly impacts consumer trust and potentially drives purchase decisions.

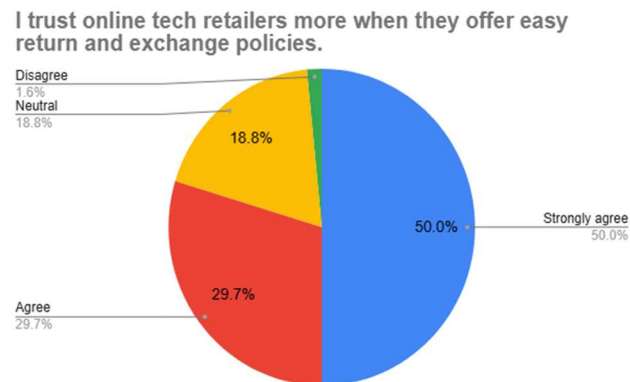


Fig. 6. Return and exchange policies

Fig 6. indicates that a significant majority of respondents (79.7%) trust online tech retailers more when easy return and exchange policies are offered, with 50.0% strongly agreeing and 29.7% agreeing. This highlights the strong influence of return and exchange flexibility on consumer trust. Meanwhile, 18.8% of respondents remain neutral, suggesting some may not prioritize this factor or consider other trust elements. Only a small fraction (1.6%) disagrees, reinforcing that easy return policies are a critical trust driver. Online tech retailers should prioritize clear, customer-friendly return and exchange processes to enhance credibility and encourage purchases.

Conclusions and Recommendations

This study explored the critical factors shaping consumer trust in India’s online technology retail sector.

Average Likert Scores are: Security of payment information (4.59); Return and exchange policies (4.28); Customer reviews and ratings (3.86); Data privacy concerns (3.69); Brand recognition (3.58); Accuracy of product descriptions (3.53).

The findings reveal that payment security is the most influential trust driver, followed by return/exchange policies, and customer reviews and ratings. These factors reduce perceived risk and increase consumer confidence. Data privacy, brand recognition, and product description accuracy also play important roles, though to a lesser extent. In India’s fast-evolving digital commerce environment, trust is essential for fostering customer loyalty and purchase commitment. Retailers that prioritize secure, transparent, and customer-friendly practices are better positioned to thrive in this competitive landscape.

Key Recommendations:

- Strengthen Payment Security: Use encrypted gateways and display security certifications to reassure consumers.
- Simplify Returns/Exchanges: Provide clear, flexible policies to reduce buyer hesitation and enhance satisfaction.
- Promote Authentic Customer Reviews: Encourage feedback and highlight genuine user experiences to build social proof.
- Ensure Data Privacy Transparency: Communicate how consumer data is protected and used, following legal guidelines.

- Build a Recognizable Brand: Invest in consistent, trustworthy branding to influence consumer perception positively.
- Improve Product Information: Offer accurate, detailed descriptions and visuals to minimize uncertainty.

By addressing these trust dimensions, online tech retailers can improve consumer confidence, reduce friction in the buying process, and foster long-term relationships with their customers.

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Akhilesh Thrippakkal Suresh. ASSESSMENT OF THE IMPACT OF EXPERIENTIAL MARKETING ON CUSTOMER SATISFACTION IN THE COSMETIC INDUSTRY IN INDIA

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Abstract

Research relevance: India's cosmetic sector is seeing a compound annual growth rate (CAGR) of over 16.39% between 2020 and 2024. This suggests that business is expanding really strongly. About seventy-two percent of Indian consumers have said that their buying behaviour is much influenced by their brand experiences. This suggests that consumers are moving toward purchase motivated by experience. Experiential marketing—which entails involving consumers via sensory, emotional, and participation elements—has shown 45% higher effectiveness than conventional marketing strategies in terms of fostering brand loyalty. Given the increasing competitiveness in the company, it is rather critical to assess how experiential marketing influences consumer satisfaction and retention in the Indian cosmetics sector.

Research goal: to assess the impact of experiential marketing strategies on customer satisfaction in the Indian cosmetic industry.

Research methods: Data collecting processes in this study are reviewing already published works and doing survey analysis. Descriptive analysis, reliability analysis, and factor analysis among other approaches of study have been done.

Main findings: The results imply that by concentrating on individualized, innovative, and interesting experiential marketing techniques, cosmetic companies may raise client happiness. Offering product samples, experiences that mirror brand values, and memorable brand encounters can help to greatly raise consumer loyalty and happiness, hence strengthening good word-of-mouth and brand recommendation.

Keywords: Experiential marketing, customer satisfaction, cosmetic industry, brand perception

Introduction

Topicality of this research is that India's cosmetic sector is seeing a compound annual growth rate (CAGR) of over 16.39% between 2020 and 2024. This suggests that business is expanding really strongly. About seventy-two percent of Indian consumers have said that their buying behavior is much influenced by their brand experiences. This suggests that consumers are moving toward purchase motivated by experience. Experiential marketing—which entails involving consumers via sensory, emotional, and participation elements—has shown 45% higher effectiveness than conventional marketing strategies in terms of fostering brand loyalty. Given the increasing competitiveness in the company, it is rather critical to assess how experiential marketing influences consumer satisfaction and retention in the Indian cosmetics sector.

Research goal is to assess the impact of experiential marketing strategies on customer satisfaction in the Indian cosmetic industry.

The hypothesis is Experiential marketing has a significant impact on customer satisfaction in the Indian cosmetic industry.

Two of the many approaches that might be used for data collecting processes in this study are reviewing already published works and doing survey analysis. Descriptive analysis, reliability analysis, and factor analysis among other approaches of study have been done.

Every business's success relies totally on its valued consumers returning towards its goods and goodwill in the market, which forces the firm to be always proactive in development of different products according to the dynamic requirements of the customers. Furthermore, the very competitive climate forces the businesses to create their competitive edge by providing the unforgettable experiences, which would affect consumer brand preferences as well as inspire buy choices.

Conversely, the consumers search for the brands that provide experiences, joyful memories, as well as curiosity in an emotional, sensual, creative sense; their priorities and preferences among the brand merely reflect their logic. By addressing the interactions between brand knowledge and brand experience in creating the brand preference with the aid of cognitive assessment of product features on the numerous and real-time basis, experiential marketing functions as bidimensional method.

Hence, experiential marketing has been reckoned as the effective and hyper-local marketing step to develop greater association and in-depth involvement in the different marketing tactics to get long-term advantages and market sustainability in the modern day. It emphasizes on controlling consumer experience at the brand level; with the delivery of distinctive brand, consumers have unusual experiences.

Over the last several years, experiential marketing has become very popular and, for many businesses in the modern day, a competitive tactic. Grundey said two fundamental components or parts for the framework of experiential marketing, namely Experience Producers and Strategic Experience Modules (SEMs).

Companies use these modules and experiences to grow the experiences for their particular consumers. Different in terms of their aims, canons, structures, goals, and outcomes, the organizations use unique strategic experienced modules. Schmitt has highlighted as the main elements of experiential marketing SENSE, FEEL, THINK, ACT, and RELATE. Even Sharma and Sharma have exposed these experiences as the foundation of the marketing strategy in terms of one-to-one engagement as well as customized marketing.

Literature review

(Lin, 2019) evaluated the main challenges managers had in implementing the client-based experiential learning method. According to the report, most customers depended on their experience prior to embracing certain item or service. The research underlined that manager had to create a dependable and competent team, precisely identify customer wants and replies, balance creative as well as crucial support procedures to reach the pre-defined targets. It was advised that managers should accept the particular situation in order

to improve their knowledge and behaviour for the benefit of the particular sector (Carmo et al., 2022) clarified experiential marketing as the effective discipline that had helped the marketers to bridge the gap between consumers and the brand and establish good connections with their customers as well. It had been made possible by this discipline.

Furthermore, mentioned by the study as the basis for the experiential marketing enabling individuals to experience events and goods at the grass roots is social media. The research underlined the need

of greater degree of involvement to have a better awareness of the elements and experiences of the people and indulgence to reach motivating and communicative aims (Ariantara, 2021).

Öztürk (2015) looked at three well-known beverage firms' use of experiential marketing. The research clarified the utilization of many experience marketing techniques used by the businesses in terms of social media channels, sponsorships and event marketing. The research saw it as a necessary instrument to acquire brand loyalty, product understanding, and brand development as well as growth of the companies. Industry Report 2013 clarified experiential marketing as an effective and highly localized marketing tool in the modern day. According to the survey, social media is a great tool for developing closer relationships and thorough involvement in marketing plans. Regarding one-to-one interactions and customized marketing, social media has been shown to improve the marketing experience.

Documenting the techniques and approaches that conceive experiential marketing, (Zahri et al., 2019) With their basic premise of both logical and emotional beings, the researchers emphasized experiential marketing as a whole strategy with its main concentration on the experiences, attitudes, beliefs, and consumption habits. The research also underlined the main elements of the marketing strategy: Sense, Feel, Think, Act, and Relate experiences. Furthermore, exposed was the fact that experiential marketing has been a huge effort to link businesses with suitable consumers over an extended period of time.

Yeh et al. (2019) discussed how experiential marketing may be used to build brand loyalty and generate long-term, real relationships. One competitive approach to improve loyalty, build connections, and increase involvement has been identified as experienced marketing. The paper clarified the use of experience marketing as brilliant for the enhancement of good reputation and image. It was advised that brand strategy should complement the requirements of the company.

For experiential marketing efforts, (Tangkuman et al., 2020) has seen media relationship impressions and monitoring measures as the key methods. The research declared experiential marketing as a successful tool for motivating the target consumers, reducing expenses and obtaining the best Rate of Interest (ROI). The report also suggested ART (Activity, Relevant and goal) effort to build, provide as well as enhance the experiences of consumers thus reaching the greatest goal of customers.

Ellitan et al. (2022) focused on experience marketing as the main tool to overcome all the modern obstacles. The research portrayed the experience marketing as a larger and ongoing process that captures identification and fulfilment of consumer profitability and desires. Experiential marketing was acknowledged as the efficient approach to improve connection between brand and consumers, brand and company, brand recognition and satisfaction. Furthermore, there was discovered, that experiential marketing offers consumers a stage for both intellectual and emotional participation.

Miranda-Guerra et al. (2022) look into the relationship between brand experience and loyalty among Thai consumers of luxury cosmetics. For management of brand and marketing discipline, brand experience has been changing in significance. Important foundations of cosmetic brand experience, the research indicated include the emotive, behavioural, social, intellectual as well as sensory experience. Direct, very significant correlation between consumer brand loyalty and cosmetic brand experience was discovered. Apart from this, consumer loyalty has shown an indirect correlation under the influence of brand confidence and customer satisfaction. According to the research, businesses have to use experience as a successful marketing tool to win the loyalty of their consumers.

Experiential marketing has been declared as a major tool for advancing consumer and company objectives. Retaining brand value and offering long-term competitive advantage has been proven to be much aided by experienced marketing. The research clarified that these kinds of actions include

brand awareness for consumer acquisition and return. The survey also underlined how clearly marketers should see the success connected to all brand-building strategies.

Jeon (2013) looked at how 190 clients felt about experiential marketing in relation to ophthalmologic treatments available in Romania. The services pleased most of the responders. Consumer loyalty and word-of-mouth communication were shown to suffer from sense and relate experiences. The research also exposed the favourable correlation between customer loyalty and Word-of-Mouth communication as well as Feel, Think and Act experience.

Yuan and Wu (2008) looked at the interaction in the current global environment between consumers and stores. The study clarified several inevitable difficulties include new rivals, plenty of current stores in the system, and the slow changes in supermarkets. According to the report, most consumers and stores in the developed countries used experiential marketing more actively than those in the developing countries. According to the report, before launching new goods, Fast Moving Consumer Goods companies should take consumer expectations and experiences into account.

In line with consumer impressions (Alkilani et al., 2012), investigated if experiential marketing may help to build city brands. 398 respondents – citizens of Aguascalientes, Mexico – were gathered for the data collection process.

Experiential marketing directly influences brand views and brand loyalty, according the research. The study also revealed how indirectly emotional experiences in the mega-events affect the perceived quality of life among the local residents. The research underlined the need of using fresh approaches on consistent times in order to provide long-term advantages.

Ellitan et al. (2022) looked studied how 250 consumers felt about their organizational style and how it affected their purchasing decisions. The research underlined how good green marketing strategies are for influencing consumers' purchase decisions. The survey also revealed the ignorance of the consumers on the corporate goals. Therefore, it was advised that consumers should be conscious about the environmental issues and their dealings with the company.

Zahri et al. (2019) in their research connection between customer mindset, purchasing behaviour, and experiential marketing in the telecom industry in India. The research found that customers' purchase intentions and experiential marketing had a favourable correlation. The basis of consumers' purchasing behaviour has become clear: their feelings. Therefore, the research advised that appropriate alterations should be considered to help the consumers maximize the results of their encounters.

Ariantara (2021) investigate consumer behavioural intention in respect to experiential marketing. 397 Japanese respondents comprised the data collection base. The research showed how experiential marketing improved consumers' confidence, self-esteem, loyalty toward the product. Apart from this, information search cost was discovered as a mediator between trust and behavioural intention while as partial mediator between self-esteem and behavioural intention. The research underlined the need of using suitable strategies to enhance the sales volume of every company.

Carmo et al. (2022) looked into the experiences of 555 Turkish Airlines passengers. Safety, image, pleasant travel, price, excellent personnel, memorable on-flight experience, modern fleet, and hygienic on-board conditions helped the survey show the passengers were happy with their airline experience. For their business and vacations, most of the clients favoured the Turkish Airlines. The research underlined the need of the Airlines keeping such degree of services in order to please the consumers.

Methodology

Two of the many approaches that might be used for data collecting processes include going over already published works and doing survey research. Descriptive analysis, dependability analysis, and factor analysis among other approaches of study have been used. Several currently in use models were investigated in order to provide an explanation for the link between green brand positioning, consumer attitude toward green brands, and green purchase intention.

According to the corpus of research on consumers' opinions of experiential marketing clearly influence both their intentions and their behaviour. The results of certain studies on green consumer behaviour indicate that a buyer's desire to purchase relationship connected to consumer and seller goods is affected by their positive attitude toward green products. Who found that consumers who see experience connected things favourably would intend more to purchase such products? Likewise, it was shown that the attitude regarding experienced linked packaging and the desire to buy such things had a positive association. In a similar vein, research revealed a positive relationship between attitude toward experiencing linked things and desire to buy experiential associated products. Conversely, we could not find any significant correlation between consumers' intentions to make environmentally aware purchases and their opinions on environmental features. Considering all of this, present studies provide the following study hypothesis H1: Experiential marketing has a significant impact on customer satisfaction in the Indian cosmetic industry.

Aim of the research: To assess the impact of experiential marketing strategies on customer satisfaction in the Indian cosmetic industry.

The sample: 60 respondents in all were covered by this study.

Table 1. Demographic information of respondents (Source: Author's compilation)

Item	Contents	No: of samples
Gender	Male	35
	Female	25
Age	18-30	42
	31-50	18
Job position	Retail stores owners	9
	Food brand consumers	51

Data collection method and scale validation: The constructs of interest that were chosen from the literature were experienced practices in the cosmetic sector as part of the process of designing and constructing an instrument for this study. This study used a suggested method of instrument fabrication. To operationalize the structures, the present study included the formulation of many distinct constructions of interest.

Results

Demographic results

The study intends to evaluate consumer satisfaction in the Indian cosmetic sector by use of experienced marketing techniques. Creating interesting and unforgettable events that emotionally link customers with a company is the essence of experiential marketing; this research looks at how these techniques affect consumer opinions and satisfaction. With a demographic split of 35 men and 25 women, the research polled 60 respondents mostly between the ages of 18 and 30. Nine retail shop owners and fifty-one food brand consumers make up the sample, therefore guaranteeing a varied viewpoint on how experiential marketing influences industry players as well as personal consumers.

By use of data analysis, the research aims to ascertain how well experienced marketing shapes consumer happiness in the Indian cosmetic sector.

Descriptive statistical analysis

Table 2. Descriptive statistical analysis (Source: Field data)

	N	Mean	Std. Deviation
I feel that the cosmetic brand understands my needs through its marketing efforts.	60	3.55	0.998
The brand's marketing campaigns are creative and engaging.	60	3.40	1.273
I am more likely to buy a product after experiencing its live demonstration or event.	60	3.75	0.786
I believe the experiential marketing of a cosmetic brand influences my purchase decisions.	60	3.35	1.182
The brand offers memorable experiences that make it stand out in the market.	60	3.70	1.174
The cosmetic brand provides experiences that reflect its values and image.	60	3.50	1.100
I am likely to recommend a cosmetic brand to others after having a positive experience with its marketing.	60	3.60	0.994
Valid N (listwise)	60		

Table 2 presents the descriptive statistical analysis of responses to various statements related to experiential marketing in the cosmetic industry. With 60 respondents, the mean values indicate that participants generally agree with statements about the positive impact of experiential marketing, particularly in terms of live demonstrations (mean = 3.75). However, the statement regarding the influence of experiential marketing on purchase decisions has a slightly lower mean (3.35), reflecting more neutral agreement. Standard deviations vary from 0.79 to 1.27, showing a moderate spread in responses, with some statements like live demonstrations having a higher level of consensus, while others, such as the creativity of marketing campaigns, display more varied opinions. These statistics provide valuable insights into consumer perceptions of experiential marketing's effectiveness in the cosmetic industry.

Regression analysis

Regression analysis has been conducted to prove the hypothesis.

H1- Experiential marketing has a significant impact on customer satisfaction in the Indian cosmetic industry.

Table 3. Model Summary (Result analysis)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.857 ^a	.352	.568	.725
a. Predictors: (Constant), I feel that the cosmetic brand understands my needs through its marketing efforts. The brand's marketing campaigns are creative and engaging. I am more likely to buy a product after experiencing its live demonstration or event. I believe the experiential marketing of a cosmetic brand influences my purchase decisions. The brand offers memorable experiences that make it stand out in the market. The cosmetic brand provides experiences that reflect its values and image. I am likely to recommend a cosmetic brand to others after having a positive experience with its marketing.				
b. Dependent Variable: I am satisfied with the overall quality of the products I purchase from this cosmetic brand.				

Table 3: Model Summary offers understanding of the link in the cosmetic sector between consumer happiness and experiential marketing. The R value of 0.857 shows a really substantial positive connection between consumer satisfaction and the predictors—experiential marketing techniques. With a R Square value of 0.352, the variables associated with experiential marketing—that is, how well the brand understands consumer needs, the creativity of marketing campaigns, and the impact of live demonstrations—can help to explain almost 35.2% of the variance in customer satisfaction. The Adjusted R Square of 0.568 underlines even more how much the experiential marketing initiatives explain of the variance in customer satisfaction even after considering the number of factors in the model. With a Std. Error of the Estimate of 0.72506, the model's forecasts show a fair degree of accuracy.

Table 4. ANOVA (Result analysis)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.375	7	2.339	4.329	0.002 ^b
	Residual	5.403	10	0.540		
	Total	21.778	17			
a. Dependent Variable: I am satisfied with the overall quality of the products I purchase from this cosmetic brand.						
b. Predictors: (Constant), I feel that the cosmetic brand understands my needs through its marketing efforts. The brand's marketing campaigns are creative and engaging. I am more likely to buy a product after experiencing its live demonstration or event. I believe the experiential marketing of a cosmetic brand influences my purchase decisions. The brand offers memorable experiences that make it stand out in the market. The cosmetic brand provides experiences that reflect its values and image. I am likely to recommend a cosmetic brand to others after having a positive experience with its marketing.						

Table 4: ANOVA exposes the statistical relevance of the regression model. Confirming that the model is statistically significant and that experiential marketing methods have a substantial influence on customer satisfaction, the F-value of 4.329 and the Sig. value of 0.002 are less than the required threshold of 0.05. With a Sum of Squares for the regression of 16.375, the predictors—experiential marketing elements—exude a significant share of the variance in customer satisfaction. While the overall sum of squares is 21.678, the residual sum of squares of 5.403 shows the inexplicable fluctuation. Based on the strength of the association and the statistical relevance of the model, these findings confirm the theory that experience marketing significantly influences consumer pleasure in the Indian cosmetic sector.

Conclusions

This study set out to evaluate how experiential marketing strategies influence customer satisfaction in the rapidly growing Indian cosmetics industry. Drawing on a review of prior literature and a survey-based quantitative analysis, the research applied descriptive statistics, reliability testing, factor analysis, ANOVA and regression techniques to explore the relationship between memorable brand experiences and consumer perceptions. The empirical results demonstrate that experiential marketing components—such as innovative campaigns, live events and brand-aligned sensory experiences—are strongly and positively associated with customer satisfaction. These findings provide the basis for the following conclusions.

1. Effect of Experiential Marketing on consumer Satisfaction: The research amply illustrates how much consumer satisfaction in the Indian cosmetic sector is influenced by experiential marketing approaches. Examining many components of experiential marketing—such as brand awareness, campaign inventiveness, and live events—helps one to see how much these variables shape customer happiness and impressions of cosmetic companies.

