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TELECOMMUNICATION INDUSTRY IN SRI LANKA: MARKET CONCENTRATION AND CUSTOMER SATISFACTION

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Abstract: *The telecommunication industry plays an important role in global economies, with mobile services making substantial contributions to GDP. In 2022, this sector's economic impact reached an impressive USD 4.62 trillion. The COVID-19 pandemic further underscored the vital role of telecommunications (Kaskar and Patel; 2022). This study focuses on the market concentration within the telecommunication industry and evaluates customer satisfaction with telecommunication services in Sri Lanka. Data from 419 individuals were collected via an online survey, and binary logistic regression models were applied to analyze customer satisfaction with telephone and internet services. To evaluate market concentration, the study has used the Concentration Ratio of the strongest enterprises (CRm) and the Herfindahl Hirschman Index (HHI). The results of the study challenge the perception of monopolistic market behavior within Sri Lanka's telecommunication industry.*

The results emphasize the key factors influencing customer satisfaction. Price, promotional events and incorporating users' ideas emerged as significant drivers of customer satisfaction with telephone services. Price and network connection quality were found to be crucial determinants of customer satisfaction with the internet services. To thrive in this competitive industry, telecommunication firms must prioritize efficient customer care services and adopt customer-friendly strategies. Additionally, policymakers should concentrate on developing the telecommunication industry's infrastructure to ensure network stability and fostering its active participation in the country's future development.

JEL classification: L10, L13, L52, L96

Key words: Telecommunication services, Customer satisfaction, Market concentration, Monopoly, Network stability

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1. INTRODUCTION

The telecommunication sector has experienced remarkable expansion and transformation, largely driven by globalization, which has facilitated increased connectivity between regions and populations on a global scale. For a long period of time, it has spread across national boundaries and the telecommunication industry stands out as one of the most advanced and influential industries. Telecommunication industry within the sector of information and Communication technology is the second largest in the world (Kaskar and Patel; 2022).

Notably, over half of the world's population now relies on mobile internet services and the mobile telephone services industry made an appreciable contribution of USD 4.62 trillion to the global GDP in 2022, with the number of mobile phone users exceeding 7.26 billion (www.statista.com).

In the specific context of Sri Lanka, regulatory oversight of the industry is provided by the Telecommunications Regulatory Commission of Sri Lanka (TRCSL), established under the Sri Lanka Telecommunications (Amendment) Act, No.27 of 1996. As of 2020, this dynamic sector comprised three Fixed Access Operators, four Cellular Mobile Operators, two Data Communications (facilities-based), three Data Communications (non-facilities-based), and a range of Internet Service Providers (ISPs), alongside six international telecommunication operators and two other operators.

The Fixed Access Operators in Sri Lanka include prominent names such as Sri Lanka Telecom PLC, Dialog Broadband Networks (Pvt.) Ltd, and Lanka Bell Ltd. Meanwhile, the Cellular Mobile Operators include Dialog Axiata PLC, SLTMobitel, and Hutchison Telecommunications Lanka (Pvt.) Ltd., and Bharti Airtel Lanka (Pvt.) Ltd. This diverse system operates within a flexible, open and market-oriented framework that actively encourages private sector participation to meet the growing demands of consumers. In line with an oligopolistic market structure, the industry offers differentiated products while having entry barriers and merger and acquisition activities. Notably, in December 2018, Hutchison Lanka merged with Etisalat Lanka, emerging as the third-largest communication operator in the country.

The telecommunication industry in Sri Lanka holds substantial significance for government tax revenue, with telecommunication services (excluding internet services) contributing a significant 22.6% of total tax revenue in 2019. Furthermore, this industry is generating a lot of

employment opportunities, approximately 25,000 jobs. In 2020, telecommunication and IT programming-related services experienced an impressive growth rate of 14.1%. Due to its economic influence, the industry contributed 1.10% to the country's GDP in 2020 (CBSL Report, 2020).

Crucially, the telecommunication industry in Sri Lanka operates in a competitive environment, with a small number of key players who compete for the market share. This study aims to analyze the telecommunication industry in Sri Lanka, exploring its growth, competitive dynamics and its significant role in customer satisfaction. It also seeks to emphasize the interplay between market competition, customer preferences, and the industry's overall impact on the Sri Lankan economy.

