Tax Reform in Indian Business and Taxable Annual income Impact of Rebate u/s. 87A

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Abstract: -

The paper describes and assesses the introduction of new forms of direct and indirect taxes, their revenue and equity implications and the successes achieved in their implementation. There have been major changes in tax systems in several countries over the last two decades for a variety of reasons. The objective of this paper is to analyses the evolution of the tax system in India since the early 1990s. The paper concludes that after eight years of reform improving the tax system remains a major challenge in India. Govt. will have to forego Rs.40,000 crore as a consequence of income tax rate tweaking.70 out of the 100 tax exemptions in the simplified tax regime, says financial minister, adding that the Govt. will review and rationalize more in the future. Tax is the major source of revenue for the government, the development of any country's economy largely depends on the tax structure it has adopted. A Taxation Structure which facilitates easy of doing business and having no chance for tax evasion brings prosperity to a country's economy. On the other hand taxation structure which has provisions for tax evasion and the one which does not facilitate ease of doing business slows down the growth of country's economy. Therefore as taxation structure plays an important role in country's development. India has a well-developed tax structure. The power to levy taxes and duties is distributed among the three tiers of Government, in accordance with the provisions of the Indian Constitution. Indian taxation structure has gone through many reforms and still it is very far ahead from being ideal taxation structure. Many problems like Tax Evasion, Reliance on indirect taxes, Black money, existence of parallel economy show that Indian taxation system requires some major reforms in the future ahead to address all this problems. In the following paper, the study is purely based on secondary data. Various figures are obtained from the different websites of government of India. It is seen that there are various number of taxes and different tax collection authorities in India. Also it is seen that there is major dependence on indirect taxes for tax collection than the direct taxes. Both Indirect taxes and Direct taxes have their own advantages and disadvantages.

Keywords: - Direct Taxes, Indirect Taxes, Tax Structure of India, Tax Collection Reports.

Introduction:

There have been major changes in tax systems of countries with a wide variety of economic systems and levels of development during the last two decades. The motivation for these reforms has varied from one country to another and the thrust of reforms has differed from time to time depending on the development strategy and philosophy of the times. In many developing countries, the immediate reason for tax reforms has been the need to enhance revenues to meet impending fiscal crises. As Bird 1993 states, the salient features of comprehensive tax reform since 1991 and its impact on revenues are analyzed in section III. The last section brings out the major shortcomings still persisting in the tax system and lists the
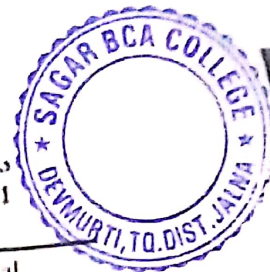
challenges faced by the government in developing a co-ordinate tax system in the Indian federal polity.

The India's central Finance Minister, announced significant Tax Reforms to reignite the country's economy. The country reduced the corporate tax rate by 8% points to 22%. New manufacturing companies would pay a 15% corporate tax rate, a reduction of 10 % points. These tax cuts are expected to cost the government around $20 billion in annual revenues. Indian stock markets rewarded the prospect of higher corporate profits and investments. The benchmark Sensex index gained 5.3% on Friday and closed up 2.8% today. Banks were some of the biggest beneficiaries of the tax reforms, with hdfc Bank hdb closing up 4.9% today on India's National Stock Exchange. Adrs of Bank, which gained 9.4% on Friday, rose 4.4% at 10:35 am edt. The Prime minister announcement of the country's tax reforms coincides with Indian Prime Minister Visit to the US. Yesterday, P.M. and President Trump shared the stage at a gathering of more than 50,000 Indian-Americans, dubbed "Howdy, P.M." The event, which took place at Houston's NRG Stadium, carried the tagline, "Shared Dreams, Bright Future."

Objective:

1) To, assess the Tax Structure of India.
2) To, identify the different taxes collected in India.
3) To, study the amount incurred on collection of taxes

Research Methodology:

This Research paper is purely based on Primary and Secondary data. Various figures are obtained from the different websites of government of India.

Literature of Review:

In the Taxation and Economic Growth in Latin America, Jorge Martinez-Vazquez 2013 concluded that the taxation is among the most common and relevant instruments of policy-makers when thinking about promoting growth, yet there is not compelling evidence regarding its effect in Latin American countries. The findings suggest that the neo-classical growth model describes well the relationship between output and the tax rate in these countries.

Zahir, 2013 in his article "The Economic Performance of SAARC Countries" attempted to examine the impact of trade liberalization over the macro-economic structure of four SAARC member countries Pakistan, India, Bangladesh and Sri Lanka during1985 to 2006. The data set consists of a 21years 1985-2006 of trade variables.

Table

Report of New Income Tax Slab For The F.Y. 2019-20

SR. NO.	TAXABLE INCOME	TAX RATE
1.	Up to Rs 2.50 Lac.	NIL
2.	Rs 2.50 Lac. –Rs. 5.00 Lac.	5%
3.	Rs 5.00 Lac.-7.5 Lac.	10%
4.	Rs 7.5 Lac.- 10 Lac.	15%
5.	Lac Rs.10.00 Lac. -12.5 Lac.	20%
6.	Rs.12.5 Lac.-15.00 Lac.	25%
7.	15.00 Lac.-to above	30%

(Rebate u/s.87A is increased from Rs.250 to Rs.12,500 if taxable income up to Rs. 5.00 Lac. To Investment Up to 1, 50,000. Exemption of without any condition.)
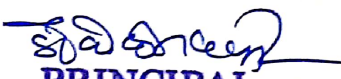
Finding and suggestions

The conclude that, the no impact of 6.5Lac.becouse Rebate u/s.87A profitable to investment 1.5 Lac. To make sure India stays a favored destination for investments, tax rate for existing companies brought down to 22%. New companies, tax rate reduced to 15%. FM M proposes new simplified individual tax regime, for who those forego deductions and exemptions, For those in the Rs 5 to 7.5 lac. Slab the tax rate at 10%. For income Rs 7.5 to 10 lac, Tax rate is 15%, For income Rs 10 to 12.5lac. Tax at 20%. For Rs 12.5 to15 lac. Income. tax rate at 25%. Those earning above Rs.15 lac. To continue to pay 30%. The new income tax is optional, without exemptions. Govt. will have to forego Rs. 40,000 crore as a consequence of income tax rate tweaking. 70 out of the 100 tax exemptions in the simplified tax regime, says FM, adding that the Govt. will review and rationalize more in the future. Surcharge and education cases would apply as per existing rates. The new tax regime is optional. Individuals who opt to claim available exemptions/ deductions would be taxed as per the existing rates. Individuals who earn taxable income up to Rs. 2.5 to 5 Lac. Continue to be exempt from tax liability under the existing and new tax regimes. Taxation of dividend from domestic companies and mutual funds the existing provisions of the Income-tax, domestic companies that declare, distribute or pay dividend are required to pay a dividend distribution tax. Such dividend was exempt in the hands of the recipients up to Rs.10, Lac. It is proposed to remove the dividend distribution tax payable by companies and tax the dividend from such companies and mutual funds in the hands of the recipients. After eight years of tax reform, as already mentioned, a number of disquieting features in the tax system still remain. Improving the productivity of the tax system continues to be a major challenge in India. The tax ratio is yet to reach the pre-reform levels. Although the coverage under income tax has shown significant improvement, much remains to be done to reach the hard-to-tax groups. The ratio of domestic trade taxes in particular have continued to decline and this has posed a major constraint in reducing tariffs which is necessary to achieve a locative efficiency. No impact of 6.5Lac.becouse Rebate u/s.87A profitable investment.

