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STRIDES – A STUDENTS' JOURNAL OF SHRI RAM COLLEGE OF COMMERCE

ISSN 2581-4931 (PRINT)

Shri Ram College of Commerce is well known for its academic excellence and dedicated approach towards dissemination of knowledge in the academic world. The college appreciates the role of research in education and is committed to developing an inclination towards research in both faculty and students. In this pursuit, the college has taken the initiative to launch a new Journal named 'Strides – A Students' Journal of Shri Ram College of Commerce'.

ABOUT THE JOURNAL

It is a double blind reviewed bi-annual Journal launched exclusively to encourage students to pursue research on the contemporary topics and issues in the area of commerce, economics, management, governance, polices etc. The journal provides an opportunity to the students and faculty of Shri Ram College of Commerce to publish their academic research work.

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The following guidelines are to be carefully adhered by the students before final submission of the manuscript. The submitted manuscripts not conforming to the following guidelines are not taken into consideration for any further processing.

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c) Abstract
d) Keywords

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The abstract should capture the essence of the article and entice the reader. It should typically be of 100 -150 words, and in Italics.

Font type and word limit

The research paper is to be typed on A-4 size paper with single line spacing. The complete length of the paper should not exceed 5000 words including endnotes and references. The font size should be 12 and font style should be Times New Roman.

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Endnotes should be serially arranged at the end of the article well before the references and after conclusion.

Table, Figures, Graphs

The first letter of the caption for table, figure, graph, diagram, picture etc. should be in capital letter and the other words should be in small letter - e.g. Table-1: Demographic Data of Delhi, Figure-1: Pictorial Presentation of Population etc.

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The authors of best three papers from every Issue are awarded – First Prize, Second Prize and Third Prize on the SRCC Annual Day.

Principal's Message

The mission statement of the college signifying the existence and its road map to the achievement of its vision, reads as:

"To achieve and sustain excellence in teaching and research, enrich local, national and international communities through our research, improve skills of alumni, and to publish academic and educational resources"

To achieve and promote excellence in publications and applied research, the college has taken the initiative to launch a new journal exclusively to publish students' research papers and articles. It will be an add-on to the enriched catalogue of college publications and academic literature.

The Journal has provided an opportunity to the students of our college to focus on research. Since the students were not opened to the research methodologies at the undergraduate level, they were mentored by experienced faculty of our college. Simultaneously, their articles were also reviewed by the referees and tested for plagiarism before publication. After reporting all the suggestions recommended by the referees, the articles were revised and then finally published. The college had successfully released the foundation issue of the Journal **"Strides - A Students' Journal of Shri Ram College of Commerce, Volume 1, Issue 1, 2016-17"** on the occasion of 91st Annual Day of the College held on 13th April, 2017. The Journal was released by **Shri Prakash Javadekar, Honb'le Union Minister of Human Resource Development, Government of India.**

I would like to congratulate the students whose papers are published in this issue of the journal and simultaneously encourage all the students to contribute their research papers and articles for the successive issues of the Journal.

Best wishes for their future endeavors.

Prof. Simrit Kaur
Principal

Editor's Message

Shri Ram College of Commerce is well known for its academic excellence and dedicated approach towards dissemination of knowledge in the academic world. The college appreciates the role of research in education and is committed to developing an inclination towards research in both faculty and students. In this pursuit, the college has taken the initiative to launch a new Journal named 'Strides - A Students' Journal of Shri Ram College of Commerce' to encourage students to pursue research under the guidance of the faculty of Shri Ram College of Commerce.

It is a bi-annual Journal launched exclusively to publish academic research papers and articles by the students on contemporary topics and issues in the area of commerce, economics, management, governance, policies etc.

In order to maintain the high standards of publication, COPE (Committee On Publication Ethics) has been constituted. The COPE shall be the apex authority to take all the decisions related to the publication of research papers and articles in Strides. The decision of COPE shall be final and binding.

To maintain the high academic standards, academic ethics and academic integrity, a rigorous process of double blind review of research papers is followed along with screening of plagiarism of each manuscript received by the COPE for publication. The research work published in Strides is original and not published or presented at any other public forum.

The foundation issue of the Journal **"Strides - A Students' Journal of Shri Ram College of Commerce, Volume 1, Issue 1, 2016-17"** was successfully released on 91st Annual Day of SRCC held on 13th April, 2017 by **Shri Prakash Javadekar, Honb'le Union Minister of Human Resource Development, Government of India.**

The successive Issues of 'Strides - A Students' Journal of Shri Ram College of Commerce' shall be bi-annually released.

I congratulate all the students whose research papers are published in this Issue of Strides and express my sincere thanks to their mentors and referees.

Dr. Santosh Kumari
Editor

STRIDES - A STUDENTS' JOURNAL OF SHRI RAM COLLEGE OF COMMERCE

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RESEARCH PAPERS

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Delhi Metro Rail Corporation Ltd.: An Analysis of Financial Aspects and Fare Hike

Abstract

To understand the financial competence of the Mass Rapid Transport System, the paper analyses the past 10 years' financial statements of Delhi Metro and reviews the effectiveness of the fare hike of 2016.

Statistical methods and trend analysis have been employed to examine the profitability issues of operating the Metro Rail on PPP model and exploring different ways to increase the total revenue. The findings suggest that such infrastructure projects do not generate sufficient returns for the private players to attract their investment. Our findings indicate that the fare hike of 2016 was worthwhile in boosting the fare revenues however further raising the fares can severely affect the ridership. DMRC can expand its operations in the future through borrowings attributing to its lower debt equity ratio. Though DMRC has not been able to break even till now but it possesses the potential to augment its operating profits in the future.

Keywords: Funding Model,Fare-box and Non-fare-box revenues, Ridership, High Costs, Finance Cost, Metro Rail Policy

REVIEW OF LITERATURE

There are a number of studies that shed light on several aspects of the Mass Rapid Transport System worldwide. Analytical studies on Delhi metro evaluate its economic and environmental benefits, efficiency in operations, level of customer satisfaction, examining issues with PPP projects and management strategies for successful operation of the Metro system. Singh, N. and Ravi, R., (2018) wrote a paper titled "Riding on Debt: Financial Analysis of Delhi Metro after Phase III" focusing on the impact of debt on the financial performance of DMRC. Advani, M., & Tiwari, G. (2005) evaluated in detail the Delhi Metro Transport System in terms of its capacity, commuters perspective, travel time and accessibility.