LITERATURE REVIEW

This literature review provides a comprehensive overview of key studies, emphasizing their relevance to the Sri Lankan telecommunication industry while highlighting the need for updated research to address industry-specific needs.

The study done by Greer (1971) established a link between market concentration and advertising intensity in the telecommunication industry, underlining the role of advertising in shaping market dynamics. Porter (1974) emphasized how advertising contributes to product differentiation and, subsequently, influences market structure. These insights are important to understand the competitive landscape of the Sri Lankan telecommunication industry.

Clarke and Davies (1983) analyzed the relationship between aggregate concentration, market concentration, and diversification within the telecommunication industry. This understanding is crucial for assessing how diversification strategies impact the market structure, in the local context.

In 1985, Montgomery's study has examined the diversification and market power and identified that highly diversified firms tend to possess lower market power compared to less diversified ones. This concept holds implications for the study of market power and diversification strategies in the Sri Lankan telecommunication industry.

When analyzing the firm size and innovations within the industry, Acs and Audretsch (1987) observed that large firms are often capital-intensive and concentrated industries while smaller firms thrive in innovative sectors. This concept is applicable to the Sri Lankan

telecommunication industry, where innovation is a driving force and the industry's composition plays a vital role.

Martin (1988) explored how competition from smaller firms can constrain the market power of larger entities. Investigating market power in a competitive environment is essential for understanding industry efficiency and the implications for public policy in promoting anti-competitive behavior, which is of interest to the Sri Lankan telecommunication sector.

Narver and Slater's (1990) research into market orientation and profitability holds relevance for the telecommunication industry, allowing an exploration of whether a similar relationship between market orientation and profitability exists within the Sri Lankan context.

Rhoades (1995) discussed market imperfections in local banking markets, offering insights into the limitations of relying solely on market profit rates and concentration to gain efficiency advantages. Although focused on banking, the study's findings have applicability to other industries, including telecommunications.

When analyzing the firm size inequality and market power, Barla (2000) revisited the complex interplay between firm size inequality and market power. This theoretical foundation also can be extended to the Sri Lankan telecommunication sector, offering fresh perspectives on market dynamics.

In 2000, Jayasuriya and Knight-John analyzed the challenges stemming from the politicization of the regulatory process within the telecommunication industry. Addressing impartiality issues that hinder investment in the industry is a pressing concern in the Sri Lankan context.

Bowen and Chen (2001) explored the nonlinear relationship between customer loyalty and satisfaction, emphasizing its benefits. Investigating customer satisfaction and loyalty in telecommunication services is crucial for identifying factors influencing profitability in Sri Lanka.

Sadowski, Dittrich, and Duysters (2003) studied international sourcing capabilities in the mobile telecommunication industry, focusing on technological discontinuity. While focused on Nokia, their insights into the complementary nature of local and international resources hold relevance for the Sri Lankan telecommunication industry.

When analyzing the entry barriers and market concentration, Alexander and Feinberg (2004) emphasized the role of flexible regulatory policies, market size, and fundamentals in determining entry into the telecommunication industry. Investigating the relationship between

entry barriers and market concentration is a barrier to the Sri Lankan telecommunication industry.

Wang, Lo, and Yang (2004) highlighted the influence of customer perceived service quality on customer value and satisfaction. Analyzing this relationship within the Sri Lankan telecommunication industry is valuable for understanding customer-centric strategies.

Ojo (2010) emphasized the importance of aligning telecommunication services with consumer preferences. According to that, implementing customer-centric programs based on the customer suggestions is essential for service providers in Sri Lanka.

Rauniyar, Samuel, and Jeyatissa (2010) identified limitations in expanding the Sri Lankan telecommunication industry to rural areas. Recent data is required to assess market behavior and address these challenges effectively.

Wong (2010) has presented customer retention strategies for the wireless telecommunication industry. These strategies are relevant to the Sri Lankan telecommunication industry, which encompasses both fixed-line and mobile operators.

Liberalization, Deregulation, and Market Concentration are identified as major areas by Pejic, Zoroja, and Jirousv (2013). They have discussed the relationship between the number of telecommunication companies, deregulation, and liberalization within the industries. Understanding the impact of liberalization and deregulation on market concentration is essential for the development in telecommunication industry in Sri Lanka.

According to Hewage and Ratnajeewa (2015) there are some benefits in facility sharing among telecommunication firms in terms of sustainability management. This practice contributes to environmental sustainability in the industry.

