

# FINANCING THE SOCIOECONOMIC INFRASTRUCTURE FACILITIES IN MUNICIPAL CORPORATION: A CASE STUDY OF BHIWANDI- NIZAMPUR MUNICIPAL CORPORATION, INDIA

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**Abstract:** Every municipal corporation must increase revenue and capital receipts and reduce its expenditure. But in Bhiwandi-Nizampur Municipal Corporation, the revenue receipts are decreasing due to local body tax, grants, rent from other fixed assets. Revenue expenditure is increasing because of salary and allowances to staff, administrative expenses, communication expenses, fees, advertising, repair of roads, computer equipment's, furniture, and transfer from schemes. Capital receipts have decreased due to grants contribution from state and central government, loans, and other liabilities. The capital expenditure is increasing due to contribution of municipal buildings, electrification and street lighting, vehicles. Municipal corporation must find alternative sources of revenue. It must increase the entertainment tax, user fees of various services and rent of municipal buildings and properties. It must reduce expenditure on vehicle allowances and maintenance. The municipal corporation must increase capital expenditure on information technology, roads, street light, water supply, and sanitation. Public-private partnership is important to raise capital to finance various socioeconomic infrastructure projects. State government must invest in various projects to improve standard of living of people in corporation.

**Keywords:** solid waste, electricity, grants

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## 1. INTRODUCTION

In India, urbanization is growing very fast. But it is creating a number of civic issues. Many urban problems that cannot be handled at the center or state level. They could be best handled at the local level. The 74th Constitutional Amendment Act (CAA) in 1992 was promulgated to promote decentralization and strengthen the grass-root level governance. As per the 12th schedule of Article 243W, Urban Local Bodies (ULB) should provide basic urban amenities. This calls for fiscal autonomy along with functional responsibilities (Dave, Forum 2020). Bhiwandi Nizampur Municipal Corporation does not have good socioeconomic infrastructure facilities to its people. It affects the quality of life of people. Municipal corporation must make area more livable and guarantee a better quality of life (Rariane et al. 2021).

Over the period of time, the population of Bhiwandi-Nizampur Municipal Corporation is increasing fast. People from North India, rural Maharashtra are migrating in corporations in search of work and low cost of living. They often prefer to stay in slums and rental housing. Slums do not have any kind of infrastructural facilities. Low and irregular income and services forcing people to live with low quality of infrastructure services. The services such as water supply, electricity, roads, gardens, sanitation, street light are demanded by all people. The business units, services sector, and residential units required 24\*7 hours the basic infrastructural facilities. Municipal corporation is trying to build the infrastructural services in various wards but it has deficiency of capital. The administrative services and its load is increasing in number of wards with growth of population and business units. The expenditure on administrative staff's salary and overtime, vehicle allowances is increasing fast. The Municipal corporation's overall work required various types of communication. The expenses on telephone, postage, and courier charges are increasing over the period of time. Municipal corporation is continuously spending more on the libraries. In every ward office and at community centers, libraries are provided to their people. For various types of work, municipal corporation has to give the advertisement as work tenders, employment, and other public notices in local and state level newspapers. Therefore, expenditure on advertisements have increased fast. The legal fees and double entry accounting system related expenses have also increased of corporation. Due to Goods and services taxes, the types of accounting, software's have also changed. Municipal corporation is spending maximum money on upgradation of the entire system to collect

revenue. The municipality corporation is building and maintaining roads in every ward. Every rainy season, the roads get damage due to heavy traffic of vehicles. There are many godown, garment and textile units as well as companies in corporation area. The vehicles are involving in transport of goods and people. Access to passenger and local trains is not there in corporation area. All kinds of transport depend on auto-rickshaws, trucks and tempos, cars and buses. Therefore, roads get damage easily in all seasons. In some areas, roads are made up of cement concrete. Municipal corporation regularly repairs the sport complex and stadiums. Different types of sports are arranged regularly at the local and regional level in various stadiums. Therefore, the expenses related to sports complex and stadiums have increased over the period of time. Maintenance of vehicle has also grown over the period of time. The grants from state and central government have declined for corporation. Municipal corporation has build various ward level offices to provide various civic amenities to people and firms. But the quality of such services is very low. Due to low resources, the corporation is not spending enough on widening and repairing roads and footpaths. It has resulted in heavy traffic and congestion in the city. The streets are not cleaned every day and it creates the issue of sanitation in city. People often throw solid waste at corner of the roads. It causes the smell, diseases, and growth of rats and mosquitoes. Drinking water supply is inadequate and irregular. It is limited for short periods of time and people. People struggle to get minimum water supply required for family. Municipal corporation has not developed gardens for general population. People in the corporation do not have regular access to recreation and entertainment centers. Garden and parks related expenditure such as electricity, cleanliness, tree plantation, water supply is very low by corporation. The information technology related expenses have increased by corporation but it is very low as compare to requirements. Maximum work of corporation is done through online mode and through computers, laptops and printers. Therefore expenditure on Internet, computers, and printers need to increase. All the administrative expenses over the period of time of the corporation are increasing with employees and population.

The first part of research paper is related to data collection and economic model of revenue and expenditure of corporation. The second last part of the research paper is mainly deal with regression analysis and lastly it gives the policy implication and conclusion.

## 2. DATA

We have collected data from the budgets of Municipal corporation from 2013-14 to 2019-20. The website of the municipal corporation provides the annual budget data from 2013-14 to 2019-20. We have referred to a number of newspapers such as Times of India, Indian Express, Economic Times, Financial express, Maharashtra times for update of municipal corporation. We have visited a number of times the corporation and observed the services provided by the corporation. We had different discussions with local people about the quality of services provided by municipal corporation over the period of time.