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8. Synthesis and Antimicrobial Activity of Some New Thiopyrimidine Derivatives from Chalcones

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Abstract

A new series of substituted 6-(2-bromo/4-hydroxy-3-methoxyphenyl)-4-(2-hydroxy-3,5-substituted-phenyl)pyrimidine-2(1H)-thione **9(a-j)** were prepared by the condensation of substituted chalcones with thiourea. The newly synthesized heterocyles were characterized on the basis of their melting point and spectroscopic data. All newly synthesized compounds were evaluated for their antimicrobial activities against *Bacillus subtilis, Staphylococcus aureus, Escherichia coli and Salmonella typhi.*

Keywords - Chalcone, Thiopyrimidine, Antimicrobial.

Introduction

Pyrimidines are the most important class of heterocyclic compounds having their broad spectrum of applications in biological, pharmaceutical as well as agrochemical fields [1]. Pyrimidine derivative are found to exhibit good antibacterial [2], anti-inflammatory [3], antidepressant [4], anticonvulsant [5], insecticidal [6], herbicidal [7], antimicrobial [10], anticancer [11], antiamoebic [12], antifungal [13], anti HIV [14], anti-tubercular [15], anti-malerial [16], cytotoxicity [17] activities.

Derivatives of pyrimidine have played crucial roles in the history of heterocyclic chemistry as important pharmacophore and starting material in the field of organic chemistry and medicinal chemistry [18].

The purpose of present studies is to synthesize the iodo/bromo/chloro substituted *o*-hydroxy substituted thiopyrimidines and study their antimicrobial activitiey.

Results and Discussion

Chemistry

The synthetic strategy adopted to obtain the target compounds is depicted in Scheme. Cyclization of substituted chalcone [19, 20] derivatives with thiourea to the formation of corresponding pyrimidine **9(a–j)** derivatives. Mixture of chalcone (0.001mol) and thiourea

pyrimidine nucleus. Another singlet signal resonated near aromatic region i.e. δ 7.95 was attributed for CH of pyrimidine nucleus. In addition to multiplet signal integrated for five protons in the range of 7.46-7.88 were assigned to five aromatic protons. Two singlet signal for six proton resonated at 2.32 and 4.08 was attributed for -CH$_3$ *meta* to the -Br and -OCH$_3$ *ortho* to the -OH respectively. The mass spectrum of compound (10a) showed molecular ion peak at m/z 418 (M+), 420 (M+2) corresponding to molecular formula C$_{18}$H$_{15}$BrN$_2$O$_3$S. Based on the above spectral evidances it can be concluded that compound (10a) characterized as 4-(3-bromo-2-hydroxy-5-methylphenyl)-6-(4-hydroxy-3methoxylphenyl)pyrimidine-2(1*H*)-thione.

The IR spectrum of pyrimidine (10b) exhibited characcreristics of hydroxyl NH (3350 cm^{-1}), C=N (1647 cm^{-1}), C=C (1465 cm^{-1}), C=S (1170 cm^{-1}) functionalities. The ^{1}HNMR spectrum display two singlet signal at δ 13.36 and 12.94 attributed to two -OH group *ortho* to the -Br and *ortho* to the -OCH$_3$ group respectively. A singlet signal resonated at δ 9.07 was attributed to NH proton in pyrimidine nucleus. Another singlet signal resonated near aromatic region i.e. δ 7.78 was attributed for CH of pyrimidine nucleus. In addition to multiplet signal integrated for five protons in the range of 7.55-7.71 was assigned to five aromatic protons. One singlet signal for three protons resonated at 4.0 was attributed for -OCH$_3$ *ortho* to the -OH group. The mass spectrum of compound (10b) showed molecular ion peak at m/z 439 (M+), 441 (M+2) corresponding to molecular formula C$_{17}$H$_{12}$BrClN$_2$O$_3$S. Based on the above spectral evidences it can be concluded that compound (10b) characterized as 4-(3-bromo-5-chloro-2-hydroxyphenyl)-6-(4-hydroxy-3-methoxyphenyl)pyrimidine-2(1*H*)-thione.

Experimental Section

Mixture of chalcone (0.001mol) and thiourea (0.002 mol) in ethanol 15 ml containing KOH (1gm) was refluxed for 4-6hrs. Reaction was monitored by TLC. After completion of reaction, the reaction mixture was cooled to room temperature, poured in ice cold water (100 ml), filtered, washed and after drying recrystallized from ethanol.

Scheme
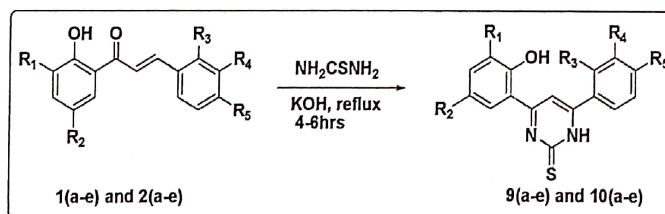
Compound No. 9b

4-(3-bromo-5-chloro-2-hydroxyphenyl)-6-(2-bromophenyl)pyrimidine-2(1H)-thione

IR (KBr) : 3419, 3334, 1647, 1458, 1170, 754, 723 cm^{-1}.

^{1}H NMR (CDCl$_3$)   (δ ppm) : δ 7.40-7.60 (m, 6H, Ar-H), 7.67 (s, 1H, CH of pyrimidine), 9.14 (s, 1H, NH), 13.72 (s, 1H, OH).

M.S. (m/z) [% of intensity] : 472 (M+), 474 (M+2), 476 (M+4), 478 (M+6).

Compound No. 9c

4-(3-bromo-2-hydroxy-5-methylphenyl)-6-(4-hydroxy-3methoxylphenyl)pyrimidine-2(1H)-thione

IR (KBr) : 3310, 1635, 1456, 1172, 644 cm^{-1}.

^{1}H NMR (CDCl$_3$)   (δ ppm) : δ 2.32 (s, 3H, CH$_3$), 4.08 (s, 3H, OCH$_3$), 7.46-7.88 (m, 5H , Ar-H), 7.95 (s, 1H, CH of pyrimidine), 9.54 (s, 1H, NH), 12.15 (s, 1H, OH), 12.76 (s, 1H, OH).

M.S. (m/z) [% of intensity] : m/z 418 (M+), 420 (M+2).

Compound No. 9d

4-(3-bromo-5-chloro-2-hydroxyphenyl)-6-(4-hydroxy-3-methoxyPhenyl) pyrimidine-2(1H)-thione

IR (KBr) : 3350, 1647, 1465, 1170, 792, 723 cm^{-1}.

^{1}H NMR (CDCl$_3$)   (δ ppm) : δ 4.0 (s, 3H, OCH$_3$), 7.55-7.71 (m, 5H , Ar-H), 7.78 (s, 1H, CH of pyrimidine), 9.07 (s, 1H, NH), 12.94 (s, 1H, OH). 13.36 (s, 1H, OH).

M.S. (m/z) [% of intensity] : 439 (M+), 441 (M+2).

Antimicrobial Activity

All synthesized compound were tested for their antimicrobial study. All chemicals used were of research grade. Evaluation of antimicrobial activity can be done by the disc-diffusion methods.

