ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Iss 11, 2022

From Plug to Planet: Market dynamics behind Energy efficient Home Appliances

Dr. Devkumar Mahisekar,

Pratibha Institute of Business Management, Chinchwad, Pune.

Dr. Swapnil Shah,

S.N.G. Institute of Management & Research, Rajgurunagar, Pune

Abstract: Worldwide, the household-appliance sector is undergoing three clear shifts: (1) rising residential energy consumption, (2) Rapid technological upgrades in appliance design, and (3) An accelerating push toward energy-sustainability solutions. Electrical home appliances are at the centre of these trends.

Our investigation explored how market forces, sustainability initiatives and the marketing-mix shape consumers' willingness to purchase energy-efficient models. We also examined whether socioeconomic variables—particularly income and educational attainment—influence that choice. Statistical analysis confirms that every one of these factors contributes meaningfully to purchase decisions.

The resulting insights outline a practical framework for understanding what drives demand for energy-saving appliances. Marketers can use this framework to craft sharper marketing-mix tactics and more precise market-segmentation strategies within the electrical-appliance industry.

Keywords- Market dynamics, energy efficient electrical home appliances, socioeconomic factors, sustainability factors, marketing mix, purchase decision.

1.1. Introduction

The household-appliance arena now spans an array of products—from washing machines, refrigerators and televisions to air-conditioners, water-heaters, fans and modern lighting systems—that make day-to-day living easier. At the same time, average dwelling size and family head-count are shrinking, while rising disposable incomes, steady GDP expansion,

ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Iss 11, 2022

deeper electrification and rapid product innovation are pushing ownership rates higher. A growing, dual-income workforce further amplifies demand.

In monetary terms, home-appliance turnover reached roughly US $0.59 trillion in 2022, and analysts expect compound annual growth of about 5.8 % after 2022 . Retail revenues already touched US $448 billion in 2021, underscoring the sector's global momentum.

Because energy-efficient (EE) models must reach every income bracket to deliver meaningful sustainability gains, marketers occupy a pivotal position. Crafting viable solutions requires a careful reading of socioeconomic realities, market forces and the classic 4 Ps (product, price, place, promotion). Variables such as age, household income, education, occupation, gender and marital status all appear to shape the likelihood of choosing EE appliances—making them fertile ground for further study. Unlike many consumer goods, EE appliances sit at the crossroads of brand diversity, wide price dispersion and fluctuating market pressures; understanding how shoppers balance perceived value against up-front cost is therefore essential. Marketers who grasp these preference patterns can design sharper segmentation schemes and campaigns that highlight both monetary savings and environmental benefits.

Literature review

- **International Energy Agency (IEA, 2021)** – The IEA's *Coal 2021* outlook notes that, despite two consecutive yearly dips, coal-fired generation rebounded nine % to an estimated 10,350 TWh in 2021 and may set fresh highs in 2022 unless policy action accelerates. The report indirectly boosts the urgency for low-carbon electricity and, by extension, efficient end-use devices.
- **Arun Prakash Amrita et al. (2021)** – Surveying young adults, the authors found that environmental concern and prior experience outweigh price sensitivity; youth already familiar with EE products intend to repurchase even when premiums are steep. Campaigns that foreground ecological impact therefore resonate strongly with this segment.
- **Vedran Lesica et al. (2018)** – The team argues that policy makers and brands must account for public misconceptions about appliance energy use before designing conservation programmes. Accurate, real-time feedback (for example via smart-meter apps) can correct misunderstandings and support more effective efficiency measures.

ISSN PRINT 2319 1775 Online 2320 7876

 UGC CARE Listed (Group -I) Journal Volume 11, Iss 11, 2022

- **Dalila Antunes et al. (2012)** – Household chores consume a large share of residential energy. The authors distinguish between one-off, deliberative purchases of EE models and the ingrained habits that follow. Knowledge transfer at the point of sale can nudge consumers toward the initial efficient choice.
- **Marie Cervellon et al. (2011)** – Because complex labels and technical jargon often confuse buyers, consumers default to prior experience, peer opinion and the headline benefits highlighted in ads. Clear, plain-language communication therefore remains a missing link in EE appliance marketing.
- **Raaijet et al. (2001)** – New approaches in marketing communication can elevate perceived product value and foster brand loyalty. A focused, benefit-centred message helps to secure repeat purchases of EE devices.
- **Christopher Koroneos (2007)** – Comparative analysis of Balkan nations shows that higher efficiency is the most reliable path to electric-energy security, lower bills and reduced environmental harm.
- **Adarsh Raj (2017)** – Smart-city initiatives and the rise of dual-income households will continue to spur uptake of advanced kitchen and household gadgets, with new entrants offering competitively priced options.
- **Rannjeet Nair (2021)** – Appropriate tariff structures—especially higher marginal prices for heavy residential consumption—send clear economic signals that encourage investment in EE technology.

Research Gap and Problem Statement

Although broad market trends are visible, detailed, up-to-date intelligence on how those forces interact across the marketing mix is scarce. In particular, we lack clarity on whether and how income, education and related demographic attributes steer consumers toward EE household equipment. Filling this knowledge gap will equip firms to devise more effective strategies—ensuring that energy-saving technologies reach the widest possible audience and contribute meaningfully to long-term energy sustainability.

Objectives

- To analyze evolving market forces, the 4 Ps of marketing and sustainability priorities that shape consumers' decisions to purchase energy-saving household appliances.

ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Iss 11, 2022

- To identify the critical socioeconomic variables that influence households' likelihood of choosing energy-efficient electrical appliances.