Grishunin and Suloeva (2015) proposed a project-controlling system to identify key goals in the telecommunication industry, emphasizing the industry's high-risk and capital-intensive nature. Such strategies are valuable for the Sri Lankan telecommunication sector.

Valaskova et al. (2019) have done the concentration analysis and oligopoly dynamics with regarding the telecommunication industry. They have analyzed the level of concentration of the mobile service market while highlighting high concentration levels due to product differentiation and entry barriers. This study offers insights into oligopoly dynamics that can be applied.

Many of these studies offer a general understanding of the concepts discussed and have not directly addressed the telecommunication industry in Sri Lanka. Therefore, there is a need to investigate market concentration, customer satisfaction, and other relevant factors specific to the Sri Lankan telecommunication industry using recent data.

METHODOLOGY

The primary objective of this study is to assess the degree of market concentration within the telecommunications industry. This assessment is carried out by employing established market concentration theory, wherein two absolute concentration indicators, namely the Concentration Ratio of the strongest enterprises (CRm) and the Herfindahl Hirschman Index (HHI).

The computation of the concentration rate necessitates the utilization of market shares. Specifically, the Concentration Ratio of the strongest enterprises (CRm) is derived by aggregating the market shares of the identified firms within the industry. In this particular investigation, our focus is directed towards the two most dominant enterprises, which we denote as "m=2." Consequently, the calculation for CRm is formally expressed as follows:

$$CR_m = \sum_{i=1}^{m} Si \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(1)$$

CRm represents the Concentration Ratio of the two strongest enterprises. "m" denotes the number of strongest enterprises under consideration, which in this instance is equal to 2.

By conducting this rigorous analysis, we aim to provide valuable insights into the market structure of the telecommunications industry, particularly in terms of its concentration levels, using these well-established concentration indicators.

The Herfindahl Hirschman Index (HHI) is a prominent metric employed to assess market concentration. This index is determined by squaring the market shares of all individual firms operating within the industry and subsequently summing these squared values. Formally, the formula for HHI is expressed as:

$$HHI = \sum_{i=1}^{n} (Si)2 \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(2)$$

In Equation 2, the variable "si" signifies the market share of the i^{th} firm, denoted as a percentage or fraction of the firm's output (qi) in relation to the aggregate output of all firms (Q). The

determination of the total industry output (Q) involves the summation of the outputs of all participating firms within the industry.

HHI provides a quantitative representation of market concentration within the telecommunications industry, facilitating a comprehensive understanding of its competitive landscape.

The Concentration Ratio (CRm) furnishes insights into market concentration by considering the market shares of the industry's two foremost enterprises. Conversely, the Herfindahl Hirschman Index (HHI) offers a comprehensive measure of concentration by incorporating the squared market shares of all enterprises within the industry.

The systematic application of this analytical framework equips us to assess the extent of market concentration inherent in the telecommunication industry. By quantifying concentration through these indicators, we are enabled to acquire a more nuanced understanding of the competitive dynamics and structural characteristics that define the industry.

It is important to note that this study focuses specifically on the telecommunication industry in Sri Lanka. Through the employment of market concentration theory and the application of these concentration indicators, our objective is to have invaluable insights about the market's competitive environment within the Sri Lankan telecommunication industry.

In the present study, binary logistic regression analysis was employed to investigate the association between customer satisfaction regarding telecommunication services and the influencing factors that shape consumer preferences when making decisions related to the acquisition of these services.

Model 01 : Customer Satisfaction with Telephone Services

$$Y_1 = \beta_0 + \beta_1 TelePrice + \beta_2 HH + \beta_3 Inc + \beta_4 D_1 + \beta_5 D_2 + \beta_6 D_3 + u_1 \quad \ldots\ldots\ldots (3)$$

In equation 3, Y_1 denotes customer satisfaction pertaining to telephone services, wherein it assumes a binary value of 1 to signify satisfaction with the utilized telephone facilities and 0 to indicate dissatisfaction.