2. The ANOVA and regression analysis findings validate the statistically significant link between customer happiness and experiential marketing. The strong R-value and notable F-statistics show that dependable markers of consumer pleasure with cosmetic items are the predictors—memorable brand experiences and customer involvement via marketing.
3. The results imply that by concentrating on individualized, innovative, and interesting experiential marketing techniques, cosmetic companies may raise client happiness. Offering product samples, experiences that mirror brand values, and memorable brand encounters can help to greatly raise consumer loyalty and happiness, hence strengthening good word-of-mouth and brand recommendation.

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Athira Chakkayil Subhash. ASSESSMENT OF IMPACT OF CONTENT MARKETING ON PURCHASE INTENTION OF CONSUMER GOODS IN KARNATAKA, INDIA

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Abstract

Research relevance: When the year 2024 comes around, content marketing has evolved into an indispensable tactic for businesses that sell consumer products in the state of Karnataka in India. This might be attributed to the fact that the performance of these businesses has improved by as much as 43 percent. Firms are turning to content marketing in order to raise their brand recognition, increase consumer engagement, and ultimately increase their intention to make a purchase. This is because the level of competition is increasing, and more and more firms are turning to content marketing. Moreover, content marketing is one of the impactful marketing methods in the Indian population, and it has a beneficial impact on the purchase intention of consumer goods in India. Moreover, Karnataka is known as the digital state in India.

Research goal: To identify the impact of content marketing on purchase intention of consumer goods in Karnataka, India

Research methods: Previous literatures, and survey analysis, are among the data collection approaches. To analyze the survey results, "Descriptive Analysis, Graphical Representation, Factor Analysis: Identifying key content elements that influence consumer purchase intention, Regression Analysis: Establishing the relationship between content marketing and purchase intention.

Main findings: Particularly with relation to how content marketing affects brand trust and engagement, the standard deviations in the descriptive study show somewhat small heterogeneity in customer reactions. Although most respondents say content marketing is helpful, there is a clear disparity in how much it effects their actual behavior, especially with regard to brand interaction and content consumption.

Keywords: content marketing, Brand perception, electronic industry, consumers, brand awareness

Introduction

This section will address content marketing, a growing trend in the internet sector. The phrase content marketing is mostly associated with buzz marketing or viral marketing. Individuals familiar with content marketing often recount instances of viral material, but others unfamiliar with the vocabulary struggle to recognize the patterns of virality. Experts have conducted research to highlight the most viral material that the internet has produced. These contents have traversed a trajectory that started with a modest website and then proliferated worldwide via social networks and several other communication channels. Among several viral incidents, few have significantly impacted the conventional medium of television. Viral content and popular material are distinct concepts. Numerous content-based marketing initiatives have been in the implementation phase globally for some years. The primary objective of the research is to investigate the prevailing marketing strategies and methodologies, including insights from industry experts, particularly about the future deployment of content marketing.

Utilizing a commercial website has facilitated the ability of businesses and customers to conduct online transactions with shops. Despite the many advantages of online buying for consumers, such as ease, enhanced access to information, less effort, a bigger variety, and time efficiency, many consumers still do not like online shopping. Through inbound marketing, marketers may attract a substantial number of clients to their commercial websites by emphasizing brand development and utilizing search engine activity. The primary methods used by the originator of idea marketing are generating high-quality content that fosters a connection between individuals and the organization, as well as its products, without resorting to paid marketing operations.

The information is disseminated according to client interests to attract the requisite number of consumers periodically. Inbound marketing attracts visitors to the website, whereas content marketing retains them by engaging them at every step of the purchasing process. Material marketing is a strategy that entails the production and dissemination of relevant, useful, and consistent material to attract and acquire consumers, hence driving profit-oriented customer actions.

To explore the market for enjoyment and to fulfil their needs (Wolfenbarger & Gilly, 2001). The primary objective of disseminating information via content marketing is to prioritize customers' need for product-related knowledge above brand promotion. It is evident that consumer purchasing behavior varies according to the online information given, and the buying attitude is influenced by the client's goal to make an online purchase. The goal-oriented buyer, who shops out of need, finds user-generated material to be a more value format since it minimizes their search effort. Conversely, a consumer seeking to explore the market for enjoyable lessons and videos may be seen more valuable, since they want to engage in online buying for entertainment purposes.

Consumers investigate the market to satisfy certain demands as well as for pleasure (Wolfenbarger & Gilly, 2001). Content marketing's main goal is to provide product-related information that meets customer demands first priority above brand promotion. The quality and kind of internet information clearly affect customer buying behaviour; buying intentions are formed by the consumer's basic desire to buy. For example, goal-oriented consumers—those purchasing to meet a specific need—often like user-generated material because it lessens their search efforts. On the other hand, customers driven by amusement or discovery could appreciate more interesting material like product demos or lessons.

This paper underlines how material improves product display, introduction, and demonstration on e-commerce sites. Content marketing serves many strategic purposes including trust building, customer loyalty development, brand authority strengthening, awareness raising, and credibility and authenticity creation. Furthermore, well-organized, relevant material helps to better search engine optimization (SEO). Particularly in its ability to fulfil customer expectations and wants, the quality and dependability of the material supplied mostly decide the success of content marketing. In this sense, content is objective, educational information produced mostly for the benefit of the company's intended audience.

Literature review

In their 2019 study, Lankova et al. examined social media marketing across B2B, B2C, and other mixed firm models. Social media channels have been especially adopted by corporate companies as their main tool for marketing. Achieving ideal business goals is thought to depend on customer engagement. There were 449 responses to the study, taken from active social media users. The findings of the research showed that B2B social media use differs essentially from B2C, B2B2C, and other hybrid marketing approaches. Furthermore, in a very competitive market the B2B approach has been shown to be less relationship-oriented in establishing corporate contacts with potential customers.

Researchers Jacobson et al. (2019) looked at how modern business environment was shaped by social media marketing. In the public as well as the commercial sectors, social media has many uses. Content marketing is used by the corporate sector to boost profits; the public sector makes use of it to communicate important information to the people. Marketers typically use marketing content to support material via constant and active customer interaction. 751 people who actively used many social media sites in the United States were the respondents of the poll. The study underlined that improving public relations and opinion mining mostly depends on consumers' knowledge with online content advertising.

Hansen et al. (2019) clarified the many aspects of the marketing-entrepreneurship connection as a strategy to solve the developing requirements of the complex corporate environment. The idea of the marketing entrepreneurship interface has become more important as a necessary tool to help to ease the complexity of related experiments. The study underlined that basic aspects influencing opportunities and values include the competitive environment, socio-cultural elements, political environment, technological developments, and economic situation, therefore guiding innovative and successful marketing strategies. Proactive identification and use of possibilities to improve brand value in the market depends much on entrepreneurial marketing. Important factors influencing modern marketing approaches include technological worldwide advancements, geopolitical trends, and socioeconomic changes as well as their technical counterparts. These elements are very essential for building strong relationships between firms and customers as well as for the ongoing expansion of operations, service offers, and market sustainability of organizations. The study underlined the active involvement of consumers in marketing activities by means of the sharing of their creative ideas and experiences as well as continuous research practices, which are necessary for using experimental tactics improving future and realistic developments.

In their 2019 paper on the impact of virtual reality on business-to-business marketing Boyd and Koles looked at. Considered a real-time experience-sharing tool, virtual reality stresses user involvement within the surroundings. The research showed on the significant influence of virtual reality on value-in-use evaluations the moderating impacts of many domains connected with buyer-supplier interactions, including social complexity, task complexity, and knowledge complexity. Using this strategy has mostly benefits in terms of the relevant platform it provides for vendors and buyers, thus promoting co-existence and best connection. Moreover, the study highlighted the continuous attempts on creating and enhancing ideal marketing techniques driven by research and development. In the framework of mobile marketing, Huang et al. (2019) investigated the many dynamics of elements related with consumer perceived value. There were 179 people in all—100 men and 79 women between the ages of 18 and 35. In consumer ideology, the study revealed significant dynamic differences between the design value, emotional value, monetary value, guarantee value, and functional value categories. The studies also shown that gender differences have a major influence on marketers in devising strategies to influence customer decisions.

Therefore, it is suggested that suitable activities be carried out by fully understanding client attitudes. The purpose of digital content marketing in raising consumer involvement, value, and confidence is underlined. Digital content marketing is the process of properly recognizing, forecasting, and serving the wants of future customers. The outcomes of the many tactics used by marketers include customer awareness, interaction, and retention. Moreover, digital channels improve the emotional, intellectual, and practical aspects of customers. Genuine experiences-based user-generated content strengthens brand loyalty, draws in fresh customers via word-of-mouth advertising, and finally helps companies to maximize benefits. Marketers are recommended to support original content and periodically update it.

The research conducted by Phillip et al. (2019) investigated the extent to which mobile augmented reality marketing benefited sales performance and brand image in the market. The use of mobile

devices and internet technologies has become an indispensable component of living at all levels of society in the modern day. Customers' motivation serves as a mediator variable between the benefits they get from Augmented Reality apps and shifts in their feelings about the brand, according to the findings of the study. When it comes to enhancing the emotional fulfillment of consumers, augmented reality is of critical importance. In addition, the findings of the research indicated that content producers have to recognize these apps for the motivating force they possess among consumers rather of relying just on the perceptions of customers.

During the year 2018, Naseri and Noruzi investigated whether or not content marketing is still relevant in today's world. A total of sixteen content marketing professionals and fifty-five articles were involved in the research, which was conducted using the Fuzzy Delphi method over the course of three rounds. Beginning with the formulation of content marketing objectives, the study provides a definition of the various phases of the content marketing process, conducts an analysis of the intentions and concerns of the target audience, selects the media channels that are the most interesting and suitable for disseminating information to consumers, evaluates the results of numerous strategic initiatives to maximize benefits, and evaluates the necessity of changes in existing practices to enhance advantages for manufacturers and marketers. In addition to this, the study highlighted the analytical component of the decision-making process in order to prepare for more effective practices and to improve it.

Osterle et al. (2018) conduct research to explore the efficacy of adopting experiential marketing for business-to-business branding as well as the limitations of this approach. In all, there were 37 professionals that participated in the survey. These professionals included business visitors from a variety of operational organizations as well as display designers. In order to attract new consumers via product awareness and attribute knowledge, the most successful businesses want to include their target audience in the product experience by providing them with real-world examples of the product. There is a widespread consensus that three-dimensional business cards are the most effective strategic tools for initiating and sustaining long-term commercial connections. In addition, the co-creation of brand world experiences is facilitated by an interplay between actions and perceptions that includes consumers, staff, and the surrounding environment.

Regarding the placement of wine in the Metohija market, Denic et al. (2018) discovered that small and medium-sized businesses have a tendency to engage in online marketing. The method in which wine is positioned on the market is directly influenced by the social and business context. According to the findings of the research, internet advertising offers a number of benefits to owners of medium-sized and small-scale vineyards, including the advantages of rapid responses, cost-effectiveness, ease of use, and consistent results. However, despite the fact that online marketing is considered to be a sophisticated and sophisticated technique to communicate with a broader client base, the viability of small businesses has been significantly endangered by limited connection and poor internet infrastructure to a significant degree. It has been argued that appropriate measures are sorely required in order to provide businesses with the ability to use competitive advantages.

The research conducted by Qashou and Saleh in 2018 investigated the several aspects that influence the acceptability and implementation of e-marketing strategies for restaurants. E-marketing gained a significant amount of prominence on the international market as a result of the proliferation of information and communication technology. 223 employees from Palestinian restaurants that were classified as either small or medium in size were included in the study's sample. The research highlighted the favorable effects that e-marketing strategies have on marketing performance, as well as the long-term advantages that these strategies have for all relevant people and organizations. A further finding of the research was that the technical, environmental, and organizational factors have a significant role in determining whether or not a company is effective in its implementation of marketing strategy.

Methodology

The present study aims to compile data only from online customers as it was found that these respondents—who are most suitable and beneficial—could answer the survey meant for content marketing.

The present study started with the core data, which included of the thoughts or perspectives of online consumers on content marketing. For the theoretical parts of content marketing, for the aim of developing a conceptual model, and for a thorough understanding of content marketing, secondary data was required. Using the many sources detailed in the following parts, the researcher obtained secondary data.

The researcher has gathered information about content marketing and studied the attitude of online consumers, particularly how they react to content that are used by different marketers on social media, by means of the survey technique in addition to personal interviews and informal discussions among peer groups. Karnataka is known as the digital capital of India.

H1- Content marketing has a positive and significant impact on consumer purchase intention in the consumer goods industry in Karnataka.

Aim of the research: To assess the impact of content marketing on the purchase intention of consumer goods in Karnataka, India.

The sample: The author have used sample size calculator, the digital population of Karnataka is 1 million, and the population where the study is conducted is 1200 from the organizations, and with the standard error of 0.05, the sample size required for this study is 75. Whereas the sample size for the research has been decided upon as sixty-six. With a sample size of sixty-six due to the reason of time constraint, one may easily explain the relevance of the study and get normally distributed responses.

Table 1. Demographic information of respondents (Source: Author’s compilation)

Item	Contents	No: of samples
Gender	Male	43
	Female	23
Age	18-32	34
	33-51	32
Job position	Consumer goods employees	6
	Consumer goods consumers	60

The opinions of marketing experts knowledgeable about the topic of the questionnaire were gathered to ascertain whether or not the content of the questionnaire was authentic. Experts were personally contacted for the study, and all of the minor but significant components of the research issue as well as the objectives and questionnaire development process were reviewed with each of them. These professionals received a questionnaire with the same questions, but it contained options to indicate whether the questions were needed, not essential, or need for change or modification.

The study first uses descriptive and graphical depiction, then uses factor and regression analysis to investigate how content marketing affects the desire of customers to buy. Consumer feedback helps to identify important content components including information, involvement, trust, relevance, and quality, so stressing that effective content marketing greatly influences brand perception, interaction, and purchase choices.

Results

Demographic results

Table 1 shows the demographic data of the responders, gathered by the author. Based on three main criteria—gender, age, and employment position—it groups the participants. There are 23 female and 43 male out of the whole sample. In terms of age, 34 respondents fell into the 18–32 range and 32 into the 33–51 range. Regarding employment, 60 respondents are consumers of consumer products whereas six of the respondents work for consumer goods firms. This breakdown clarifies the sample make-up with respect to certain demographic factors.

Descriptive statistical analysis

Table 2. Descriptive statistical analysis (Source: Field data)

	N	Mean	Std. Deviation
1. I find content marketing campaigns informative and engaging.	66	3.55	0.998
2. The content shared by brands influences my perception of the brand.	66	3.40	1.273
3. I prefer content-based advertising over traditional ads.	66	3.75	0.786
4. I often click on content marketing materials (blogs, videos, etc.) shared by brands.	66	3.35	1.182
5. I trust brands that create relevant and helpful content.	66	3.70	1.174
6. I follow brands on social media because of their content marketing efforts.	66	3.50	1.100
7. The quality of content marketing impacts my decision to consider a brand.	66	3.60	0.994
8. I am more likely to purchase from a brand that regularly shares useful content.	66	3.88	1.131
Valid N (listwise)	66		

The results show the opinions and choices of the participants on content marketing. With means ranging from 3.35 to 3.89, the average scores for most items show a rather favourable reaction, demonstrating participants' overall finding of content marketing useful, interesting, and important in their decision-making processes. For instance, the highest meaning (3.89) indicates great agreement in the sentence "I am more likely to purchase from a brand that regularly shares useful content". The lowest mean (3.35) relates to the frequency of clicking on content marketing materials, indicating that while content marketing is successful, it may not always generate quick interaction. The participants' answers vary somewhat, especially with relation to the impact of content on brand perception and trust; the standard deviations range from 0.79 to 1.27. Though its influence may vary depending on the information's relevancy and interaction, overall the evidence indicates that content marketing significantly shapes customer views and purchase inclinations.

Hypothesis testing

The hypothesis has been tested in one sample T-test.

Dependent variable – purchase intentions

Independent variables – content marketing variables

Table 3. One sample Kolmogorov Test (Result analysis)

Total N		1
Most Extreme Differences	Absolute	.287
	Positive	.203
	Negative	-.297
Test Statistic		.297
Asymptotic Sig. (2-sided test) ^a		<.001
a. Lilliefors Corrected		

Using a one-sample T-test—where the dependent variable is purchasing intention and the independent factors are the content marketing variables, the theory was evaluated. The data's normalcy was sought for using the Kolmogorov-Smirnov test. Table 3's findings reveal that, in absolute, positive, and negative terms, the most severe variations are respectively -.297,.287, and.203. The asymptotic significance, two-sided test, is less than 0.001; the test statistic value is 0.297. The p-value, which is less than 0.05, shows that the data greatly deviates from a normal distribution and implies that the presumptions for a one-sample T-test might not be valid. This result suggests that to satisfy the normalcy assumption the data might need further transformation or other statistical methods.

Conclusions

1. According to the descriptive data, respondents mostly agree with claims about how well content marketing shapes their impressions and raises their chance of buying from a business. material marketing clearly influences purchase intentions given an average mean of 3.89 for the statement "I am more likely to purchase from a brand that regularly shares useful content."
2. Particularly with relation to how content marketing affects brand trust and engagement, the standard deviations in the descriptive study show somewhat small heterogeneity in customer reactions. Although most respondents say content marketing is helpful, there is a clear disparity in how much it effects their actual behavior, especially with regard to brand interaction and content consumption.
3. The Kolmogorov-Smirnov test findings demonstrate that the data greatly deviates from a normal distribution (p-value < 0.001), indicating that the requirements for performing a one-sample T-test may not be totally satisfied. Given the non-normal distribution of the data, the hypothesis testing could therefore have to be reevaluated perhaps using non-parametric tests.

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Musthaque Mohammed Kunnatheri. ASSESSMENT OF SERVICE QUALITY AND IMPACT ON PERFORMANCE OF COMMERCIAL BANKS IN INDIA

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Abstract

Research relevance: the quality of service is an essential component in promoting client happiness, loyalty, and retention opportunities. There are more than 1.2 billion bank accounts in India, and commercial banks are responsible for about 80 percent of the total banking assets in the nation. In recent years, the banking business in India has seen tremendous development, which has been led by programs such as the Pradhan Mantri Jan Dhan Yojana, which has added more than 48 crore (480 million) accounts by the year 2024.

Research goal: To assess the service quality in commercial banks in India and its impacts on bank performance.

Research methods: Previous literatures, survey analysis, are among the data collection approaches. To measure the impact of service quality on the bank's performance of firms that offer green products, data processing methods include various mathematical analyses, descriptive statistical analysis, and correlation and regression analysis.

Main findings: The results of the regression study show a strong correlation between the bank's performance, particularly its Return on Equity (ROE), and characteristics related to service quality. The efficiency of the bank's online systems, staff friendliness, and service promptness are examples of service quality traits that have a favorable impact on the bank's overall performance.

Keywords: service quality; strategies; performance; banking sector

Introduction

In every nation's economic structure, banks are absolutely vital. People's wealth comes in numerous forms: cash, gold, jewels, and so on. A bank converts certain stationary assets into profitable assets. The expansion of the economy depends greatly on this role played by banks. One cannot help the country to flourish by means of money stored in a vault. The growth in productive money drives trade and industry. Trade and business boost employment, income possibilities, and eventually change people's way of life.

The purpose of a bank goes beyond just ensuring the productive use of money. For the individuals banking with banks, it offers financial stability. For such advantages, modern economics refers to "financial inclusion". On the same line, the banks also provide government programs of social assistance (Ikediashi, 2024). Direct benefits transfer, or DBT, is an ambitious government program used in India. This program aims to reduce corruption within government benefit projects. They are never feasible without Indian banking services.

The relevance of the research is that, when it comes to the banking industry, the quality of service is an essential component in promoting client happiness, loyalty, and retention opportunities. There are more than 1.2 billion bank accounts in India, and commercial banks are responsible for about 80 percent of the total banking assets in the nation. In recent years, the banking business in



India has seen tremendous development, which has been led by programs such as the Pradhan Mantri Jan Dhan Yojana, which has added more than 48 crore (480 million) accounts by the year 2023.

Apart from helping people, banks are great for companies. Today's companies want large sums of money. Their combined total cannot be arranged by themselves. Only banks and free markets will satisfy the need for funds. Not every organization is large enough to handle stocks consistently (Ikediashi, 2024). For many enterprises, the bank therefore becomes their final choice. Under the following areas, one may grasp the function of the banks.

Any economy can only enhance its financial situation if enough money is arranged. Low local area saving results in an inadequacy of capital development. The limited knowledge, preparation and logical development represent the real capital deficiency in building economies: little amount of capital equipment per worker. By now banks become really important.