Research Methodology

Respondent profile

Respondent Profile			
Age	**Percent**	**Education**	**Percent**
20 to 30	45.6	Upto HSC	1.8
31 to 40	33.9	Graduate	41.4
41 to 50	12.5	Post Graduate	53.6
51 to 60	8.1	Professional	3.1
Total	100.0	Total	100.0
Gender	**Percent**	**Profession**	**Percent**
Male	65.4	Student	8.9
Female	34.6	Salaried	58.1
Total	100.0	Business	31.3
		Home maker	1.8
Income per annum	**Percent**	Total	100.0
1-5	45.1	**Marital status**	**Percent**
5.01-10	28.4	Married	70.1
10.01-15	16.1	Single	29.9
15.01-20	9.4	Total	100.0
Above 20	1.0		
Total	100.0		
Zone	**Percent**		
Central	23.4		
North	19.5		
South	16.9		
West	19.8		
East	20.3		
Total	100.0		

The study targeted entire urban population of 3,124,458 residents (latest census) of a city. Using De Morgan's sampling guidelines, a statistically valid sample of 384 respondents was computed.

ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Iss 11, 2022

A stratified random-sampling method was adopted, drawing proportionate participants from the city's five geographic zones—East, West, South, North, and Central. This design maximized relevance, controlled selection bias, reduced within-stratum variance, and preserved the city's demographic and socioeconomic balance.

Subsequently, an exploratory factor analysis was run: principal-component extraction with Varimax rotation reached convergence after nine iterations, isolating clear factor structures for the constructs of market dynamics, sustainability drivers and the marketing-mix elements.

Reliability of the instrument

Case Processing Summary

		N	%
Cases	Valid	384	100.0
	Excluded[a]	0	0.0
	Total	384	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.837	5

A Cronbach's alpha of 0.837 confirms solid internal-consistency reliability for the survey scale.

Construct validity was supported by significant inter-item correlations ($p < 0.01$, two-tailed). Normality checks showed all skewness values between –1 and +1 and kurtosis between –3 and +3, meeting accepted thresholds.

Model adequacy was evaluated with ordinal logistic regression, supplemented by chi-square goodness-of-fit tests.

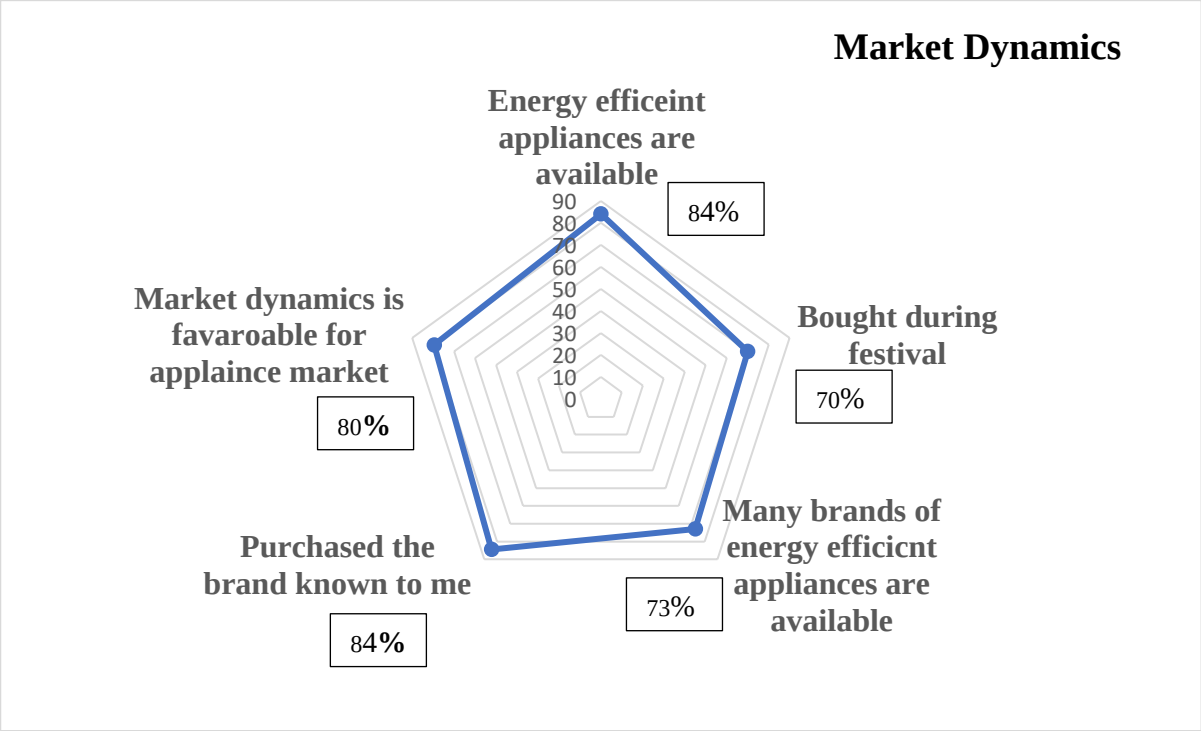
For each variable, agreement levels were gauged by combining the %ages of respondents selecting "Agree" or "Strongly Agree" on the five-point Likert items.

Overall, the study maps the market landscape for energy-efficient home appliances and outlines marketing directions to advance appliance energy efficiency.

ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Iss 11, 2022

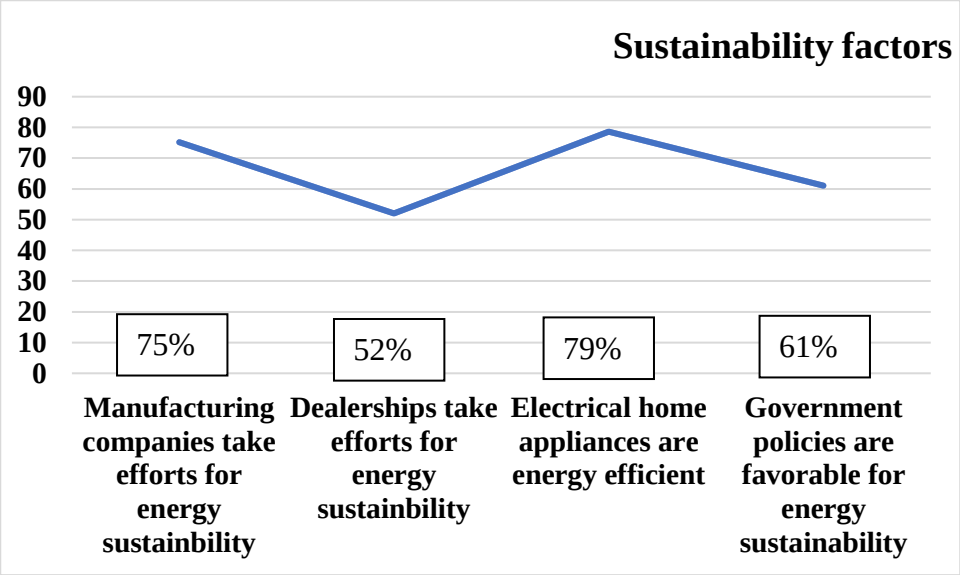
Data analysis



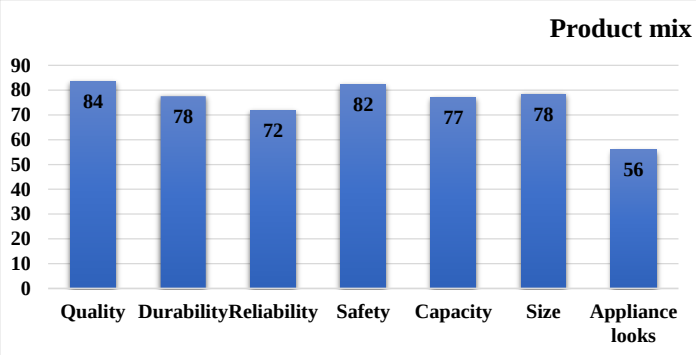
Comparatively lesser number of energy efficient appliances brands are available in the market.

ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Iss 11, 2022



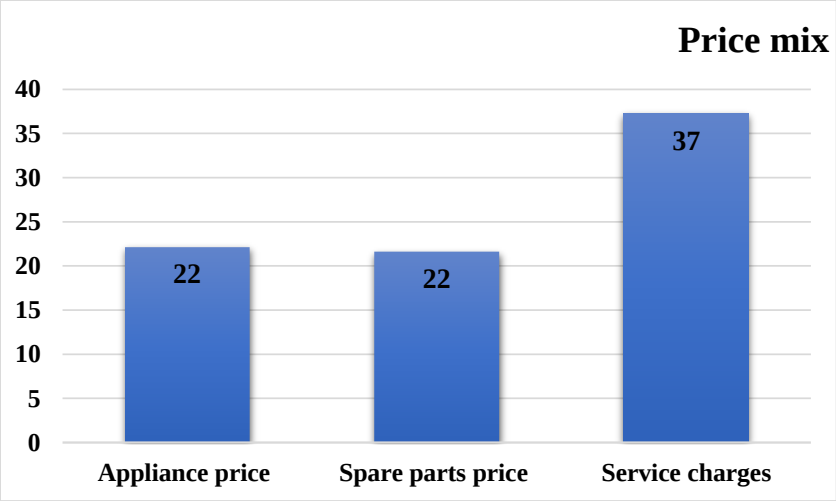
Less visibility of the initiatives taken by the Government and dealerships for energy sustainability.



Quality, durability, reliability, safety, capacity and size are given more importance while buying home appliance.

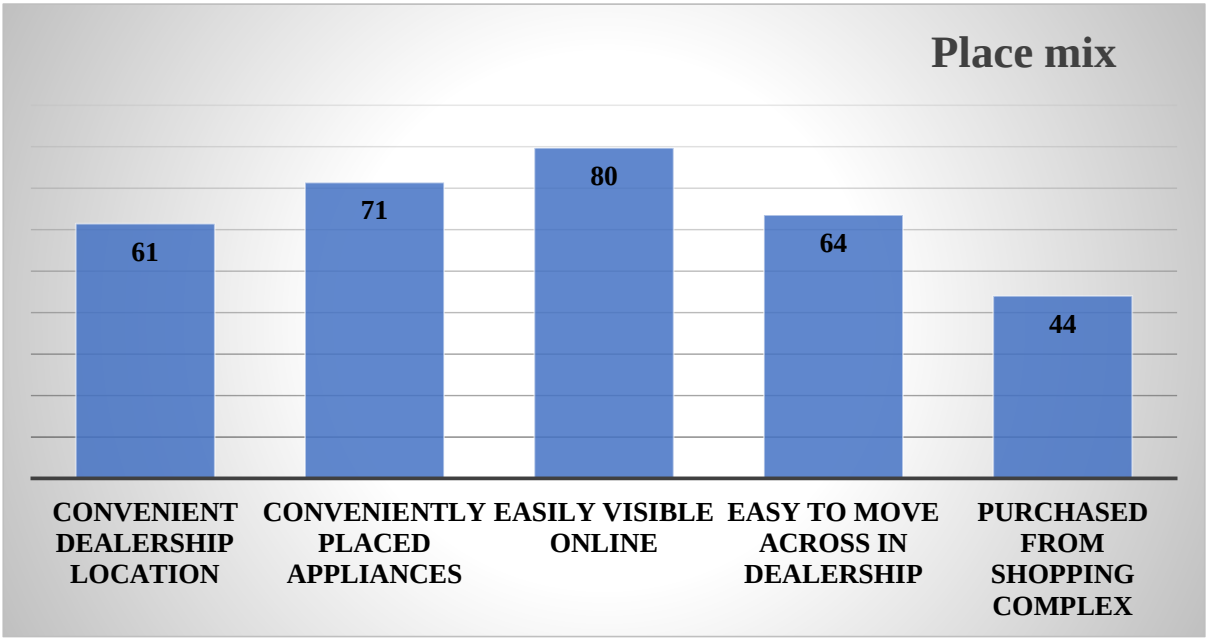
ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Iss 11, 2022



Price, spare parts of energy efficient electrical home appliances are high as only 22% of the respondents have responses 'Agree' and 'Strongly agree' for the assertion, 'price is reasonable.'