An interesting study was conducted titled "Social Cost-Benefit analysis of Delhi Metro" by authors from the Institute of Economic growth, Delhi University Enclave that analysed the benefits and financial costs incurred by the introduction of the Mass Rapid Transport System. The paper extensively covers various aspects of the Metro system including the fare sensitivity of ridership, estimation of the daily trips by passengers, estimation of the financial flows and revenue, reduction in vehicles on road and fuel savings. Annual revenue, investment flows, operation and maintenance costs were the important parameters taken into consideration to conduct the research. The study estimated that the financial cost-benefit ratio of DMRC stands at "2.30 and 1.92 at 8 percent and 10 percent discount rates respectively" and the financial internal rate of return was estimated at 17 percent. It also concluded that "the shares of debt, equity and internal resource mobilization in investments made on Metro are 60, 30 and 10 percent, respectively"(M N Murty et al., 2006)

Murty and Goldar, (2006) conducted the evaluation of investment projects economically in a project sponsored by the Planning Commission. A study conducted by a civil servant, posted with the Planning Commission of Delhi analysed the reasons for the failure of the Public Private Partnership Model to develop the Delhi Airport Metro Express. It observed that India faces a lower rate in cancellation of infrastructure PPP projects as compared to the worldwide rate for developing countries. According to the World Bank database, "less than 10% of the 5,783 PPP projects in developing countries have been cancelled till now" whereas in India "only 6 of the 725 projects have been cancelled" which is less than 1%. This reflects the willingness of the state to continue with the service provision to escape payment liabilities on termination and to maintain public relations. (Kumar V Pratap, 2013)

A study was conducted to find out the level of satisfaction of the commuters for platform related services. The results obtained through Chi square test establish 5% level of significance, which endorses the idea of a "significant relationship between demographic variables and variables causing satisfaction of commuters for Platform services." (Govind Nath Srivastava & Ranjan Upadhyaya, 2016)

Lather and Mohan, (2007) studied the relationship between the level of commitment and personal efficacy of associates of DMRC. Arora, S. (2019) evaluated the failing transit ridership of the Delhi Metro by examining various factors and concluded 'Fare revision' as the major factor. Kirti Bhandari, Hirokazu Kato & Yoshitsugu Hayashi (2011) studied the equity evaluation of Delhi Metro and concluded that Metro has led to a positive impact on mobility and accessibility.

OBJECTIVES OF STUDY

- To analyse the financial statements of DMRC and assess its financial soundness
- To calculate the yield generated by DMRC and check whether it can operate under the PPP Model
- To analyse the fare revision of 2016 and its impact on fare-box revenue and ridership
- To recommend measures to improve the operating profits of DMRC

INTRODUCTION

The Metro Rail System in India is not only a subsidised urban transportation system but also provides a host of social, environmental and economic benefits. The development of Metro Rail Transport in Delhi in the contemporary times has contributed majorly in addressing various issues, revolutionized the transport system and provided multiple benefits: controlling pollution, lessening traffic congestion, time and cost efficiency in routine travel and saving of fuel. Currently the DMRC boasts of a massive and well-connected network of around 389 Km with 285 stations, many of them equipped with roof top solar power plants (DMRC, n.d.).

The Delhi Metro Rail Corporation Limited was registered on 3rd May 1995 under the Companies Act, 1956 with equal equity contribution of the Central Government and the Government of National Capital Territory of Delhi (GNCTD).

It is an epitome of a world-class Mass Rapid Transport System (MRTS) completed before time and within budgeted cost. DMRC has been certified by the United Nations for contributing towards reducing global warming as it lessens pollution levels in the city by 6.3 lakh tons every year. It is also the first ever railway project in the world to claim carbon credits for regenerative braking (DMRC, n.d.).

The Metro Rail Policy 2017 approved by the Union Cabinet insists a shift from the current 'Financial Internal Rate of Return of 8%' to 'Economic Internal Rate of Return of 14%' "in line with global practices" (Press Information Bureau, 2017). The new policy requires the participation of private players in metro projects to be eligible to avail the central assistance and it also demands more commitment from the states to encourage public- private partnerships (PPP). This poses the question of attractiveness of such capital-intensive projects for the private investors for allocation of funds.

RESEARCH METHODOLOGY

The data used in this study has been collected from the Annual Audited Financial Statements of DMRC published by DMRC as available on the corporation's website. Other reports like the Sustainability Report and the Funding Report by DMRC have also been referred to for this academic study.

The data analysed of past ten years performance of DMRC has been worked out to produce charts and graphs. The techniques used to analyse the data and draw conclusions consist of the statistical and financial management tools such as simple average, ratio analysis, correlation, etc.

Other research methodologies employed in this research for financial analysis include the trend analysis (Time series) and regression analysis.

FINANCIAL ANALYSIS PARAMETERS

A. FUNDING MODEL

The Funding Model of DMRC is reflective of various sources of sustainable finance raised by the corporation to achieve its infrastructural goals. Understanding the funding of the corporation will enable us to know the stakeholders of the company and give an insight about its cost of capital.

Table-1: Cost and Funding Plan for Phase- I, II & III

Source of funds	Phase I	Phase II	Phase III[1]
JICA Loan	60%	54.47%	48.57%
GOI Equity	14%	16.39%	10.04%
GNCTD Equity	14%	16.39%	10.04%
Property Development	7%	5.59%	7.34%
Interest free subordinate debt towards land cost	5%	3.83%	-
Grant by HUDA	-	0.59%	-
Interest free subordinate debt for central taxes	-	2.73%	-
Land and Central tax	-	-	13.39%
Grant	-	-	10.62%
Total Completion Cost (₹ in crores)	10571	18783	41079

Source: http://www.delhimetrorail.com/otherdocuments/funding.pdf

The DMRC development has taken place in phases and each phase has been financed differently with contributions coming from the Government of Japan by way of a soft loan by the Japan International Cooperation Agency (JICA), the Central Government and the State Government as well as other loans and grants. The proportion of finance sources in the three phases is shown in Table 1. The Phase IV has also been initiated and the tenders have been floated for the year 2019-20.