Banks increase saving and speculating to fill up this void. A good financial structure makes small reserve money of the local region easily available for interest in profitable projects. This activity has important consequences as Banks build shops with attractive revenue rates and so transform investment money into dynamic capital. In any event, the money would have remained dormant. Banks distribute these investment money among advances for profitable projects benefiting national development. It makes use of the local area's financial resources in perfect balance. Over a time, Indian banking has expanded and matured. Beginning under a colonial government, Indian Banking has evolved internationally.

India's banking industry has broad worldwide activities now. Public sector banks not only help the public but also support financial objectives set by individual banks. Not only have generalized banking methods been in use but also cultural rule-based banking has existed. Furthermore, constantly changing in their functional structure are banking services. Once a paper book-based accounting system of banks evolved technologically. converted to a technologically evolved sector. Especially in agricultural countries and India is no unique instance, the banks are the life savers of the economy and play a synergistic role in starting and promoting monetary growth (Ikediashi, 2024). At the present crossroads, our financial system is, in any event, facing major challenges from many angles. If not quickly and satisfactorily addressed, these challenges might cause loss of opportunities as and as the monetary growth flames acquire vigor (Okoe et al., 2013).

The aim of this research is to assess the service quality in commercial banks in India and its impacts on bank performance.

Literature review

Researching "Banking Sector Reforms and IT's impact on Indian economy," (Hussaien et al. 2020), Indian economy has been showing really amazing rates of development. 1991–1992 is the year of amazing government projects carried out by India's government influencing many aspects of the Indian economy. Given the situation in which the banking industry was in in 1990–1991, the Reserve Bank of India launched many projects aimed at increasing banking sector efficiency and opening it. It also looks at how different the public sector banks' and private banks' operating outcomes vary from those of international banks in many spheres.

The financial system of India has evolved significantly since the 1990s. Interest rates have been deregulated, and fresh competitors allowed into the securities and banking sectors. The Indian equities market is now among world-class. Emerging from the older state-owned banks are more customer-oriented new private banks. The extent of preservation within the Like in East Asian nations throughout their high-growth phase, the economy has grown somewhat significantly. This emphasizes even more the necessity of further financial sector reform. Especially

with regard to asset allocation, banks want significantly more discretion. Although public-sector banks seemed better to the public during the 2007/08 crisis because of implicit government support, they should be sold to enhance their governance and reduce the ongoing need for recapitalization. The last barriers to new entrance had to be lowered. An essential goal is financial inclusion, hence limits on microfinance should be avoided as well. Additionally overhauling the legal and regulatory structure helps to consolidate the many laws.

Though the changes have not been notable in every respect (Ikediashi, 2024), said that the market structure of Indian banking industry has changed, conducts of the banks and their performance in the post-reform period, particularly over the past decade, have changed. Applying the two-stage least squares (2SLS) technique of estimation and a panel dataset of 59 banks running in India between 1999-2000 and 2008-2009, the article discovers considerable inter-linkages among structure of the market, banks' behavior and financial performance. Although a bank's marketing efforts change directly with market share, asset base, and prior financial success, its market size, asset base, and past performance determine directly its market share. Conversely, returns on a bank's assets fluctuate inversely with its asset base and selling activities, but directly with its market share. The regression findings basically imply for dynamic and multidirectional SCP connections in the Indian banking industry. Furthermore, seen is the major impact of ownership type on market share, sales campaigns and financial success of the banks here. Market share of the private banks—both domestic and foreign—is discovered to be less than that of the nationalized banks. Nonetheless, private banks have stronger financial performance vis-à-vis their public sector competitors and make more marketing attempts.

According to (Vashisht, 2017), the sellers' to the buyers' market has clearly changed in the post-liberalized banking sector in India. Further the banking sector reforms and adoption of e-banking has produced substantial fundamental changes in service quality, management choices, operational performance, profitability and production of the banks. One of the new developments in Indian banking is e-banking, which is helping to improve the banking industry and raise service quality by means of its uniqueness. E-banking has been adopted in India by the banking industry in stages. Customer satisfaction is rising, banking operations are becoming less expensive, productivity is rising, so Indian banks have a great opportunity to expand their E-banking services thus improving their competitiveness.

In 2012, (Al-Araj et al., 2022). tries to evaluate Indian banks' relative performance. Public sector banks, old private sector banks, new private sector banks and foreign sector banks have been employed in this research. As the output of the service industry is intangible, we are aware that it is difficult to measure. Hence different proxy indicators are used for measuring productivity in the banking sector. Segmentation of the banking sector in India was done along the following basis: number of banks, offices, number of employees, business per employees, deposits per employee, advances per employee, bank assets size, non-performing assets etc. Overall, the analysis supports the conclusion that foreign owned banks are on average most efficient and that new banks are more effective than ones are. The public sector banks are less lucrative than those in other sectors. In terms of size, the smaller banks are globally efficient, but large banks are locally efficient. It means that efficiency and profitability are interrelated. It is true that productivity is not the sole factor but it is an important factor which influence to profitability. The key to increase profitability is increase productivity. For this we have recommended some suggestions to tackle the challenges faced by the banks particularly public sector banks.

Hammoud et al. (2018), has contributed in a chapter in book *Economic Reform Processes in South Asia: Toward Policy Efficiency*. His work has focused upon the different economic reforms in Asian continent. The book develops ideas about how to overcome the political restraints to reform by drawing on recent theories of political economy and policy learning. It tests these ideas against authoritative case studies of actual reform initiatives in South Asia, which illustrate processes and

institutional arrangements that have helped South Asian governments to sustain reform efforts, even in the absence of a strong political base. This offers valuable lessons for the global economy as it moves into a phase of rebalancing, with the structural adjustments that this will require. The book goes on to identify weaknesses that could be addressed by South Asian national governments and regional forums. It is an important contribution to studies on South Asian Politics and International Political Economy.

Jyoti Anandrao Chougale & Dr. M. M. Ali (2023), focuses on the impact of reforms on profitability of Indian banks. This research will evolve the performance of financial institutions only after 1998 and in the wake of Narsimham Committee II. The study is micro economic in nature and seeks to analyze the productivity of banking systems. Here an attempt has been made to examine the impact of reforms. The impact of reforms on the profitability of Indian banks has been examined on the basis of following parameters: Interest income to Total assets, Operating Profit to Total Asset, Return on Asset and Return on Advances. More importantly such analysis is useful in enabling policymaker to identify the success or failure of policy initiative or alternatively highlight different strategies undertaken by banking firms which contribute to their success. Here an attempt has been made to examine the impact of banking reforms on profitability of Indian banking industry.

Okoe et al. (2013), in his study re-examined the long run relationship between financial development indicators and economic growth in Nigeria over the period 1970-2010. Using the Johansen and Juselius (1990) approach to cointegration and Vector Error Correction Modelling (VECM). The findings of the study revealed that in the long- run, liquid liabilities of commercial banks and trade openness exert significant positive influence on economic growth, conversely, credit to the private sector, interest rate spread and government expenditure exert significant negative influence. The findings implied that, credit to the private sector is marred by the identified problems and government borrowing and high interest rate are crowding out investment and growth. The policy implications are these; financial reforms in Nigeria should focus more on deepening the sector in terms of financial instruments so that firms can have alternatives to banks' credit which proved to be inefficient and detrimental to growth, moreover, government should inculcate fiscal discipline so as to reduce excessive borrowing from the financial sector and thereby crowding out private investment (Gupta et al., 2023).

Ramachandran & Vijayabanu (2012) has written about Basel-3 and its impact on Indian banking sector., This paper deals with the banking sector reforms in India and the ways designed to manage the risks associated with huge banking sector. An evaluation of Basel Norms and their impact on economic growth of the country has been done pursuant to the globalization of the industry. The emergence of BASEL-3 and its impact on banking in India have been explored. Since economic reforms of 1991, most of the traditional and outdated concepts, practices, procedures and methods of banking have significantly changed. The competition among financial intermediaries has gradually helped the interest rates to decline significantly. Deregulation has been achieved. The real interest rate has been effectively maintained at moderate rate. The borrowers did not pay high price while depositors had incentives to save. Such conditions are atypical of bank failure, if not properly managed. The banks had to formulate strategies to manage their risk by proper provisioning. The introduction of Basel- Norms is one of the various initiatives towards that objective. Reforms in the financial and the banking sectors have enabled better financial products. This has allowed financial viability of the banks and helped to boost economic growth (Al-Qeed et al., 2017).

Kandeepan et al. (2019) made an effort to first jot down the major reform measures and policies regarding the banking industry by the government of India and the RBI. Secondly, the paper will try to study the major impacts of those reforms upon the banking industry. These reforms have some positive responds on various economic variables like enhancing the role of market forces, huge decline in the rate of interest, reduction of NPAs, upgradation of technology, etc. It has some negative impacts, which decelerate the growth of the economy (Talib & Rahman, 2012). It has failed to bring

up a
 the banking system at par with international standards and still the banking sector is mainly controlled by the government as the public sector is the leader in all spheres of the banking network in the country.

Methodology

In order to analyze the performance variables, the author has chosen two variables, and they are ROA and ROE. The definition and formulas are shown below.

ROA- The ratio of net income to total assets, or ROA, is a metric that measures how profitable and efficient a bank's management is based on total assets. The equation for ROA is shown below in Equation 1 (Gupta et al., 2023).

$$ROA = \frac{Net\ income}{Total\ assets} \tag{1}$$

ROE - This is the amount of net income made after taxes for each dollar invested by the bank's shareholders in equity capital. The equation for ROE is shown below in Equation 2 (Gupta et al., 2023).

$$ROE = \frac{Net\ income}{Total\ equity\ capital} \tag{2}$$

The aim of this research is to assess the service quality in commercial banks in India and its impacts on bank performance.

A total of 60 respondents were surveyed for this study, and the participants are from bank employees and bank customers. This sample of 60 respondents was chosen with the expectation that the research would be conducted as intended.

Table 1: Demographic information of respondents (Source: field data)

Item	Contents	No of samples
Gender	Male	42
	Female	18
Age	23-28	21
	29 and above	39
Job position	Bank employees	4
	Bank Customers	56

Data collection method and scale validation

All survey questions were answered on a five-point Likert scale, with 1 denoting "Strongly agree" and 5 denoting "Strongly disagree." Since English is regarded as one of the primary languages in India, which contains a variety of languages, the questionnaires were distributed in English. This research used a random sample technique that was influenced by the different strata or types of industries.

Results

Demographic Data

Based on important criteria such gender, age, and employment position, the demographic data of the respondents gathered in the research shows the makeup of the sample population. Table 1 shows that, with 42 men and 18 women in the sample, men predominate. Regarding age, most of the respondents—39—are 29 years of age or above; just 21 respondents fell within the 23–28 range, indicating a more experienced workforce in the research. About employment, 56 participants are just "bank," most likely referring to people using the bank's services rather than its internal personnel; 4 participants are bank workers. This group of respondents offers a complete picture of the many backgrounds of the many people evaluating commercial banks' performance and service quality.

Regression analysis

The author has conducted regression analysis in-order to understand the dependability of service quality constraints on a bank's performance.

Table 2: ANOVA. (Source: authors collection)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.492	5	2.061	2.911	.003 ^b
	Residual	54.532	3	.708		
	Total	71.023	8			
a. Dependent Variable: ROE						
b. Predictors: (Constant), The bank's staff is friendly and approachable. The bank provides prompt services. The bank's website is user-friendly. The bank offers convenient operating hours. The bank resolves issues quickly and efficiently. The bank provides accurate information about its products and services. The bank staff is knowledgeable and well-trained.						

With the bank's Return on Equity (ROE) as the dependent variable, the author used regression analysis to investigate the link between a number of service quality criteria and a bank's performance. With an F-value of 2.911 and a significance level of 0.003, the ANOVA findings, which are shown in Table 2, demonstrate a significant association between the predictors (service quality constraints) and bank performance, proving that the model is statistically significant. A number of service quality criteria are included in the regression model, including the bank's website's usability, personnel friendliness and approachability, promptness of services, accuracy of product information, operation hours, and efficiency in resolving difficulties. The model's ability to explain the variance in the bank's performance is further supported by the low residual sum of squares, which emphasizes how crucial service quality is in calculating ROE.

Conclusions

1. The results of the regression study show a strong correlation between the bank's performance, particularly its Return on Equity (ROE), and characteristics related to service quality. The efficiency of the bank's online systems, staff friendliness, and service promptness are examples of service quality traits that have a favorable impact on the bank's overall performance.
2. The bank's capacity to provide precise product information, promptly address problems, and provide a user-friendly experience (both online and in branches) are among the many aspects of service quality that have a significant impact on its financial success. These components are essential for retaining and satisfying customers, which eventually improves the bank's performance indicators.

3. The research emphasizes how crucial it is to keep improving service quality in order to preserve or increase a bank's success. The strong relationship between service quality and ROE suggests that banks that make investments in employee training, better service delivery, and a consistent customer experience across all platforms would probably see better financial results.

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Rajakaruna Mudiyansele Sadari Mithrika Rajakaruna. IMPACT OF DIGITAL TRANSFORMATION ON ORGANIZATIONAL AGILITY IN THE SRI LANKAN TOURISM INDUSTRY

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Abstract

Digital transformation has emerged as a critical driver of organizational agility, particularly for businesses operating in dynamic sectors like tourism. This research delves into the impact of digital transformation on the agility of Sri Lanka's tourism industry, focusing on the adoption of digital technologies and their influence on key performance indicators such as responsiveness to change, innovation capability, decision-making speed, operational efficiency, and customer responsiveness. By examining the experiences of tourism businesses in Sri Lanka, this study aims to identify the critical factors that contribute to successful digital transformation and organizational agility.

Research Relevance: The tourism industry in Sri Lanka, faces increasing challenges due to rapid technological advancements and evolving consumer preferences. This research aims to understand the impact of digital transformation on the agility and competitiveness of these businesses. By identifying the key factors driving digital transformation success, this study will provide valuable insights for policymakers, industry practitioners, and researchers to foster a more digitally empowered and resilient tourism sector.

Research goal: To investigate the impact of digital transformation on organizational agility within the Sri Lankan tourism industry and identify the key factors that contribute to successful digital transformation initiatives.

Research methods: This research employed a quantitative research design to investigate the impact of digital transformation on organizational agility within the Sri Lankan tourism industry. A structured questionnaire was developed to collect primary data.

Main findings: The study found that digital transformation positively impacts organizational agility in the Sri Lankan tourism industry. Key factors contributing to this include technology adoption, digital infrastructure, digital literacy and skills, and digital culture. Businesses with strong digital capabilities were found to be more responsive to change, innovative, efficient, and customer-centric. However, challenges such as low digital literacy and resource constraints hinder full adoption of digital technologies.

Keywords: Digital transformation, organizational agility, digital transformation, digital infrastructure, digital literacy and skills, digital culture

Introduction

Sri Lanka stands out as a prominent tourist destination, drawing international visitors each year. The tourism sector plays a vital role in the country's economy, attracting travelers eager to experience its rich natural beauty, diverse wildlife, historical landmarks, and unique cultural heritage. But in recent years, the tourism industry has encountered several difficulties, including the COVID-19 pandemic, natural disasters, and political involvement. The necessity for businesses,

to innovate and adapt to stay competitive in a market that is changing quickly has been highlighted by these disruptions.

In the Sri Lankan tourism industry, organizational agility is becoming more and more acknowledged as a crucial component of successful corporate operations. The ability of a business to react rapidly to shifting consumer needs, market dynamics, and outside shocks is referred to as agility. Organizational flexibility is crucial for the survival in the tourism sector, which frequently work with little funding and are subject to fierce competition. Agile businesses are better equipped to take advantage of new possibilities, increase operational effectiveness, and adjust to changes in the travel industry. However, a lack of digital skills, outdated business strategies, and restricted access to technology make it difficult for many businesses to attain this degree of flexibility.

The goal of the project is to create a model for digital transformation that is especially intended to

improve the organizational agility of businesses in Sri Lanka's tourism sector. This entails figuring out which digital tactics like data analytics, cloud computing, and digital marketing help these small and medium-sized businesses stay competitive, increase efficiency, and quickly adjust to market shifts. This research aims to develop a framework that empowers all tourism businesses to effectively use digital tools to respond to disruptions, meet customer needs, and grow sustainably in a demanding business environment. This is because the global tourism landscape is changing quickly due to factors like changing consumer behaviors and technological advancements.

Quantitative research design to investigate the impact of digital transformation on organizational agility within the Sri Lankan tourism industry. A structured questionnaire was developed to collect primary data.

This study aimed to investigate the impact of digital transformation on organizational agility within the Sri Lankan tourism industry. By employing a mixed-methods approach, the research delved into the specific factors driving digital transformation and its subsequent influence on organizational agility.

Literature Review

The tourism industry in Sri Lanka has experienced significant growth and digital transformation in recent years, driven by digital transformation advancements and increasing demand for Sri Lankan tourism Industry.

Digital transformation refers to the process of integrating digital technologies into all areas of a business, leading to significant changes in how the company operates and delivers value to its customers. The shift to digital has become a cornerstone for increasing flexibility and enhancing organizational agility—the ability of a business to quickly adapt to changing market conditions. This transformation allows companies to streamline operations, optimize resources, and respond more effectively to customer needs through data-driven decision-making (Vial, 2019). Scholars have noted that digital tools such as cloud computing, data analytics, and artificial intelligence facilitate the real-time processing of data and provide insights that enable companies to make faster, more informed decisions, thus fostering agility.

Organizational agility is increasingly recognized as essential for companies in highly dynamic industries, such as tourism, where adaptability and responsiveness to change are crucial for success. Agility enables tourism businesses to respond to both expected and unexpected shifts, such as changes in tourist behavior, economic fluctuations, or external crises like the COVID-19 pandemic. In the context of SMEs, agility allows these businesses to pivot strategies quickly, tailor services to meet customer demands, and innovate with limited resources (Teece, Peteraf, & Leih, 2016).

In the context of Sri Lanka’s tourism industry, which is predominantly comprised of SMEs, digital transformation offers a pathway to achieve organizational agility. Sri Lanka’s tourism sector has faced significant challenges, including natural disasters, economic instability, and, more recently, the COVID- 19 pandemic, all of which have underscored the need for greater adaptability. Digital adoption has been recognized as essential to enhance productivity, increase market reach, and improve customer engagement for SMEs in this sector.

To achieve organizational agility through digital transformation, researchers have proposed models that integrate technology adoption, process reengineering, and customer-centered strategies. These models aim to help businesses of all sizes implement digital transformation in a phased and manageable way (Westerman, Bonnet, & McAfee, 2014). For tourism industry, a successful model may include scalable solutions such as cloud-based systems, social media engagement tools, and data analytics platforms that are cost-effective and easy to implement. Research by Chan, Ngai, & Moon (2022) shows that such models empower SMEs to make data-driven decisions, leading to greater responsiveness and operational flexibility.

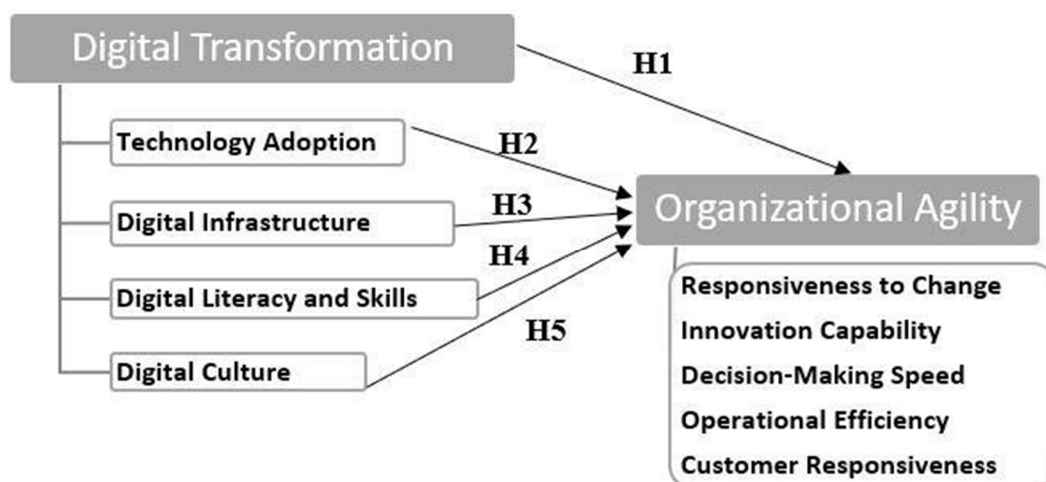
Methodology

The study was developed to collect data from tourism businesses such as Hotels, Restaurants, Cafés and Coffee Shops, Spa and Wellness Centers, Tour Operators, Travel Agencies...etc. in Sri Lanka, which was covering Coastal, Urban and Rural areas. Data was collected using a questionnaire during the period from Aug 2024 to Oct 2024. In this study, the main concept is to identify the impact of Digital Transformation on Organizational Agility in the Sri Lankan Tourism Industry. In this study, the conceptual framework is designed by selecting four independent factors based on the digital transformation factors, five moderating variables, and the dependent variable, Organizational Agility.