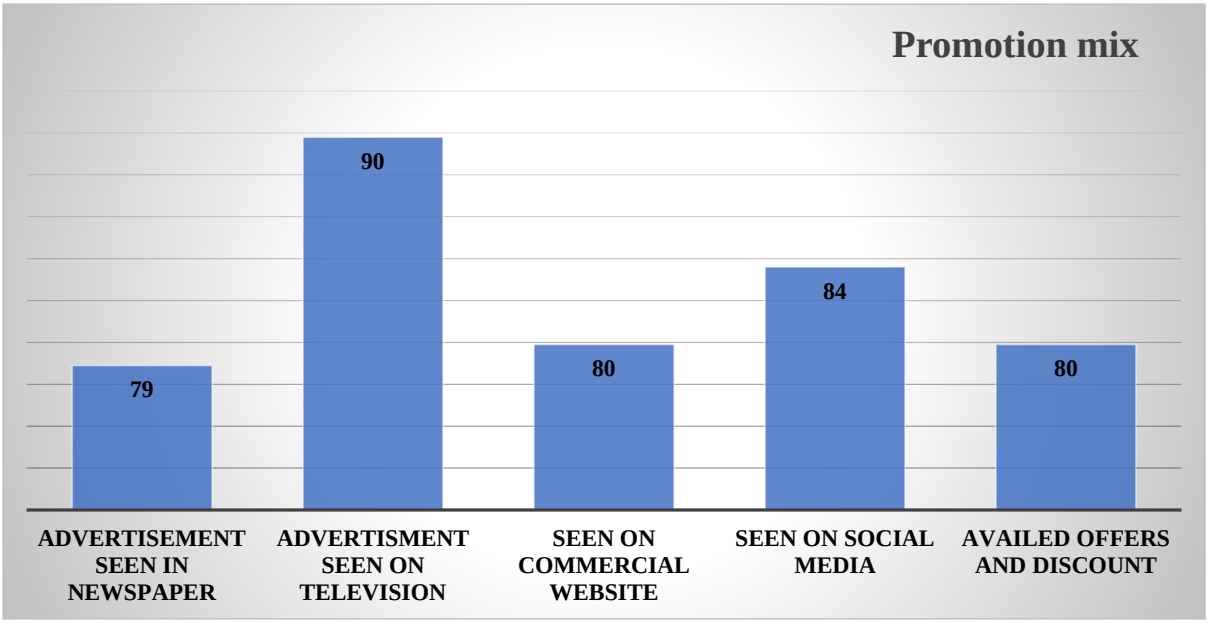
b.



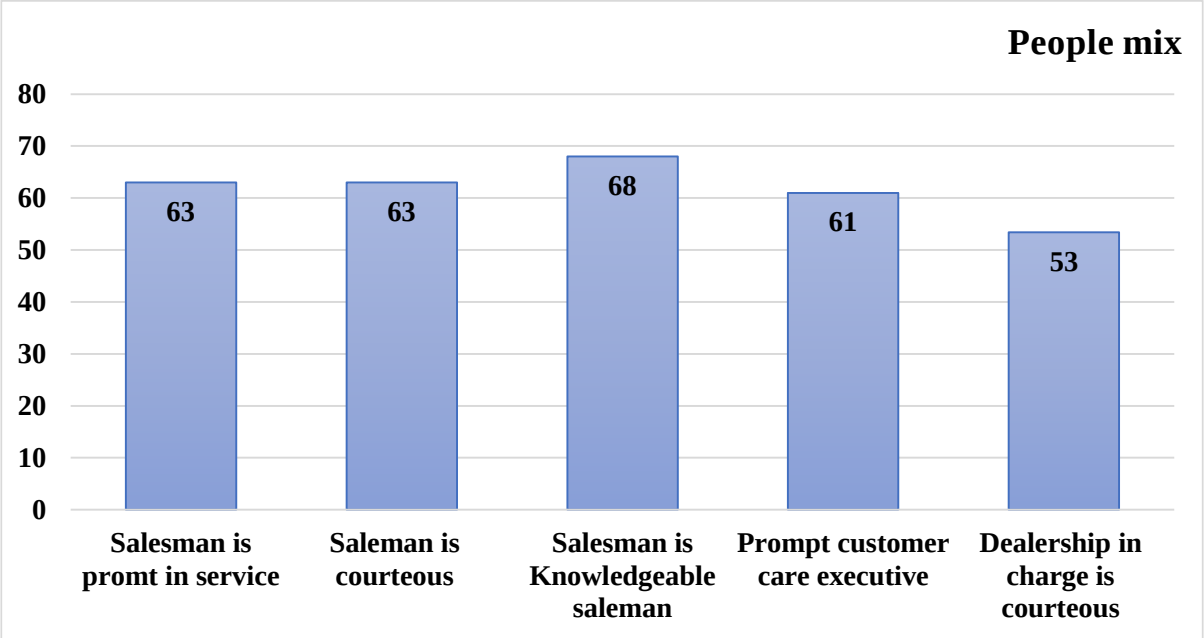
a. Convenient dealership location and easy to move across in dealership are issues in place mix. b. A trend of buying from shopping complex has emerged.

ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Iss 11, 2022



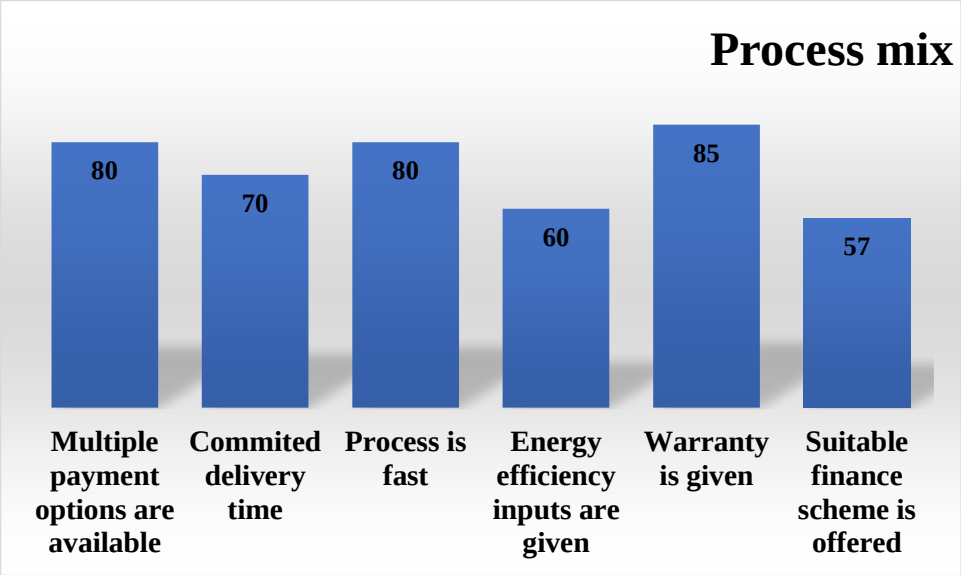
Apart from traditional promotional channels Social media and Commercial website have also gained importance.



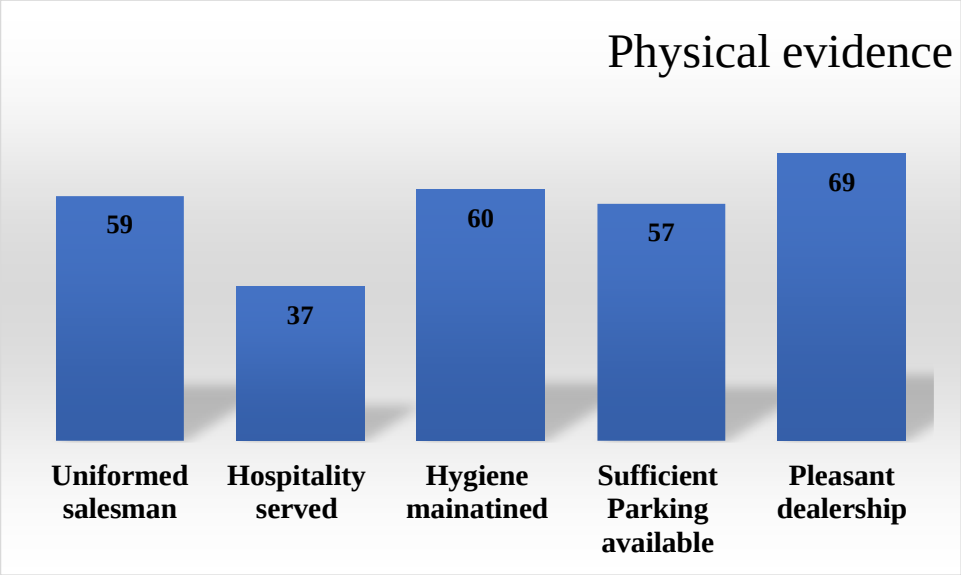
All people mix elements have comparatively less %ages, that is less than 70% for the options, ‘Strongly agree’ and ‘Agree’.

ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Iss 11, 2022



Variables energy efficiency inputs are given (60%) and suitable finance scheme is offered (57%) have low %ages for the options, 'Strongly agree' and 'Agree'.



Hospitality is found out to be the weakest element followed by the next weak element as sufficient parking area.

Case Processing Summary

	Cases					
	Valid				Total	
	N				N	Percent
Purchased EEA * Income	384	100.0%	0	0.0%	384	100.0%
Purchased EEA * Education	384	100.0%	0	0.0%	384	100.0%

ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Iss 11, 2022

Purchased EEA * Income Crosstabulation

			Income					
			1-5	5.01-10	10.01-15	15.01-20	Above 20	Total
Purchased EEA	No	Count	21	10	15	11	3	60
		% within Purchased EEA	35.0%	16.7%	25.0%	18.3%	5.0%	100.0%
		% within Income	12.1%	9.2%	24.2%	30.6%	75.0%	15.6%
	Yes	Count	152	99	47	25	1	324
		% within Purchased EEA	46.9%	30.6%	14.5%	7.7%	0.3%	100.0%
		% within Income	87.9%	90.8%	75.8%	69.4%	25.0%	84.4%
Total		Count	173	109	62	36	4	384
		% within Purchased EEA	45.1%	28.4%	16.1%	9.4%	1.0%	100.0%
		% within Income	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

The income group 5.01-10 lakhs per annum (90.8 %) is the largest, followed by the income group 1-5 lakhs per annum (87.9 %) amongst all in buying energy efficient electrical home appliances. Other consumers having income groups10.01-15, 15.01-20 and above 20 have comparatively lower %age of buying energy efficient electrical home appliances that is (75.8 %), (69.4 %) and (25 %) respectively.

Purchased EEA * Education Crosstabulation

			Education				
			Up to HSC	Graduate	Post Graduate	Professional	Total
Purchased EEA	No	Count	2	22	31	5	60
		% within Purchased EEA	3.3%	36.7%	51.7%	8.3%	100.0%
		% within Education	28.6%	13.8%	15.0%	41.7%	15.6%
	Yes	Count	5	137	175	7	324
		% within Purchased EEA	1.5%	42.3%	54.0%	2.2%	100.0%
		% within Education	71.4%	86.2%	85.0%	58.3%	84.4%
Total		Count	7	159	206	12	384
		% within Purchased EEA	1.8%	41.4%	53.6%	3.1%	100.0%
		% within Education	100.0%	100.0%	100.0%	100.0%	100.0%

ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Iss 11, 2022

The consumers who are graduate are the largest group (86.2 %) amongst all education levels in buying energy efficient electrical home appliances followed by the post graduates (85 %). Other consumer groups; professionals and Higher secondary school certified (HSC) group have comparatively lower %age of buying energy efficient electrical home appliances that is 58.3 % and 71.4 % respectively.