Antibacterial Activity of the Synthesized Compound

In present work disc-diffusion method was used. Kirby-Bauer method was followed for disc diffusion assay. In vitro antimicrobial activity was screened by using Mueller Hinton Agar (MHA) obtained from Himedia (Mumbai). The MHA plates were prepared by pouring 15 ml of

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SHRI CHATTRAPATI SHIVAJI PUBLIC LIBRARY, SAVARDE - A STUDY

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Abstract:

This study is committed to determining the functions, services, collections, and facilities provided by Sri Chhatrapati Shivaji Public Library, Savarde. The purpose of the study is to determine the objectives of this library. The study also focuses on the development and growth of the Shree Chhatrapati Shivaji Public Library. Various services offered by this library to its readers have been studied. What kind of readers are there in this library has been studied by the researchers. The researcher has reviewed the development of the Shri Chhatrapati Shivaji Public Libraries from its establishment to till now.

Key Words: Public library, Library Services, Library Users, Shri Chattrapati Shivaji Public Library

Introduction:

Public libraries play a vital role in developing a person to become a better person. The public library provides services to all people of age, sex, caste, religion, education, and social studies. All users get reading materials relevant to their needs and requirements in public libraries. The purpose of the public library is to provide various information resources and services for democracy and society development, including education, information, and personal development of people of different groups. A public library is a non-commercial library accessible to the public. The main objective is to provide free reading material to the public. A public library is a powerful source of information for education and culture. Efforts are being made to create a public library in every village area in India. All these services are provided at a moderate cost to make public libraries in Maharashtra accessible to all. According to the level of the public library, they are given a subsidy by the government. Using the said libraries can increase their reading material. It has been discussed how they are provided through various concessions given to public libraries by the government.

Public Library: An Overview

Public libraries are a powerhouse of knowledge and are meant for use by the general public. The public library helps to develop an interest in ready among all kinds of readers. According to Dr. S.R. Ranganathan, the father of the Library movement In India, define as "the public

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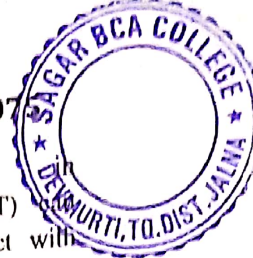
library is open to any member of the public and annually free of any charge paid as so much service" (Ranganathan,1950). "The public library, the local gateway to knowledge, provides a basic condition for lifelong learning, independent decision-making and cultural development of the individual and social groups" (IFLA/UNESCO Public Library Manifesto, 1994).

Shri Chattrapati Shivaji Public Library: An Overview:

Shri Chattrapati Shivaji Public Library was established by Shri Bhagat Singh Tarun Mandal in the year 1976 and was recognized as a "D" grade in 1978. This library got an "A" grade in 2011. The area of the library building is 2000 sq. ft. And there are six different separate sections, 1) Child reader section 2) Reference section 3) Woman's section 4) Library section 5) Newspaper reading section 6) Periodical and magazine section. At present library has a collection of 22353 books (till 20 March 2022), 78 periodicals, and 16 daily newspapers & magazines.

Objective of this Study:

This study is being conducted to understand the functioning, development and services provided to the users by Shri Chhatrapati Shivaji Public Library.
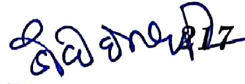
1) To review the development of Shri. Chattrapati Shivaji Public Library

Review of literature:

The majority of people in India live in rural areas and new technologies are not available in remote areas, thus creating a huge gap in knowledge and libraries in rural areas. Today the Internet and web technologies are the new means of communication. Advances communication technologies (ICT) connect remote people to interact with public libraries and civil society. Technology can be used to improve and promote existing library services. An attempt is made here to propose ICT for urban communities as well as public libraries operating in Indian states with suitable library extension programs to help the entire rural population. (Ghosh, 2005) This study is committed to determining the organization and functioning of Pratap Public Library, Karnal (Haryana). The purpose of the study was to determine the aims and objectives of the library. Public libraries are established by the people for the benefit of the people. Among all other types of libraries developed by society in modern times, public libraries are the most popular libraries because of the functions they perform. They have a great contribution to the welfare of society. (Narula, 2017).In this chapter, a thorough account of how the library was established in ancient India is given. Public libraries started to appear all throughout the world at the same time when publishing, literacy, and education all grew. Every nation has a unique public library history. The growth of public libraries has been aided by emperors, the affluent, and philanthropists. Emperors, wealthy businessmen, and scholars were primarily responsible for funding the establishment of libraries in ancient India. The emperors and kings of India funded academics. There is proof that libraries existed in their current form as early as the sixth century AD. With a sizable collection of manuscripts spanning the breadth of knowledge, the renowned Nalanda University in Bihar has its own wonderful library.(Wani, 2008).

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Scope & Limitation:

This is a scholarly attempt to know the practices of Shri Chhatrapati Shivaji Public Library. Discusses how the practices adopted at the Chhatrapati Shivaji Public Library can increase the use of libraries and what steps can be taken to improve the existing services if they are not satisfactory. This study is limited to Sri Chhatrapati Shivaji Public Library only.

Problems:

Shivaji Public Library was established in Sawarde, a small village in Panhala Taluka of Kolhapur District. Shivaji Public Library is a big library. Books, newspapers, and magazines Collection of Shivaji Public Library was good. Although this library is in a rural area, it has a good collection of books related to libraries in urban areas. However, the readership of this Garatha is less so this library needs to be brought into the limelight so that more users can take advantage of this library. Libraries should focus on increasing readership.

Methodology:

The case study method is use for this study. Research methods like Cluster sampling method, lottery method, and interview techniques have been used to collect data. The collected data is present using different tables and figures.
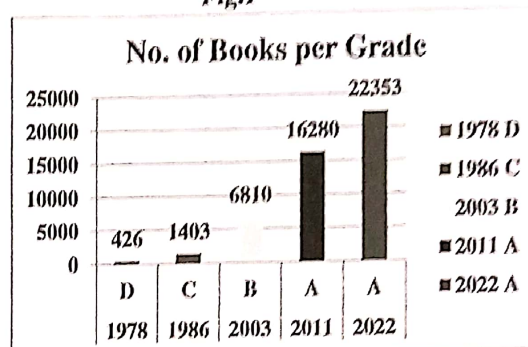
Data analysis and Interpretation:

Information from 7.1 to 7.4 has been obtained from the librarian of Shivaji library

1. Collection of books from 1978 to 2022

Collection of books at grading time

Table No.1

Year	Library Grade	No. of Books
1978	D	426
1986	C	1403
2003	B	6810
2011	A	16280
2022	A	22353

Fig.1

No. of Books per Grade

Above table and fig. shows that, in year 1978 library got grade D status and that time they have 426 books. In year 1986 library got grade C and that time they have 1403 books. In year 2003 library got grade B status and that time they have 6810 books. In year 2011 library got grade A status and that time they have 16280 books. At present time (March 2022) library is in grade A status and having a 22353 books.