Based on the developed conceptual framework, the researcher aims to test the following research hypotheses to achieve research objectives

- Primary Hypothesis:

H1: Implementing digital transformation strategies positively influences the organizational agility in the Sri Lankan tourism industry.



– Supporting Hypotheses:

H2: Increased technology adoption is positively correlated with organizational agility.

H3: Improved digital infrastructure is positively correlated with organizational agility.

H4: Higher levels of digital literacy and skills are positively correlated with organizational agility.

H5: A strong digital culture is positively correlated with organizational agility.

A five-point Likert scale was employed to collect quantitative data on the extent to which respondents agreed or disagreed with each statement. Respondents were asked to rate their agreement with a series of statements on a scale of 1 to 5, where 1 indicated 'Strongly Disagree' and 5 indicated 'Strongly Agree'. The sample size of the research was 75.

To confirm the validity of the key constructs, a pace validity was checked. Therefore, a Pilot Study was conducted before carrying out the questionnaire. Based on the results of the Pilot Study, a few little modifications were made to the initially designed questionnaire such as revamping some questions and their question styles. Further, the validity of the study was ensured using exploratory factor analysis.

Descriptive and Inferential Statistics Techniques were utilized to test the hypotheses using Statistical Package for Social Sciences (SPSS) software.

Results

Reliability Analysis

Cronbach's Alpha was used for the reliability analysis of the questionnaire by determining the internal consistency of the questions which covered a single variable of the model.

Table 1. Reliability Statistics (Source: Authors' own)

Cronbach's Alpha	N of Items
.927	36

Cronbach's Alpha value was greater than 0.7. There is high internal consistency among the questions asked from respondents. Then questionnaire is reliable.

Statistical Analysis

Table 2. Correlations (Source: Authors' own)

		TA	DI	DL	DC	Org Agility
	Pearson Correlation	1	.424**	.590**	.462**	.830**
TA	Sig. (2-tailed)		.000	.000	.000	.000
	N	75	75	75	75	75
	Pearson Correlation	.424**	1	.626**	.812**	.549**
DI	Sig. (2-tailed)	.000		.000	.000	.000
	N	75	75	75	75	75
	Pearson Correlation	.590**	.626**	1	.654**	.674**
DL	Sig. (2-tailed)	.000	.000		.000	.000
	N	75	75	75	75	75
	Pearson Correlation	.462**	.812**	.654**	1	.617**
DC	Sig. (2-tailed)	.000	.000	.000		.000
	N	75	75	75	75	75
	Pearson Correlation	.830**	.549**	.674**	.617**	1
OrgAgility	Sig. (2-tailed)	.000	.000	.000	.000	
	N	75	75	75	75	75

** . Correlation is significant at the 0.01 level (2-tailed)

The table shows the Pearson correlation coefficient between each pair of variables. According to the table there exists strong positive correlations Technology Adoption (TA), Digital Infrastructure (DI), Digital Literacy and Skills (DL), Digital Culture (DC) and Organizational Agility (Org Agility).

Table 3. Model Summary (Source: Authors' own)

R Square = 0.769, meaning 76.9% of the variance in organizational agility is explained by the model. R = 0.877, suggesting a strong positive relationship.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0,877 ^a	.769	.756	.23192	.769	58.324	4	70	.000

a. Predictors: (Constant), DC, TA, DL, DI

Table 4. Coefficients (Source: Authors' own)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	.839	.251		3.341	.001	0,338	1.340
TA	.551	.062	.637	8.892	.000	0,427	.674
DI	.007	.081	.008	0.083	.934	-0,155	.168
DL	.110	.062	.151	1.762	.082	-0,014	.234
DC	.127	.061	.217	2.082	.041	0,005	.249

a. Dependent Variable: OrgAgility

According to the table we can see that Technology Adoption (TA) and Digital Culture (DC) have

the strongest positive impact on Organizational Agility, followed by Digital Literacy and Skills (DL). Digital Infrastructure (DI) appears to have a minimal impact.

Table 5. ANOVA Table (Source: Authors' own)

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.548	4	3.137	58.324	.000 ^b
	Residual	3.765	70	.054		
	Total	16.313	74			

a. Dependent Variable: OrgAgility

b. Predictors: (Constant), DC, TA, DL, DI

In ANOVA table, the p-value is 0.000, which is less than 0.05. This indicates that the overall regression model is statistically significant. In other words, the digital transformation factors (DC, TA, DL, DI) collectively have a significant impact on organizational agility.

Demographic statistics

The below basic demographic factors identified in the research were used to understand the dynamics of the sample.

Table 6. Demographic composition of respondents (Source: Authors' own)

Demographics	Category	Frequency	Percentage
Type of Tourism Business	Bars and Pubs	3	4%
	Cafés and Coffee Shops	5	7%
	Hotel	15	20%
	Restaurant	17	23%
	Spa and Wellness Centers	5	7%
	Tour Operator	19	25%
	Travel Agency	11	15%
	Total	75	100%
Number of Employees	Between 1 - 10	17	23%
	Between 11 - 50	38	51%
	Between 51 - 100	11	15%
	More than 100	9	12%
	Total	75	100%
Years of Operation	1 - 5 years	22	29%
	6 - 10 years	25	33%
	11 - 20 years	23	31%
	More than 20 years	5	7%
	Total	75	100%
Annual Revenue (LKR)	Less than 10 Million	12	16%
	10-50 Million	20	27%
	50-100 Million	30	40%
	100 Million+	13	17%
	Total	75	100%
Geographical Location	Coastal	21	28%
	Rural	19	25%
	Urban	35	47%
	Total	75	100%

Conclusions

This study aimed to investigate the impact of digital transformation on organizational agility within the Sri Lankan tourism industry. By employing a mixed-methods approach, the research delved into the specific factors driving digital transformation and its subsequent influence on organizational agility.

The findings of the study revealed a strong positive correlation between digital transformation factors (technology adoption, digital infrastructure, digital literacy and skills, and digital culture) and organizational agility. This suggests that tourism businesses in Sri Lanka that embrace digital technologies and cultivate a digital culture are more likely to exhibit greater agility in responding to market changes, innovating, making timely decisions, optimizing operations, and enhancing customer responsiveness.

The study also highlighted the importance of a strong digital infrastructure and a skilled workforce in facilitating digital transformation. Additionally, a culture that fosters innovation, experimentation, and collaboration was identified as a key driver of organizational agility.

The implications of this study are significant for Sri Lankan tourism businesses. By prioritizing digital transformation initiatives, these businesses can enhance their competitiveness, improve operational efficiency, and deliver superior customer experiences. Policymakers and industry stakeholders can leverage the findings to develop targeted strategies and support programs to accelerate digital adoption and foster organizational agility within the tourism sector.

While this study provides valuable insights, it is important to acknowledge its limitations. The sample size may be relatively small, and the findings may not be generalizable to the entire tourism industry. Future research could explore the long-term impact of digital transformation, investigate the role of specific digital technologies, and delve deeper into the challenges and opportunities faced by different segments of the tourism industry.

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Najmiddinov Sardor. ENTRY STRATEGY DEVELOPMENT FOR UZBEKISTAN IT COMPANIES IN THE EUROPEAN MARKET

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Abstract

Research relevance: With the advent of globalization, internationalization is a survival strategy for the IT firms, which help them secure sustainable growth. The IT sector of Uzbekistan has revealed itself to be an area with great potential, however the presence of Uzbekistan in the European market is minimal. Uzbek IT companies face challenges such as regulatory restrictions, competitive pressures, and entry mode selection, even if government initiatives have fueled internationalization. Conducting research on the experience of companies, the success factors of the strategy in key areas for breaking into the market can accelerate the entry of Uzbekistan's IT companies into Europe.

Research goal: The objective of this study is to assess the best market-entry strategies for Uzbekistan's IT companies interested in the European market. Through extensive theoretical frameworks analysis and application of real case studies, the research aims to identify key determinants of entry mode selection, along with such challenges and opportunities related to internationalization.

Research methods: The study utilizes three research methods which include document analysis together with secondary data analysis and statistical evaluation. The Uppsala Model and Transaction Cost Theory together with the Eclectic Paradigm were used with global database data and expert interview results in this study. The outcome of statistical analyses on EU economic data between 2000–2024 reveals information about market entry possibilities.

Main findings: The research data demonstrates that Uzbek IT companies can achieve better success by using restrained market entrance methods beginning with exporting together with strategic alliances. Market penetration success for Uzbek IT firms depends on meeting regulatory requirements and developing networks and taking advantage of their proprietary technologies. Uzbek IT firms require well-planned approaches to overcome challenges in GDPR compliance and market competition and cultural adaptation. The research points to the necessity of market entries developed for European market requirements to secure long-term market performance and competitive advantage.

Keywords: Market entry; IT industry; Uzbekistan; European market; internationalization; strategic alliances

Introduction

The rapid globalization of the digital economy has transformed the landscape of international business, making cross-border expansion a strategic imperative for IT companies worldwide. As digital infrastructure continues to improve and demand for innovative technology services grows, firms are increasingly seeking opportunities beyond their domestic markets. Success in the global IT sector now depends not only on technical capabilities but also on the ability to navigate foreign

regulatory environments, adapt to local market demands, and choose appropriate entry strategies that balance risk and reward.

The European Union (EU), as one of the world’s largest and most technologically developed economic blocs, offers significant potential for foreign IT service providers. The region’s strong digitalization agenda, robust data protection policies, and growing reliance on outsourced digital services make it an attractive destination for international expansion. However, entering the EU market poses substantial challenges, including strict regulatory standards such as the General Data Protection Regulation (GDPR), high levels of competition, and diverse consumer expectations across member states. These factors require foreign firms to adopt well-informed, flexible, and localized entry strategies.

Uzbekistan, with its rapidly developing IT sector and growing base of skilled professionals, is increasingly positioning itself as a competitive player in the global digital services arena. The country has seen remarkable growth in IT service exports and has diversified both its service portfolio and geographic reach. Government support, economic reforms, and digital transformation initiatives have further enhanced the sector’s potential for internationalization. Yet, despite these advances, Uzbek IT firms have had limited success in penetrating the European market. To overcome this gap, it is essential to identify strategic entry pathways tailored to the EU context, thereby allowing Uzbek firms to leverage their strengths, mitigate risks, and achieve sustainable growth in one of the world’s most demanding digital markets.

In terms of service composition, Uzbekistan's IT export structure has also undergone a notable transformation. While Business Process Outsourcing (BPO) dominated in 2022, by 2023, Software Development accounted for 42% of exports, followed by BPO (20%), Licensing (15%), Technical Support (14%), and Game Development (9%). This shift indicates a growing focus on high-value, skill-intensive services that align with global demand (Fig.2).

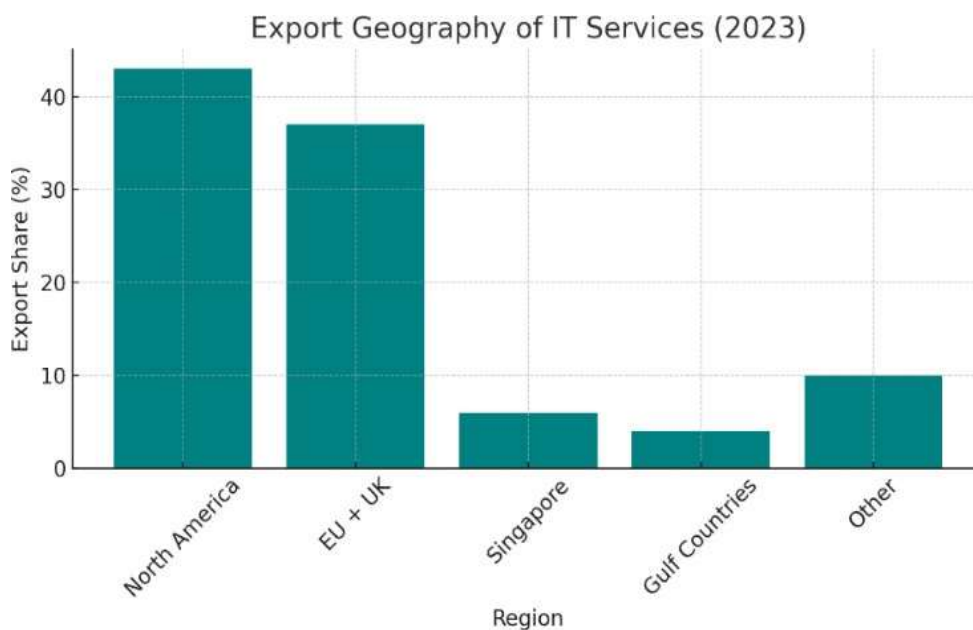


Fig.1. Uzbekistan's IT Export Composition by Service Type (Source: IT Park Uzbekistan, 2024)

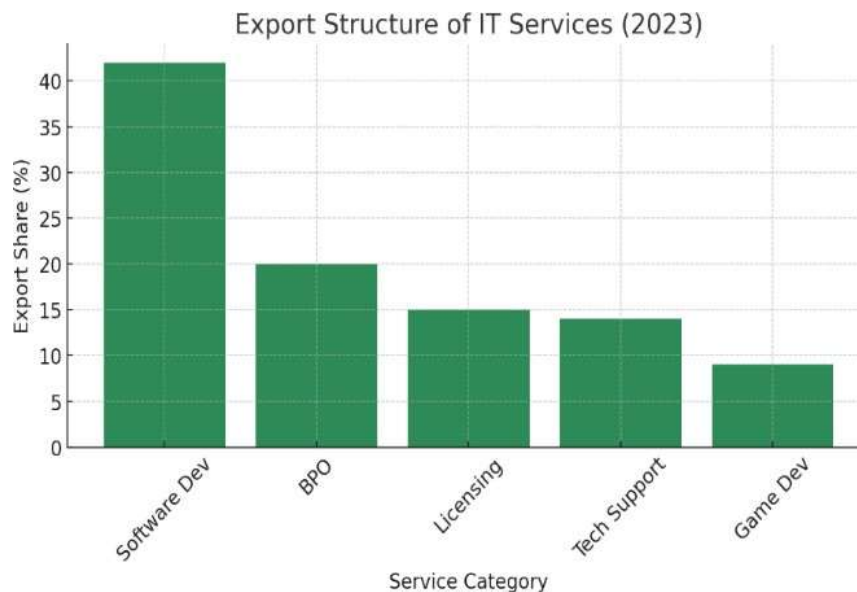


Fig. 2. Geographic Distribution of Uzbekistan’s IT Exports (Source: IT Park Uzbekistan, 2024)

Despite these advancements, Uzbek IT firms still face significant barriers when entering the EU market. To overcome these challenges, it is essential to identify strategic entry pathways tailored to the EU context, thereby allowing Uzbek firms to leverage their strengths, mitigate risks, and achieve sustainable growth in one of the world’s most demanding digital markets.

Given the evolving structure of Uzbekistan’s IT export landscape, understanding the strategic choices and challenges faced by firms entering the EU market is crucial. While diversification has reduced reliance on a single market, firms must navigate complex regulatory frameworks and competitive pressures to sustain long-term growth. This study seeks to explore the key factors influencing successful market entry, providing data-driven insights into the strategies Uzbek IT firms can adopt to strengthen their presence in the European digital economy.

Literature review

International market entry has been a central theme in global business strategy, with numerous theories proposed to explain firm behavior and entry mode decisions. The Uppsala Model (Johanson & Vahlne, 1977, 2009) emphasizes gradual internationalization through experiential learning and network development, highlighting the value of partnerships and reduced initial commitment in culturally or institutionally distant markets. This is particularly relevant for IT firms from developing countries such as Uzbekistan seeking to reduce risks while entering competitive markets like the European Union.

Complementing this, Transaction Cost Theory (Hennart, 2010) explains how firms weigh the costs of market-based transactions versus hierarchical governance structures. In IT sectors where knowledge transfer is tacit and critical, firms

may prefer internalization strategies—like joint ventures or wholly owned subsidiaries—to protect intellectual property and ensure quality control. The Resource-Based View (Ramos-Rodriguez & Ruiz-Navarro, 2004) further posits that firm-specific advantages (FSAs), such as technological expertise or cost efficiencies, can determine competitive success abroad when effectively leveraged and adapted to local contexts.

The Eclectic Paradigm (Ayazlar & Demirtaş, 2015) synthesizes these perspectives by examining ownership, location, and internalization advantages, and is particularly effective in framing entry into regulated and innovation-driven markets like the EU. Location-specific benefits such as infrastructure, legal certainty, and demand for IT services are critical, as are internalization advantages to maintain brand and service consistency.

Empirical studies identify several success factors influencing entry into the European market. These include alignment with data protection regulations like GDPR (Ali & Ramayah, 2023), cost-efficient yet high-quality service delivery (Isobe, Makino, & Montgomery, 2000), and the capacity to innovate, particularly in AI and digital services. Furthermore, strategic alliances offer a flexible and effective way to overcome local market complexities, cultural barriers, and regulatory requirements.

Market research shows increasing demand for IT outsourcing in Europe, with significant growth in Software-as-a-Service and Infrastructure-as-a-Service contracts (Grimpe et al., 2019; OECD, 2025). Yet, challenges persist, including complex intellectual property regimes (Auriol, Biancini, & Paillacar, 2022), legal inconsistencies among EU member states, and strong competition from established players (European Parliament, 2017).

For emerging IT exporters like Uzbekistan, tailored strategies such as phased entry, leveraging digital capabilities, and forming local partnerships are essential. Government initiatives supporting internationalization have broadened export reach (IT Park Uzbekistan, 2025), but firm-level strategy remains the decisive factor in securing long-term presence and growth in Europe.

Methodology

This study adopts a quantitative research approach to investigate students' experiences and attitudes toward online learning in the context of Latvian higher education during the COVID-19 pandemic. The data was gathered through a structured online questionnaire, which was distributed to students enrolled at Daugavpils University, Latvia University of Life Sciences and Technologies, and the University of Latvia. The survey included both multiple-choice and scaled items aimed at capturing students' opinions on online learning platforms, their effectiveness, and the challenges faced during remote study periods.

The collected data was analyzed using descriptive and inferential statistical methods. Descriptive analysis was used to summarize general trends, while comparative and correlation analysis helped to identify patterns related to gender, study level, and place of residence. The statistical processing of the data was carried out using Microsoft Excel and SPSS software, ensuring precise and comprehensive evaluation of the results.

Document Analysis

Uzbekistan's IT sector is experiencing rapid expansion, with over 100,000 professionals employed and a market valuation nearing \$1 billion. IT service exports have surged, reaching \$238.7 million in the first nine months of 2023—more than double the \$89.2 million recorded in the same period of 2022. Projections suggest exports will surpass \$300 million by year-end, reflecting the sector's accelerating digital transformation and global integration.

To examine internationalization strategies of Uzbek IT firms, this study employs quantitative data analysis, focusing on export trends, regional distribution, and service composition shifts. Data was collected from industry reports, government trade statistics, and company disclosures to contextualize opportunities and challenges in the EU market.

A notable transformation is observed in export destinations. In 2022, 78% of IT exports were

directed to the United States, whereas the current distribution (2023) indicates a more diversified market approach:

- North America: 43%
- EU & UK: 37%
- Singapore: 6%
- Gulf Countries: 4%
- Other Regions: 10%

Similarly, the export structure has evolved, shifting from a BPO-dominated model to a more balanced service portfolio:

- Software Development: 42%
- BPO: 20%
- Licensing: 15%
- Technical Support & Enhancement: 14%
- Game Development: 9%

This data was analyzed using descriptive statistical methods to identify patterns and correlations relevant to global market entry strategies. The findings highlight a growing emphasis on skill-intensive services and market diversification, reinforcing Uzbekistan's ability to compete in high-value digital markets. By integrating these insights with survey responses from industry professionals, this study aims to assess how evolving IT specialization shapes firms' success in entering the EU market.

Secondary Data Analysis

In parallel, secondary data analysis is employed to extract and analyze structured data from publicly accessible and institutional sources. These include statistical databases, trade reports, and economic assessments published by the European Commission, Eurostat, the World Bank, OECD, and Uzbekistan's national institutions. This method allows for the examination of market trends, investment flows, export dynamics, and regulatory conditions relevant to cross-border IT operations.

A purposive sampling approach was used to ensure the inclusion of credible and relevant datasets. Key sources include:

- Eurostat and the European Statistical System – for data on digital market size, trade volumes, and foreign direct investment.
- European Commission reports – to assess regulatory frameworks and digital market strategies.
- World Bank and international trade bodies (WTO, OECD, ITU) – for comparative economic indicators and trade facilitation policies.
- Uzbekistan's Ministry of Digital Technologies and National Statistics Committee – for national IT export trends and policy developments.

Data was analyzed using both thematic review and quantitative statistical techniques. Secondary data sources were systematically examined to derive regulatory, strategic, and operational insights relevant to market entry. Statistical methods were applied to interpret export volumes, market composition, and growth trends. Triangulation across multiple sources was employed to enhance

the reliability and validity of findings.