Hypotheses Testing

Ha1: Marketing mix, market dynamics and sustainability factors influence the purchase decision of energy efficient electrical home appliances.

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	327.305			
Final	184.915	142.391	54	0

Link function: Logit.

The significance level is obtained to be 0. Hence the alternative hypothesis; 'Marketing mix, Market dynamics and Sustainability factors influence the purchase decision of electrical home appliances.' is accepted.

Predictors are considered as the elements of Marketing mix, Market dynamics and Sustainability factors and the dependent variable is considered as, 'Purchased Energy efficient appliance.'

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	316.929	283	0.081
Deviance	179.369	283	1

Link function: Logit.

As significance level is obtained to be more than 0.05, that is 0.081, the test confirms for Goodness of fit for the model.

ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Iss 11, 2022

Pseudo R-Square	
Cox and Snell	0.31
Nagelkerke	0.534
McFadden	0.428

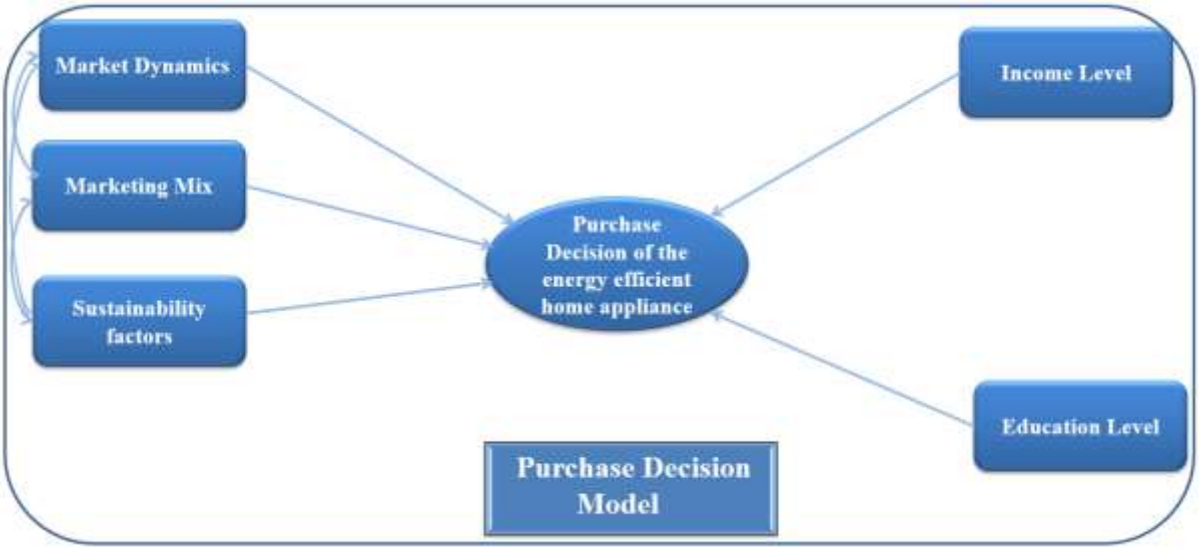
Link function: Logit.

The Nagelkerke value of 0.534 suggests that independent variables have 53.4% prediction for the dependent variable, 'purchased energy efficient electrical home appliance.'

Ha2: There is an association of income and education with the purchase of electrical home appliances.

Chi-Square Tests			
Socio-economic and Demographic	Value	df	Asymptotic Significance (2-sided)
Age	3.988[a]	3	0.263
Gender	.904[a]	1	0.342
Income	25.272[a]	4	0.000
Education	5.501[a]	3	0.038
Profession	1.347[a]	3	0.718
Marital status	.365[a]	1	0.546
Zone	6.682[a]	4	0.154

The significance levels for Income and Education are 0.00 and 0. 038.Hence the alterative hypothesis; 'There is an association of income and education with the purchase of electrical home appliances.' is accepted.



ISSN PRINT 2319 1775 Online 2320 7876

 UGC CARE Listed (Group -I) Journal Volume 11, Iss 11, 2022

Hence it indicates that marketing mix, market dynamics and sustainability factors

influence the purchase of energy efficient home appliance and there is an association of Income and Education level with the purchase of energy efficient appliance.

Findings

Brand presence and festive sales

Around 73 % of respondents “strongly agree” and 70 % “agree” that they buy well-known energy-saving brands during festival periods. By comparison, 84 % confirm that efficient models are available year-round, they usually purchase a familiar brand (84 %), and they feel overall market conditions are favorable (80 %).

Sustainability signals

The stronger the sustainability initiatives from manufacturers and marketers, the more positively shoppers view the category.

Nonetheless, only 52 % credit local dealers with serious sustainability efforts, and 61 % believe government policy actively supports those goals. In contrast, 75 % recognize manufacturers’ efforts and 79 % trust the efficiency claims of the products themselves.

Price perceptions

Acceptance of pricing is low: merely 22 % rate appliance prices or spare-part prices as “satisfactory,” and just 37 % feel the same about service charges.

Place (distribution) factors

Physical access shows mixed results. Convenient dealer location (61 %) and ease of movement within the store (64 %) trail online visibility (80 %) and in-store product placement (81 %). Shopping-complex purchases now account for 44 % of transactions.

Promotion and media reach

Television remains the dominant information source (90 %).

People (service quality)

All “people-mix” indicators score under 70 % : prompt and courteous sales staff (63 %), knowledgeable sales staff (68 %), responsive call-centre executives (61 %), and courteous store managers (53 %).

Process factors

ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Iss 11, 2022

Finance schemes (57 %) and energy-efficiency advice (60 %) lag behind fast processing (80 %), multiple payment options (80 %), on-time delivery (70 %) and warranty clarity (85 %).

Physical evidence

Apart from a "pleasant showroom" rating of 69 %, all ambience markers—uniformed staff (59 %), hospitality (37 %), hygiene (60 %), and parking adequacy (57 %)—score below 60 %.