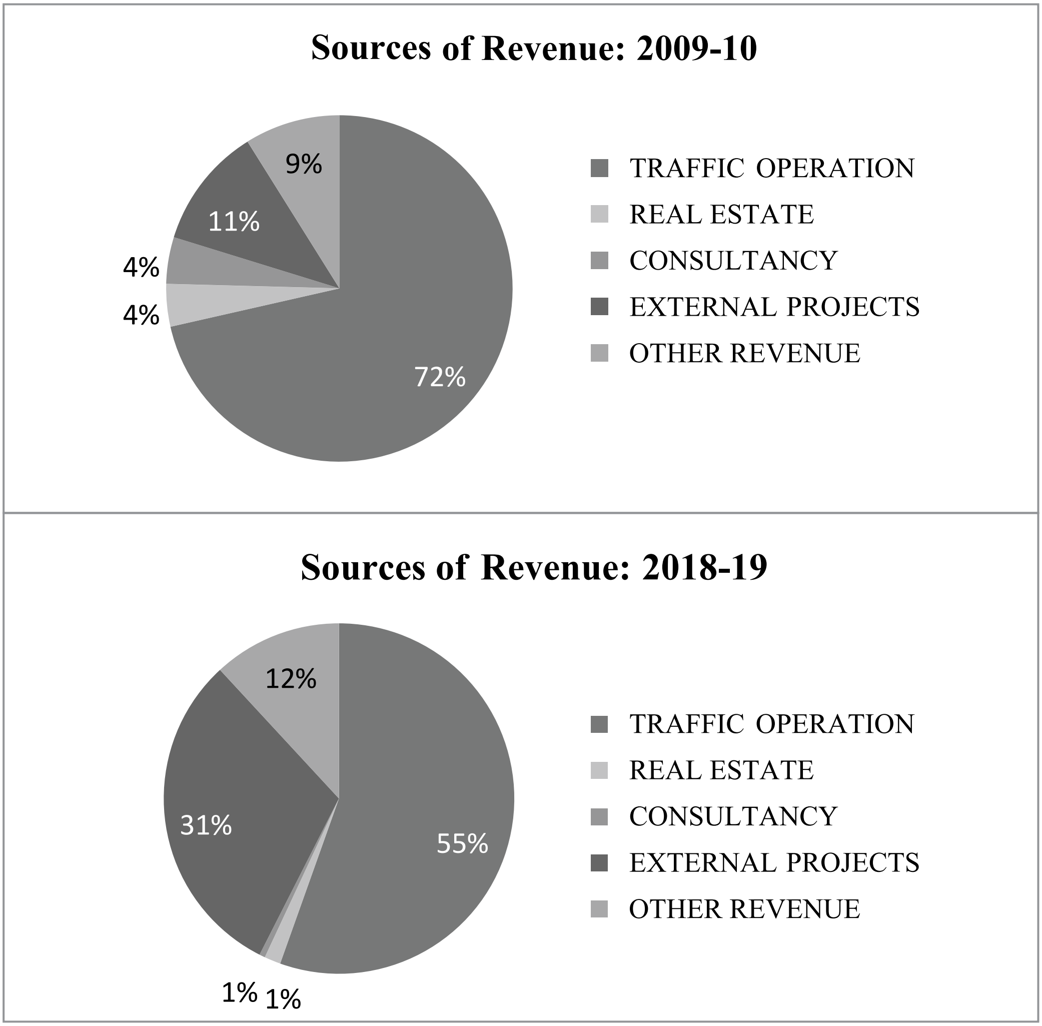
B. INCOME STATEMENT ITEMS

1. REVENUE

DMRC generates its revenue from different segments that can be classified as fare-box and non-fare box. Its principal business segments are revenue from Traffic Operations (Metro), Real Estate, Consultancy and External Projects. To increase revenue from all the sources, DMRC has taken all measures to widen its scope of operations and generate higher revenues. Since 2016, the fare has remained static and the focus is to boost ridership in augmenting fare-box revenue.

[1] Phase III figures are estimated costs taken from http://www.delhimetrorail.com/otherdocuments/funding.pdf

Figure-1: Sources of Revenue



Source: Data from DMRC Annual Reports, DMRC

The above two pie charts depict the share of different revenues sources in the respective years. It can be observed that the earnings from non-fare box sources particularly external projects and other revenue has increased in the past ten years. Other revenue of DMRC includes interest from bank deposits, income from sale of carbon credits, income from training and recruitment and most importantly advertisement revenues which it earns by allowing different companies to market their products on the walls of Metro Stations and Metro Coaches. Company's income from consultancy and from real estate has decreased over the years. Hence this calls for more attention to these non-fare box sources in augmenting the total revenues.

TIME SERIES ANALYSIS

The Time series analysis is helpful to study the past behaviour of a variable under consideration. Here the two variables analysed are the Total Revenue and Total Expenditure of DMRC for the past ten years.

Table-2: Total Revenue and Total Expenditure

(in lakhs)

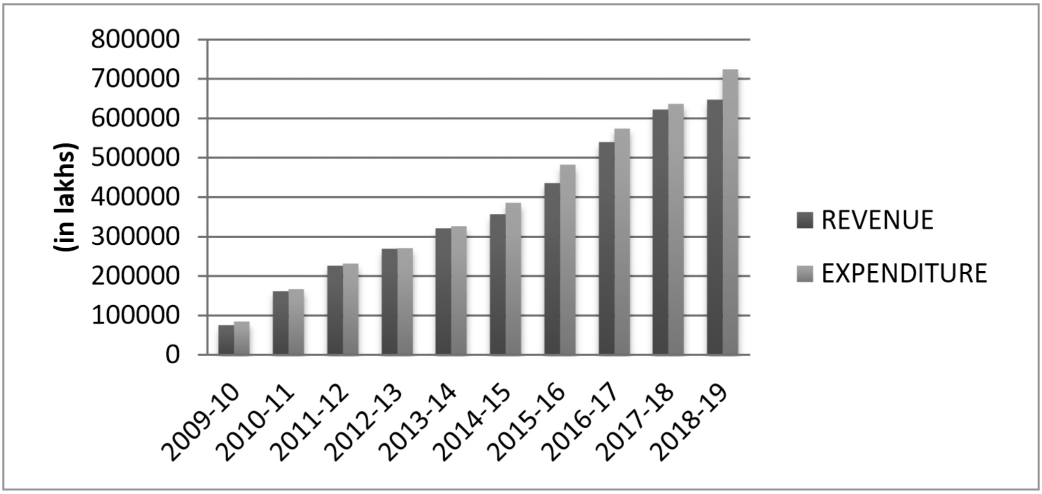
Year	TR	% Increase	TE	% Increase
2009-10	73786	1.86	82736	28.21
2010-11	160803	117.93	165489	100.02
2011-12	224777	39.78	230289	39.16
2012-13	268748	19.56	270232	17.34
2013-14	319802	19.00	325836	20.58
2014-15	356227	11.39	383783	17.78
2015-16	434425	21.95	481093	25.36
2016-17	538799	24.03	573614	19.23
2017-18	621105	15.28	635604	10.81
2018-19	646152	4.03	722584	13.68