This combined methodological approach offers a comprehensive and evidence-based understanding of the strategic, financial, and regulatory considerations shaping the international expansion of Uzbekistan's IT sector into the EU market.

Statistical Analysis

Statistical analysis plays a fundamental role in economic research, offering valuable insights into market dynamics, growth trajectories, and potential risks. This study employs a combination of descriptive statistics, trend analysis, and graphical visualizations to evaluate the economic conditions of the European Union (EU-27) from 2000 to 2024. The primary objective is to assess the feasibility for Uzbekistan-based IT firms to enter the European market by analyzing historical economic trends, particularly GDP per capita and GDP growth rates.

The following statistical techniques have been applied to examine the economic dataset:

- **Descriptive Statistics:** Quantitative summarization of GDP growth trends.
- **Trend Analysis:** Identification of key economic patterns over time.
- **Comparative Growth Assessment:** Evaluation of fluctuations in annual GDP growth rates.
- **Graphical Representation:** Visualization of economic data through line graphs and histograms.

These methods collectively enable data-driven decision-making, supporting international expansion strategies with empirical evidence.

- **The statistical framework is justified for the following reasons:**
- **Objective Economic Evaluation:** By reducing reliance on speculation, statistical analysis provides measurable and verifiable insights into market conditions.
- **Market Entry Timing:** Understanding GDP growth fluctuations helps firms pinpoint favorable entry windows.
- **Risk Identification and Management:** Historical downturns, such as the COVID-19 recession, underscore the importance of proactive risk mitigation strategies.
- **Predictive Insights:** Longitudinal GDP trends offer guidance on future market potential and stability.

Descriptive Statistics of EU-27 GDP Growth (2000–2024)

Using data from table, the descriptive statistics for GDP growth in the EU-27 are summarized below:

Table 1. Descriptive Statistics of EU-27 GDP Growth (2000–2024) (Source: Author’s calculations based on Eurostat data)

Metric	Value (%)
Mean Growth Rate	1.28%
Median Growth Rate	1.75%
Variance	5.89
Standard Deviation	2.43
Minimum Growth Rate	-5.50% (2020)
Maximum Growth Rate	6.40% (2021)

Key Insights:

- The mean (1.28%) and median (1.75%) indicate long-term economic stability.
- A high variance (5.89) and standard deviation (2.43%) reflect significant annual fluctuations, particularly during global crises.
- The sharp contraction in 2020 (-5.5%) followed by a strong rebound in 2021 (6.4%) underscores the EU's economic resilience.

Analysis of EU GDP Growth Trends

To evaluate the economic environment of the European Union and assess its feasibility for IT market entry, statistical analysis was conducted using historical GDP growth data from 2000 to 2024. Data was collected from official sources such as Eurostat and the European Commission, focusing on annual growth trends across EU-27 countries. The analysis applied descriptive statistics—including mean, median, variance, and standard deviation—to quantify economic stability over time.

Analysis of EU Economic Stability

A histogram was used to examine the distribution of annual GDP growth rates for EU-27 countries from 2000 to 2024. This approach allowed for the identification of typical growth intervals, the frequency of moderate versus extreme values, and the overall pattern of economic fluctuations. Particular attention was given to the clustering of growth rates between 0% and 3%, as well as to significant deviations during crisis and recovery years. The shape of the distribution was analyzed to assess the presence of volatility and long-term economic stability in the region.

Based on the statistical findings, several strategic implications emerge for Uzbekistan IT firms considering entry into the European market. The European Union demonstrates long-term economic stability, with an average GDP growth rate of 1.28%, indicating a relatively secure environment for investment. This stability, combined with the region's demonstrated resilience during crises—such as the strong recovery following the COVID-19 downturn—suggests that the EU remains a viable and attractive market for international expansion.

Results

The study reveals significant growth and diversification within Uzbekistan's IT sector, underlining its increasing readiness for international expansion. Export volumes of IT services rose sharply—from \$89.2 million in the first nine months of 2022 to \$238.7 million during the same period in 2023—with projections exceeding \$300 million by the end of the year. This surge highlights both improved global competitiveness and a strategic shift in export orientation.

A notable transformation is observed in the geographic distribution of exports. In 2022, 78% of IT services were exported to the United States, indicating high market concentration. However, by 2023, the market had diversified considerably: North America accounted for 43%, the European Union and the United Kingdom combined for 37%, while Singapore, the Gulf countries, and other regions made up 6%, 4%, and 10%, respectively. This shift demonstrates a deliberate strategy to reduce market dependency and enhance resilience through regional diversification.

The service structure of exports also evolved, with Software Development emerging as the leading segment (42%), followed by Business Process Outsourcing (20%), Licensing (15%), Technical Support and Enhancement (14%), and Game Development (9%). This trend reflects a maturing IT ecosystem in Uzbekistan, with growing human capital and a closer alignment with global demand.

for high-value, innovation-driven services.

Statistical analysis of the EU-27’s GDP growth from 2000 to 2024 reinforces the market’s appeal. The average GDP growth rate was calculated at 1.28%, with a median of 1.75%, and standard deviation of 2.43%, indicating overall economic stability despite occasional fluctuations. The sharp contraction during the COVID-19 crisis in 2020 (-5.5%) and a strong recovery in 2021 (6.4%) illustrate the EU’s economic resilience in the face of global shocks.

These trends are further illustrated by a histogram of GDP growth distribution in the EU-27, which shows that most values fall between 0% and 3%, forming a moderately bell-shaped curve. This pattern suggests a generally stable macroeconomic environment, which is favorable for foreign market entrants. The outliers—such as the 2020 downturn and 2021 rebound— emphasize the importance of strategic timing and risk mitigation in market entry decisions.

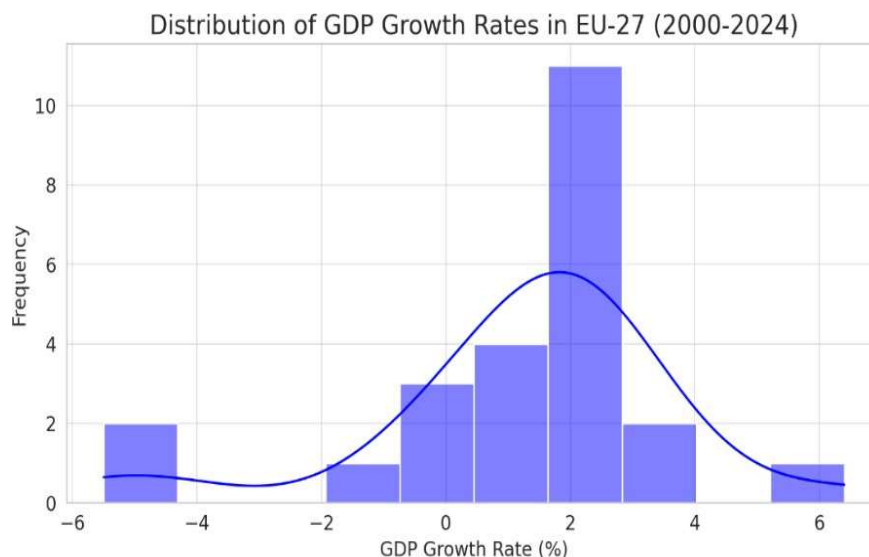


Fig. 3. Distribution of GDP Growth Rates in EU-27 (2000–2024) (Source: Author’s visualization based on Eurostat data)

The GDP growth rate trend over the 2000–2024 period highlights several key economic events. From 2000 to 2019, the EU experienced stable growth ranging between 0.5% and 2.2%. A significant decline occurred in 2020, with GDP contracting by -5.5% due to the COVID-19 pandemic. This was followed by a robust recovery in 2021, with a peak growth rate of 6.4%. In 2022, the economy stabilized with 2.8% growth, but by 2023, a slight contraction of -0.1% suggested a return to stagnation. These fluctuations, as visualized in Figure 3, emphasize the importance of entry timing and adaptability for firms considering market expansion into the EU.

Table 2. Major Economic Events Reflected in EU-27 GDP Growth (2000–2023) (Source: Author’s summary based on Eurostat data)

Year	GDP Growth Rate (%)	Key Economic Events
2000-2019	0.5% to 2.2%	Stable economic growth with minor fluctuations.
2020	-5.50%	COVID-19 recession, major economic downturn.
2021	6.40%	Strong recovery post-pandemic.
2022	2.80%	Return to economic stabilization.
2023	-0.10%	Stagnation, indicating economic slowdown.

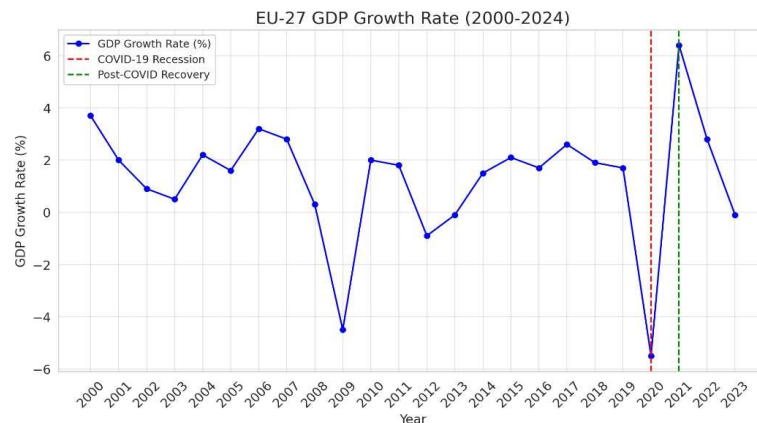


Fig. 4. EU-27 GDP Growth Rate Trend (2000–2024) (Source: Author’s visualization based on Eurostat data)

Taken together, the findings point to a dynamic and internationally oriented IT sector in Uzbekistan, well-positioned to engage with the European digital economy. The convergence of internal growth, service diversification, and external economic conditions (see Table 2 and Figure 4) creates a strong foundation for market entry. However, long-term success will require firms to align their offerings with EU regulatory standards and consumer expectations while leveraging strategic partnerships and technological capabilities.

Conclusions

This study explored the potential and strategic pathways for Uzbekistan’s IT companies to enter the European Union market. The research confirms that while the EU offers substantial growth opportunities, success depends on aligning Uzbekistan’s IT capabilities with European regulatory standards, market expectations, and technological demands.

The results indicate a rapidly growing and diversifying IT sector in Uzbekistan. Export volumes have increased significantly, and the sector has evolved from a BPO-dominated model to a more advanced service structure, led by software development. Market diversification and rising export capacity reflect improved competitiveness and readiness for global engagement.

Statistical analysis of the EU’s economic environment reinforces its attractiveness as a target market. Despite occasional fluctuations, the EU demonstrates long-term stability and resilience, offering a relatively secure environment for strategic investment. However, entering such a competitive market requires careful timing, risk management, and strategic planning.

The literature underscores the importance of gradual internationalization, strategic partnerships, and leveraging firm-specific advantages. Models such as the Uppsala Model and Eclectic Paradigm highlight that entry strategies must account for both institutional differences and internal capabilities.

In conclusion, Uzbekistan’s IT firms have strong potential to succeed in the EU, provided they adopt flexible, knowledge-based strategies. Emphasizing innovation, regulatory compliance, and local partnerships will be key to building a sustainable presence in the European digital economy.

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Senthilkumar Rajagopal. THE IMPACT OF ARTIFICIAL INTELLIGENCE AND BLOCKCHAIN ON THE TRANSFORMATION OF THE LOGISTICS INDUSTRY IN INDIA

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Abstract

India's retail market is one of the world's fastest-growing retail markets, estimated to be over USD 800 billion and likely to exceed USD 1.5 trillion by 2030 (IBEF, 2023). This rapid growth is mainly driven by GDP growth, demographic changes, urbanization, and penetration of digitalization. Historically unorganised (characterised by local 'kirana' stores), the sector is also undergoing a structural transformation, with growth in organised retail, modern supermarkets and e-commerce channels (Deloitte, 2022).

Research relevance: The research is unique in its concentration of understanding with evolving customer behaviors translating into strategic response in the Indian retail environment, a disruption in market structure currently analyzed in the boundaries of e-commerce growth or digital innovation. Unfortunately, the extant literatures have explored preference and online retail expansion in isolation, with relatively scant attention to comprehensively capturing the concomitant behavioral ripple effect in organized and unorganized retail formats in India.

Research goal: Analyze the impact of Artificial Intelligence (AI) and blockchain on the logistics industry in India and identify the challenges and opportunities in adopting these technologies.

Research methods: The research employed surveys, document analysis, and interviews for data collection. Data was processed using descriptive statistics, including mean and standard deviation, along with transcription of qualitative inputs. Graphic and correlation analyses were used to visually and statistically interpret patterns, providing a comprehensive understanding of AI and Blockchain's impact on logistics.

Main findings: The global Blockchain AI market, valued at \$349 million in 2023, is projected to reach \$2,787 million by 2033, growing at a 23.1% CAGR, reflecting rising trust in these technologies. Similarly, the U.S. Blockchain IoT market is expected to surge from \$230.83 million in 2024 to \$22,840.23 million by 2034, at a remarkable 58.32% CAGR. These trends underscore the transformative potential of AI and Blockchain in enhancing supply chain efficiency, transparency, and automation. For India's rapidly growing logistics sector, adopting these technologies is crucial to maintaining competitiveness, reducing inefficiencies, and supporting the nation's economic and infrastructural goals amid increasing global digitalization.

Keywords: Logistics industry, Artificial Intelligence, Blockchain, Automation;

Introduction

The explosion of India's logistics market today and the adoption of artificial intelligence (AI) and blockchain across the world, we are in a fortunate position today, to leverage these paradigm shifts to correct inefficiencies, lack of transparency, and overall costs. Market.us (2024), the worldwide blockchain AI market size was USD 349 million and it is anticipated to reach USD 2,787 million by

2033, with a CAGR of 23.1% during 2021-2033. Also, the U.S. market for the blockchain IoT was estimated to bid at USD 230.83 million in 2024 and is anticipated to make approximately USD 22,840.23 million by 2034, growing at a CAGR of 58.32 percent between 2025 to 2034.

The aim is to analyse the impact of Artificial Intelligence (AI) and blockchain on the logistics industry in India and identify the challenges and opportunities in adopting these technologies.

Main tasks of the study

- 1) To conduct a review of existing research on AI, blockchain, and their applications in logistics, focusing on India. To highlight gaps in knowledge and establish a theoretical foundation for the study.
- 2) To gather primary data through surveys and interviews with logistics companies, technology providers, and industry experts in India.
- 3) To collect secondary data from industry reports, case studies, and government publications.
- 4) To analyse how AI and blockchain are currently being used in India's logistics sector.
- 5) To evaluate impact on efficiency, transparency, cost reduction, and security. To identify key challenges such as infrastructure limitations, high costs, and skill gaps.
- 6) To explore opportunities like scalability, innovation, and improved supply chain management. To develop actionable recommendations for logistics companies, policymakers, and technology providers.

Object of the research is Indian logistics industry.

Subject of the research is AI & Block chain impact on Indian logistics.

Research Question of the research is, what is the factors impacting consumer behavior change, specifically the increasing inclination towards online shopping on India's retail sector?

The limitations of the study are as follows

- Limited access to reliable and comprehensive data.
- Small sample sizes in surveys around 400 and limited to Indian logistic companies.
- Research time is 6 months.
- Fast-evolving nature of AI and blockchain technologies may make findings quickly outdated.

Literature Review

There is a dynamic shift in the Indian retail markets: on one hand the traditional formats continue to persist, while at the other end of the spectrum, the shift and the acceptance of international formats and technologies has become more significant than ever before. The industry is worth about \$836 billion in 2023, and is expected to grow by leaps and bounds, to between \$1.5 and \$1.8 billion by 2030. Yet even at those breakneck speeds, the industry is still highly unorganized, with more than 80% of sales channeled through traditional neighborhood shops, or kiranas. These mom-and-pop stores have competitive advantages like a strong customer base, hyperlocal reach, personalized offerings, credit-based sales and less overhead, which make them able to sell items at 10%–15% lower rates compared with organized players. Retail also is a very important in macroeconomic term representing around 10% of India's GDP and nearly employing 8% of the workforce indicating its socio-economic impact.

Rising costs, lower yields the sector is undergoing structural changes driven by a combination of factors. Organised retail is growing at a healthy pace due to FDI reforms, mall and logistics infrastructure development and initiatives like “Make in India”. The digitalisation of these industries has been a key driver, particularly e-commerce, which is growing at CAGR of about 25%. This is driven by rising smartphone penetration, strong digital payment ecosystem driven by UPI, growing internet penetration and improving last-mile delivery. Key players influencing the competitive landscape include local heavyweights like Reliance Retail, Tata Digital and D-Mart as well as global and local e-commerce leaders such as Flipkart, which dominates 48% of the market, and Amazon, with 25% of the market.

India’s retail sector is also being fuelled by favourable demographic and economic factors. With a median age of 28.4, the country is young, and a rising middle class is driving consumption. Urbanisation and increasing per capita income (around \$2,600 in 2023) are further boosting consumer spending power. Government measures (simplification under GST regime and 100% FDI in B2B e-commerce) have led to infusion of investments, over USD 16 bn FDI in retail since 2020.

But there are a few obstacles that still dog the industry. Infrastructure bottlenecks persist — only 4% of perishable goods are transported in cold chain networks, while of total logistics costs account for about 14% of GDP, well above global norms. Regulatory complexity is also a barrier, with differences among states and elaborate GST architectures compounding compliance costs. Indeed, the informal sector, being cost-effective and localized, still presents stern competition to organized retail and e-commerce platforms (Fadus et al. 2019).

Trends are shaping the Indian retail of tomorrow. Omnichannel retailing — combining both digital and physical formats — is gaining ground, as JioMart integrates kirana stores and technologies such as augmented reality are used for a more immersive shop. Direct-to-consumer (D2C) brands are on a tear, projected to become a \$60 billion market by 2027 and already yielding standouts such as Mamaearth and Boat. Rural ecommerce, too, is exploding at a 35% CAGR enabled by innovations like Whatsapp commerce and drone-based deliveries (Cummins et al. 2014).

Consumer behaviour in this novel world can be further explained using different theories. Theory of Planned Behaviour (Ajzen), where importance of family, perceived behavioural control and social norm are crucial especially for the adoption of digital payment. Consumer Culture Theory by Arnould & Thompson, focuses on the importance of ritual, glocalization (e.g. McAlloo Tikki) and seasonal consumer behaviour related to Diwali purchases. The Diffusion of Innovations (Rogers) addresses the gap that exists between urban early adopters and rural people, who are limited by a literacy and an infrastructure gap. Social Identity Theory (Tajfel & Turner) predicts that consumption choices, i.e., of sustainable or luxury products, may signal identity and social aspirations. Prospect Theory (Kahneman & Tversky) is not explicitly referred to, but is useful for understanding consumer hesitations on e-commerce return, payment's security which are influenced by the loss aversion and bounded rationality (Kumar, 2021).

Barriers to the overall growth of e-commerce, and trust deficiencies, such as lack of credibility, payment security, and returns process, are more prevalent in some regions such as eastern India, while its southern counterpart consumers are more open to online retail. Developments of human-assisted commerce models are helping make the digital retail experience more user-friendly, especially for tech-resistant users. To sum it up, India’s retailing is at a challenging crossroads with in-grained tradition conflicting with hi-tech and policy support. To crack inclusive, sustainable growth, deep rooted inefficiencies and regulatory barriers need to be uprooted even as innovation continues to reimagine one of the largest and most complex retail systems in the world (Angeli et al. 2015).

Methodology

This study adopts a mixed-methods research design to assess how AI and Blockchain are transforming India's logistics industry, integrating both quantitative and qualitative approaches. Quantitatively, structured surveys and performance data (e.g., delivery speed, cost savings) will be analysed using statistical tools. Qualitatively, semi-structured interviews with stakeholders and case studies of early adopters will explore contextual insights. Using a sequential explanatory strategy, quantitative results will be followed by qualitative interpretation. A purposive sample of logistics firms across sectors ensures relevance, while ethical protocols like informed consent and data confidentiality will be upheld throughout the study.

This study adopts a pragmatic research philosophy, blending positivist and interpretivist approaches to explore the real-world impact of AI and Blockchain on India's logistics sector. Pragmatism supports mixed methods, enabling both quantitative analysis and qualitative insight, making it ideal for understanding complex, tech-driven transformation in a dynamic, developing economy.



Fig. 1. Methodology of Article (Source: Created by Author)

Results

Online surveys are critical in terms of discovering the effects that AI and Blockchain is having on India's logistics sector, and providing a quick, scaled method of obtaining qualitative and quantitative inputs from key stakeholders like logistics companies, tech companies, and government bodies. They describe trends of use, both advantages and disadvantages, of solutions such as predictive maintenance, or smart contracts, and give interesting tips in terms of cost efficiency, transparency, or scalability. Survey responses enable us to see trends, test hypotheses, and call out India specific bottlenecks like regulatory complexity and infrastructure gaps. In the age of big data, there is no denying that if they are well-designed, online surveys offer a balanced reflection of a broad range of industry, are therefore important for evidence-based, technology-driven research.