2. Difference in the collection of books from 1976 to 2022:

Table No. 2

Year	Difference in grade	No. of books from last grade	Difference of books in last grade
1976-1978	No Grade - Grade D	0-426	426
1978-1986	Grade D - Grade C	427-1403	977
1986-2003	Grade C - Grade B	1404-6810	5407
2003-2011	Grade B - Grade A	6811-16280	9470
2011-2022	Grade A	16281-22353	6073

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Fig. 2

Difference in the books from last grade
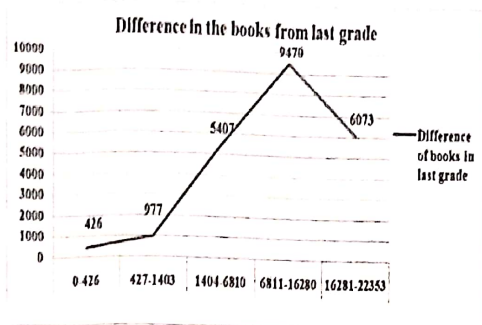
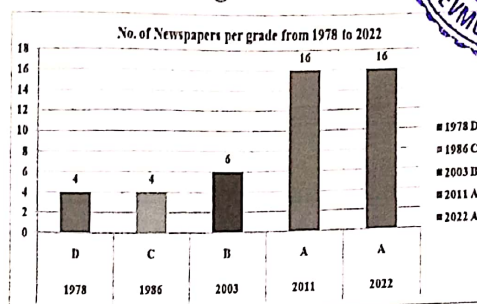Above table and fig. shows that, this library collection increase by 426 books in first 2 years. After this library got D grade in 1978, library collection increases by 977 books till they got grade C in 1986. Then library is recognized as grade B in year 2003, library collection is increased by 5407 books grade C to grade B i.e. from 1986 to 2003. In 2011 library is recognized as grade A library, at that time library manages to increase collection of books up to 9470 from grade B (i.e. 1986 to 2003) At present time in 2022 library has collection of 22353 books i.e. library increased their collection by 6073 books from the year 2011.

3. Number of Newspapers per grade from 1978 to 2022:

Table No. 3

Year	Grade of library	No. of Newspapers
1978	D	4
1986	C	4
2003	B	6
2011	A	16
2022	A	16

**Fig. 3**

No. of Newspapers per grade from 1978 to 2022

Above table and fig. shows us, the number of Newspapers from grade D to grade A.In 1978, when library is recognized as grade D status library has 4 newspapers. In 1986 library has also 4 different newspapers. In 2003, when library is recognized as grade B they has 6 different newspapers. In 2011, library has got grade A status and that time library has 16 different newspapers daily. At present time in 2022 library has 16 different kinds of Newspapers daily.

4. Number of periodicals per grade from 1978 to 2022:

Table No.4

Year	Grade of library	No. of periodicals
1978	D	6
1986	C	6
2003	B	20
2011	A	58
2022	A	78

Fig. 4
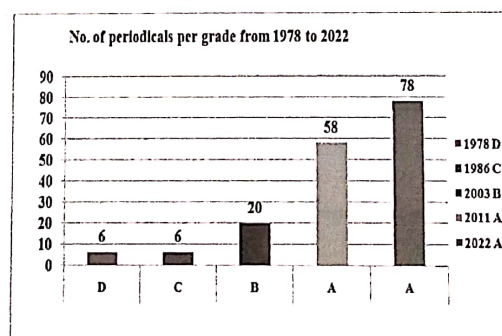
No. of periodicals per grade from 1978 to 2022

Mr. Vaibhav A Varute and Mr. Sangram A. Killedar

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Above table and fig. show us number of Periodicals library has. In year 1978 and 1986 library has 6 different periodicals. In 2003 number of periodicals increased from 6 to 20. In 2011, as the library got grade A status, number of periodicals are increased up to 52 periodicals. At present time in 2022, library has huge collection of 78 different types of Periodicals.

Conclusion:

Shri. Chh. Shivaji Public Library was established in 1976 and they got grade D in 1978. From 1978 to 2022 library's growth is satisfactory. Time to time they upgrade their collections with respect to books, magazines and periodicals and also newspapers.

Recommendation:

1. Card system is used for exchange of books, it needs to be changed and updated as an online system.
2. Books are kept according to acquisition numbers, they need to be changed and updated as DDC or UDC or any other classification system.
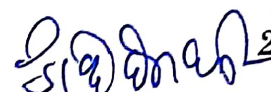3. The library should be computerized.

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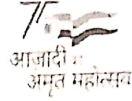*Mr. Vaibhav A Varute and Mr. Sangram A. Killedar*

Barr. Balasaheb Khardekar Knowledge Resource Center (BBKKRC) and
Department of Library and Information Science (DLISc)
Shivaji University, Kolhapur

One Day National Webinar on
'Research and Publication Ethics'

Certificate

This is to certify that **Vaibhav Ananda Varute** from **Shivaji University, Kolhapur**
has participated in One Day National Webinar on **'Research and Publication Ethics'**
organized by BBKKRC and DLISc, Shivaji University Kolhapur on 22nd July 2022.

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8. Search Operation

The time taken for the search information is very important. The time that software takes from time the depends on many factors as size data file, its arrangement, operating systems etc. from time the much more important thing is that at what basis a document can be searched by Author, Title, Accession No., ISBN Publishers etc.

9. Cataloguing

At the selection time of a library software the consideration of cataloguing should be kept in mind. What is the type of cataloguing? There should consideration that the development of the software at the MARC pattern.

List of the Library Software

Sr. no.	Name of library software	Developing Agency
1	CDS/ISIS	UNESCO
2	SOUL	UGC
3	Libman	Datapro consultancy, Pune
4	Libra	I V V System Ltd. NewDelhi
5	granthlaya	NIC, New Delhi
6	Golden Libra	INSDOC, New Delhi
7	LIbrarian	SOFTAID, Pune
8	Library Management	Data matrix Pvt. Ltd., Mumbai
9	Library Management	Indo Informatics, Bengaluru
10	Library Management	Rayon systematics, Bengaluru
11	Archives	Minifaxinformation system, Kolkata
12	Library Management	U & I software Pvt. Ltd., Mumbai
13	Acquas	Ober information system
14	Library Manager	System Data ControlPvt. Ltd. Mumbai
15	MECSYS	Macon ,Ranchi
16	LIBSOFT	T & T Corporation, New Delhi
17	LIBSYS	Libsys Corporation, New Delhi
18	NLIS	Asmita consultant, Mumbai
19	LIST PLUS	Computer System Bengaluru
20	LOAN SOFT	Computec Computer System
21	MAITRAYEE	With help of NISSAT
22	NIRMALS	Nirmal Institute
23	SALIM	Uptron India Ltd. Sikandrabad
24	TULIPS	TATA UNISIS Ltd., Mumbai
25	ULISYS	VIPRO Information Ltd. Sikandrabad
26	SLIM- 1.1	ALGORITHJM, Mumbai
27	WILSYS	VIPRO India Bengaluru
28	Integrated Library Management	PRAGTI Pvt. Ltd.
29	DSpace	MIT and HP Labs
30	VERTUA	Virginia, America
31	KOHA	KATIPO Communication Ltd. Newzeland

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Library Automation Software

Amit Kumar Maurya*

Introduction :

Software means a set of programmes which are designed for a special purpose. In the Library software's of many types is used. Hence Library software package means a set of programmes that are designed accordingly for library functions. In the market various types of library software are available. There are some kinds of software's that is developed by programmers of their own library respectively.

Although it is very long lasting and expansive process so many of the libraries used readymade software present in the market. In present time SOUL, LIBSYS, CDS/ISIS, SANJAY, LIBMAN, CIBRA etc. are frequently used in common.

Keywords: Library, Software, Automation, Information, Develop, Language

Selection of Library Software :

There are various reasons as long lasting duration, lack of programmers, excess cost by which a library cannot develop its own software. So any one of the software present in the market can be pick and chosen for the library. There are many points at which in the selection of a library software should be considered.

1. Initial study

For selection a library software all the information of the software is collected and considered the Pros and Cons matters of software. After that it analyzed that the software can fulfilled all the requirements of the library. For the information collection we can use the advertisement also because a short description in about the software is available there.