Source: Data from DMRC Annual Reports, DMRC

As per the Table 2, DMRC has not been able to breakeven since past ten years as its total expenditures have always been greater than its revenues. The total revenue has shown an increasing trend in the past ten years and is growing at an average rate of 24.46% whereas cost is growing by 27.32%. The expenditures are on the higher side due to increasing costs like employee expenses, depreciation and finance cost. DMRC has cited rise in operating costs including more than 90% increase in electricity tariff[2]. There was a tremendous increase in depreciation by 40.6% in the last year. As we can see from the Graph 2 the gap between total revenue and total expenditure has increased over the past years.

[2] Moushumi Das Gupta, May 08, 2017, Hindustan Times, https://m.hindustantimes.com/delhi/delhi-metro-fares-set-to-go-up-thisweek-minimum-ticket-price-rs-10-and-maximum-rs-50/story-lH0wh4B136dp9ex9CGUYCM.html

Figure-2: Gap between Revenue and Expenditure



Source: Data from DMRC Annual Reports, DMRC

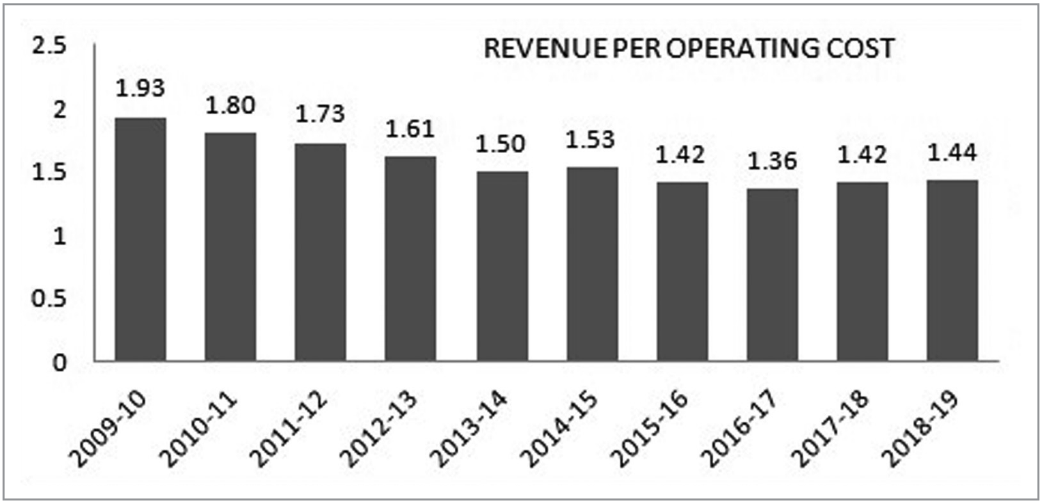
REVENUE PER OPERATING EXPENSES

The revenue per operating costs gives the value of the earnings of company by spending Rs.1. Higher the value of this ratio, the more is the efficiency of the operations.

The total commercial revenue has consistently grown over the past ten years however as seen in Graph 3, the revenue per operating cost had registered a declining trend in the initial period. The key reason for this was the static fares from the period 2009 to 2016 and the rising operating costs that were increasing at a high average rate of 28.4%. The reasons attributable to such rising operating costs relate to electricity cost, maintenance, administration, staff expenses etc.

In the recent years, revenue per operating cost is growing which indicates rise in total revenues. The reasons behind this increase are - fare revision in 2016, increase in revenues from non-fare box sources and decline in the rate of increasing operating costs which are now increasing at an average rate of 14.2%.

Figure-3: Revenue Earned per Operating Expenses[3]



Source: Data from DMRC Annual Reports, DMRC

2. EXPENDITURE

HIGH COSTS

The analysis of expenditures of DMRC reflects the presence of certain costs that wipe out major part of operating profits. These costs form part of high costs and have been analysed separately. High costs are those costs that form the major chunk of the total expenditures and are the major drivers for wiping out the profits of the company. In case of DMRC, operational expenses, employee benefit expenses and finance cost comprise major part of total expenditure. Hence, together they have been referred to as High Costs.

The high costs as percentage of total revenue and total expenditure have remained within the range of 55-67% in the past 10 years. This shows that with the rising revenues and expenditures over the years, the high costs have also increased proportionately. This calls for an urgent need to curb such expenditures in the pursuit of achieving the breakeven point.

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[3] Operating Expenses includes operational expenses, employee benefit expenses and other expenses

Table-3: Analysis of High Costs[4]

Year	High Costs	Total Revenue (TR)	Total Expenditure (TE)	HC/TR	HC/TE
2009-10	49772	73786	82735.59	67.45%	60.16%
2010-11	95814	160803	165489.37	59.58%	57.90%
2011-12	127414	224777	230288.54	56.68%	55.33%
2012-13	170296	268748	270231.94	63.37%	63.02%
2013-14	214130	319802	325835.97	66.96%	65.72%
2014-15	224409	356227	383782.85	63.00%	58.47%
2015-16	294614	434425	481093.21	67.82%	61.24%
2016-17	380242	538799	573613.98	70.57%	66.29%
2017-18	417973	621105	635603.57	67.30%	65.76%
2018-19	431275	646152	722584.49	66.75%	59.69%