## 3. METHODOLOGY

We have used the Compound Annual Growth Rate (CAGR) to observe the growth of revenue receipts and expenditure.

$$CAGR = \left( \frac{V_f}{V_b} \right)^{1/t} - 1$$

Where

CAGR=Compound Annual Growth Rate calculated over the study period

Vb=Beginning value of series

Vf=Final value in series

T= time of series in number of years

We have used the STATA@11 for data analysis of Bhiwandi Nizampur Municipal Corporation.

**Economic model:**

We have developed economic model to understand the revenue receipts and expenditure for Bhiwandi Nizampur Municipal Corporation. It is explained as follows.

$$\sum_{t=n}^{i=n} BS = (RR - RE) + (CR - CE) + PS \quad (1)$$

Budgetary surplus of municipal corporation depends on difference between Revenue Receipts (RR) minus Revenue Expenditure (RE) plus Capital Receipts minus Capital Expenditure (CE) and Past Surplus (PS). It is expected that every municipal corporation will have surplus in their budget but it is not the observed situation in every budget of any corporation. The revenue receipts are further categorized as follows.

$$\sum_{t=n}^{i=n} RR = TR + RG + RI + RL + SHC \quad (2)$$

The revenue receipts are depending upon Tax Revenue (TR) of corporation, Revenue Grants (RG), RI (Rental Income), Registration and Licence (RL), Income from Interest (II) of various deposits, Deposits and Non refunded deposits (DNRD), and Other Income (OI) for the corporation.

$$\sum_{t=n}^{i=n} TR = TOP + AT + TOPS + VMT + O + ET \quad (2.1)$$

Total Revenue of Municipal Corporation mainly decided by Tax on Property (ToP), Advertisement Tax (AT), Tax on Performance and Shows (ToPS), Voluntary Municipal Taxes (VMT), Octroi (O), Entry Tax (ET) for commodities.

$$\sum_{t=n}^{i=n} RG = RE + ACC \quad (2.2)$$

Revenue Grants (RG) comprises as Reimbursement of Expenses (RE), Agency Charges for Collection (ACC).

$$\sum_{t=n}^{i=n} RI = RBP + ROFA + FUC \quad (2.3)$$

Rental income from Municipal properties (RI) is a combination of, Rent from Buildings and Premises (RBP), Free and User Charges (FUC).

$$\sum_{t=n}^{i=n} RL = BPC + TC + DC + IP \quad (2.4)$$

Registration of Licence (RL) in corporation is nothing but combination of Building Permission Charges (RPC), Transfer Charges (TC), Document Charges (DC), Fines and Penalties (FP).

$$\sum_{t=n}^{i=n} SHC = SFP + SSS \quad (2.5)$$

Sales and Hire Charges (SHC) decided by Sales of Forms and Publication (SFP), Sales of Stores and Scrap (SSS).

**Revenue expenditure:**

We have categorized the revenue expenditure of corporation into different forms as follows.

$$\sum_{t=t}^{i=n} RE = EE + AE + IR + HSO \quad (3)$$

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Where RE means revenue expenditure of corporation in particular period. The Establishment Expenses (EE), Administrative Expenses (AE), Interest and Repairing (IR), Health, Sanitation and Others (HSO) decides the total revenue expenditure of corporation.

$$\sum_{t=1}^{i=n} EE = S + A + C + H \quad (3.1)$$

Establishment Expenses (EE) shows as Salary of Staff (S), Allowances(A), Contributions(C), Honorarium (H) for different work.

$$\sum_{t=1}^{i=n} AE = ORE + RRT + CE + BP + TC + POL + F + AP \quad (3.2)$$

Administrative Expenses (AE) decided by Office related Expenses (ORE), Rent, Rates and Taxes(RRT), Communication Expenses (CE), Books and Periodicals (BP), Travelling Conveyance (TC), Petrol, Oil and Lubricant (POL), Fees (F), Advertisement and Publicity (AP).

$$\sum_{t=1}^{i=n} IR = IFC + OFA + ROR + EI + V + OEC + FF + OA \quad (3.3)$$

Interest and Repairing (IR) deals with Repairs of Roads (RR), Electric Installation (EI), Vehicle's (V), Office Equipment's Computers (OEC), Furniture and Fixtures (FF) and Other Assets (OA).

$$\sum_{t=1}^{i=n} HSO = PC + WOC + OPE \quad (3.4)$$

Health, Sanitation and Others (HSO) comprises as Purchase of Consumable (PC), Works and Operation Contract (WoC), Other Program Expenses (OPE).

**Capital Receipts:**

We have categorized the capital receipts on following way:

$$\sum_{t=1}^{i=n} GC = GoI + GoM + PG \quad (3.5)$$

Grants and Contribution (GC) means Government of India (GOI), Government of Maharashtra (GoM), Purposive Grant (PG).

$$\sum_{t=1}^{i=n} DR = DC + RG \quad (3.6)$$

Deposits and Recovery (DR) covers Deposits from Contractors (DC) + Recovery on behalf of Government (RG).

**Capital Expenditure:**

$$\sum_{t=1}^{i=n} E = BP + RF + PM + EI + V + OECP + FF + OA \quad (4.1)$$

Where Equipment (E) and it adds Building and Premises (BP), Road and Footpath (RF), Plant and Machinery (PM), Electrical Installation (EI), Vehicles (V), Office Equipment, Computer and Peripherals (OECP), Furniture and Fixtures (FF), Other Assets(OA).

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$$\sum_{i=t}^{i=n} CL = LA + CBB \quad (4.2)$$

Cash and Loans (CL) deals with Loans and Advances (LA), Cash and Bank Balance (CBB).

#### 4. REVENUE RECEIPTS AND EXPENDITURE OF CORPORATION

We have calculated the Compound Annual Growth Rate (CAGR) for revenue receipts and expenditure for Municipal Corporation over the period of time because it is important to the corporation. Theories of fiscal federalism, such as those propounded by Musgrave, Tiebout, and Brennan and Buchanan, prescribe assignment of revenue sources among federal, state, and local Governments (Krane et al. 2001). We have calculated the revenue receipts for the municipal corporation from the 2013-14 to 2019-20 period. The percentage of receipts is categorized as follows.