Table 01: Independent Variables – Model 01

Variable Name	Model 01: Definition of the variable
TelePrice – Price of the telephone services	Price (LKR) of the telephone service (Monthly average expenses for telephone services)
HH - Number of mobile service users within the household.	Number of family members who use mobile services within the family of each respondents.
Inc - Household Income	Monthly income of the household (LKR)
D_2 - Other users' ideas about Telephone service	D_2 = 1 if other users' ideas about internet service affect to customer satisfaction on telephone service. D_2 = 0 if other users' ideas about telephone services not affect to customer satisfaction on telephone service.
D_3 - Promotional Events of Telephone Services	D_3 = 1 if promotions affect to customer satisfaction on telephone service. D_3 = 0 if promotions not affect to customer satisfaction on telephone service.
D_4 - Telephone Packages	D_4 = 1 network coverage affect customer satisfaction with internet service. D_4 = 0 network coverage does not affect customer satisfaction with internet service.
u_1 - Error Term	

Model 02 : Customer Satisfaction with Internet Services

$$Y_2 = \beta_0 + \beta_1 NetPrice + \beta_2 Age + \beta_3 D_1 + \beta_4 D_2 + \beta_5 D_3 + \beta_6 D_4 + u_2 \text{ ..... (4)}$$

In Equation 4, Y_2 represents customer satisfaction pertaining to internet services, taking on binary values where 1 denotes satisfaction with the employed internet services, while 0 indicates dissatisfaction.

Table 02: Independent Variables – Model 02

Variable Name	Model 02: Definition of the variable
Net Price – Price of the internet services	Price (LKR) of the internet services (Monthly average expenses for internet services)
Age - Age of users	Age (years) of the respondents who use internet services for the different purposes.
D_1 - Gender	D_1 = 1 if gender affect to customer satisfaction on internet service. D_1 =0 if gender not affect to customer satisfaction on internet service.
D_2 - Network Coverage	D_2 = 1 network coverage affect to customer satisfaction on internet service. D_2 = 0 network coverage not affect to customer satisfaction on internet service.
D_3 - Other users' ideas about internet services	D_3 = 1 other users' ideas affect to customer satisfaction on internet service. D_3 = 0 other users' ideas not affect to customer satisfaction on internet service.
D_4 – Internet Packages	D_4 = 1 internet packages affect customer satisfaction with internet service. D_4 = 0 internet packages do not affect customer satisfaction with internet service.
u_2 - Error Term	

By employing these econometric models, our aim was to statistically explore and elucidate the relationship between customer satisfaction and the multifaceted determinants that underlie consumer preferences in the context of both telephone and internet services.

The primary data for this research study was gathered from a sample of 419 respondents, comprised of telecommunication service users in the country. The selection of respondents was conducted through a Snowball sampling method, and data acquisition was executed via the distribution of structured questionnaires. Additionally, secondary data was predominantly

sourced from the annual reports of each telecommunication firm operating in Sri Lanka, as well as from the official websites of key players such as SLTMobitel, Dialog, Hutch, and Airtel. Subsequently, both primary and secondary data were analyzed through STATA and Excel software tools. Descriptive analyses were conducted to comprehend the inherent characteristics of the dataset, and the resultant outcomes were visually presented using charts and graphs.

By emphasizing the binary logistic regression analysis, this study aspires to provide in-depth insights into the determinants influencing customer satisfaction within the telecommunication services sector of Sri Lanka. The incorporation of both primary and secondary data facilitates a comprehensive exploration of customer preferences and the discernment of the diverse factors that exert an impact on their levels of satisfaction.

DATA ANALYSIS AND INTERPRETATIONS

This section presents a comprehensive analysis and interpretation of the data gathered for this study. The relationship between the dependent and independent variables is explored as in Equation 3, which represents customer satisfaction with telephone services. The summarization of this relationship is presented in Table 3, providing key statistics such as minimum and maximum values, mean, median, mode, and standard deviation of the data. Notably, the standard deviation of promotional events stands at 0.483, indicating the variance in respondents' perceptions of this variable. Similarly, the standard deviation for other users' ideas about telephone services is 0.497.