Source: Data based on DMRC Annual Reports, DMRC

FINANCE COST ANALYSIS

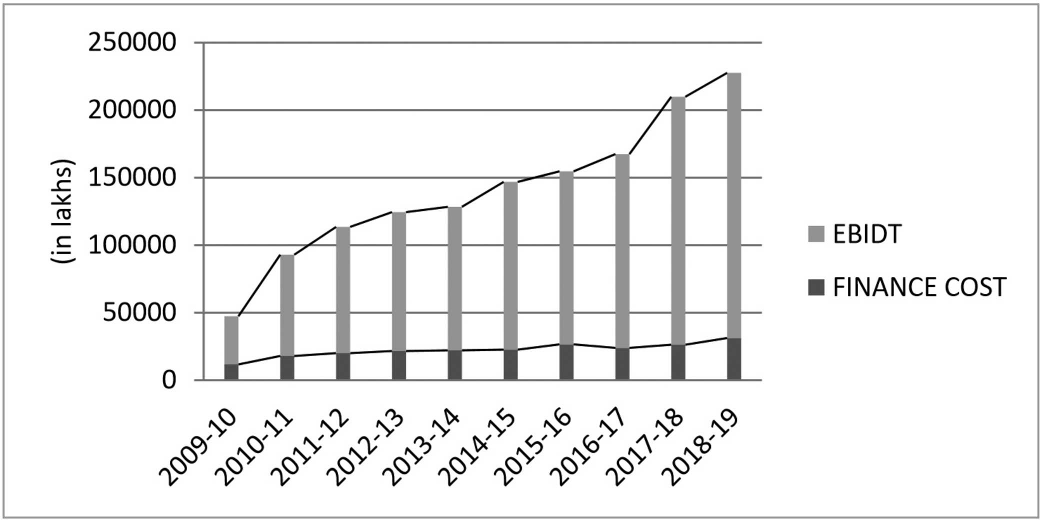
The DMRC operations have been financed in phases, majorly through external borrowings.

This led to the huge burden of repayment of principal with interests, though DMRC is charged at a nominal rate. The company has serviced the debt obligations timely and has planned to borrow more for the next phase. Such repayments have formed the part of finance cost which has remained in the same range in the recent years.

Due to rise in the operating profits, finance cost as a percentage of EBITDA has been declining since the past ten years. Finance cost includes interest payment and commitment charges to JICA, finance charges, interest on enhanced compensation on land and interest cost (Fair Value on Security Deposit /Retention Money).

[4] High Cost includes operational expenses, employee benefit expenses and finance cost

Figure-4: Part of EBIDT Wiped Out by Finance Cost



Source: Data from DMRC Annual Reports, DMRC

C. RATIO ANALYSIS

RETURN ON INVESTMENT

Return on Investment is the ratio between operating profits and the cost of investment. A higher ROI indicates that the gains from the investment are favourable as compared to its cost and is used as a good parameter to evaluate the efficiency of the investment. Private players tend to invest their capital into projects that give higher ROI and are profitable in the long run.

Table 4 shows the Return on Investment that is miniscule and below 3% in the past ten years. The key reason for such performance is the low fares that leave a very meagre chance of recovery of capital investment. The big obstacle that the corporation faces is the ceiling on fares, which has to be maintained to keep them at a level that doesn't hamper the ridership.

The metro industry involves lot of high costs in terms of infrastructure and operations and hence the fixed capital investment is difficult to recover with low operating returns. Hence this makes DMRC not suitable to be operated under the PPP (Public- Private Partnership) Model as it would not be able to yield the required returns.

Table-4: Return on Investment

(in lakhs)

Year	EBIDTA	Total Investment [5]	ROI %
2009-10	35590.32	2526750.81	1.41
2010-11	75049.58	2917164.51	2.57
2011-12	93335.20	3245904.3	2.88
2012-13	102783.76	3621659.26	2.84
2013-14	106208.29	4107219.46	2.59
2014-15	123990.05	4623891.39	2.68
2015-16	128173.90	5505543.33	2.33
2016-17	143309.36	6077168.09	2.36
2017-18	183571.57	6542820.47	2.81
2018-19	196274.52	6885126.12	2.85

Source: Data from DMRC Annual Reports, DMRC

DEBT-EQUITY RATIO

The Debt to Equity[6] (D/E) Ratio measures the relative proportion of debt and shareholder's equity used to finance the company's assets. It is the measure of degree to which a company finances its operation with debt as compared to the owner's equity.

Table-5: Debt Equity Ratio

Year	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Debt: Equity	1.36	1.27	1.23	1.15	1.18	1.16	1.15	1.32	1.43	1.5

Source: DMRC Annual Report (2018-19), DMRC

The debt equity ratio of the company has remained below the industry average over the years which indicates sound financial health of the company as well as its future fund-raising capabilities via debt financing. This also highlights that

[5] Total Investment = Net Worth of the company + Borrowings

[6] Debt to Equity (D/E) Ratio = Total Debt/ Equity

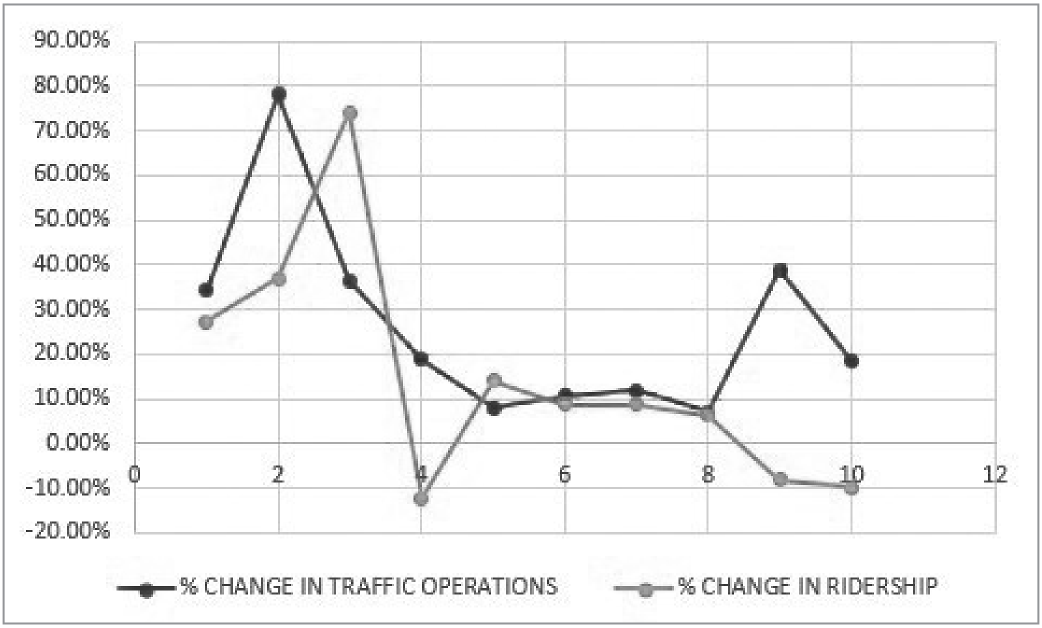
DMRC doesn't depend excessively on borrowed funds and is able to meet its financial obligations through other sources of funds as well.