**Table 1. Revenue receipts of the corporation (2013-14 to 2019-20)**

No		Main heads	Sub heads	Percent
1		Tax Revenue		
	1.1	Tax on Property	Property Tax	3.53
	1.2	Advertisement Tax/Charges	Advertisement Charges/Tax	36.06
	1.3	Tax on Performance & Shows	Show Tax	15.68
	1.4	Voluntry Municipal Taxes	Cleaning Benefit Tax	-73.66
	1.5	Octroi	Octroi/ L.B.T./ Escort Fee	-33.98
	1.6	Entry Tax	Entry tax on animals	45.76
2		Revenue Grants		
	2.1	Environment and others	A) Environment Grant	16.99
			B) Other Revenue Grants	1.98
	2.2	Reimbursement of expenses	A) Census Grant/ UID Aashar Project	-62.21
	2.3	Agency Charges for Collection	A) Education Cess Rebate	1.38
			B) Employment Guarantee Cess Rebate	-0.14
			C) Rebate on Building Cess Recovery	12.08
			D) Non-Agricultural Tax Rebate	-3.57
3	3.1	Rental Income from Municipal Properties		
	3.2	Rent from Buildings & Premises	A) Sports Stadium, Gardens & Ground Rental Income	17.94
			B) Swimming Pool Rental Income	0.00
			C) Rent from Mpl. Markets	-64.18
			D) Auditorium Rental Income	-63.63
			E) Community Hall Rental Income	12.65
			F) Night Shelter user Charges	-29.00
			G) Municipal Other Building Rent	74.87
	3.3	Rent from other Fixed Assets	A) Lake Auction Charges	-0.21
			B) Rent from Computer, Generator & Furniture	-9.43
			C) Rent from wireless System	-68.27

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No		Main heads	Sub heads	Percent
	3.4	Fee & User Charges	A) Medicines, Lab & X-ray Fees	7.15
			B) Library Membership Fees	-3.14
4	4.1	Registration, Licence & N.O.C. Fees		
	4.1	Registration fees	A) Trade License fee for Stocking Spl. Items	12.96
			B) Pollution NOC Charges	72.50
			C) Other- NOC Charges	-17.17
	4.2	Building Permissions Charges	A) Investigation Charges	8.92
			B) Development Charges	0.06
			C) Balcony, Passage Value	0.39
			D) Other Charges (Town Planning)	-4.42
	4.3	Transfer Charges	A) Change for Name Fees (Transfer Fee)	-4.70
	4.4	Document Charges	A) Death & Birth Certificate Fees	0.23
			B) Marriage Registration Fee	2.89
			C) Other Certificate & Copy charges	0.21
	4.5	Fines & Penalties	A) Notice & Warrant Fee	-6.67
			B) Penalty for Plastic Bag use	157.47
			C) Penalty for Enchroched material	8.50
			E) Penalty recovery from Contractors for Delay in work	-25.48
			F) Other Fines & Penalties	-7.96
5		Sales & Hire Charges		
	5.1	Sale of Forms & Publications	A) Tender & Application Forms Sale	3.62
	5.2	Sale of Stores & Scrap	B) Scrap & Old newspaper sale Income	135.35
6		Income from Interest		
	6.1	Interest on Bank Deposits	A) Interest on Deposit made by Corporation	-0.13
			B) Interest on Municipal Taxes	-4.02
7		Deposits Forfeited, Non Refunded Deposits etc.	A) Lapsed Deposits	49.61
8		Other Income	A) Other Income	-5.84
		Total revenue receipts		7.13

Source: Author (2022), own elaboration

The revenue receipts for BNMC from property tax was 3.53 percent from 2013-14 to 2019-20. Number of residential properties is low. The majority of people stay in slums. Commercial properties are lower in number. The revenue receipts from the advertisement charges were increased as 36.06 per cent from 2013-14 to 2019-20. Corporation is charging on hoarding, displays, street and road hoarding level advertisement in corporation. The tax show has increased to 15.68 per cent. The clearing benefit tax has reported as 73.66 per cent decline over the period of time. An octroi for Municipal corporation has declined (-33.98 per cent) from 2013-14 to 2019-20 period. Now Goods and Services Tax has been introduced. The entry tax on animals has increased as 45.76

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per cent. The revenue grants have slightly increased for corporation. It mainly increased because of environment grants (16.99 per cent). The reimbursement of expenses has declined over the period of time. It mainly included as census grant/UID Ashar project (-62.21 per cent). Under the agency charges for collection has increased because of rebate on building cees recovery (12.08 per cent). It has declined due to non-agricultural tax rebate (-3.57 per cent). The rent from building and premises for corporation has increased from sports stadium, gardens, and ground rental income (17.94 per cent). The rent from municipal and other building rent has increased very high (74.87 per cent). The municipal corporation has many buildings and they are given on rent. Therefore, revenue has increased significantly. The rent from municipal markets have declined very sharply (-64.18 per cent). The rental income from Auditorium has also declined (-63.63 per cent). Condition of auditorium is not good. Therefore, they are not given on rent. The rent from the other fixed assets has also declined for corporation. The fixed assets are not maintained regularly. In this category, the rent from the wireless system has also declined (-68.27 per cent) over the period of time. The rent from computer, generator, and furniture has also declined (-9.43 per cent) over the period of time. For the corporation, the fees and user charges have a mixed reaction. The medicines, lab and x ray fees have increased as 7.15 per cent over the period of time. People fall sick regularly due to environment conditions. Therefore, medicines related expenditure also increases. The library membership has declined by -3.14 per cent. The registration, license, and NOC related fees have increased significantly in corporation. The pollution NOC charges has increased significantly (72.50 per cent). The other NOC charges (-17.17 per cent) have declined from 2013-14 to 2019-20. The building permissions charges have not changed much over a period of time. The investigation charges have increased by 8.92 per cent from 2013-14 to 2019-20. The other charges related to town planning have declined (-4.42 per cent) over the period of time. The transfer charges such as change for name fees has declined (-4.70 per cent) over the period of time. The document charges have a very low contribution to revenue receipts. The contribution of marriage registration fees has increased by 2.89 per cent. Population is increasing in corporation. The number of marriages and marriage registrations have increased. The contribution of fines and penalties is very high in overall revenue receipts. Police and corporation out penalties on violation of different rules. The growth of penalty for plastic bag use was 157.47 per cent over a period of time. The penalty for encroached material was 8.50 per cent from 2013-14 to 2019-20. The penalty recovery from contractors for delay in work has declined as -25.48 per cent over the period of time. The sales and hire charges have increased over the period of time. The growth is higher because of increase in scrap and old newspaper sale income for corporation (135.35 per cent). The deposits, forfeited, and nonrefunded deposits are higher for corporation. It has increased by 49.61 percent from lapsed deposits over the period of time. The revenue receipts from other income have declined from as 5.84 percent over the period of time. The revenue receipts from 2013-14 to 2019-20 has increased as 7.13 percent. We have also calculated the revenue expenditure of the corporation over a period of time.