Table 03: Summary of Multiple Linear Regression Model

	Satisfaction	*Tele p*	*Income*	*HH*	*Others*	*promotions*	*packages*
Mean	0.766	1846.501	73169.45	3.790	0.563	0.368	0.947
Standard Error	0.021	84.817	1747.876	0.052	0.024	0.024	0.011
Median	1	1000	50000	4	1	0	1
Mode	1	1000	50000	4	1	0	1
Standard Deviation	0.424	1736.153	35778.12	1.058	0.497	0.483	0.223
Sample Variance	0.180	3014227	1.28E+09	1.118	0.247	0.233	0.050
Kurtosis	-0.410	5.635	-0.03641	1.674	-1.944	-1.704	14.285
Skewness	-1.262	2.114	1.156	0.452	-0.256	0.551	-4.027
Range	1	9950	135000	7	1	1	1

Minimum	0	50	40000	1	0	0	0
Maximum	1	10000	175000	8	1	1	1
Sum	321	773684	30658000	1588	236	154	397
Count	419	419	419	419	419	419	419

Source: Survey data

The logistic regression analysis highlights that telephone price, other users' ideas about telephone services and promotional events are significant variables in ascertaining customer satisfaction with telephone services. These variables have done substantial statistical influence on the probability of customers' satisfaction with the telephone facilities they have utilized.

To deepen our understanding of these relationships, the marginal effect of the logistic regression model has been calculated. The mean value of promotional events is determined to be 0.368, suggesting that an increase in promotional events is positively associated with the customer satisfaction with telephone services. Similarly, the mean value of other users' ideas about telephone services is 0.563, signifying that other users' ideas contribute significantly to customer satisfaction

Table 04: Marginal Effect of Logistic Model

Variable	dy/dx	p>|Z|	Average (X)
Tele Price	-0.000	0.005	1846.5
HH	-0.028	0.132	3.79
Income	5.11e-07	0.405	73169.5
Promotions	0.103	0.012	0.368
Others	-0.172	0.000	0.563
Packages	0.163	0.159	0.947

(*) dy/dx is for discrete change of dummy variable from 0 to 1

Source: Survey data

Shifting our focus to customer satisfaction with internet services, we identified the relationship between the dependent and independent variables articulated in Equation 4. This relationship is concisely summarized in Table 5. The standard deviation of network coverage is 0.198, signifying the extent of variability in respondents' perceptions of network coverage.

Table 05: Summary of Multiple Linear Regression

	Satisfaction	*Net P*	*Gender*	*Age*	*Network*	*Others*	*Package*
Mean	0.726	2027.325	0.606	25.89	0.959	0.570	0.959
Standard Error	0.022	84.277	0.024	0.353	0.010	0.024	0.010
Median	1	1500	1	25	1	1	1
Mode	1	1000	1	25	1	1	1
Standard Deviation	0.447	1725.114	0.489	7.218	0.198	0.496	0.198
Sample Variance	0.200	2976017	0.239	52.09	0.039	0.246	0.039
Kurtosis	-0.976	6.233	-1.818	8.248	19.941	-1.928	19.941
Skewness	-1.014	2.233	-0.436	2.629	-4.674	-0.285	-4.674
Range	1	9800	1	50	1	1	1
Minimum	0	200	0	15	0	0	0
Maximum	1	10000	1	65	1	1	1
Sum	304	849449	254	10848	402	239	402
Count	419	419	419	419	419	419	419

Source: Survey data

Our logistic regression findings express that the network price and network coverage significantly shape customer satisfaction with internet services. These variables bear profound statistical significance, impacting the likelihood of customers' satisfaction with the internet services they have utilized.

Further insights are provided through the calculation of the marginal effect of the logistic regression model. The mean value of network price is determined as 2027.32, indicating that higher prices reduced the customer satisfaction with internet services. Conversely, the mean value of network coverage is established at 0.959, indicating that improved network coverage substantially elevates the probability of customer satisfaction with the service (Table 6).

Table 06: Marginal Effect of Logistic Model

Variable	**dy/dx**	**p>|Z|**	**Average (X)**
Net Price	-0.000	0.047	2027.32
Age	0.003	0.364	25.89
Gender	-0.056	0.211	0.606

Others	0.01	0.823	0.57
Packages	-0.006	0.958	0.959
Network	0.416	0.000	0.959

(*) dy/dx is for discrete change of dummy variable from 0 to 1

Source: Survey Data

In addition to examining customer satisfaction, we also analyzed the market concentration of the telecommunication industry, utilizing revenue and profit data from the year 2020 (Table 7). We present calculations of the concentration level of the industry's dominant players (CRm).