2. Cost

Cost plays a vital role in the selection of library software. Although quality of the software is essential but we cannot ignore the price. There should be consideration that the quality of the software is accordance to its price. Although there are many library software that's are free in nature example CDS/ISIS, KOHA, granthlaya

3. Manufacturing Agencies

Purchasing library software it is essential to know that what agency is manufacturing it is as what is its specialty because the liability as software depends on its manufacturing agency?

4. Programming Language

The quality of software depends on its programming language because various types of programming language had its own specialty.

5. Operating System

In the selection of library software we should remembered that the software should be useful for the all types of software that support different operating systems.
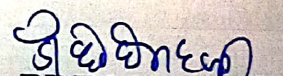
6. Work Language

There are many countries like India where books are published in many languages so at the selection there should kept in mind the software allows what types of language.

7. User Friendliness

At the selection time of library software it is essential that the library software is user friendly or not. In many libraries the library staff may not be specialist of a computer so it should be kept in mind that the library software not be complicated for operation,

*Library Trainee, Veer Bahadur Singh Purvanchal University, Jaunpur, U.P.

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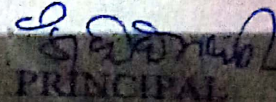
Vol. VII   No. XXIII   April-June 2017

Editor

Dr. Anish Kumar Verma

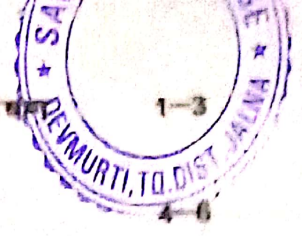## Associate Editors

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MANET: Security and Challenges

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Abstract-Mobile ad hoc network is a collection of mobile nodes with no pre-determined network infrastructure. Security is an important aspect in wireless ad-hoc network. The nodes possess an exclusive characteristics and it leads to significant challenges to security. A d hoc network is dynamic and these networks become vulnerable to many number of attacks. We discussed in detail about security attacks, parameters and challenges.

INTRODUCTION:

MANET is dynamically establishing mobile nodes networks with no fixed infrastructure. Each mobile node is equipped with wireless transmitter and a receiver with a suitable antenna. Nodes in mobile ad hoc networks move freely in the network and they can organize themselves in a random way. The important sector of ad-hoc network is routing protocols because network topologies keep on changing due to the movement of the nodes. All the network related activities like discovering of topology and delivery of packets is performed by the nodes itself. The nodes communicate over wireless links; they have to compete with the effects of radio communication, such as noise and interference. In Manet the links typically have less bandwidth than a wired network. Each node in a wireless ad hoc network functions as a host as well as a router. The control of the network is distributed among all the nodes of the network.

The aim of this paper is to provide a brief introduction of Manet security threats and analysis of its security challenges. Since each packet forwarded from one node to another node in the networks so each node must have trust to each participating nodes in the traffic of communications. If threats act on routing protocols one is form nodes that are not part of the network and other from inner that are part of the network due decentralized network it faced lots of challenges.
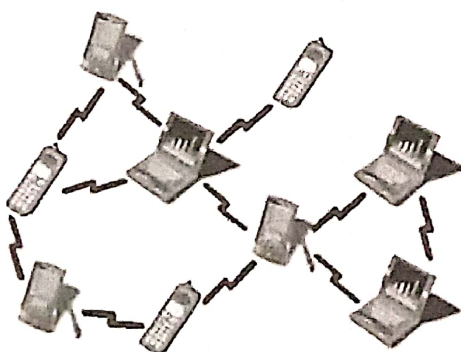
Basic Diagram of Mobile ad hoc network

BASIC CHARACTERISTICS OF AD HOC NETWORKS

1) No fixed infrastructure: An ad-hoc network is a collection of nodes that do not depends on fixed infrastructure for connectivity of the nodes. Hence these types of networks are flexible and effortlessly reconfigurable.
2) Limited resources: These networks have limited resources for their computational actions. Resources like battery power, bandwidth, computation power, memory etc have to be used wisely and efficiently for the endurance and proper operation of the network.
3) Dynamic Topology: In ad hoc networks Nodes are free to move arbitrarily, wireless devices like Laptops, PDAs, smart-phones etc. due to frequent change in their location results the dynamic topology of it.
4) Autonomous Networks: it is also known as stand-alone self-organized network Due to their decentralized nature these networks have lesser complexities of infrastructure setup, enabling devices to create and join network wherever, anytime, for any kind application. A node in the ad hoc networks can communicate with all other nodes that are in its transmission range. Nodes in the network are self-sufficient for the purposes like routing packets and assuring security of the network and so on.

IMPORTANT PARAMETERS IN MANET SECURITY

Since MANET's have special characteristics, there are some important metrics in MANET security that are important in all security approaches; we call them "Security Parameters". Being unaware of these parameters may cause a security approach useless in MANET. Each security approach must be aware of security parameters All mechanisms proposed for security aspects, must be aware of these parameters and don not disregard them; otherwise they may be useless in MANET. Security parameters in MANET are as follows:

Network Overhead: This parameter refers to number of control packets generated by security approaches. Due to shared wireless media, additional control packets may easily lead to congestion or collision in MANET. Packet lost is one the results of congestion and collision. Therefore, high packet overhead increases packet lost and the number of retransmitted packets. This will easily wastes nodes energy and networks resources.

Processing Time: Each security approach needs time to detect misbehaviors and eliminate malicious nodes. Due to MANET's dynamic topology it is strongly possible that routes between two different nodes break because of random mobility of the nodes. Therefore, security approaches must have low processing time in order to enhance MANET flexibility.

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Energy Consumption: In MANET nodes have limited energy supply so optimizing energy consumption is extremely challengeable issue in MANET. High energy consumption reduces lifetime of the nodes as well as network.

All security protocol must be aware of these important parameters. In some situations a trade-off between these parameters is provided in order to perform a satisfaction level in all of them. Security protocols that pay no attention to these parameters are not efficient as they misuse network resources.

SECURITY SERVICES

The aim of a security service is to secure network before any kind of attack that encountered in the network and made it harder for a malicious node to breaks the security of the network. MANET providing these services faced lots of challenges. For securing MANET a trade-off between these services must be provided it means if any one service guarantees without taking account of other services that security system will fail. The problem is to provide services one by one in MANET and presenting a way to guarantee each service. We discuss about five important security services and their challenges as follows:

Availability: In this service, each authorized node must have access to all data and services in the network. Availability challenge arises due to MANET's dynamic topology and its open boundary. Accessing time, which is the time needed for a node to access the network services or data is important, because time is one of the security parameters. By using lots of security and authentication levels, this service is disregarded as passing security levels needs time.

Authentication: The goal of this service is to provide trustable communications between two different nodes. When a node receives packets from a source, it must be in no doubt about identity of the source node. To provide this service it is using certifications; key distribution and key management are challengeable

Data confidentially: According to this service, each node must have access to specific services that it has the permission to access. Most of services that are provided by data confidentially use encryption methods but in MANET there is no central management, key distribution faced lots of challenges and in some cases impractical

Integrity: According to integrity security service, only authorized nodes can create, edit or delete packets. As an example, Man-In-The-Middle attack is against this service. In this attack, the attacker captures all packets and then removes or modifies them.

Non-Repudiation: By using this service, neither source nor destination can repudiate their actions or data. It means if a node 1 receives a packet from node 2, and sends a reply to node 2 cannot repudiate the packet that it has been sent.