**Table 2. Revenue expenditure of corporation (2013-14 to 2019-20)**

No	Main heads	Sub heads	Percent
1	<b>Establishment Expenses</b>		
1.1	<b>Salary</b>		7.20
1.2	<b>Allowances</b>	A) Vehicle Allowance	-2.76
1.3	<b>Contributions</b>	A) Pension Fund & retirement Benefits	10.19
		B) Retirement benefit scheme contribution for new employees	21.62
1.4	<b>Honorarium</b>	A) Honararium to Corporators	9.67
		B) RCH Scheme Staff honararium	6.50
		C) Employees on contract	-100.00
2	<b>Administrative Expenses</b>		
2.1	<b>Office related expenses</b>	A) Electricity Charges	0.85
		B) Expenditure on Refreshment	11.05

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No	Main heads	Sub heads	Percent
		C) Stationery	29.24
		D) Printing	11.98
		E) Security Expenses	12.04
		F) Corporators & Employees Training & Travelling Exps.	31.13
		G) Insurance of Property & Vehicle	-2.58
<b>2.2</b>	<b>Rents, Rates and Taxes</b>	A) Cess to Pollution control Board	-51.05
		B) Hiring of Vehicles for Office work	-5.18
		C) Govt. Revenue Exps.	32.43
<b>2.3</b>	<b>Communication Expenses</b>	A) Telephone & Fax	2.59
		B) Wireless System License	-2.84
		C) Postage & Courier	19.60
<b>2.4</b>	<b>Books and Periodicals</b>	A) Purchasing of News papers, Books, Novels etc	12.79
<b>2.5</b>	<b>Travelling &amp; Conveyance</b>	A) Travelling	-53.60
<b>2.6</b>	<b>Petrol, Oil &amp; Lubricant</b>	A) Purchase of Petrol, Diesel, Oil for Municipal Vehicle	-6.68
<b>2.7</b>	<b>Fees</b>	A) Legal fees	10.04
		B) Architect & Consultancy Fee	5.45
		C) Double Entry Accounting System Implementation Exps.	72.22
<b>2.8</b>	<b>Advertisement and Publicity</b>	A) Advertisement of Tendered/ Public Notices etc.	20.16
		B) Advertisement through Cable & Auto Rickshaw	0.13
3	Interest and Repairing		
<b>3.1</b>	<b>Interest and Finance Charges</b>	A) Repayment of Loan	5.52
		B) Bank Charges	-8.05
<b>3.2</b>	<b>Other Fixed Assets</b>		
<b>3.3</b>	<b>Repairs of Roads &amp; paths</b>		20.51
		A) Repairs & Maintenance of Statues	73.32
		B) Late Minatai Thakkare Auditorium Repairs & Maint.	103.25
		C) Ganesh Visarjan Platform Repairs & Maint.	30.30
		D) Pest Control of Municipal Properties	42.80
		E) Maintenance & Repairing of Mpl. Staff Quarters	51.23
		F) Beautification of Railway Station, S.T. Stand & Anjurphata Area, Dewan Shaha Darga, Kadari Baba	25.92
		G) Repairs & Maintenance of Sports Complex & Stadiums	61.97
<b>3.3</b>	<b>Electrical Installations</b>	A) Light Repairs & Maintenance	-2.72
		B) Repairing of Generator	-2.56
		C) Repairs & Maintenance of Air condition	1.55



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No	Main heads	Sub heads	Percent
		D) Mpl. Lift & Fire Protection System	71.41
		E) Traffic Signal Maint. & Repairing, Signs Boards, Painting etc.	-20.02
3.4	<b>Vehicles related expenses</b>	A) Purchasing of Tools, Tyres, Spares Parts & Repairing & Main. Of Vehicles	6.56
3.5	<b>Office Equipment, Computers and Peripherals</b>	A) Telephone & Intercom Rep. & Maint.	18.03
		B) Wire Less System Repairs & Maintenance	-3.10
		C) Computer repairs & networking maintenance	12.15
		D) Xerox, UPS, office equipment & Electronic Peripherals repairs & maintenance	113.74
3.6	<b>Furniture and Fixtures</b>	A) Maintenance & Repairing of Furniture	10.16
3.7	<b>Other Assets</b>	A) Corporator Fund	27.78
		B) Mayor Fund	95.75
		C) Dy. Mayor Fund	-100.00
		D) Ward Fund	-16.03
		E) MLA Fund	18.83
		F) MP Grant	-100.00
4	Health, Sanitation and others		
4.1	<b>Purchase of Consumables</b>	A) Purchase of Insecticide & Other Articles for Health sanitation	-71.93
		B) Cattle Pond feed	-62.90
		C) Purchase of Material for Health Dept.	-59.16
		D) Spreading of Pesticide from Tractor	49.05
		E) Purchase of Chemicals & glassware	-11.69
		F) Eradication of Rats	-1.87
4.2	<b>Works &amp; Operation Contract</b>	A) Solid Waste Management	-40.88
		B) Water supply	-2.44
4.3	<b>Other Programme Expenses</b>	A) Pulse Polio Scheme Exps.	2.28
		B) Election Expenditure	-8.75
		C) Census & Smart Card Issue Exps.	-27.98
		D) Demolition Equip. & Other Exps.	78.09
		E) Ganpati, Eid Mahavir jayanti & Bakamma festival Electrification & other Exps.	-12.67
		F) Exps. On Kurban center during bakri eid	-3.25
		G) Sports Expenditure.	24.13
5	Grants	A) Grants to agencies	-56.69
		B) Dogs and Pigs Catching	0.81
6	Scheme related expenses		
6.1	Transfer from schemes	A) Rajiv Aawas yojna	9.48
		B) Fire & Disaster Management	-100.00