CORRELATION BETWEEN RIDERSHIP & REVENUE FROM TRAFFIC OPERATIONS

The annual ridership impacts the revenue from traffic operations and hence it becomes essential to study the relationship between the two to arrive at meaningful conclusions. For the said analysis the percentage change in both the variables has been taken into consideration.

As per the Figure 5, annual ridership and revenue from traffic operations are positively correlated. Correlation worked out for the past ten years is 0.7 which reflects a strong relationship between the two variables. So a rise or fall in one variable leads to the change in the other variable in the same direction. But the analysis of recent years showcases a different trend.

Figure-5: Percentage Change in Ridership & Revenue from Traffic Operations



Source: Data from DMRC Annual Reports, DMRC and DMRC Sustainability Report, DMRC

As it can be inferred from above, since 2016 after the fare revision, though the ridership has declined but the revenues have still grown giving negative correlation of -0.988 for the last 3 years. To understand this phenomenon, the time period between 8th and 10th year is divided into two phases: Phase I[7] and Phase II[8].

In Phase I, the years under study are 2016-17 and 2017-18. In this period immediately following the fare revision, the revenues witnessed an upsurge despite the percentage decline in the ridership. This can be attributable to the fact that though the ridership had fallen but the increased fares were sufficient enough to push up the total traffic revenues to a higher value.

In Phase II, the years under consideration are 2017-18 and 2018-19. In this phase after reaching the peak, DMRC witnesses a fall in the percentage of revenues with further fall in the ridership. This is due to the continued percentage decline in the ridership that severely impacted the fare box revenues at this stage.

Another reason that can be attributable for this trend is the extra discount offered to the riders. As per the notification, with a view to encourage ridership on Sundays and National Holidays (26th January, 15th August and 2nd October), DMRC approved special discounted fares[9] in 2017. Also to avoid overcrowding during peak hours, an additional 10% discount can be availed by riders using Smart Card who exit from metro system during off peak hours.

Hence this analysis gives an insight regarding the change in fare- box revenues and ridership and their behaviour as impacted by the change in fare policy.

ANALYSING THE FARE REVISION OF 2016

What would have been the revenue from traffic operations had the fare revision not taken place?

DMRC adopted a new fare policy in 2016 which led to a fare hike and subsequently impacted the percentage increase in ridership. Had such fare revision not taken place and DMRC would have continued with the old fares, the values of fare box revenue and annual ridership would have been different. Through this analysis we aim to assess the success of this fare policy in terms of its impact on fare box revenue.

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[7] The period of 8-10 years has been divided into 2 parts to discuss the change in revenues and ridership in phases. Phase I is from the beginning to the mid period.

[8] Phase II is from the mid to the end of the said period

[9] Refer to the Appendix for the tables depicting fare charged by DMRC, DMRC Press Release: http://www.delhimetrorail.com/press_reldetails.aspx?id=jkOjxn1IG6Ylld)

To do the comparative analysis of the impact of fare revision on the revenue from traffic operations and the ridership, the values of past years were taken in order to project the values for the year 2018-19. The actual figures from the year 2004-05 to 2014-15 have been taken under the analysis to extrapolate the figures. The projected values are computed below.

Table-6: Projected Revenue from Traffic Operations

(in lakhs)

Year	Average Ridership	Annual Ridership	Revenue from Traffic Operations	RTO/R* (₹)
2004-05	1.2	438	5350.51	12.2
2005-06	2.68	978.2	11328	11.6
2006-07	4.84	1766.6	22266.26	12.6
2007-08	6.25	2281.25	28338.32	12.4
2008-09	7.22	2635.3	39286.6	14.9
2009-10	9.19	3354.35	52720.12	15.7
2010-11	12.59	4595.35	93865.23	20.4
2011-12	16.6	6059	128157.32	21.2
2012-13	19.26	7029.9	152374.25	21.7
2013-14	21.92	8000.8	164539.74	20.6
2014-15	23.86	8708.9	182032.05	20.9
2018-19[10]	32.66	11920.27	325934.67	27.34

Source: Data from DMRC Annual Reports, DMRC and DMRC Sustainability Report, DMRC

**RTO/R stands for Revenue from Traffic Operations per Rider*

As it can be inferred from the Table 6, the extrapolated figures of daily revenue per rider for the year 2018-19 is 27.34 which is lower than the actual current value of 42.96[11]. This is due to the higher value in the numerator and lower value in the denominator in the current case as compared to the projected values. The actual revenues are 9% higher than the projected while the ridership is 43%[12] less as compared to the projected values.

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[10] The figures for 2018-19 are projected values (see Appendix)

[11] The actual Revenue from Traffic Operations and Ridership for the year 2018-19 are ₹ 358279.63 and 8340.25 respectively. Hence the daily revenue per rider comes out to be 358279.63/8340.25 = ₹ 42.96

[12] Actual values have been taken as the base to arrive at this percentage

As far as the time value of money is concerned (which has not been taken into account in the analysis), the real value of old fares would have gone down and the metro would have become cheaper year by year had no revision in fare taken place. Also, this would have led to overcrowded metros necessitating for an increase in the seating capacity, adding to the total fixed costs.

Hence it can be concluded that had the fare revision of 2016 not taken place, the ridership would have been very high, but the revenues would have stayed below the current level. So, the fare revision was a good and a necessary measure to escalate the revenue base without severely impacting the ridership.

Table-7: Comparative Analysis

Data for 2018-19	Ridership (in lakh)	Revenue from Traffic Operations(₹ in lakh)	RTO/R (₹)
Actual	8340.25	358279.63	42.96
Projected	11920.27	325934.67	27.34

RECOMMENDATIONS

As per the analysis of the financial statements of DMRC and the results obtained from the various parameters, it seems very challenging for the company with the existing fare structure and high input costs to become self-sufficient. The company should focus on increasing its operating profits and pursue to breakeven. For this the following recommendations are proposed:

1. Augment revenue from non-fare box sources to push up the total revenue.

DMRC operates in four business segments namely Traffic Operations, Real Estate, Consultancy, and External Projects. The revenue from External Projects has witnessed a surge in the recent years due to new projects taken up by DMRC. It can further widen its scope by entering into contractual agreements with more organisations in different sectors as well as explore the possibilities of providing services globally and serving other underdeveloped economies. This can prove to be a major revenue generator in the future.