Table 07: Revenue and Profit (2020)

Firm	Revenue (LKR Million)	Profit (LKR Million)
Dialog	120,141.00	12,002.00
SLTMobitel	91,119.00	7,881.00
Airtel	11,563.00	5,487.00
Total	**222,823.00**	**25,370.00**

Author's calculations

Table 08: Revenue and Profit (2020)

Firm	Revenue (LKR Million)	%	Square Value	Profit (LKR Million)	%	Square Value
Dialog	120,141.00	53.91	2,906.28	12,002.00	47.30	2,237.29
SLTMobitel	91,119.00	40.89	1,671.99	7,881.00	31.06	964.72
Airtel	11,563.00	5.18	26.83	5,487.00	21.62	467.42
Total	**222,823.00**	**100**	**4605.1**	**25,370.00**	**100**	**3,669.43**

Author's calculations

Collectively, our data analysis offers invaluable insights into the factors influencing customer satisfaction within the telecommunication services sector and illuminates the market concentration of the industry. These findings serve as a compass for telecommunication firms, aiding them in enhancing service quality and comprehending the competitive dynamics within the industry.

CR_2 = Σ*si* (revenue)

si **= (qi/Q)*100%**

= [(120,141+91,119)/222,823]*100%

= **99.81%**

CR_2 = Σ*si* (profit)

si **= (qi/Q)*100%**

= [(12,002+7,881)/25,370]*100%

= **78.37%**

Our analysis reveals that a substantial proportion of the telecommunication industry's revenue and profit is concentrated in the hands of two prominent service providers, Dialog and SLTMobitel, capturing 99.81 percent of the industry's revenue and 78.37 percent of its profit. This underscores their dominant position in the market and their substantial influence over the industry's financial performance.

To further gauge the market structure, we employed the Herfindahl-Hirschman Index (HHI), a commonly used measure for assessing market concentration. The HHI values calculated for market revenue and profit are 4,605.1 and 3,669.43, respectively. These values suggest that the telecommunication industry in Sri Lanka does not exhibit a monopolistic market structure, as the HHI falls below the threshold typically associated with monopolistic concentration. Instead, the market appears to possess a diversified structure, with multiple players competing for market share.

In pursuit of a comprehensive understanding of our target population, we collected socio-economic data encompassing factors such as educational status, family size, income, occupation, monthly household income, and expenditure. Our survey involved 419 respondents from diverse regions across the country, with a specific focus on two telecommunication services: telephone service and internet service.

Upon analyzing the number of telecommunication service users and their levels of satisfaction, we observed certain discrepancies. Significantly, Dialog emerged as the service provider garnering the highest customer satisfaction levels among all market participants.

"In our area, we often face problems with our internet & telephone connection. However, we can use Dialog without any issues." - Respondent-(Google Form Responses)

"I have two SIM cards. I used another SIM card before, but I found out about Dialog's different plans and bought one of those as well. Now I enjoy different services with a minimum cost per month". - Respondent-(Google Form Responses)

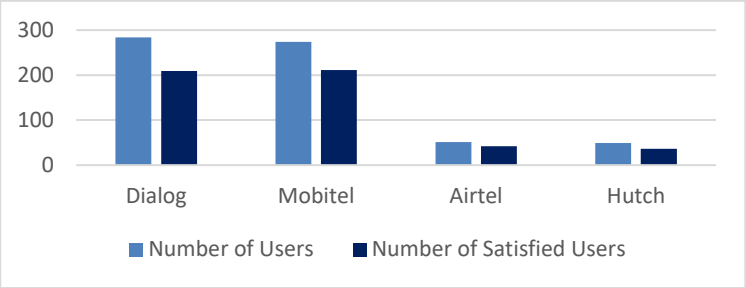

Figure 01: Telecommunication Service Users

Source: Survey data

Specifically, concerning telephone services, 175 respondents expressed satisfaction, while 47 respondents reported dissatisfaction. The primary reasons of the dissatisfied respondents included elevated pricing, inadequate facilities, and limited network coverage. Notably, one respondent highlighted that Mobitel often outperforms Dialog in terms of coverage, while others suggested that fiber lines offer superior speed.