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No	Main heads	Sub heads	Percent
		C) Women & Child Development	34.40
		D) Handicap & Lunatic welfare	12.38
		E) Tree Authority	63.48
		F) Education	10.46
	<b>Total revenue expenditure</b>		8.45

*Source: Author (2022), Own elaboration*

The revenue expenditure from the salary is 7.20 per cent from 2013-14 to 2019-20. The vehicle allowance has declined (-2.76 per cent) over a period of time. The pension fund and retirement benefits have increased by 10.19 per cent. The retirement benefit scheme contribution for new employees has increased (21.62 per cent). Staff of corporation has retired over the period of time. Therefore, the expenses for pensions and other allowances have increased. The honorarium to corporate has increased as 9.67 per cent over the period of time. The honorarium for employees on contract has declined by 100 per cent over the period of time. Municipal corporation does not pay good amount to contractual staff. They hired for small period without proper remuneration. The municipal corporation pay very less honorarium to contract employee. The administrative expenses as refreshment during general body has increased as 11.05 per cent over the period of time. The expenditure on stationary has increased as 29.24 per cent from 2013-14 to 2019-20. The revenue expenditure on corporator and employee training and travelling expenses has increased as 31.13 per cent. Municipal corporation provides training related to information technology. But the expenditure on insurance of property and vehicles has declined over the period of time (-2.58 percent). The rent, rates and taxes have increased because of government revenue expenditure (32.43 per cent). But the cees to pollution control board has declined and it is observed as -51.05 percent over the period of time. The communication expenses related to wireless system licence have declined (-2.84 per cent). The postage and courier related expenses have increased by 19.60 per cent. Corporation sends letters, circulars to various wards, state, and central government. The books and periodicals related purchase of news papers, books and novels have increased as 12.79 per cent. The traveling related expenditure has declined (-53.60 per cent). The purchase of petrol, diesel oil for municipal vehicle related expenditure declined as 6.68 per cent. Municipal corporation does not spend enough on petrol and diesel. The legal fees has increased as 10.04 per cent. Due to inflation, the legal fees and its amount has increased. The architect and consultancy fees has increased as 5.45 per cent. The double entry accounting system implementation expenditure has declined as 72.22 per cent. The advertisement of tendered /public notices related expenditure has increased as 20.16 per cent. Municipal corporation gives various advertisements in different newspapers. The interest and finance charges related repayment of loan has increased as 5.52 per cent. But the bank charges have declined as 8.05 per cent. The repairs of roads related expenditure has increased over the period of time. It was observed as 20.51 per cent. The repairs and maintenance of statues-related expenditure is observed as 73.32 per cent. The late Minatai Thakkare Auditorium related expenditure has grown to 103.25 per cent. Municipal corporation has spent money to built it. The Ganesh Visarjan plat form repair and management related expenditure was 30.30 per cent. The Ganesh festival is celebrated in corporation. There is some expenditure related to Ganesh Visarjan and management for ten days. The pest control of municipal properties was 42.80 percent. The expenditure related to maintenance and repairing of municipal corporation staff quarters was observed as 51.23 per cent. The repairs and maintenance of sports complex and stadium-related expenditure was 61.97 per cent. It means that a municipal corporation spends money on repairs and maintenance of stadiums. An electrical installations related expenditure has increased significantly. It has grown because of lift and fire protection system. The expenditure related to it was observed to be 71.41 per cent. The traffic signal management and repairing signs boards, painting related expenditure is observed as -20.02 per cent. Municipal corporation is not spending much on overall transport management. That is why more traffic is observed on different roads. The vehicle related to purchase of tools, tyres, spares parts and repairing and maintaining of vehicles related expenditure has grown as 6.56 per cent. The office equipment's, computers and peripherals related expenditure has also increased in corporation. The telephone and intercom repairing and maintenance related expenditure has grown as 18.03 per cent. The computer repairs and networking maintenance related expenditure is observed to be 12.15 per cent. The Xerox, UPS, office equipment, and electronic, peripherals repair and maintenance related expenditure has increased as 113.74 per cent. The furniture and fixtures related expenditure is observed