The following figure 2 shows the responses of factors related to Shopping experience of FMCG products

1. Your role in the organization.

402 responses

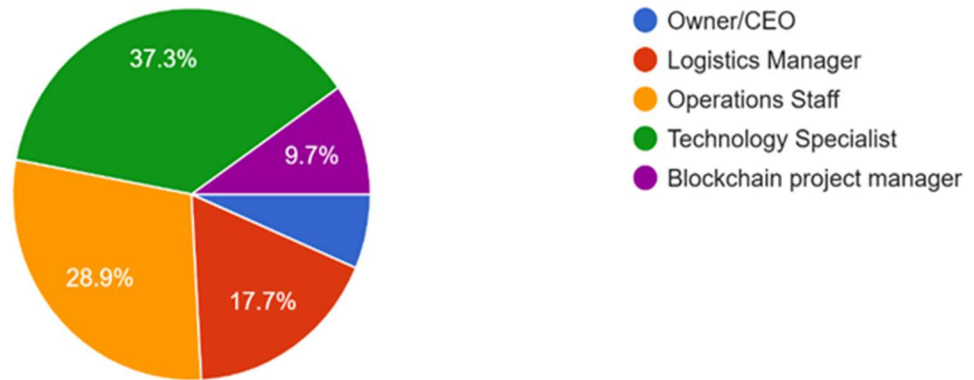


Fig. 2. Responses for consumer Shopping experience of FMCG products (Source: Created by Author)

Below is the wording of the online survey question: “In which current capacity do you work for the organization? provides insights which are helpful in shaping the academic perspective of studying Artificial Intelligence (AI) and Blockchain in the logistics of India. Responses can constitute a broad-category of respondents; techies with 37.3% Fuelled by deep tech adoption in AI and Blockchain enablement, it is key to examine India’s fragmented logistics sector for scalability and interoperability challenges. Operation members (28.9%) include grassroots oriented to operation impacts like AI driven routing optimization, or Blockchain enabled parcel tracking etc., to solve pain point such as the inefficiency of the last-mile delivery. Logistics Manager: Both bring a management angle to the cost-effective strategy, but I suspect that Blockchain Project Manager (9.7%) is more into special applications like supply chain transparency (forestry and ports are big in India). Afl; Owners/ CED (6.5 percent) This is the minority of landowners, however it brings a strategic dimension to investment and policy requirements. This assignment of roles will ensure in-depth understanding from the technical, operational and managerial point of view, though due to reduced inputs from the CEO, further information from secondary sources is also taken in to account. “Given the technology and operations slant to the results, these also are in sync with India’s audacious move toward digitizing the logistics industry and slaying age-old demons like expensive logistics and regulatory maze making the survey a strong foundation for evidence based research.

The following figure 3 shows the responses of factors related to Product preferences of FMCG products

2. Your Experience in logistics Industry.

402 responses

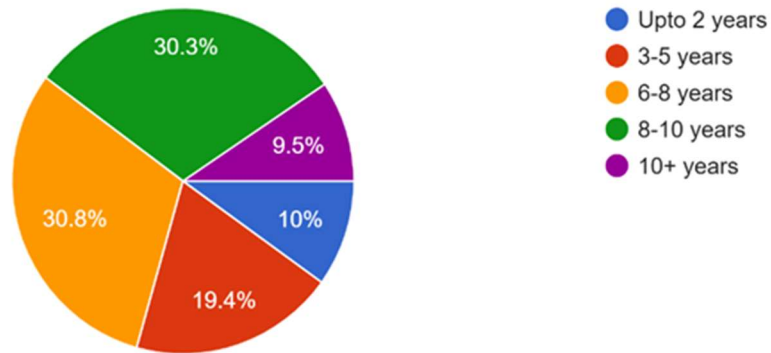


Fig. 3. Responses for consumer Product preferences of FMCG products (Source: Created by Author)

The online survey question “Character of your involvement in logistics” addresses this background, illuminating the domain expertise of the contributors. The population should comprise talent with medium- to high-level of expertise in the field so that a more realistic evaluation of the AI and Blockchain could be conducted on the logistics of India: with a sample of 43.3% between 6–10 years of experience and 9.5% who have been working more than 10 years. Younger professionals (10% with <2 years, 19.4% with 3–5 years) also bring fresh ideas and tech knowledge to an organization. This mix provides a level perspective at the strategic, operational and technical level. With low proportions of heavily seasoned experts, the broad base of experience provides a reasonable foundation for evaluating the technology-induced transformation.

The following figure 4 shows the responses of factors related to Influence of Covid-19 of FMCG products

3. AI-powered route optimization has significantly improved delivery speed in my organization.

402 responses

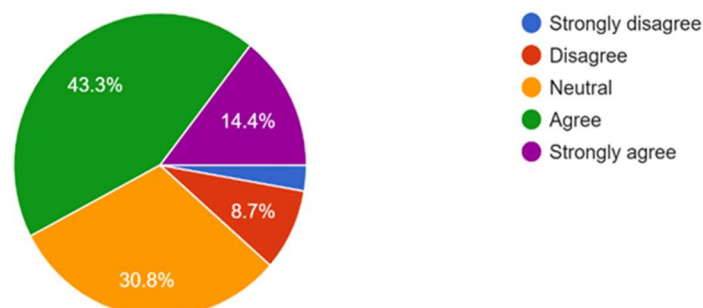


Fig. 4. Responses for consumer Influence of Covid-19 of FMCG products (Source: Created by Author)

The survey question, “AI-powered route optimization has improved delivery speed in my organization,” reveals a generally positive perception of AI in logistics. 57.7% agree, with 43.3%

agreeing and 14.4% strongly agreeing, indicating that AI contributes to faster delivery, as seen in companies like Delhivery. However, 30.8% remain neutral, suggesting barriers like infrastructure and high costs hinder AI adoption for some. The 11.4% disagreement highlights issues like poor data quality or resistance to technology. The diverse responses underscore AI’s potential to address logistics challenges while also pointing to obstacles such as regulatory complexity, which warrants further exploration..

The following figure 5 shows the responses of factors related to future Shopping intentions of FMCG products

4. AI-driven demand forecasting has reduced inventory stockouts in our supply chain.

402 responses

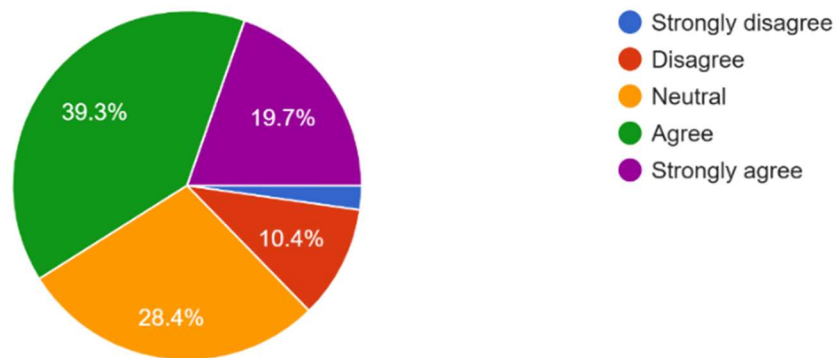


Fig. 5. Responses for consumer future Shopping intentions (Source: Created by Author)

AI-powered demand forecasting has considerably reduced out-of-stock events in our supply, is the survey items reflecting the good perception towards efficiency of AI in inventory management. When asked if AI has an important role to play with regards to stockouts, 59% agreed – 39.3% of people agreeing and 19.7% strongly so. This implies that AI tools, such as the one used by Delhivery, can help India address its high logistics costs and supply chain disintegration. But 28.4% stay neutral, perhaps because of obstacles to adopting AI, and 12.6% disagree, citing problems such as data quality and resistance. These results further demonstrate the potential for AI and urge future investigation into the barriers for broader implementation of AI.

5. AI chatbots have enhanced customer service efficiency in logistics operations.

402 responses

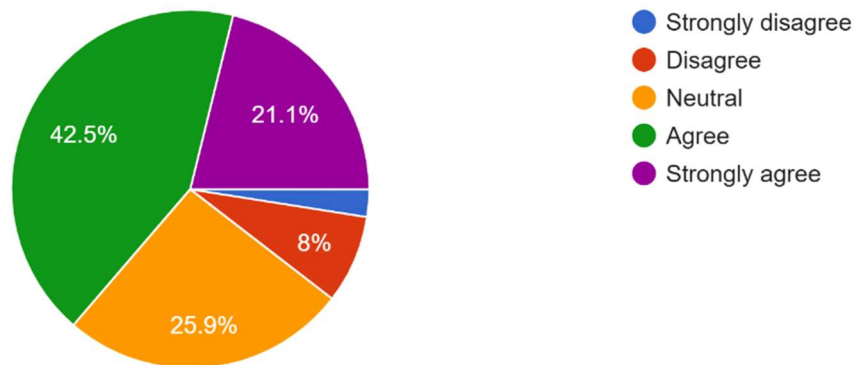


Fig. 6. Responses for consumer service efficiency (Source: Created by Author)

This question, AI chatbots have made customer service much better in logistics, strongly supports AI customer service tools. Some 63.6% respondents agreed or strongly agreed that AI chatbots improve customer service, which is critical in the fast-paced logistics industry of India dominated by e-commerce. Still, 25.9% are neutral, which can be a reflection of mixed chatbot uptake as well as integration troubles. Around 10.5% disagree, claiming there are likely high implementation costs or the possibility for lack in customization. While the results highlight the potential of AI chatbots, the study also shows there is a need for more research to combat adoption barriers, such as infrastructure and cultural resistance.

Conclusions

The answers to the question on the position of the respondents in the logistics area are a mix of technical, operational and management competencies. About a third of the respondents (37.3%) were tech focused and 28.9 % operational, so the survey provides a broad-based view of how AI and Blockchain hold the promise to be transformational for India’s Logistics landscape and provides good pointers for further research.

With a strong proportion having 6–10 years of experience (43.3%) and a healthy mix of more youthful professionals, the sample is solid. This team of experienced individuals mixed with forward thinking newcomers contributes to the study’s success in assessing AI and Blockchain initiatives from a strategy, operations as well as technical perspective.

The fact that over half of the industry has a favourable view of AI-enabled route optimization (57.7% agreeing) demonstrates the amazing promise of AI in logistics. Nevertheless, the even ‘neutral’ and ‘negative’ reactions to the question demonstrate that while barriers including infrastructure constraints and high expenses are some of the challenges in the way of wider AI adoption, there is still more ground to be covered in terms of understanding the reasons for these concerns to enable unleashing AI’s potential in India.

AI-enabled demand forecasting is viewed favourably too, with 59% of respondents saying that it decreases stockouts, demonstrating the impact of AI on operational efficacy within the supply chain. Yet, neutral (‘I am unsure’) and negative responses also foretell adoption challenges such as data quality and resistance, indicating that addressing these barriers is critical to the future success of AI in India’s logistics space.



AI chatbots are perceived as useful to advance customer service in logistics: 63.6% agreed or strongly agreed. But the 25.9% neutral and 10.5% negative show that there are some, like integration problems and specific customisation requirements. These results indicate the necessity to explore adoption barriers and to improve the efficiency of AI chatbots in the field of Indian logistics.

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APRITES EKONOMIKA UN SOCIĀLĀ UZŅĒMĒJDARBĪBA



Diluma Jayashani, Jayaweera Hewage. THE IMPACT OF SUSTAINABILITY TRANSFORMATION ON AGRICULTURAL PRODUCTIVITY IN ANURADHAPURA & POLONNARUWA DISTRICTS, SRI LANKA

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Abstract

Research relevance: Sustainable agriculture has become increasingly critical in the face of climate change, resource scarcity, and environmental degradation, particularly in developing nations like Sri Lanka. The agriculture sector, being a major contributor to both employment and national GDP, must transition toward more sustainable and resilient practices to ensure long-term food security. In regions such as Anuradhapura and Polonnaruwa, where farming is central to livelihoods, understanding the impact of sustainability transformations on agricultural productivity is vital for informed policy development and effective implementation of climate-resilient farming models.

Research goal: The primary objective of this study was to examine the impact of sustainable farming practices, climate-smart techniques, and circular economy practices on agricultural productivity among farmers in Sri Lanka’s Anuradhapura and Polonnaruwa districts during the period 2018–2023.

Research methods: This research employed a quantitative approach. Primary data were collected via structured questionnaires distributed to 300 farmers. Secondary data sources included government and agricultural sustainability reports and transformation case studies. Data analysis involved descriptive statistics, correlation tests, and regression analysis to determine the relationships between sustainability practices and productivity outcomes.

Main findings: The results indicated positive correlations between sustainable agricultural practices and productivity. Regression analysis confirmed that circular economy practices had the most substantial influence on productivity, followed by climate-smart and sustainable farming techniques. These findings provide both theoretical contributions and practical implications for policymakers and agricultural development agencies.

Keywords: sustainable agriculture; climate-smart techniques; circular economy; agricultural productivity; Sri Lanka

Introduction

Sustainability transformation in agriculture has become a global priority as nations seek to balance food security with environmental conservation. Agricultural systems must adapt to increasing pressures from climate change, resource depletion, and economic volatility, which threaten long-term agricultural productivity. In Sri Lanka, agriculture remains a vital sector, employing a significant portion of the population and contributing to national food security. However, the sector faces critical challenges, including soil degradation, inefficient water management, and climate-related uncertainties (Kurukulasuriya and Mendelsohn, 2007). According to Kurukulasuriya and Mendelsohn (2007), developing countries are particularly vulnerable to climate variability due to their dependence on traditional farming methods and lack of adaptive infrastructure. Sri Lanka’s agricultural sector is increasingly strained by extreme weather events, declining soil fertility, and unsustainable farming practices.

The primary aim of this research is to develop guidelines for enhancing agricultural productivity in Anuradhapura and Polonnaruwa districts through effective sustainability transformation practices.

To achieve this aim, the study will undertake the following tasks:

1. To examine existing research on the subject of transformation on agricultural productivity in Anuradhapura and Polonnaruwa districts in Sri Lanka.
2. To identifying major factors that effects on the transformation of eco-friendly practices, resource management policies and interventions, in increasing yield, soil fertility, and farmer's resilience.
3. To develop questionnaire and conduct survey to analyze the factors affecting on implementing the sustainable farming methods among farmers.
4. To conduct surveys with 300 farmers (150 per district).

Literature Review

This study reviews pertinent literature to provide an overview of the existing body of research relevant to the research question of how agricultural productivity is utilised by sustainable transformation to find the fit point where productivity does not decrease while sustainability does not suffer. The review provides that insights based on a broad set of global and regional empirical studies when considering practices such as CSA, organics, and circular economy models to see how those influence yields, cost effectiveness and resilience. Global meta-analyses show that sustainable practices manage to conserve or even enhance productivity, especially under stressful climates. Locally, findings from South Asia and Sri Lanka are also similar trend albeit adoption is often hindered by financial & institutional barriers. This review also addresses the relationship between sustainability policies and local socio – economic contexts. Both top-down policy mechanisms and bottom-up behavioural change have to guarantee the sustainability transitions. Stakeholder engagement and situational appropriateness are essential in particular to convert sustainability frameworks into action. This literature review not only provides a summary of the current state of knowledge but also highlights clear gaps particularly in the Sri Lankan dry zone—and consequently, there is a justification for this thesis.

Methodology

Research for this study was a quantitative study which supported by both primary and secondary data to find out the effect of sustainability transformation on agricultural productivity in the Anuradhapura and Polonnaruwa of Sri Lanka districts. Primary data were collected by using structured questionnaire administered to 300 farmers, who were purposefully selected on the basis of their active involvement in farming during the research duration from 2018 to 2023. The survey delved into the adoption of sustainable agricultural practices including organic fertilisation of CSA and circular economy's techniques. The Secondary data was fetched from government documents, agricultural department reports and documented case studies on sustainability change in agriculture sector. The research confined to the agriculture industry and omitted those rural livelihoods non-agricultural sectors in order to keep the research focus and consistency.

A statistical analysis was conducted using a combination of they descriptive and inferential statistical methods for data analysis. Demographic and farm-level characteristics of respondents were described by descriptive statistics. Visual data analysis allowed for inspecting of essential trends and

fluctuations over sustainability practices and productivity outcomes. To verify the connection between sustainability transformation and agricultural production, a regression analysis and correlation test were performed. These statistical tools allowed the measurement of the impact of independent factors like sustainable inputs, agro practices and access to resources on dependent factors like yield, revenue, cost efficiency, etc. All statistical computations were done by applying appropriate software, so that standard econometric formulae were used to guarantee the dependability and reliability of the findings.

Results

Demographic data are provided to describe the research sample.

Table 1. Gender

Gender		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	16	5.3	5.3	5.3
	Male	284	94.7	94.7	100.0
	Total	300	100.0	100.0	

The sample is predominantly male, with 284 respondents (94.7%) identifying as male and only 16 (5.3%) identifying as female. This indicates a significant gender imbalance among the participants, which may reflect the male-dominated nature of the farming community in the surveyed districts.

Table 2. Age

Age Group		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	31-40	99	33.0	33.0	33.0
	41-50	65	21.7	21.7	54.7
	51-60	74	24.7	24.7	79.3
	Above 60	5	1.7	1.7	81.0
	Under 30	57	19.0	19.0	100.0
	Total	300	100.0	100.0	

Participants range across various age groups, with the majority aged between 31–40 years (33.0%). This is followed by those aged 51–60 (24.7%), and 41–50 (21.7%). Younger individuals under 30 make up 19.0%, while only 1.7% are above 60. This suggests that the farming population is mostly middle-aged, with limited representation from the elderly.

Table 3. District

District		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Anuradhapura	150	50.0	50.0	50.0
	Polonnaruwa	150	50.0	50.0	100.0
	Total	300	100.0	100.0	

The study sample is evenly split between the districts of Anuradhapura and Polonnaruwa, with 150 respondents from each district, accounting for 50.0% respectively. This equal distribution ensures balanced geographic representation in the analysis.

Table 4. Education Level

Education Level		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A/L	86	28.7	28.7	28.7
	Bachelor	13	4.3	4.3	33.0
	Master	1	.3	.3	33.3
	O/L	200	66.7	66.7	100.0
	Total	300	100.0	100.0	

Most respondents have completed education up to the Ordinary Level (O/L), comprising 66.7% of the sample. Advanced Level (A/L) qualifications account for 28.7%, while only a small number hold Bachelor’s (4.3%) or Master’s degrees (0.3%). This highlights a generally low level of formal education among the farming population.

Table 5. Farming Experience

Farming Experience		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	11-20	71	23.7	23.7	23.7
	5-10	161	53.7	53.7	77.3
	Less than 5	58	19.3	19.3	96.7
	More than 20	10	3.3	3.3	100.0
	Total	300	100.0	100.0	

The majority of respondents (53.7%) have 5–10 years of farming experience, followed by 11–20 years (23.7%). Around 19.3% have less than 5 years of experience, and only 3.3% have been farming for more than 20 years. These figures suggest that most participants are moderately experienced in agriculture.

Table 6. Farm Size

Farm Size		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<1 Acre	26	8.7	8.7	8.7
	>6 Acres	33	11.0	11.0	19.7
	1–3 Acres	114	38.0	38.0	57.7
	4–6 Acres	127	42.3	42.3	100.0
	Total	300	100.0	100.0	

Most farmers operate on medium-sized farms, with 42.3% managing 4–6 acres and 38.0% farming 1–3 acres. A smaller portion (11.0%) have large farms exceeding 6 acres, while only 8.7% work on plots smaller than 1 acre. This indicates that small- to medium-scale farming is the dominant practice among respondents.

Table 7. Descriptive

Descriptive Statistics	N	Min	Max	Mean	Std. Deviation
Sustainable Farming Practices	300	3.14	5.00	4.31	0.33
Climate-Smart Techniques	300	2.92	5.00	4.29	0.36
Circular Economy Practices	300	3.14	5.00	4.28	0.35
Agricultural Productivity	300	3.17	5.00	4.31	0.31
Valid N (listwise)	300				

Descriptive statistics indicated that all sustainable practices have been scored high by surveyed farmers. The mean results for Sustainable Farming Practices, Climate Smart Practices and Circular

Economy Practices were 4.32, 4.30 and 4.28 respectively showing the high adoption rate of these practices among farmers. Agricultural Productivity also exhibited high mean value of 4.32 with low SD (0.32) indicating relative constant productivity levels among the sampled farmers of 300.

Table 8. Correlation

		Sustainable Farming Practices	Climate-Smart Techniques	Circular Economy Practices	Agricultural Productivity
Sustainable Farming Practices	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	300			
Climate-Smart Techniques	Pearson Correlation	.006	1		
	Sig. (2-tailed)	.000			
	N	300	300		
Circular Economy Practices	Pearson Correlation	.097	.123*	1	
	Sig. (2-tailed)	.000	.000		
	N	300	300	300	
Agricultural Productivity	Pearson Correlation	.024	.030	.067	1
	Sig. (2-tailed)	.000	.000	.000	
	N	300	300	300	300

*. Correlation is significant at the 0.05 level (2-tailed).