The Real Estate income primarily are the rentals from leasing. Not much information is available about the consultancy services offered by DMRC and it forms the least share of the total revenue. The Management should try to expand the scope of revenues from these services as they hold good potential for raising revenues.

2. Control the rising input costs and reduce the high cost component of the expenditures that wipe out profits.

As per the analysis of the total expenditures, operating expenses form the major part of expenditures and have been rising, which require to be checked. DMRC should lay emphasis on capitalising on private resources, expertise and entrepreneurship, as can be established from the Metro Rail Policy 2017 approved by the Central Government. The Policy says, "Private participation either for complete provision of metro rail or for some unbundled components (like Automatic Fare Collection, Operation & Maintenance of services etc.) will form an essential requirement for all metro rail projects seeking central financial assistance" (Press Information Bureau, 2017).Hence the management can work on outsourcing the aforementioned services and adopting suitable operating model for achieving efficiency and cost reduction.

3. Revenue by way of advertisement (Other Revenue source) holds loads of potential for revenue generation considering the popularity of metro as a means of transport and ample scope of Ad spaces to be given for this purpose. There is already a soaring demand for advertisements by private companies which can be profitably tapped by DMRC.

4. Enhancing corporate governance to achieve effectiveness in operations and reduce losses. For example, the delay in land acquisition poses problems for the expansion of metro and causes increase in operating and construction costs. Such inefficacies can be checked to reduce such costs and bring more efficiency in operations.

CONCLUSION

The analysis and research on the financial data of DMRC brings out a bundle of observations regarding its financial position, stability and sustainability. The low Debt-Equity ratio of the company provides it the financial soundness to borrow more in the future for expanding its operations. DMRC has the scope of increasing its non-fare based revenues and by opting a suitable operating model it can lessen its operating expenses.

The analysis of the fare revision of 2016 leads to the conclusion that it was successful in augmenting the fare-box revenues and was a necessary measure to boost the operating profits. But increasing fares further is not a good option to expand the revenue from operations as that would deter people from using the metro and further lead to the reduction of the fare box revenues. Also, the fares of DMRC cannot be kept more than double of the alternative modes of transport. Though the company has yielded very low returns in the past, but it has the potential to improve its position by pushing up its operating profits.

Studying the case of DMRC helped in understanding the Metro Rail Projects in general and what problems are being faced by them. The Metro Rail models in India lack the profitability factor to attract private investment in capital as they don't yield a return of more than 2-3%. Hence the future of Metro Rail development is through the Centre-State cooperation and soft loan funding by international organisations.

REFERENCES

Advani, M., & Tiwari, G. (2005). Evaluation of Public Transport Systems: Case study of Delhi Metro

https://www.semanticscholar.org/paper/EVALUATION-OF-PUBLIC-TRANSPORT-SYSTEMS%3A-CASE-STUDY-Advani-Tiwari/edf85468b8be20d903251ee9b22badd9da2947b7

Arora, S. (2019). Evaluating the failing transit ridership of the Delhi Metro.

https://www.researchgate.net/publication/334545477_Evaluating_the_failing_transit_ridership_of_the_Delhi_Metro

Delhi Metro Rail Corporation Ltd., (2009-10 to 2018-19) *Audited Annual Report.* Retrieved from: http://www.delhimetrorail.com/annual_report.aspx

Delhi Metro Rail Corporation Ltd., *Introduction.* Retrieved from:

http://www.delhimetrorail.com/about_us.aspx

Delhi Metro Rail Corporation Ltd., *Press Release.* Retrieved from: http://www.delhimetrorail.com/press_reldetails.aspx?id=jkOjxn1IG6Ylld)

Delhi Metro Rail Corporation Ltd., (2015-16) *Sustainability Report.* Retrieved from: http://www.delhimetrorail.com/otherdocuments/Sustainability-Report.pdf

Delhi Metro Rail Corporation Ltd.,*Website, Projects, Funding*. Retrieved from: http://www.delhimetrorail.com/otherdocuments/funding.pdf

Govind Nath Srivastava and Ranjan Upadhyaya (2016). *Measuring Platform Services of Delhi Metro: Commuter satisfaction.* https://search.proquest.com/openview/121ede75932e13cb2b4ff15c3ca7386a/1.pdf?pq-origsite=gscholar&cbl=546310

Kirti Bhandari, Hirokazu Kato & Yoshitsugu Hayashi (2011). *Economic and Equity Evaluation of Delhi Metro.* https://www.tandfonline.com/doi/citedby/10.1080/12265934.2009.9693657?scroll=top&needAccess=true

Kumar V Pratap (2013). *Delhi Airport Metro Fiasco: What Can Be Done to Redeem the Project?* Economic and Political Weekly, 48(49), 18-20. Retrieved from www.jstor.org/stable/24478367

Lather, A. S., & Mohan, S. (2007). A Comparative Study of Executive and Non-Executive Associates of Delhi Metro Rail Corporation for Their Level of Commitment and Personal Efficiency. Vision, 11(4), 13–20. https://doi.org/10.1177/097226290701100402

M N Murty, Kishore Kumar Dhavala, Meenakshi Ghosh and Rashmi Singh (2006) *Social Cost-Benefit Analysis of Delhi Metro.* https://mpra.ub.uni-muenchen.de/1658/

Murty, M. N. & B. N. Goldar (2006), *Economic Evaluation of Investment Projects*, Report of Project Sponsored by Planning Commission, Government of India.

Press Information Bureau- GOI (16-August-2017) *Metro Rail Policy 2017.*

https://pib.gov.in/PressReleasePage.aspx?PRID=1499815

Singh, N., &Ravi, R. (2018). Riding on Debt: Financial Analysis of Delhi Metro after Phase III.

https://www.researchgate.net/publication/328094569_Riding_on_Debt_Financial_Analysis_of_Delhi_Metro_after_Phase_III

APPENDIX

1. Projected Revenues from Traffic Operations

- The figures of average daily ridership for the period 2004-05 to 2014-15 have been extracted from the Sustainability Report of DMRC released by DMRC. The figures of Revenue from Traffic Operations for the said period have been taken from the audited Annual Reports of DMRC.