REASONS OF MANET BEING UNSAFE

i. **No central management** – Every node in MANET is self-configured and self-administered. Therefore it is difficult check or control the transfer of data.

ii. **Freedom for a node** – Any node in network is free to enter or leave the network so any malicious activity by a node cannot be tracked completely.

iii. **Low Power** – In a MANET every node is light weighted so with small battery backup and small memory size.

iv. **Data loss during transmission** - as both sender and receiver node are mobile there are frequent path breaks in MANET so possibility of data loss during transmission is high.

v. **Limited bandwidth** – Wireless network has much less capacity as that of wired network.

vi. **Trust issues with routing protocols** – As every node in MANET is independent, routing protocols assumes that all nodes present in network are non-malicious and cooperative.

TYPES OF NETWORK ATTACKS

Attacks on the ad hoc networks can be broadly categorized as Passive Attacks and Active Attacks.

i. Passive Attacks - The main aim of passive attackers is to steal the valuable information from the targeted networks. Attackers do not scare the normal network functioning like inducing false packets or dropping packets. They basically become a part of the network. They do not initiate any malicious activity to disturb the normal functioning of the network. It becomes very difficult to identify such kind of attacks. Examples of such types of attacks are traffic analysis, traffic monitoring and eavesdropping.

ii. Active Attacks - Active attackers tamper the network traffic like cause congestion, propagation of false routing information etc. Due to active participation of attackers, their detection and prevention can be done using appropriate prevention algorithms. Examples of passive attacks include modification attack, impersonation, fabrication and message replay.

Attacks can also be classified depending upon the position of the attacker in the network.

i) External attacks

External Attacks are the attacks made by the unauthorized nodes which are not a part of the network. External attackers can flood false packets in the network, impersonation etc. Their aim of such attackers is to cause congestion or to disturb expected network functioning.

ii) Internal attacks

Internal attacks are caused by the internal nodes in the network. The reason for their malicious behavior may be the following:

a) Hijacking those (authorized) nodes by some external attacker and then using them for Launching internal attacks in the network.

b) Selfishness to save their limited resources like battery power, processing capabilities, and the Communication bandwidth and exploiting other nodes for their benefit.

ATTACKS IN MANET

Due to special features like hop- to-hop communications, wireless medium, and easy to setup, MANET became popular for malicious nodes. Some of the most important attacks in MANET are as follows:

Black Hole Attack: In this attack, malicious node injects fault routing information to the network and forward packets toward it and then discards all of them. In black hole attack the attacker node advertises itself to other node that it has shortest route to reach towards destination. If this reply reaches before the actual reply an artificial route will be established that also includes the malicious node of the network. Now this malicious node can drop packets. The Throughput and the packet to delivery ratio of the AODV protocol using black hole attack can be analyzed by introducing an attacker on a particular node. Whenever an attacker claims for a specific node, there is a possibility that several parameters like throughput, packet to delivery ratio etc can vary accordingly [15].

Worm Hole Attack: In worm Hole attack, malicious node records packets at one location of the network and tunnels them to another location. Fault routing information could disrupt routes in network. Authors in presented a way to secure MANET in opposition to this attack by using encryption and location information of the node. But as mentioned before, key distribution is a challenge in MANET. Packet leash [5] is a technique for detecting and defending against wormhole attacks. A leash is any information on that is added to a packet designed to restrict the packet's maximum allowed transmission distance. Till now various techniques have been proposed for prevention and detection of wormhole attack. In [12], in this paper the impact of wormhole attack is decrypted and concise detail of wormhole attack and its types are explained. Also present various detection and prevention techniques are discussed.

Byzantine attack: In this attack, malicious node injects fault routing information to the network, in order to locate packets into a loop. One way to protect network against this attack is using authentication. Authors in presented a mechanism to defeat against this attack using RSA authentication. In [17] once t active set of insider nodes in the network are turned to be malicious by threats then the whole network will be under the control of adversaries and further secured data transmission is not possible. This is very critical in mobile devices used in military fields and medicinal fields to transferring patient reports and medical advises. A byzantine adversary can prevent the route establishment by dropping the route call or response

packets and modify the route selection metrics like packet ids, hop counts, drops packets selectively.

Denial of service: In this attack, malicious node prevents other authorized nodes to access network data or services. Using this attack, a specific node or service will be inaccessible and network resources like bandwidth will be wasted. [3] Although many efforts (including above) have been done on the impact of Denial of Service attacks in MANETs, few of them analyzed the impact on the connectivity, which is an essential requirement for any networks, especially military networks

Jamming attack: Jamming attack is a kind of DOS attack. The aim of a jammer is to interfere with legal wireless communications. It can achieve this goal by preventing a real traffic source from sending out a packet and by preventing the reception of legitimate packets.

Modification Attack: In this attack, malicious nodes sniff the network for a period of time. Then, explore wireless frequency and use it to modify packets. Man-in-the-middle is a kind of Modification attack.

Man-in-the-middle attack: In this attack, malicious node puts itself between source and destination. Then, captures all packets and drops or modifies them. Hop by hop communications are made MANET vulnerable against this attack. Authentication and cryptography are the most effective ways to defeat this attack.

CONCLUSION

In this paper we discussed various Security Aspects of MANETs .we done literature survey for detecting the malicious nodes misbehaviors in mobile ad hoc network. Ad-hoc networks are proven to various kinds of vulnerable attacks since they are dynamic, wireless and infrastructure network. We have found that necessity of secure routing protocol is still a very strong question. There is no universal algorithm available that suits well against the most generally known attacks. However, in short, we can say that the complete security solution requires the prevention, detection in MANET.

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ANALYSIS OF BLACK HOLE ATTACK DURING ROUTE DISCOVERY PHASE OF AODV IN MANET

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hole AODV is evaluated for various parameters such as throughput, end to end delay, and packet delivery ratio. Simulations are done in NS 2.35 tool [9].

2. AODV Overview

The Ad-hoc On-Demand Distance Vector (AODV) routing protocol is designed for use in ad-hoc mobile networks [1, 7]. AODV is a reactive protocol: the routes are created only when they are needed. It uses traditional routing tables, one entry per destination, and sequence numbers to determine whether routing information is up-to-date and to prevent routing loops. An important feature of AODV is the maintenance of time based states in each node: a routing-entry not recently used is expired. In case of a route is broken the neighbors can be notified. Route discovery is based on query and reply cycles, and route information is stored in all intermediate nodes along the route in the form of route table entries. The following control packets are used: routing request message (RREQ) is broadcasted by a node requiring a route to another node, routing reply message (RREP) is unicasted back to the source of RREQ. Route error message (RERR) is sent to notify other nodes of the loss of the link. HELLO messages are used for detecting and monitoring links to neighbors.

3. Implementation of Black Hole Attack

To implement black hole attack during route discovery phase of aodv protocol, some changes are made in *aodv.h* and *aodv.cc* file inside ns2.35 simulator [6,10]. Following are the steps to make changes:

Step1: In aodv.h file, declare a boolean variable malicious as shown below in the protected scope in the class AODV-

bool malicious;

Step2: In aodv.cc file, following changes are required:-

a) Initialize the malicious variable with a value "false". Declare it inside the constructor as shown below-
AODV::AODV (nsaddr_tid): Agent (PT_AODV)...

```
{
.......
Malicious = false;

}
```
b) Add the following statement to the aodv.cc file in the "if(argc==2)" statment.

```
if(strcmp(argv[1],"hacker")==0){
 malicious=true;
  returnTCL_OK;
}
```

[Tripathi et. al., Vol.4 (Iss11): November, 2017]

c) Implement the behavior of the malicious node by setting the following code in the rt_resolve(Packet *p) function.