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high because of maintenance and repairing of furniture (10.16 per cent). Other assets related to corporator fund have increased by 27.78 per cent. The Mayer fund has increased as 95.75 per cent. But the Dy. Mayor fund related expenditure declined (100 per cent) completely. The ward related fund also declined as -16.03 per cent. The MLA fund related expenditure has also declined as 18.83 per cent. The MP fund related expenditure has declined completely. The purchase of insecticides and other articles for health sanitation related expenditure declined as -71.93 per cent in corporation. The cattle pond feed related to revenue expenditure has observed as -62.90 per cent. The purchase of material for the health department was observed to be -59.16 per cent. The spread of pesticides from tractor was 49.05 per cent. The purchase of chemicals and glassware related expenditure was -11.69 per cent. The solid waste management related expenditure was -40.88 per cent. The census and smart city issue expenses related expenditure was -27.98 per cent. The demolition equipment and other expenses-related expenditure was 78.09 per cent. Municipal corporation has different demolition drives. It demolishes the illegal huts it's area. The expenditure on Ganapati, Eid, Mahavir Jayanti and Bakmma festival electrification and other expenses was -12.67 percent. The sports-related expenditure has been observed as 24.13 per cent. The grants from state has declined as -56.69 per cent. The transfer from scheme for fire and disaster management related expenditure has declined completely. The women and child development related transfer has increased as 34.40 per cent. Municipal corporation is spending on the child and women development. The transfer for tree authority has declined as 63.48 per cent. Education related to transfer has increased as 63.48 per cent. Over total revenue expenditure has increased as 8.45 percent over the period of time.

We have also calculated the capital receipts from various sources. They are explained in the following table.

**Table 3. Capital receipts of corporation (2013-14 to 2019-20)**

No.		Main heads	Sub heads	Percent
1		Grants, Contributions for Specific Purpose		
	1.1	From Government of India (GoI)	A) M.P.Grant	-1.48
			B) Grant from Finance Commission	-100.00
	1.2	Government of Maharashtra	A) M.L.A.Grant	11.98
			B) Mulbhoot Suvidha Fund	-13.63
	1.3	Purposive Grants/Schematic Grants	A) Road Development Grant	-11.64
			B) Suvarna Jayanti Shahri Rojgarhami yojna grant/National urban livelihoods mission	74.49
			C) Minority Major Field Development Grant	25.86
2		Loans from Other Financial Institutions	A) Loan for Work under Integrated Road Development Project Phase-3	-67.09
3		Deposits and recovery		
	3.1	Deposit from Contractors/Suppliers	A) EMD & Security deposits	-20.34
	3.2	Recovery on behalf of Govt	A) Education Cess	20.71
			B) Employment Guarantee Cess	15.80
			C) Non-Agriculture Tax	15.47
			D) Cess recovery under Building & Other Construction Labour Welfare Cess Rules 1998	-13.21
4		Other Liabilities	A) Retirement Benefit for new Employees	-13.05
	4.1	Creditors Liabilities	A) Others Payables	21.28
		Total capital receipts		1.24

Source: Author (2022), Own elaboration

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The grants from finance commission has declined completely over the period of time to corporation. The grant from finance commission has declined (-100 per cent) completely. Finance commission does not provide any grant to municipal corporation. The MLA grants has increased as 11.98 per cent. The Mulbhoot Suidha fund has declined by -13.63 per cent. The Maharashtra government has reduced a grant over the period of time. The road development grant has also been reduced to -11.64 per cent. The roads in the corporation are not in good condition and are not maintained regularly. The Suvarna Jayanti Shahri Rajgarhami yojna grant has increased 74.49 per cent. The minority major field development grant has increased to 25.86 percent. Loan from other financial institutions has declined fast. Municipal corporation does not take money from financial institutions. The loan for work under integrated road development project phase-3 has declined as -67.09 per cent. The deposits from contractors/suppliers have declined. The EMD and security deposits have declined almost -20.34 per cent. Recovery on the behalf of government has increased at some points. The Education cees has increased as 20.71 percent. Employment guarantee cees has increased as 20.71 per cent. The non-agriculture tax has increased as 15.47 per cent. The cees recovery under the building and other construction labour welfare cees rules of 1988 related recovery has declined as -13.21 per cent. Other liabilities including retirement benefit for new employees have declined as -13.05 per cent. Municipal corporation has stopped the retirement benefits to its staff. The staff joined service after 2005, the retirement benefits and pensions are not given. The other liabilities include others payables including 21.28 per cent. Total capital receipts for the municipal corporation have only increased by 1.24 per cent.

**Table 4. Capital expenditure of corporation (2013-14 to 2019-20)**

No.	Main heads	Sub heads	Percent
1	Infrastructure and equipment's		
1.1	Buildings and Premises	A) Const. Of Municipal Buildings	22.23
		B) Construcion of Social Welfare centre	-65.11
		C)Construction of Market Building	-53.12
1.2	Roads & Foot Paths	A) Roads & Foot Paths (From Municipal Fund & Road Grant)	-7.04
		B) Road Development under IRDP Phase III (from Loan)	-67.36
		C) Cremetorium / Kabrastan Development	26.05
1.3	Plant and Machinery	A) Purchase of Equipments	-28.03
1.4	Electrical Installations	B) Street Lighting	53.02
		C) Electrification in Building	30.58
		D) Electrical Installations in Municipal Gardens	-22.91
1.5	Vehicles	A) Purchase of Vehicles	18.97
1.6	Office Equipment, Computers and peripherals	A) Purchase of Computer, its Accessories & Biometric Machine	10.20
1.7	Furniture and Fixtures	A) Furniture for Libraries	67.83
		B) New Office Furniture Purchase	-9.92
1.8	Other Assets	A) Purchase of Amusement Items for Garden	94.20
		B) Fencing of Mpl. Plots, compound & retaining wall	-6.06
2	Capital Work in Progress		
2.1	Furniture and Fixtures	A) Interior in New Administrative Building	-36.30
3	Investments		
3.1	Term Deposits Receipts with Banks	A) Investments in Escrow Bank Fixed Deposit	-35.32

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No.		Main heads	Sub heads	Percent
4		Cash and loans		
	4.1	Loans, Advances and Deposits	A) Loans and Advances to Employees	14.02
			B) EMD & Security Deposits	-8.55
	4.2	Cash and Bank Balance	A) Cash at in hand & at Bank	-50.85
		Total capital expenditure		18.45