Weak but statistically significant positive correlations between the independent variables and agricultural production in applied regression analysis were obtained. Most notably, Circular economy practices had the largest relationship ($r = 0.067$) with productivity, just before Climate smart techniques ($r = 0.03$), and Sustainable agriculture practices ($r = 0.024$). Despite the fact that the correlation coefficients were very low, all the associations were statistically significant at the 0.05 level, signifying the usefulness of sustainability measures to improve productivity.

Regression Analysis

Table 9. ANOVA

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.159	3	.053	.525	.000 ^b
	Residual	29.923	296	.101		
	Total	30.082	299			

a. Dependent Variable: Agricultural Productivity
b. Predictors: (Constant), Circular Economy Practices, Sustainable Farming Practices, Climate-Smart Techniques

Table 10. Coefficient

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.921	.366		10.720	.000
	Sustainable Farming Practices	.016	.055	.017	.297	.002
	Climate-Smart Techniques	.019	.051	.022	.371	.002
	Circular Economy Practices	.057	.053	.063	1.073	.003
a. Dependent Variable: Agricultural Productivity						

The model was significant at a p value < 0.05 with a Squared indicating modest predictability. No case, all the three predictors, Sustainable Farming Practices ($B = 0.016$), Climate-Smart Practices ($B = 0.019$), Circular Economy Practices ($B = 0.057$) had a positive relationship with productivity. Among these, Circular Economy Practices had the greatest influence, implying that reducing energy resources and minimizing waste would be the key to achieving more sustainable outcomes in agriculture.

Conclusions

The results of this study offers invaluable insights related to relationship between sustainable agricultural practices and productivity within Sri Lankan agricultural sector, more specifically Anuradhapura and Polonnaruwa districts. The outcome of the hypothesis testing presented that Sustainable Farming Practices, Climate-Smart Methods, and Circular Economy Practices all possess statistically significant ‘positional linkages’ with Agricultural Productivity. Even though the correlations were quite low, the regression analysis verified that these practices indeed have a positive effect on productivity, and the practice having the highest predictive strength is Circular Economy Practices.

From a practical perspective, the study holds utility for the policymakers, for agricultural extension services and for farmer cooperatives interested in improving food security and environmental resilience via sustainable practices. The study stresses the necessity of linking circular and climate-sound steps in agriculture to the increase in yields sustainably. Theoretically, it contributes to the building of a very limited available literature on sustainable agriculture, by quantitatively estimating the effect of environmental practices on farm output in a developing country.

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Ashaka Ruchiran Jayathunga, Balapitiya Liyanage. THE INFLUENCE OF IMPLEMENTING SOCIAL ENTREPRENEURIAL SUSTAINABILITY STRATEGIES ON TOURISM DEVELOPMENT IN SRI LANKA

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Abstract

Research relevance: Sri Lanka's tourism sector contributes to its national economy. However, its long-term sustainability faces challenges due to short-sighted development approaches. This research addresses integrating social entrepreneurial sustainability strategies such as eco-tourism practices, Community-based tourism initiatives, CSR, and sustainable supply chains into tourism development, a topic underexplored in the Sri Lankan context.

Research goal: The research goal is to assess the influence of social entrepreneurial sustainability strategies on the development of sustainable tourism in Sri Lanka.

Research methods: The quantitative research approach was used using a structured questionnaire to 186 stakeholders from five selected hotels in Sri Lanka. SPSS statistical tool was applied including ANOVA, regression analysis, correlation analysis, and demographic information analyses.

Main findings: The study found that sustainable supply chain management has the strongest positive influence on tourism sustainability strategies. Eco-tourism practices and community-based tourism also showed positive correlations. CSR initiatives had a statistically weaker impact. Results affirm that social entrepreneurial approaches support economic growth, community empowerment, and environmental conservation.

Keywords: Social Entrepreneurship; Sustainability Strategies; Sustainable Tourism Development; Sri Lankan Tourism Industry; Environmental Conservation

Introduction

Tourism is a crucial sector for Sri Lanka, contributing significantly to the national economy. The tourism industry accounts for a substantial portion of the country's GDP, with continued growth observed in recent years (SLTDA, 2024).

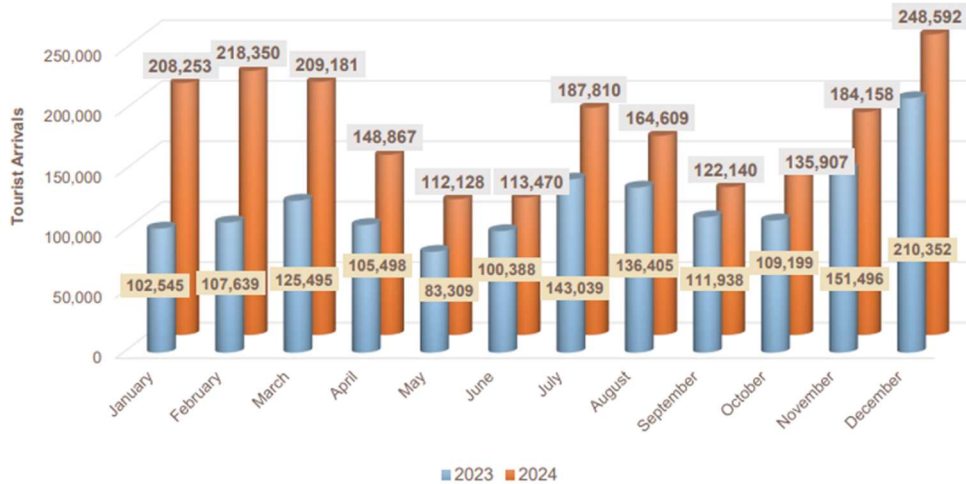


Fig. 1. Tourist Arrivals of Sri Lanka in 2023 and 2024 (Source: SLTDA, 2024)

In 2018, tourism earnings peaked at \$4.4 billion, representing 5.6% of the country's GDP (Kataria, 2022). However, the COVID-19 pandemic caused a sharp decline in tourism revenue. To revitalize the tourism industry, the Sri Lankan government has implemented various initiatives. In the first half of 2024, tourism revenue reached over \$1.5 billion, a 78% increase year-on-year, with tourist arrivals hitting 1.01 million, up 62% from the same period in 2023. Additionally, a pilot program offering free 30-day tourist visas to visitors from 35 countries, including China, India, and Russia, was launched in October 2024 to further boost tourism. The following Table shows the revenue increase of the Sri Lankan tourism industry after the pandemic.

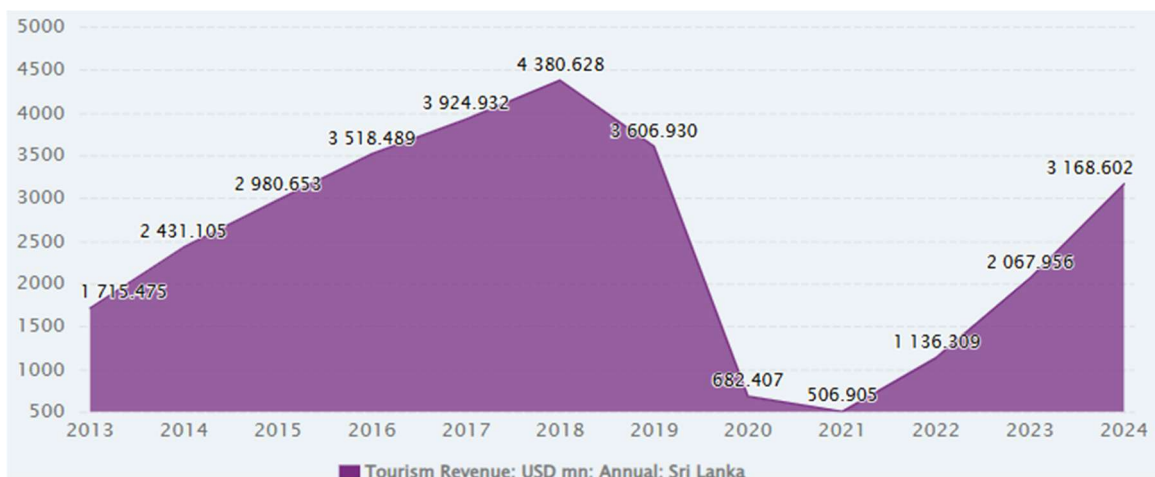


Fig. 2. Sri Lanka's Tourism Revenue from 1966 to 2024 (Source: CEIC, 2025)

However, despite the economic importance of the tourism sector, the integration of social entrepreneurial sustainability strategies into tourism development in Sri Lanka remains underexplored. Current research often overlooks long-term social and environmental impacts in favour of short-term economic gains, neglecting the potential of sustainable tourism practices that can support both economic development and environmental conservation (Solidaridad, 2024). Social entrepreneurship, which prioritizes social and environmental outcomes alongside profit, presents an opportunity for creating sustainable solutions. Yet, the application of social entrepreneurial strategies

in Sri Lanka's tourism sector is limited. By examining these strategies' influence, the research will provide valuable insights for policymakers, entrepreneurs and stakeholders in the tourism industry, contributing to the formulation of more effective strategies for sustainable tourism development.

The study aims to assess the influence of implementing social entrepreneurial sustainability strategies on the development of sustainable tourism in the Sri Lankan context. The hypotheses of the study are as follows,

H₁: Social entrepreneurial sustainability strategies have a positive influence on the economic growth of Sri Lanka's tourism sector.

H₂: The implementation of eco-tourism and community-based tourism strategies significantly contributes to environmental conservation within Sri Lanka's tourism development.

H₃: Social entrepreneurial sustainability strategies promote community empowerment and enhance local community engagement in tourism development in Sri Lanka.

Literature Review

The term social entrepreneurship has grown as a strong concept to bridge economic social and environmental objectives. According to Dees (1998), social entrepreneurship involves the identification of a social problem and the application of entrepreneurial principles to find new solutions. The idea stresses the necessity of maintaining a correct balance between financial viability and good social change (Dees, 1998). Social entrepreneurship is defined by the ability of an organization to meet the needs of the present without compromising on the ability of future generations to meet their needs (Brundtland, 1987). This approach is borrowed from the idea of creating shared value, where businesses make profits while creating shared value in society.

There have been several suggested strategies for bringing social entrepreneurial sustainability. Eco-tourism is one of the most intriguing strategies, focusing on operating tourist affairs to protect the environment (Honey, 2008). It consists of lodging tourists in the natural environment and using their visits to help the local communities. Another strategy is community-based tourism (CBT) which involves the local community's involvement in tourism development to provide their share of the economic benefits from tourism (Goodwin & Santilli, 2009). Furthermore, the practice of tourism has included corporate social responsibility (CSR) whereby businesses have had to reinvest in social and environmental well-being (Lund-Durlacher, 2015).

Sustainable practices are favourable within the global tourism industry due to the recognition that the grounded environmental and community welfare concerns are rising. The sustainable approach to tourism refers to the tourism practices that minimize negative environmental impacts, maintain local culture and encourage community interaction (UNWTO, 2025). The tourism industry in Sri Lanka has grown in sustainable tourism initiatives. Aligned with this, the strategic plan of the Sri Lanka Tourism Development Authority (SLTDA) is based on the principles of sustainability which centre on eco-friendly tourism and community participation as drivers of future tourism development (SLTDA, 2022). However, research on the application of social entrepreneurial sustainability strategies in Sri Lankan tourism remains limited, highlighting the need for further exploration in this field.

Methodology

A quantitative research design was chosen for this study to allow for the collection and analysis of numerical data. This study adopts a positivist research philosophy. The research population consists of 360, primarily employed at five selected hotels: Jetwing Vil Uyana, Heritage Kandalama,

Cinnamon Lodge Habarana, Uga Bay, and Jetwing Yala. The Sample size was selected according to the Morgon Table. When the population is known, the table is created using the following formula,

$$s = \frac{X^2 NP(1-P)}{d^2 N - 1 + X^2 P(1-P)}$$

Where;

s = Required sample size

X = The table value of chi-square for 1 degree of freedom at the desired confidence level (3.841).

N = The population size

P = The population proportion (assumed to be 0.5 since this would provide the maximum sample size).

d = The degree of accuracy expressed as a proportion (0.05).

Source: (Krejcie & Morgan, 1970)

Hence, the sample size for the study was 186 participants. The participants were selected based on their involvement in tourism operations, sustainability initiatives, and their familiarity with the concepts of social entrepreneurship and sustainability. The survey was limited to English-speaking participants, ensuring clear communication and accurate data collection. The sample includes a variety of roles, such as hotel managers, sustainability officers, operations managers, and front-line staff, providing diverse perspectives on sustainability practices within the industry. SPSS was used for data analysis, including ANOVA testing, correlation analysis, regression analysis and demographic information analyses. Independent variables included eco-tourism practices, community-based tourism, CSR activities, and sustainable supply chain management and the dependent variable was tourism development.

Results

The results of this study highlight the significant impact of various independent variables on the dependent variable the implementation of social entrepreneurial sustainability strategies in Sri Lanka's tourism sector. Sustainable Supply Chain Management was found to have the strongest positive impact, with a regression coefficient of 0.687 ($p < 0.001$), indicating that sustainable practices in sourcing and supply chains are a major driver of social entrepreneurial strategies. This was further supported by a Pearson correlation of $r = 0.747$ ($p < 0.01$), which demonstrates a very strong relationship between sustainable supply chains and the overall sustainability strategy in tourism development.

Eco-tourism practices also contributed positively but with a lower impact compared to supply chains. The regression coefficient for eco-tourism was 0.124 ($p = 0.083$), suggesting that while eco-tourism initiatives are beneficial, their direct influence on sustainability strategies is less pronounced. The correlation with the dependent variable was $r = 0.372$ ($p < 0.01$), indicating a moderate positive relationship.

Community-Based Tourism (CBT) Initiatives showed a weaker influence, with a regression coefficient of 0.067 ($p = 0.203$). The Pearson correlation was $r = 0.319$ ($p < 0.01$), suggesting a positive but weak relationship between CBT initiatives and sustainable tourism development.

Corporate Social Responsibility (CSR) in Tourism had a statistically insignificant effect, with a regression coefficient of -0.021 ($p = 0.772$) and a Pearson correlation of $r = 0.330$ ($p < 0.01$). Although CSR practices are still integral to the tourism sector, their impact on the broader social entrepreneurial sustainability strategy was not as strong.

Overall, the study found that sustainable supply chain management is the most influential factor in driving social entrepreneurial sustainability strategies in Sri Lanka's tourism industry, followed by eco-tourism and community-based tourism initiatives. The findings highlight the significance of incorporating sustainability at the level of the supply chain to catalyse a more comprehensive strategic change within the tourism sector.

Conclusions

The purpose of this study was to ascertain the effect of applying social entrepreneurial sustainability strategies on promoting sustainable tourism in Sri Lanka. According to the results, the first hypothesis; that social entrepreneurial sustainability strategy performs a positive impact on the economic growth of Sri Lanka's tourism sector, was supported. These findings indicate that sustainable supply chain management has the highest positive effect, eco-tourism practice and CBT initiatives. These strategies not only help in economic growth but also support environmental and social conservation practices as well as community empowerment for sustainable tourism development.

The theoretical and practical value of the research results is great. This study theoretically adds knowledge of how social entrepreneurial sustainability strategies can foster economic, social, as well as environmental goals in the tourism sector, which is an area that is still not researched adequately in the Sri Lankan context. The key findings can be actioned practically on how to protect the viability of the sector in the long run by implementing sustainable tourism practices that help reduce tourism pressures on host communities and environments, benefit their livelihoods, and expand tourism's economic returns. In particular, the paper has a special emphasis on sustainable supply chain management and eco-tourism to encourage the development of sustainable societies.

The study provides avenues for future research. However, this research only examined large tourism establishments in Sri Lanka, and future studies could expand the sample to include other stakeholders as well as smaller hotels, and rural tourism operators to obtain a better picture of where social entrepreneurial strategies make an impact on the different segments of the tourism industry. Further research on sustainability strategies in the long run over a longer period might be conducted in the developing nature of Sri Lanka's tourism industry.

Finally, this study stresses the significance of the integration of social entrepreneurial sustainability strategies for the enhancement of economic growth, environmental conservation, and community empowerment in Sri Lankan tourism. The tourism industry thus has the potential to realize sustainable development in the sense that it offers strategic benefits to the local community, and local people, as well as a potential boost to the economy.

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Zhasmin Nurzhanova. CHALLENGES AND OPPORTUNITIES FOR USAGE OF ELECTRIC CARS IN KAZAKHSTAN BY USING THE EXAMPLE OF EUROPE

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Abstract

Research relevance: Electric cars help to reduce CO₂ emissions, therefore helping to reduce air pollution. Nowadays, electric cars are not as popular in Kazakhstan as in Europe. Kazakhstan has a lot of low-quality vehicles because they are cheap to import and are accepted by law. The consequences of air pollution include adverse effects on human health, such as respiratory and cardiovascular diseases, as well as environmental degradation, including damage to ecosystems and biodiversity. Improvements in personal transportation will help decrease air pollution.

Research goal: To determine possible solutions for the implementation of electric cars in Kazakhstan by using the example of Europe

Research methods: To achieve the research goal analysis of strategies in the electric car field of Europe was studied. Then a survey among Kazakh citizens was conducted, to determine which European practices are more important for them to switch to the EVs.

Main findings: The survey showed that the majority of the survey participants are open minded to the switch to the EVs, if European practices will be implemented in Kazakhstan. One of the main reasons they didn't switch yet is the lack of charging stations in the country. The most important practices are subsidies and tax reductions.

Keywords: Electric Vehicles, Green Energy, Sustainability, Government Policy.

Introduction

The electric vehicle market has grown significantly over the last fifteen years. For example, while in Norway, in 2010, less than 1 percent of new cars were electric, in 2023, their share increased to 93 per cent, and in the European Union, the growth was from 1 percent to 22 percent.

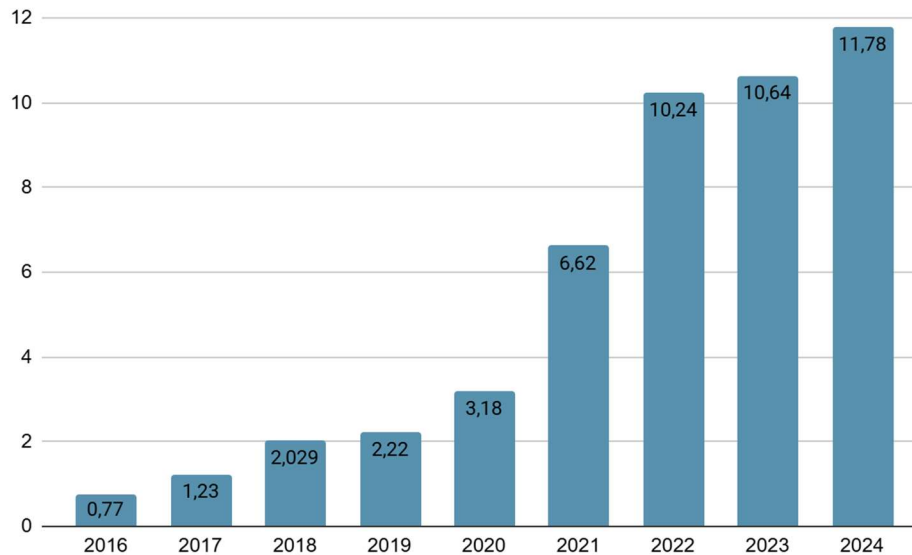


Fig. 1. Global electric vehicle market size between 2016 and 2024 in million units (Statista, 2024)

However, even though the electric vehicle market is rapidly developing worldwide, in Kazakhstan, the electric vehicle sector lags behind the European market by 15 years. According to the Bureau of National Statistics of the Republic of Kazakhstan, only 0.1% of new cars were electric in 2023. This is partly due to the fact that Kazakhstan is an oil-producing country with more than 200 oil fields and three refineries, which in turn means low gasoline prices relative to Europe, averaging €0.50 and €1.49 for gasoline 95, respectively. Affordable gas and a lack of infrastructure for electric vehicles negatively affect EV development in Kazakhstan.

The development of electric vehicles (EVs) plays a vital role in the transition to sustainable mobility and the achievement of environmental goals, both globally and in Kazakhstan. The transport sector is one of the largest sources of greenhouse gas emissions, accounting for 25% of total emissions in the EU and a significant share in Kazakhstan. Today, air quality in Kazakhstan's cities significantly exceeds World Health Organisation (WHO) and European Union standards.