- The data extracted above has been used to work out the projected values of average daily ridership for the year 2018-19 using the regression model:

$$Y = mX + b$$

where, Y is the dependent variable (Average daily Ridership)

X is the independent variable (Years)

m is the slope of the line

b is the y intercept

- By multiplying the average daily ridership by 365, the annual ridership has been found out.
- The daily Revenue from Traffic Operations per Rider for the years 2004-05 to 2014-15 is found by the following calculation:

$$\frac{\text{Revenues from Traffic Operations}}{\text{Annual Ridership}} = \text{Daily Revenue per Rider}$$

The Regression model has been used again to project the revenues from traffic operations (RTO) per rider per day using

$$Y = mX + b$$

where, Y is the dependent variable (RTO/Rider/day)

X is the independent variable (Years)

- The Projected Annual Ridership is multiplied by the Projected Revenues from Traffic Operations per rider per day (RTO/Rider/day) to arrive at the projected revenue from traffic operations i.e.

Projected RTO = Projected Annual Ridership * Projected RTO/Rider/day

Revised fares of Delhi Metro (Press release by DMRC in 2017)

Existing Fares (All Days)	
Distance zones (KMs.)	Fare (Rs.)
0-2	8.00
2-4	10.00
4-6	12.00
6-9	15.00
9-12	16.00
12-15	18.00
15-18	19.00
18-21	21.00
21-24	22.00
24-27	23.00
27-31	25.00
31-35	27.00
35-39	28.00
39-44	29.00
>44	30.00

Revised Fares (Monday to Saturday)		
Distance zones (KMs.)	Phase I Fare (Rs.)	Phase II Fare (Rs.)
0-2	10.00	10.00
2-5	15.00	20.00
5-12	20.00	30.00
12-21	30.00	40.00
21-32	40.00	50.00
>32	50.00	60.00

Revised Fares for Sundays and National Holidays

Distance zone (Kms)	Phase-I Fare (Rs)	Phase-II Fare (Rs)
0-2	10	10
2-5	10	10
5-12	10	20
12-21	20	30
21-32	30	40
>32	40	50

Source: Press Release, DMRC Website

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HISTORY OF THE JOURNAL

The idea to launch this Journal was discussed in December 2016 by the former Officiating Principal, **Dr. R. P. Rustagi** with **Dr. Santosh Kumari,** the Editor of the Journal. Since the idea appealed to **Dr. Santosh Kumari**, she took the initiative to contribute to SRCC by creating this new academic research Journal and took the responsibility for its Creation, Registration, License and ISSN (International Standard Serial Number) etc. along with *Editorship*. Therefore, **Dr. Santosh Kumari, Assistant Professor in the Department of Commerce, Shri Ram College of Commerce** was appointed as the Editor of the Journal vide. Office Order – SRCC/AD-158/2017 dated March 14, 2017. She meticulously worked hard in creating the concept and developing the structure of the Journal. She introduced the concept of COPE (Committee On Publication Ethics) to maintain the high academic standards of publication.

On behalf of SRCC, **Dr. Santosh Kumari** made every effort in seeking License from Deputy Commissioner of Police (Licensing), Delhi to register the Journal at "The Registrar of Newspapers for India, Ministry of Information and Broadcasting, Government of India". The paper work for seeking license started under the former Officiating Principal, **Dr. R.P. Rustagi** on March 27, 2017. The foundation Issue of the Journal "**Strides – A Students' Journal of Shri Ram College of Commerce, Volume 1, Issue 1, 2016-17**" was successfully released on the 91st Annual Day of SRCC held on April 13, 2017 by **Shri Prakash Javadekar, Honb'le Union Minister of Human Resource Development, Government of India**. The title of the Journal got verified and approved by the Registrar of Newspapers for India, Ministry of Information and Broadcasting, Government of India on April 21, 2017. On September 1, 2017, **Prof. Simrit Kaur** joined SRCC as Principal and signed each and every legal document required for further processing and supported **Dr. Santosh Kumari**.

On December 18, 2017, the College got the license "**License No. - DCP / LIC No. F. 2 (S / 37) Press / 2017"** to publish 'Strides – A Students' Journal of Shri Ram College of Commerce'. Due to change of Printing Press, the License got updated on March 09, 2018. On April 26, 2018, the SRCC Staff Council unanimously appointed **Dr. Santosh Kumari as the 'Editor of Strides**' for the next two academic years.

On April 27, 2018 (The Foundation Day of the College), **Dr. Santosh Kumari** submitted the application for the registration of the Journal. On May 04, 2018, the SRCC received the '**Certificate of Registration**' for ***"Strides – A Students' Journal of Shri Ram College of Commerce"*** and got the **Registration No. DELENG/2018/75093** dated May 04, 2018. ***On behalf of Shri Ram College of Commerce, it was a moment of pride for Dr. Santosh Kumari to receive the 'Certificate of Registration' on May 04, 2018 at the Office of Registrar of Newspapers for India, Ministry of Information and Broadcasting, Government of India (website - www.rni.nic.in).***

On May 07, 2018, **Dr. Santosh Kumari** submitted the application for seeking ISSN (International Standard Serial Number) at "ISSN National Centre – India, National Science Library, NISCAIR (National Institute of Science Communication and Information Resources). Weblink - http://nsl.niscair.res.in/ISSNPROCESS/issn.jsp". Finally, the College received the International Standard Serial Number "**ISSN 2581-4931 (Print)**" **on June 01, 2018.**

We are proud that this journal is an add-on to the enriched catalogue of SRCC's publications and academic literature.

STRIDES - A STUDENTS' JOURNAL OF SHRI RAM COLLEGE OF COMMERCE
ISSN 2581-4931 (Print)

RELEASE OF FOUNDATION ISSUE OF STRIDES

Foundation Issue of the Journal *"Strides - A Students' Journal of Shri Ram College of Commerce, Volume 1, Issue 1, 2016-17"* was successfully released on the 91st Annual Day held on April 13, 2017 by Shri Prakash Javadekar, Honb'le Union Minister of Human Resource Development, Government of India.

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