The malicious node will simply drop the packet and specify a reason for dropping as indicated below.

```
if(malicious==true){
  drop(p,DROP_RTR_ROUTE_LOOP);
}
```

Once done, recompile ns2 as given below command in terminal-

Make

Once the compilation is done, check the malicious behavior using the Tcl Script by setting any one node as malicious node. The command to set the malicious node is

Sns at 0.0 "[Sn2 set ragent_] malicious"

4. Simulation Parameters and Metrics

Simulations are performed for analyzing the impact of implemented black hole attack on AODV and normal AODV [8]. NS-2.35 tool is used for performing the simulations. NS-2.35 is the simulation tool which provides the platform for the simulation of various routing protocols, multicast protocols and different topology over wireless or wired networks. Simulations are done to both AODV and black hole affected AODV for nodes 20, 40, 60, 80 and 100. Malicious nodes are used in three phase during black hole attack on AODV. In first phase only one malicious node is used on node_3. In second phase two malicious nodes are used on node_3 and node_6. In third phase three malicious nodes are used on node_3, node_6 and node_9. Simulation parameters and their values used during the simulations are mentioned below in table 1.

Table 1: Simulation Parameters

Protocol	AODV
No. of Nodes	20, 40, 60, 80, 100
No. of malicious nodes	1 (node_3), 2 (node_3, node_6) and 3 (node_3, node_6, node_9)
MAC	IEEE 802.11
Propagation	Two Way Ground
Traffic Connection	CBR over UDP on 5 nodes
Size of Packet	512 bytes
Mobility	Random Way Point
Speed	Minimum=0 to maximum=10
Simulation Area	1000x1000 (m x m)
Simulation Time	200 sec

The following some metrics have used for analyzing the impact of black hole attack [5] on AODV.

Packet Delivery Ratio: PDF is defined as the ratio of all the data packets that are received by the destination node to the total number of packets being generated by the CBR source node.

Throughput: It is the rate at which data packets are transmitted per unit time in the network. It is measured in kbps or bps.

Total Packet Dropped: To evaluate dropped packets we count how many packets are sent by the source nodes and how many of them reached the Destination nodes.

5. Results Analysis with Graphs

Simulations are done using the parameters mentioned above for AODV and black hole attack AODV with multiple malicious nodes. Three different metrices are used to analyze the results as shown in graph.
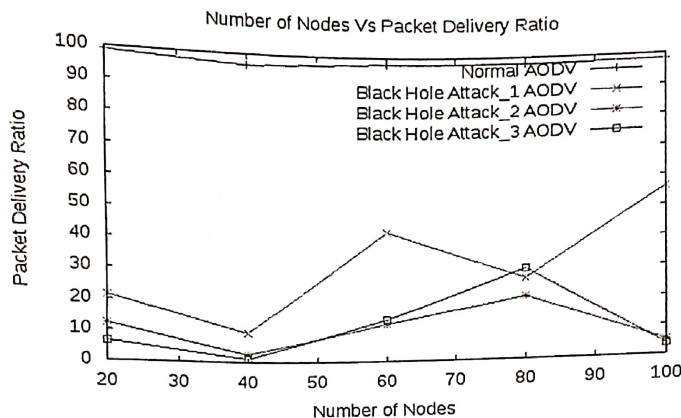

Figure 2: Packet delivery ratio of normal AODV and black hole attack AODV
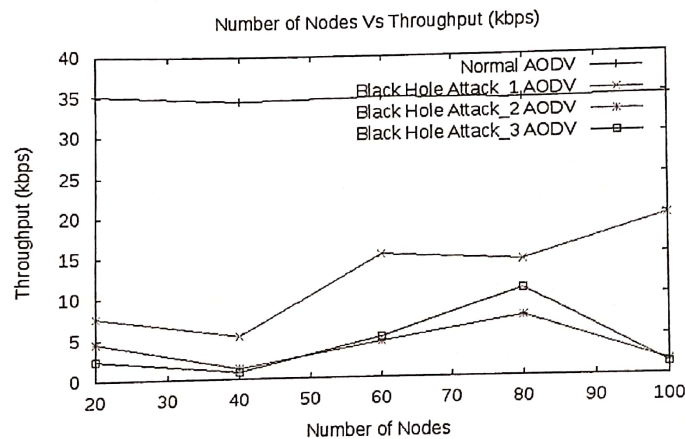

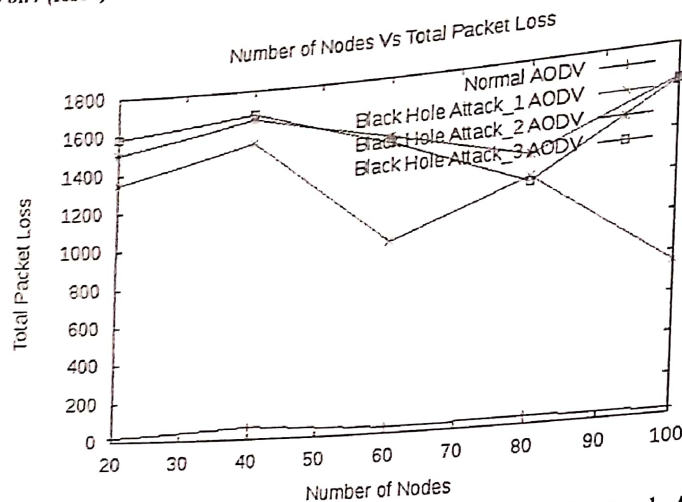Figure 3: Throughput of normal AODV and black hole attack AODV

Figure 4: Total packet loss of normal AODV and black hole attack AODV.

From the above graphs for AODV and black hole attack AODV with multiple malicious node it is observed that with the impact of black hole attack the performance of normal AODV is affected. Figure 2 shows the comparison between packet delivery ratio of normal AODV and black hole attack AODV. It is observed that PDR for black hole attack AODV is less than that of normal AODV. In figure 3 Throughput of AODV and black hole attack AODV is compared. From the graph it is seen clearly that with the rise in number of nodes the throughput for normal AODV also rises where for black hole attack AODV it falls. Total packet loss of normal AODV and black hole attack AODV is being compared in figure 4. It is found that the packet loss for the normal AODV is comparatively less whereas for black hole attack AODV it rises steeply when the number of nodes increase.

6. Conclusion

In this paper, we have implemented and analyzed the effect of black hole attack in AODV protocol. Simulations are performed on three metrics viz. packet delivery ratio, throughput and total packet loss for normal AODV and AODV affected by black hole.

Traffic and mobility scenario was same for both normal AODV and to maintain the uniformity. Based on the above performance comparisons, AODV under the black hole effect packets Dropped rises whereas throughput and PDR falls compare normal AODV. Finally we conclude that black hole attacks affect the AODV routing protocol negatively.

Acknowledgment

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KOLHAPUR MUNICIPAL TRANSPORT

DR. V. S. SHITOLE & PROF· V. V· MAHAJAN*

THE aim of this research study was to investigate the significant characteristic of passengers in connection with their types of trips, their economic status, their opinions about the bus transport etc. This emperical observation although restricted to Kolhapur, a developing urban — industrial centre of Western Maharashtra has potentialities to sketch out representative picture of characteristics of passengers of municipal transport in any city like Kolhapur.

In order to study the above contemplated aspect, the data was collected by undertaking a study of the cross section of the residents of Kolhapur.