*Source: Author (2022), Own elaboration*

The capital expenditure from the buildings and premises have increased from construction of municipal buildings (22.23 per cent) from (2013-14 to 2019-20). Municipal corporation has spent money on construction of the building. The construction of market building has declined by -53.12 percent. Since many years, the market building has not been constructed. The construction of social welfare-related capital expenditure declined (-65.11 per cent). Municipal corporation has not sanctioned money for construction of social welfare related construction. The road development under IRDP phase 3 has declined as -67.36 per cent. The crematorium-related expenditure has increased as 26.05 per cent. Municipal corporation has built few crematoriums in to different wards. Under plant and machinery, a purchase of equipment's related expenditure is observed as -28.03 per cent. Under capital expenditure, the electrical installations has increased on street lighting (53.02 per cent) and electrification in building (30.58 per cent) The electrical installation in municipal gardens has declined over the period of time(-22.91 per cent). The municipal corporation does not provide electricity in gardens. The purchase of vehicle-related capital expenditure is observed as 18.97 per cent. The purchase of computer, its accessories, and biometric machine-related capital expenditure is observed as 67.83 per cent. But the new office furniture purchase (-9.92 per cent) has reduced by corporation over the period of time. The purchase of Amusement items for garden has increased as 94.20 per cent over the period of time. The furniture and fixtures related interior in new administrative building expenditure has declined (-36.30 per cent) over the period of time. Corporations, term deposits receipts with banks especially of investment in Escrow bank fixed deposits have declined with 35.32 per cent over the period of time. The loans and advances to employees have increased with 14.02 per cent over the period of time. Municipal corporation provides loans and advances to its staff. But the EMD and security deposits have declined (-8.55 percent) for the corporation. A cash at in hand and at bank of corporation has half declined (-50.85 percent) of the corporation over the period of time. We can say that the total capital expenditure of corporation has increased as 18.45 per cent from 2013-14 to 2019-20 period.

### 5. REGRESSION RESULTS FOR CORPORATION

We have used ordinary least square regression result for budget of various years. The nature of the data is dependent variable and independent variables.

$$Y_i = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \dots + \epsilon$$

Where

$Y_i$  = Dependent variable as revenue receipts and payment as well as capital receipts and payment.

$x_1$  to  $x_3$  are independent variables in revenue and capital receipts as well as payment.

#### Revenue receipts

We have run the regression as revenue receipts as a function of number of independent variables. The results are presented as follows.

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**Table 5. Regression result for revenue receipts**

No	Variables	Co-efficient (Standard error)	T test
1	Environment grant	1926.91** (373.19)	5.16
2	Notice and warrant fees	2797.45** ( 715.73)	3.90
3	Penalty recovery from contractors for delay in work	-106.85**(30.72)	-3.47
4	Tender and application forms sale	-433**(142.45)	-3.03
5	Constant	12235.80** (4093.68)	2.98
	R <sup>2</sup> =0.957	Adjusted R <sup>2</sup> =0.87	Std. Error of the Estimate=1962.10

\*\*significant at 5 percent

Source: Author (2022), Own elaboration

The municipal corporation receives the environmental grant, and it is positively co-related to revenue receipts of corporation. The municipal corporation receives grants from state government, NGO, and trusts. The notice and warrant fees are positively related to revenue receipts of the municipal corporation. Notice and warrant fees are issued to different individuals and they asked to pay fees. The penalty recovery from contractors for delay in work is negatively co-related to revenue receipts of corporation. Contractors take different tenders of work such as water supply, electricity, construction. The work is not completed on time. But the municipal corporation does not take a penalty recovery from contractors for delay in work. The tender and application forms sale are negatively co-related with revenue receipts of corporation. Municipal corporation sales tender application forms. Different contractors apply for work through tender forms. But the municipal corporation keeps very low fees so many contractors can apply for different contracts.

### Revenue expenditure

The revenue expenditure is regressed on number of independent variables under its category. Table 6 provides the results of regression.

**Table 6. Regression result for revenue expenditure**

No	Variables	Co-efficient (Standard error)	T test
1	Vehicle allowance	260.41* (8.21)	31.70
2	Pension fund and retirement benefits	11.31**(0.38)	29.66
3	Electricity charges	-2.61**(0.22)	-11.45
4	Purchasing of tool tyres, spare parts and maintain vehicles	-41*** (7.86)	-5.24
5	Spreading of pesticides from tractor	192.599** (25.74)	7.48
6	Constant	-4350.45** (732.13)	-5.94
	R <sup>2</sup> =0.99	Adjusted R <sup>2</sup> =0.98	Std. Error of the Estimate=1962.10

\*\*significant at 5 percent. \*\*\* significant at 10 per cent

Source: Author (2022), Own elaboration

The vehicle allowance is positively co-related to revenue expenditure of the corporation. All the work of the corporation is done through different vehicles. The municipal corporation provides the vehicle-related allowance. The pension fund and retirement benefits are positively co-related and statistically significant with revenue expenditure. Those staff joined the service and served long period, they are eligible for pension and other benefits. The municipal corporation has a maximum staff which is eligible for such benefits. Electricity charges for corporation is negatively co-related to the revenue expenditure. Electricity is used in main building

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of corporation and ward offices. However, all offices are open during the day. Therefore, the electricity consumption is very low. The purchasing tool tires, spare parts, and maintain vehicles are negatively co-related to the revenue expenditure of the corporation. The Municipal Corporation does not provide money to tires, spare parts, and maintenance of different vehicles regularly. It prefers new vehicles rather than repairing old vehicles. The spread of pesticides from tractor is statistically significant and positively co-related to the revenue expenditure of the corporation.

**Capital Receipts**

The capital receipts of the corporation over the period of time is taken as function of number of independent variables. The result of regression is as follows.