Socio-economic influence

Purchase patterns differ significantly across income brackets and education levels.

Recommendations

Ongoing market vigilance – Track product launches, price shifts and policy updates continuously.

Festival readiness – Deploy well-trained, high-touch sales teams during peak festive seasons.

Omnichannel priority – Give equal weight to in-store and online channels.

Thoughtful merchandising – Review product placement and visibility regularly.

Sustainability storytelling – Highlight long-term cost savings and environmental benefits in all communications.

Location science – Use formal site-suitability analysis before opening or relocating dealerships; keep warehouses nearby to broaden brand availability.

Mall and high-footfall centres – Expand presence in shopping complexes and retail hubs.

Digital amplification – Exploit social media and commercial websites alongside traditional media.

Incentivized sales force – Link rewards to successful promotion of energy-efficient models.

Process transparency – Ensure every sales interaction includes clear guidance on efficiency ratings and savings.

Customer-referral rewards – Encourage word-of-mouth advocacy.

Youth targeting – Tailor messages and channels to younger demographics.

Parking solutions – Consider stacked, multi-level or valet options where space is a constraint

Hospitality standards – Build service protocols that guarantee basic amenities and courteous treatment.

Uniform policy – Enforce consistent dress codes to reinforce professionalism.

Visible public policy – Lobby for clearer, more prominent government schemes that lower import duties and support local assembly, ultimately easing price pressure.

Soft-skills training – Upgrade frontline staff competence and empathy.

Segment precisely – Craft offers by income and education tier.

ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Iss 11, 2022

Conclusions

Effective promotion of energy-saving appliances centers on popular media outreach and clear consumer education.

Socio-economic segmentation delivers distinctive targeting and higher sales .

A seamless sales process, supplemented with flexible finance schemes, elevates customer experience.

Strengthening the price, place, promotion and physical-evidence elements of the marketing mix will accelerate adoption and improve overall energy sustainability.

Because the initial “one-time” purchase defines later usage habits, securing that first efficient choice is critical.

Highly engaged, better-informed customers are reshaping the appliance landscape; firms that embrace the efficiency revolution will outperform those that do not.

Contribution and uniqueness of the research study

The research offers a current scenario of appliance-market dynamics and unveils distinctive insights across the full marketing-mix spectrum.

It supplies actionable guidance for advancing national and corporate energy-efficiency goals.

By capturing the consumer’s voice on manufacturer and dealer efforts, the study enriches the discourse on sustainable-appliance marketing strategies.

References

Birol, D. F. (n.d.). (rep.). *India 2020- Energy Policy Review*. International Energy Agency. Retrieved October 5, 2022, from chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/viewer.html?pdfurl=https%3A%2F%2Fiea.blob.core.windows.net%2Fassets%2F2571ae38-c895-430e-8b62-bc19019c6807%2FIndia_2020_Energy_Policy_Review.pdf&clen=12231494.

ltd, R. and M. (n.d.). *Research and markets - market research reports - welcome*. Research and Markets - Market Research Reports - Welcome. Retrieved October 17, 2022, from https://www.researchandmarkets.com/

Household appliances - worldwide: Statista market forecast. Statista. (n.d.). Retrieved November 6, 2022, from https://www.statista.com/outlook/cmo/household-appliances/worldwide

Antunes, Dalila et al (2017). Sufficiency before efficiency: Consumers' profiling and barriers/facilitators of energy efficient behaviours. Journal of Cleaner Production. 165. 134-142. 10.1016/j.jclepro.2017.07.075.

Iea. (2021, December 1). *Coal Power's sharp rebound is taking it to a new record in 2021, threatening net zero goals - news*. IEA. Retrieved July 30, 2022, from

ISSN PRINT 2319 1775 Online 2320 7876

 UGC CARE Listed (Group -I) Journal Volume 11, Iss 11, 2022

https://www.iea.org/news/coal-power-s-sharp-rebound-is-taking-it-to-a-new-record-in-2021-threatening-net-zero-goals

California Energy Commission. (n.d.). *Energy efficient heating, ventilation, and air conditioning packages for existing residential buildings*. California Energy Commission. Retrieved October 5, 2022, from https://www.energy.ca.gov/publications/2021/energy-efficient-heating-ventilation-and-air-conditioning-packages-existing
Jurič, B. (2022, February 2). *Consumer behaviour when purchasing household appliances from the aspect of energy consumption in the times of crisis*. Collegium Antropologicum. Retrieved August 18, 2022, from http://www.academia.edu/70260973/Consumer_Behaviour_when_Purchasing_Household_Appliances_from_the_Aspect_of_Energy_Consumption_in_the_Times_of_Crisis

Alexander Boegle, D. S. (n.d.). *Energy saving potential from Indian households from appliance efficiency - prayas (energy group)*. Prayas. Retrieved September 10, 2022, from https://prayaspune.org/peg/publications/item/82-energy-saving-potential-from-indian-households-from-appliance-efficiency.html

Nair, R. (2009, November 19). Energy efficiency. Retrieved October 10, 2022, from file:///D:/PhD1718/RESERCH%20PAPERS/Rannjeet%20nair%20Energy_efficiency_with_case_studies.pdf.