The aim of the paper is to identify the challenges and opportunities for the use of electric cars in Kazakhstan. The following hypothesis was formulated: European practices could help with EV adaptation in Kazakhstan. The reasoning behind such a hypothesis is that electric vehicles are gaining popularity all over the world, and according to the sources, there is an interest in it in Central Asia too, but not much has been done in the region. On the other hand, Europe has achieved significant results in the sphere of electric vehicles (EESC, 2022). Initial results suggest that while awareness of EV benefits is low, citizens show interest in EV adoption if government support and infrastructure improvements are implemented.

To test this, the study uses mixed methods: data collection involved a case study of Norway to identify what helped Norway to achieve the result of 98% of all new cars to be electric in 2024 and a survey of 216 Kazakhstan citizens, to identify which European practices are more important to the netizens. Data processing was performed by frequency analysis, factor analysis, frequency analysis and graphical analysis, to showcase the results.

The challenges and opportunities for the usage of electric cars in Kazakhstan were identified. Recommendations for the EV sector development in Kazakhstan were suggested by the research author as a response to the research findings.

Literature Review

Transport is not only a major consumer of global oil production but also a major source of greenhouse gas emissions, particularly from carbon dioxide (CO₂). Earlier in this paper, we identified that one of the global problems is air pollution and poor air quality in many megacities. Switching from conventional cars to electric vehicles can have a positive impact not only on improving air quality, which will be described in more detail in the next sub-paragraph, where the results that European countries, in particular Norway, have achieved after switching to EVs will be shown but also this switch will reduce the consumption of non-renewable fossil fuel resources such as oil (Bieker, 2021).

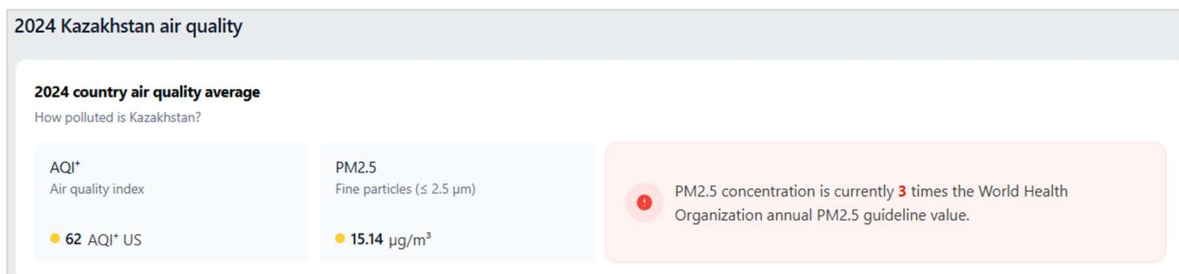


Fig. 2. 2024 average air quality in Kazakhstan (Source: IQAir, 2024)

According to AQI on January 14, 2025, Almaty was the most air-polluted megacity in the World with an 256 air pollution index, which is considered by experts as very dangerous for health (“On January 14, Almaty topped the ranking of the most polluted cities in the world” 2025). PM_{2.5} particles in Kazakhstan are three times more than is recommended by WHO.

According to the European Commission, electric motors have an efficiency rating of 90 per cent, while others have an efficiency rating of less than 40 per cent. This indicates that electric motors consume less energy when travelling an identical distance. Also in the same article, other advantages of electric motors were listed. Firstly, the electricity acting to power EVs is often extracted through renewable energy sources such as water, air and the sun, positively addressing the depletion of non-renewable energy sources such as oil and gas. Second, according to the Commission's 2020 study, on average, electric cars have an average climate impact 49 per cent lower than conventional cars when considering the entire cycle of a car, from production and use to disposal. Thirdly, the electric car industry is constantly rapidly evolving and batteries are improving, becoming more environmentally friendly and recyclable with each innovation. They have started to last longer and are already capable of withstanding several thousand charge cycles each (EESC, 2022). Electric cars are also helping to reduce oil consumption, with the European Commission predicting that as part of its Fit for 55 programme, a switch to electric cars could reduce dependence on oil, thus contributing to energy security (EESC, 2022).

Noise and air pollution from nitrogen dioxide and PM_{2.5} also diminish with EV use. Unlike conventional cars, electric vehicles emit no tailpipe pollutants, thereby improving air quality and reducing the incidence of diseases such as asthma. WHO attributes 4.2 million deaths annually to air pollution. Although EVs may generate more microparticles from their tires due to weight, they are 50% quieter than fuel-powered vehicles and significantly reduce noise stress in urban environments (Lefort, 2022; Ritchie, 2023). Lastly, EVs generate less hazardous waste compared to petrol vehicles, which use antifreeze, filters, heavy metals, and non-recyclable engine components. With increasing EU regulation, battery recycling is improving. As part of the Fit for 55 initiative, a 70% lithium battery recycling target has been set by 2030 to tackle resource depletion and waste pollution (UNECE, 2023).

Research Methodology

A Norwegian case study was used to compare with Kazakhstan and to gain information on what outcomes could be achieved and what practices were most effective. These practices were compared to the survey results to get the most realistic scenario that would meet the expectations of the people.

Data processing included frequency, graphical, correlation, comparative, factor and content analysis. These methods allowed analysing the results of the collected data, identifying trends, comparing results and defining the main challenges and opportunities, as well as the main practices that would help the implementation of electric vehicles in Kazakhstan based on the example of Europe.

An internet survey was conducted to collect data from the population of Kazakhstan. The survey covered the whole territory of Kazakhstan, and 216 participants took part.

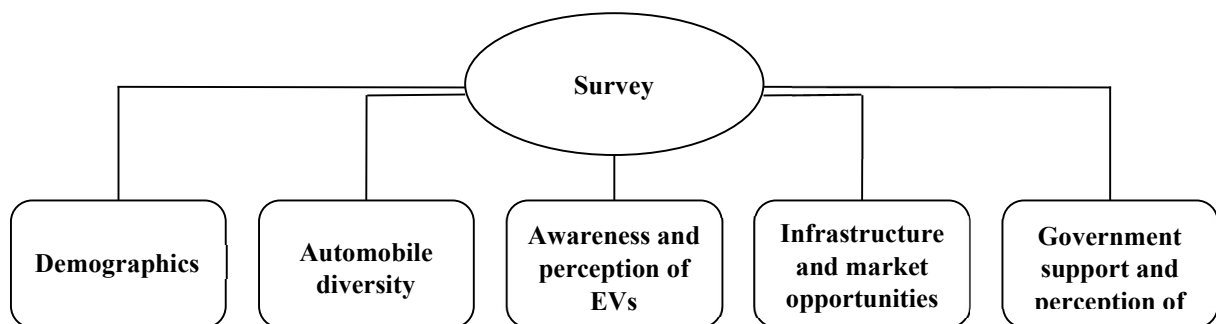


Fig. 3. Survey design (Source: developed by the Author)

Results

In order to understand which European practices can help Kazakhstan, it was necessary to select one European country with the most common characteristics with Kazakhstan. Below is a table with the results of a comparative analysis between Kazakhstan, Norway, Germany and Sweden to determine which country Kazakhstan has more in common with. These countries were chosen because of their similar climate and the fact that these countries are the European leaders in electric vehicles.

Table 1. Comparison Analysis of Kazakhstan, Norway, Germany and Sweden (Source: author’s compilation of statistical (Statista, 2024; Eurostat, 2024; Tolls.eu 2025; ACEA, 2024; IEA 2024; CIA.gov, 2024))

Category	Kazakhstan	Norway	Germany	Sweden
Percentage of EVs in new car sales (2024)	~1.5% (Statista, 2024).	88.9% (Statista, 2024).	25% (Statista, 2024).	33% (Statista, 2024).
Oil dependence (2024)	High (export) (Eurostat, 2024).	Average (export) (Eurostat, 2024).	Average (Import) (Eurostat, 2024).	Low (Import) (Eurostat, 2024).
Fuel price 95 (2025)	€ 0.45 (Tolls.eu, 2025)	€ 1.73 (Tolls.eu, 2025)	€ 1.74 (Tolls.eu, 2025)	€ 1.41 (Tolls.eu, 2025)
Charging point per km ² (2024)	1 per 7763 km ² (Statista, 2025)	1 per 19 km ² (Statista, 2025)	1 per 3.6 km ² (ACEA, 2024)	1 per 14 km ² (ACEA, 2024)
Main energy source (2025)	Coal, gas, oil (IEA, 2025)	Hydropower (IEA, 2025)	Oil, gas, biofuel (IEA, 2025)	Biofuel, nuclear (IEA, 2025)
GDP per capita (2023)	\$34,700 (CIA.gov, 2024)	\$90,500 (CIA.gov, 2024)	\$63,600 (CIA.gov, 2024)	\$63,100 (CIA.gov, 2024)
Geography/ climate	Continental, cold winters and hot summers, arid and semiarid. / Steppes and mountains (CIA.gov, 2024)	Colder winters and colder summers; rainy year-round on the West Coast. / Mountains and fjords (CIA.gov, 2024)	Temperate and marine; cool, wet winters and summers. / Valleys and mountains (CIA.gov, 2024)	Temperate in the south, subarctic in the north. Cloudy winters and cool summers. / Forests, lakes, valleys (CIA.gov, 2024)
Average distance between cities	400-800 km (CIA.gov, 2024)	100-300 km (CIA.gov, 2024)	50-150 km (CIA.gov, 2024)	100-300 km (CIA.gov, 2024)
Population density	7 ppl/km ² (CIA.gov, 2024)	15 ppl/km ² (CIA.gov, 2024)	232 ppl/km ² (CIA.gov, 2024)	25 ppl/km ² (CIA.gov, 2024)

Based on the data above, it can be concluded that Kazakhstan has the greatest number of similarities with Norway, so it is Norway that will serve as an example for Kazakhstan in this study. Surprisingly, despite these similarities, while the number of electric vehicles out of the total number of vehicles in Norway is a record 89%, in Kazakhstan, their number barely reaches 1.5%.

Case study results

Norway's transition to electric transportation has been one of the most successful in the world, delivering significant reductions in greenhouse gas emissions, improved air quality and growth in the sustainable mobility sector. This is particularly important for Kazakhstan, where there is a high dependence on fossil fuels, limited infrastructure development for electric vehicles and the need to diversify the economy. The Norwegian case study identifies key success factors and barriers that may be relevant for Kazakhstan. Thus, this chapter aims to take a comprehensive look at the Norwegian experience, adapt it to local conditions and identify the main factors for the development of the electric mobility sector in Kazakhstan.

Norway has been actively promoting electric vehicles since the early 2000s, using a powerful arsenal of government incentives. These include value-added tax (VAT) exemptions for the purchase of electric vehicles, free parking, access to dedicated lanes, road toll exemptions, and public investment

in charging station infrastructure. By 2023, more than 80% of all new cars in the country were electric. This success is due to both the economic level of the country and the high level of public confidence in sustainable technologies. It is important to note, however, that a coherent strategy supported by both state and local governments has become a key element of the policy. The charging infrastructure has developed in parallel with the growth of electric vehicles. By 2024, there were more than 25,000 charging stations across the country, including thousands of fast charging stations. This removed one of the main barriers for users - the fear of being stuck without the ability to charge. The charging network was developed both through public investment and private companies incentivised by tax breaks.

Table 2. Data and Sources for Secondary Data Analysis (Source: author’s compilation of data by the Norwegian Ministry of transport (Norwegian Ministry of transport, 2023; Norsk Elbilforening, 2023; Statistisk sentralbyrå, 2023))

Measures	Description	Results
Tax incentives and subsidies	VAT exemption (25 percent) on the purchase of electric vehicles, vehicle tax incentives, reduced registration fees and property taxes.	Reduction in the cost of electric vehicles for consumers has contributed to an increase in their sales. This has made electric vehicles affordable to a wider segment of the population.
Parking and road incentives	Electric vehicles are exempt from parking charges in some cities and can also use dedicated lanes for public transport.	Increasing the convenience and attractiveness of using electric vehicles. Electric transport has become preferred in major cities.
Development of charging infrastructure	Large-scale public funding for the construction of charging stations (including fast charging stations) and support for private investment.	More than 20,000 public charging stations across the country, including remote regions, eliminate the "range barrier".
Public procurement	Gradual conversion of the fleet of state and municipal institutions to electric vehicles.	Example for the private sector: increasing confidence in electric vehicles, development of the market for second-hand electric vehicles.
Information campaigns	Education programmes, government initiatives to raise awareness, and consumer consultations.	Increase knowledge of the benefits of electric vehicles, reduce scepticism, and create positive public opinion.
Green energy	Investments in hydropower, 98% of electricity is generated from renewable energy sources, making electric vehicles truly 'clean'	Reducing pollution, especially in urban areas, strengthens Norway's image as an environmentally responsible country.
Long-term goals and strategy	Specific targets: sales of only electric vehicles by 2025 (ahead of schedule).	

The survey was conducted with a focus on socio-economic problems, opportunities for electric vehicle development, level of public awareness, government support and perception of international experience. In total, 216 participants took part in the survey. The survey aimed to identify the needs of society, prospects for the development of environmentally friendly transport and the potential for

the introduction of electric vehicles in Kazakhstan. The study emphasised the importance of government support, public awareness and a systematic approach to infrastructure development.

Survey included men and women aged 18 years and above from all over Kazakhstan. We didn't categorize neither cities from rural regions, nor income of the participants since we decided that it doesn't play a key role in the research like this. Even though all 14 regions participated in the survey, three largest cities and their regions had the most responses: Almaty, the biggest city in the country, former capital; Astana, the capital; Shymkent, second biggest city. According to the EV charging station map, those three cities also have the most e-charging stations in Kazakhstan.

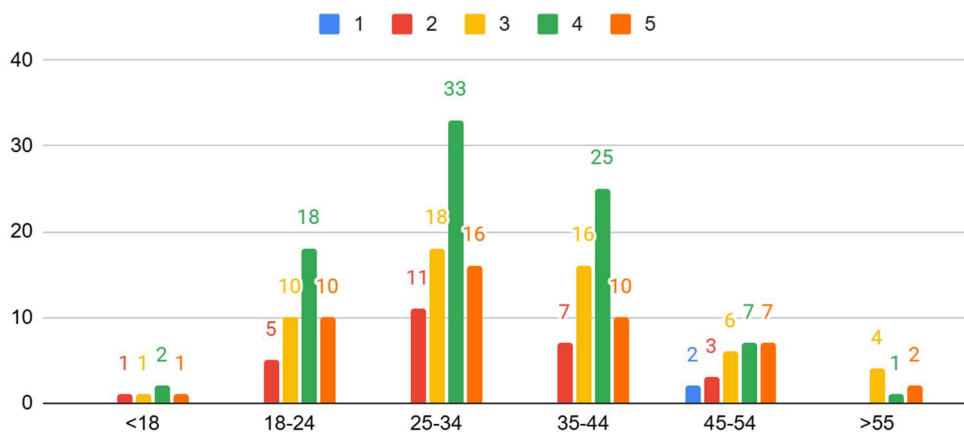


Fig. 4: Community’s belief by age that switch to EVs is vital for air pollution reduction (Source: developed by author based on survey results)

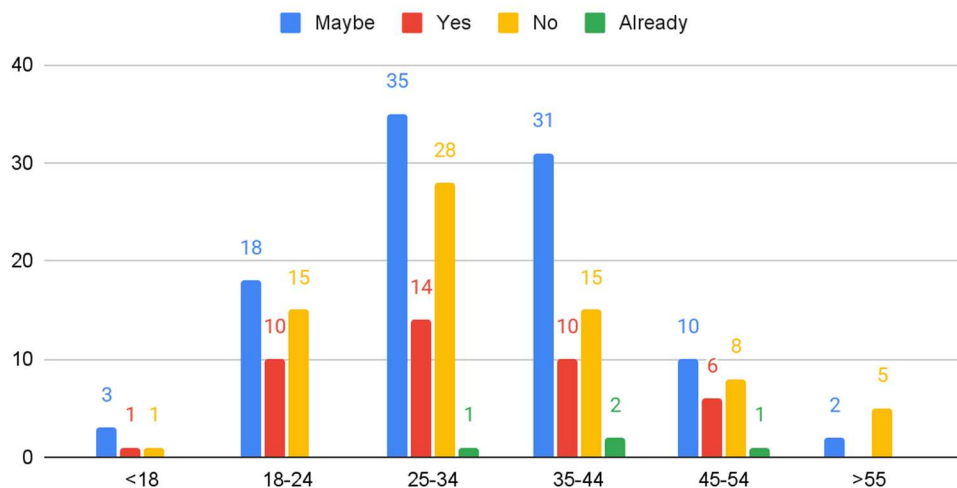


Fig. 5. Community’s readiness to switch to EVs in the next five years (Source: developed by author based on survey results)

66.6% are positive about switching to an electric car in the next five years, if given the opportunity and good conditions.

Factor analysis was used to identify key groups of motivations perceived by respondents as significant when considering the purchase of an electric car. The purpose of this method was to reduce the number of variables and to identify hidden latent factors that unite interrelated stimuli. This approach allows for a better understanding of the structure of consumer preferences and

summarises the results in the form of compact and interpretable components. Data from Google Forms were used for factor analysis - respondents rated the importance of different motivations on a scale from 1 to 5. In total, the following variables were included in the analysis: European practices, Subsidies, Tax reduction, Public transportation lane, Infrastructure of charging stations, and Official distributor.

In the table of loadings, variables with coefficients greater than 0.4 (modulo) were identified as significant within a factor. The loadings allowed the meaning of each factor to be interpreted:

1. Factor 1 - institutional motivation, focus on government and systemic measures (European practices, subsidies, tax reduction).
2. Factor 2 - practical applicability, orientation towards accessibility, benefit and local conditions (public transport lane, official distributor, charging stations infrastructure).

A scatter plot showing the values of the two factors identified in the factor analysis. Blue dots indicate Factor 1 values and red dots indicate Factor 2 values, for each respondent, for a total of 216. Trend lines have also been added to show the general direction of change.

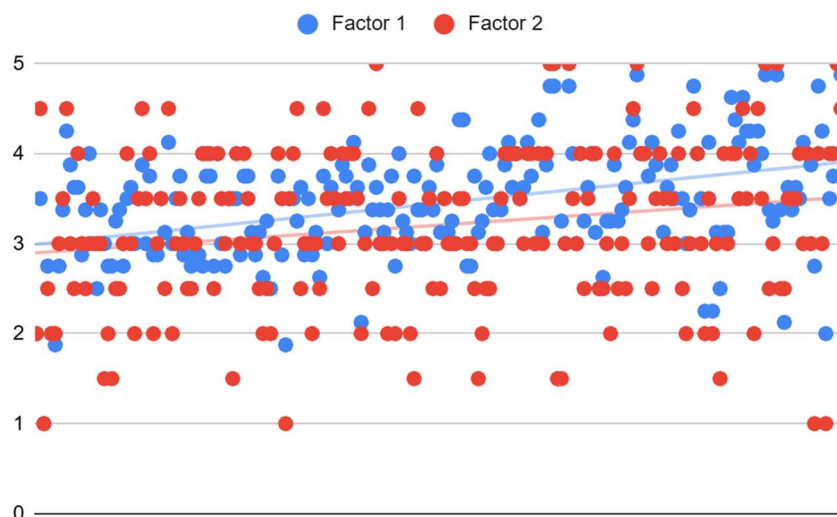


Fig. 6. A scatter plot of the values of the two factors for each respondent (Source: developed by author based on survey results)

Interpretation of Factor 1: As can be seen from the graph, most respondents have positive values for Factor 1 between 2.5 and 4.5, indicating a moderately positive attitude toward the group of variables that make up this factor. According to the loadings, Factor 1 includes such variables as European practices, subsidies, and tax reduction. High values of Factor 1 can be interpreted as respondents' desire for state support, sustainable development and infrastructural changes. On the contrary, low values indicate scepticism or low interest in such initiatives.

Interpretation of Factor 2: Red dots represent Factor 2, a component that includes variables such as public transportation lanes, official distributors, and charging stations infrastructure. Here, the variability of values is higher and the spread is wider. This suggests that Factor 2 is less unambiguous, reflecting more subjective or situational perceptions - for example, the availability of electric cars in a particular region, the presence of trust in suppliers.

Conclusions

The survey results showed that interviewees agreed that electric cars play an important role in solving air pollution problems and have an advantage over conventional cars. Also, more than half said they were thinking about switching to electric cars within the next five years.

The survey also showed that 90% would switch to an electric car if European incentives were implemented in Kazakhstan. And also identified what exactly are the most important factors in the eyes of the population for them to switch to electric cars. In the first place are subsidies from the state for the purchase of electric cars. Then, the developed infrastructure of charging stations. The third place is occupied by low taxes on the purchase of electric cars. In the penultimate place was the answer about opening an official distributor in the country. Last place was the possibility to drive in the public transportation lane.

Two latent factors were identified in the factor analysis, the first reflects the general attitude towards electric cars and their promotion, and the second factor reflects the attitude of interviewees to the convenience of switching to electric cars. The strongest latent factor determining the attitude towards electric cars is the perception of state support (subsidies, benefits, infrastructure). Thus, the main incentive for the population to switch to electric cars should be the state.

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