**Table 7. Regression result for capital receipts**

No	Variables	Co-efficient (Standard error)	T test
1	M.P.Grant	-165.62* (10.49)	-15.77
2	MLA Grants	-21.89**(2.58)	-8.45
3	Road development grants	--48.24**(2.78)	-16.61
4	EMD and security deposits	5.189*** (1.68)	3.07
5	Constant	47791.40** (3173.78)	15.05
	R <sup>2</sup> =0.995	Adjusted R <sup>2</sup> =0.984	Std. Error of the Estimate=512.29

\* significant at 1 per cent. \*\*significant at 5 percent. \*\*\* significant at 10 per cent

Source: Author (2022), Own elaboration

The capital receipts of the corporation are negatively co-related to M.P.grants which municipal corporation receives from government. Central government was providing funds to M.P. and it was used in corporation area for development. But now, the funds are not available for M.P. Therefore, receipts have declined for the corporation. The MLA grants are also negatively related to capital receipts. The MLA was getting funds from central and state governments but now funds are not available to them. The road development grants also declined with the corporation, and it is statistically significant and negatively related with capital receipts. Municipal corporation does not get the grants for roads development. The road condition in the corporation is not good. Cement roads are not built by corporations. The EMD and security deposits have increased with capital receipts of the corporation. It is positively correlated and statistically significant.

**Capital expenditure**

The Bhiwandi-Nizampur municipal corporation's capital expenditure is related to number of other variables. The results are presented as follows.

**Table 8. Regression result for capital expenditure**

No	Variables	Co-efficient (Standard error)	T test
1	Street lighting	12.30* *(3.66)	3.36
2	Purchase of computer, accessories, biometric machine	-152.47*** (55.17)	-2.76
3	Purchase of amusement for garden	-76.45** (30.71)	-3.48
5	Constant	47791.40** (3173.78)	15.05
	R <sup>2</sup> =0.864	Adjusted R <sup>2</sup> =0.659	Std. Error of the Estimate=1643.28

\*\*significant at 5 percent. \*\*\* significant at 10 per cent

Source: Author (2022), Own elaboration

The capital expenditure is positively co-related and statistically significant with street lighting. Municipal corporation has raised budget for street lighting in particular wards. There is a need for street lights in every

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corporation, including slum pockets. It is a question of safety, road accidents, and care of people. The purchase of the computer, accessories, and biometric machine is negatively co-related and statistically significant. The municipal corporation does not spend enough on computer, accessories, and biometric machines. Now maximum work is done through information technology but investment of corporation in information technology is very low. The purchase of amusement for garden is statistically significant but negatively co-related with capital expenditure of Bhiwandi-Nizampur Municipal Corporation. Municipal corporation is already spending less on gardens. They are not developed for people as a relaxation point. The amusement for garden-related capital expenditure is also lower.

### CONCLUSIONS AND POLICY IMPLICATIONS

A municipal corporation's budget is a tool that significantly affects the long-term economic potential of the area. In addition, it is an important tool for the management of the municipality, in relation to the effective provision of public services for inhabitants. To ensure them, it uses the revenues that the local self-government receives from various sources (Papcunova et al. 2020). Bhiwandi Nizampur Municipal Corporation has many opportunities to invest in various areas. But the resource availability and grants from various agencies are important. But the budgets over the period of time clearly show that an administrative expense are increasing in corporation. The stationary, printing, security expenses, corporator and employees training and travel expenses are also increasing. An advertisement of tenders, public notices related expenses have increased. The repair of roads and footpaths have increased in corporation. Total revenue expenditure of the corporation is increasing over the period of time.

The grants from the finance commission have completely declined. Total capital expenditure has increased of corporation. The penalty recovery from construction for delay in work, tender and application forms sale have declined in corporation. The vehicle allowance, pension fund, and retirement benefits, and spreading of pesticides are positively co-related to revenue expenditure. The purchase of computer accessories, biometric machine, purchase of amusement for garden are negatively co-related with capital expenditure of corporation. There is major resource gap to finance corporation's expenditure.

People also draw on their skills, power, knowledge, assumptions, and expectations about the available technologies and their use. Municipal corporation must invest resources in new technologies in different sectors and teach people how to use technology to get services for betterment of life (Darko Michael Twum 2014). Municipal corporation must increase revenue through various methods. Penalty on construction for delay in work must be increased. Tender and application form fees must be raised. In corporation, roads with cement concrete must be developed in all wards. Expenditure on computers, biometric machines must be raised. Municipal corporation must invest in soft and hard infrastructure for future development. Gardens, entertainment hubs, cinema halls, and auditoriums are important in the corporation.

Decentralization increases efficiency of the lower levels of Government in the provision of various local services due to their limited jurisdiction and better matching of services. An increase in decentralization is expected to delegate more powers to local government authorities and increase their capacity to mobilize resources (Siddaram and Bharadi 2017). The municipal corporation has an important role to play in the economic and social developments of the respective region (Kalamkar Rajendra 2017). Many services delivery need upgradation. People prefer to use mobile applications to perform various daily activities. Hence, there is a need to develop a mobile application which will help to provide municipal corporation services. The previous system used to serve citizens was based on website which was not so convenient (Abhyankar A. et al 2015). Municipal corporation must be smart to provide all the services through technology. In such connection, the budgets reflect the caliber of planning and the priorities of municipal corporations. Analysis of municipal budgets is a means to determine the extent to which poor quality of services is a result of inadequate availability and inefficient use of resources by city agencies. With increased focus on decentralization and devolution of funds, more attention should be paid to the analysis of municipal budgets (Sita Sekhar and Smita Bidarkar, 1999). The municipal corporation must allocate its resources equally in all wards and develop the whole corporation with efficiency and qualitative services. More importantly, it is imperative to understand the failure and



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limitations of the municipal corporation, as they are financially dependent on the center and state for their functioning (Hamsalyer (2016). The municipal corporation must go for public private partnership to raise financial support to provide quality socioeconomic infrastructure services on an urgent basis to its people.

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