S.Sri Ranjini and S.Sangitha. (2016). *A study on the Marketing Strategies for home appliances in supermarkets: A case study of Coimbatore City (Tamil Nadu)*. ts, *Coimbatore, International Business Management 10(20), pp 4816-4823.*

Rosen, M.A. Energy Sustainability with a Focus on Environmental Perspectives. *Earth Syst Environ* **5,** 217–230 (2021). Retrieved November 3, 2022, https://doi.org/10.1007/s41748-021-00217-6

Accenture. (1970, May 26). *Understanding Consumer Preferences in Energy Efficiency*. Newsroom. Retrieved November 7, 2022, from https://newsroom.accenture.com/subjects/research-surveys/majority-consumers-would-buy-electricity-energy-efficiency-products-and-related-services-from-companies-other-than-energy-suppliers-accenture-study-finds.htm

Antunes, D., Gaspar, R., & Lino, J. (2012). *Energy efficient appliances and energy efficient behaviours: From consumer's assessment to behaviour intervention*. Retrieved September 2, 2022, from https://www.researchgate.net/publication/235352511_Energy_efficient_appliances_and_energy_efficient_behaviors_From_consumer's_assessment_to_behavior_intervention

Lesic, V., Bruin, W. B., Davis, M. C., Krishnamurti, T., & Azevedo, I. M. L. (2021). Consumers' perceptions of energy use and energy savings: A literature review. ms., from chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/viewer.html?pdfurl=https%3A%2F%2Fwww.cmu.edu%2Fceic%2Fassets%2Fdocs%2Fpublications%2Fpublished-papers%2F2017-and-2018%2Flesic-2018-environ-res-lett-13-033004.pdf&clen=1134768&chunk=true

Anirudh V. Dhoot, Opportunities and Challenges in Consumer Electronics & Home

ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Iss 11, 2022

Appliances, Consumer Electronics and Appliances Manufacturers Association (CEAMA), p.p. 4-22, 14 December 2014, https://docplayer.net/14013393-Opportunities-and-challenges-in-consumer-electronics-home-appliances.html

Prakash, A., & Gunasekar, S. (n.d.). Predicting the young consumers buying intention of energy efficient products in India. Coimbatore. Retrieved from chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/viewer.html?pdfurl=https%3A%2F%2Famrita.edu%2Fwp-content%2Fuploads%2F2021%2F11%2Fpredicting- the-young-consumers-buying-intention-of-energy-efficient-products-in-india.pdf&clen=255008&chunk=true.

Super Energy-saving devices in pipeline. The Economic Times. (n.d.). Retrieved October 16, 2022, from https://economictimes.indiatimes.com/industry/cons-products/electronics/super-energy-saving-devices-in-pipeline/articleshow/8014537.cms?from=mdr

Jurič, B. (2022, February 2). *Consumer behaviour when purchasing household appliances from the aspect of energy consumption in the times of crisis*. Collegium Antropologicum. Retrieved February 18, 2022, from http://www.academia.edu/70260973/Consumer_Behaviour_when_Purchasing_Household_Appliances_from_the_Aspect_of_Energy_Consumption_in_the_Times_of_Crisis

Vaughan, S. (2006, January 1). *Can energy-efficient electrical appliances be considered "environmental goods"?* OECD Trade Policy Studies. Retrieved October 17, 2022, from http://www.academia.edu/66467123/Can_Energy_Efficient_Electrical_Appliances_Be_Considered_Environmental_Goods

Principles of Marketing, factors that influence consumers' buying behaviour. Retrieved July 11, 2022, from https://open.lib.umn.edu/principlesmarketing/chapter/3-1-factors-that-influence-consumers-buying-behavior/

Nguyen, Ninh, AU - Lobo, Antonio, Greenland, Steven, 2017/03/01,167,177
Energy efficient household appliances in emerging markets: The influence of consumers' values and knowledge on their attitudes and purchase behaviour, 4110.1111/ijcs.12323, International Journal of Consumer Studies

Ray , D. D., & Roy Choudhury, D. S. (2015). *Factors Affecting Consumer Decision Making For Purchasing Selected Home Appliance Products Based On Market Segmentation-A Feedback Study of People Associated With Management Education.* . ms, Kolkata. Retrieved November 5, 2022, from chrome extension://efaidnbmnnnibpcajpcglclefindmkaj/viewer.html?pdfurl=http%3A%2F%2Fwww.questjournals.org%2Fjrbm%2Fpapers%2Fvol3-issue2%2FB320611.pdf&clen=285430&chunk=true.

Koroneos, C. J., & Nanaki, E. A. (2007). Electric Energy Sustainability in the Eastern Balkans. *Energy Policy*, *35*(7), 3826–3842. https://doi.org/10.1016/j.enpol.2007.01.021

Sarangi , D. P. (n.d.). *The Indian Consumer Durable Market and an Analysis of demand pattern for major durables*. ms. Retrieved July 17, 2022, from chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/viewer.html?pdfurl=https%3A%2F%2Ficsi.edu%2Fmedia%2Fportals%2F86%2FMajor%2520Durables.pdf&clen=308762&chunk=true.

ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Iss 11, 2022

Bakre, A. (n.d.). (rep.). *Bureau of Energy Efficiency - Energy scenario*. Government of India , Ministry of Power . Retrieved October 10, 2022, from https://beeindia.gov.in/.

Vaughan, S. (2006, January 1). *Can energy-efficient electrical appliances be considered "environmental goods"?* OECD Trade Policy Studies. Retrieved Septmeber 17, 2022, from http://www.academia.edu/66467123/Can_Energy_Efficient_Electrical_Appliances_Be_Considered_Environmental_Goods

Nguyen, Ninh, AU - Lobo, Antonio, Greenland, Steven, 2017/03/01,167,177 Energy efficient household appliances in emerging markets: The influence of consumers' values and knowledge on their attitudes and purchase behaviour, 4110.1111/ijcs.12323, International Journal of Consumer Studies

Super Energy-saving devices in pipeline. The Economic Times. (n.d.). Retrieved October 16, 2022, from https://economictimes.indiatimes.com/industry/cons-products/electronics/super-energy-saving-devices-in-pipeline/articleshow/8014537.cms?from=mdr

Rojas-Mendez, Jose, Parasuraman, A., Papadopoulos, Nicolas, 2017/02/06, Demographics, attitudes, and technology readiness: A cross-cultural analysis and model validation, 10.1108/MIP-08-2015-0163, Marketing Intelligence & Planning, https://www.researchgate.net/publication/313361797_Demographics_attitudes_and_technology_readiness_A_cross-cultural_analysis_and_model_validation

****