Table 09: Level of Satisfaction with Telephone Services

Level of Satisfaction	Number of Telephone Service Respondents	Number of Internet Service Respondents
1-Highly dissatisfied	19	20
2-Dissatisfied	47	42
3-Neutral	144	116
4-Satisfied	175	191
5-Highly satisfied	34	50

Source: Survey data

In the realm of network services, 191 respondents expressed satisfaction, with 42 respondents expressing dissatisfaction. Remarkably, a majority of individuals indicated overall satisfaction with both services. Dissatisfaction with internet services was primarily attributed to factors such as poor customer care, network instability, and high costs. Some respondents also expressed concerns about the comparatively elevated cost of internet services in Sri Lanka compared to other nations. Additionally, there were instances where internet packages failed to provide sufficient data, leading to unexpected additional charges.

“I used to use data cards for the internet, but nowadays, they don't give enough data, and it runs out too fast. So, I switched to packages. Some of them are really expensive, and I can't afford them.”

-Respondent-(Google Form Responses)

“Some customer services can be really frustrating. They take a long time to reply, and sometimes they're rude about our issues. It can take hours to solve the problem”.

-Respondent-(Google Form Responses)

These findings offer a window into the levels of satisfaction and the underlying reasons for dissatisfaction among users of telephone and internet services. The insights garnered from this analysis are instrumental for telecommunication companies and policymakers, aiding them in pinpointing areas for enhancement and addressing consumer concerns. By addressing issues related to pricing, facilities, network coverage, customer care, and service quality, service providers can elevate customer satisfaction and enhance the overall user experience.

CONCLUSION AND POLICY INTERPRETATIONS

This study aimed to investigate the telecommunication industry in Sri Lanka, with a dual focus on market concentration and customer satisfaction. Our discoveries indicate that a significant portion of industry profit is concentrated among two major telecommunication service providers, Dialog and SLTMobitel. Nevertheless, as we delve into the Herfindahl Hirschman Index (HHI) and Concentration Ratio (CR4) analysis, we find no traces of monopolistic tendencies within this telecommunication sector.

When analyzing the market dynamics, the study identified the several factors that significantly influence customer satisfaction for telephone and internet services. Pricing strategies, promotional endeavors, peer influence, and the reliability of internet connectivity emerge as pivotal elements. These elements become crucial, especially in the context of COVID-19 pandemic, which has heightened the demand for telecommunication services increased with the remote work and online learning.

In this realm, some telecom entities in Sri Lanka operate in close coordination with the government. They are directly influenced by government decisions. The industry dynamics have seen mergers and acquisitions, such as the case of Hutch and Etisalat. These dynamics underscore the indispensability of understanding market behaviors and nature of the evolving industry.

Given the crowded nature of Sri Lanka's telecommunication industry, where five mobile operators serve a population of 22 million, maintaining customer satisfaction is essential for industry stability. With customers possessing an array of alternatives, firms must prioritize actions to improve customer satisfaction and address shortcomings. The study reveals that customer care services are a primary concern for customers, highlighting the need for improvements in this area. Enhancing the efficiency of customer service and adopting customer-friendly techniques should be a priority.

Telecommunication firms should establish effective feedback systems to capture customer insights, enabling the identification of strengths and weaknesses in their services. This fosters an environment of continual quality enhancement.

Furthermore, developing new products and services can contribute to market stability and customer satisfaction. Transparency is crucial, and telecommunication firms should ensure that all necessary information is publicly available and accessible to customers.

Promotional events play a significant role in customer satisfaction, and network stability is a major concern for customers. Therefore, telecommunication firms should focus on improving promotional events and network stability to attract and retain customers. Creative and compelling promotional campaigns, eye-catching advertisements, and tailored internet packages for educational institutions can prove effective strategies. Furthermore, investing in research and development stimulates innovation and the discovery of diversified products and services.

Extending telecommunication infrastructure, especially to remote areas with inadequate signal coverage, becomes indispensable to promote equal access and inclusivity in the nation's development process.

It is imperative to acknowledge the study's limitations, including the constraints posed by the limited availability of financial data for select telecommunication firms. Future research avenues could explore additional variables, such as the educational background of customers, which may influence customer satisfaction.

In conclusion, by understanding market concentration, customer satisfaction, and addressing key policy suggestions, the telecommunication industry in Sri Lanka can strive towards improved service quality, enhanced customer experience, and sustainable growth.

The implications of the findings derived from this study are poised to contribute significantly to an enhanced comprehension of the drivers underpinning customer satisfaction within the telecommunication industry. Moreover, these insights can serve as a valuable resource for telecommunication firms, enabling them to refine and optimize their service offerings to better align with and fulfill the expectations of their customer base.

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