As the resources for the emperical study were limited, it was contemplated to concentrate attention on a particular locality of the city; and therefore 'E' ward of the city was selected for study. 'E' ward was found suitable for study because this ward consists of new residential extensions slum areas and also old houses. The people living in this area are of varying economic status and are involved in different occupations. The households residing in this area were to be selected at random for the detail enquiry. While preparing the sampling frame etc., for the above planned study, the help of the Kolhapur Ichalkaranji Metropolitian Regional planning Board was sought, and the interviews of the selected families were taken to know the particulars of the demand side of transport. The data collected in this survey is discussed ahead.

*The authors who belong to the Department of Commerce, Marathwada University, were in Kolhapur in connection with this study in Summer of 1980. With the help of student investigators, they had managed to collect the data.

Modes of Transport Regularly Adopted

There are various conveyances available to the people for going to the place of work and back to home. Among all the conveyances the KMT (Kolhapur Municipal Transport) is well patronised. However, the number of people using the KMT regularly to go to their work-place in the sample population was very small. Thus out of the 126 families the members of 61% families were going to place of work and coming back on foot, 23% by bicycle and 11% by the bus (KMT); and very negligible i.e. 5% by other conveyances, i.e. scooters, autorickshaws, taxis etc.

It was discovered from the interviews of the people that most of them were going to centre of work on foot or by bicycles because almost 80% of them belonged to families with income below Rs. 250 p.m. However, it was also ascertained that this reason of low income was not the only reason for going to place of work on foot or by bicycle but there were some other reasons such as uncertainty of bus, inconvenient routes of bus and unsuitable timings and a small distance between the place of work and home etc.

Occasional Trips by the KMT

People use the KMT for different purposes. An analysis of the purposes of trips undertaken by passengers shows that the highest number of trips was performed for work purpose and the lowest for health purposes (Table No. 1).

The trips made for religious purposes (6%) were also of considerable magnitude. This was because the people of Kolhapur visit the Ambai temple frequently. It was understood from the officials of the KMT that on Tuesday, which is recognized as the
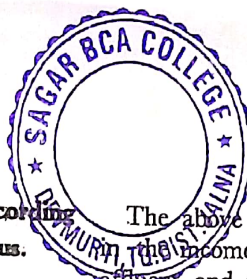
Table 1 — Classification of the Families According to the Purposes of Travel by Bus.

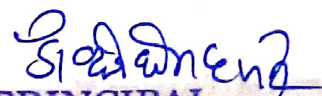| Nature of journey	Total No. of families who undertake journey occasionally	% of families to total families
Work	39	31%
Shopping	13	10%
Recreation	12	10%
Religious	8	6%
Education	7	6%
Business	10	8%
Health	5	4%
Return trip to home and other trips	9	7%
No trip (No use of Bus Service)	23	18%
Total :	126	100%

The above statistics establishes that the people in the income group of Rs. 1,000 and above are affluent and afford to have their own conveyances. Hence they form a small group among the users of the KMT both in the regular and occasional trips. On the other hand, the people who belong to families with income below Rs. 150 per month cannot afford to travel by the KMT either regularly or occasionally. The people in the income range of Rs. 251 to 750 are large in number as far as the regular and occasional trips are concerned.

In brief, the use of the KMT service is to some extent related to income. The number of the people with higher income, using the service of the KMT, is larger than the number of people with the lower income. If the demand of the services of the KMT is viewed through the perceptive of income, there seems to be hindrances for the KMT in the matter of expansion. The following table confirms the fact that small-earners are found in large numbers in Kolhapur and that also reveals indirectly the limitations of the income of the people.

sacred day, large unmber of people visit the temple by using bus. It is also interesting to note that as many as 18% families did not undertake a single bus trip during the course of one month, prior to the date of interview. It is also astonishing to mark that some families even during the period of last 3 or 4 years did not use bus at all. The bus, notwithstanding is recognised as a cheaper means of transport, it appeared as a luxury to such families because their low income did not permit them to travel by bus.

Nature of Trips and its Relation to Income

Analysis of the trips according to income group shows that the maximum number of occasional trips were made by the people in the income group of Rs. 250 to Rs. 750, while the minimum number of trips were by the people in the income group of Rs. 1,000 and above and in the income group below Rs. 150. As far as regular trips are concerned, the people in the income range of Rs. 250 to Rs. 750 performed the maximum number of trips while those with income of Rs. 1,000 and above had done the minimum. The people whose income was less than Rs. 150 per month did not undertake any regular trip.

Journal of Transport Management, June 1982

Table 2 — Classification of Families in (1977-78) Percentages in Various Income Groups

Income Group (Monthly Income)		% of families to total families
Rs. 51–100	—	9%
Rs. 101–300	—	53%
Rs. 301–500	—	20%
Rs. 501–700	—	13%
Rs. 700 & above	—	5%
Total :	—	100%

The above table indicates that more than 60% families in Kolhapur were in the income group below Rs. 300 per month. It means in other words that, more than 60% of the population of Kolhapur does not truly afford to use the services of the KMT due to the low income. While revising the rates of fare the KMT has to emphasise the point that the number of the low-income group in the city is overwhelming and hence fares should be reasonably low.
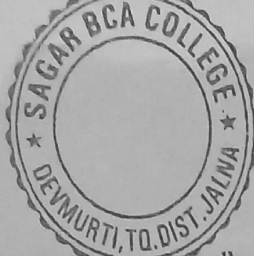
It is however not practically possible for the KMT to discriminate the passengers by charging them according to their grades of income or make some arrangements like railways for fixing different fares of various classes. In this context it can be suggested that the KMT can fix lower rates of fares for the bus-trips of different routes when the possibilities of the utilization of the full capacity of bus is doubtful. The under utilization of a bus capacity does in no way recover the operational cost but result in uneconomic transactions. The KMT can manage to undertake such study once in six months and find out uneconomic trips. Such uneconomic trips on different routes can be operated by charging less than the regular rates. This concession will help the people with lower income to avail the facilities of the bus. Similarly it also helps the KMT to recover some portion of the loss which occurs due to under-utilization of the capacity of a bus on any given route.

Uncertainty of the Timings of the Bus

Out of the 126 families interviewed, majority of them (62%) expressed their dis-satisfaction with several irregularities of buses such as of timings, arrivals, stoppages at scheduled places and time etc. The user of a bus greatly feels helpless when he has to wait for bus. He is a victim of delays, break-downs and other exceptional happenings. This helplessness mixed with uncertainty is distressing and makes waiting tiresome. If there is a display of time-table at every place of stoppage, waiting becomes less unpleasant. People have suggested that there should be proper notification of the time-table at every stop. Similarly it is also suggested that the officials of the KMT should not only note the departure and arrival time of a bus at terminus but also note the timings of a bus while passing through the intermediate stop.

General Condition of Vehicles

Attempts were made in the interviews of sampled households to ascertain opinions of family members about the general condition of buses, such as efficiency in service, discipline among operators, rates of fares etc.

As for the general condition of vehicles opinion of 58% families were found to be satisfactory. However the rest i.e. 21% had some grievances against the general condition of buses. Some people expressed the view that the design of buses deserves to be changed. There is some truth in this because there is ample scope for improving the design of the present bus and make it more attractive. In foreign countries buses have very long windows which make them considerably attractive. In foreign buses even passengers who stand can have the pleasure to have a view of the passing scenes. Most people appreciate to travel in open decked-bus where there is no feeling of being 'boxed in' as it is felt in our buses.

Table 3 — General Opinions of Passengers About the KMT Service

Particulars	Opinions given by the No. of families				Total No. of Families interviewed
	Good	Fair	Bad	No remark	
Conditions of Vehicles	73 (58%)	16 (13%)	5 (4%)	32 (25%)	126 (100%)
Efficiency in Service	48 (38%)	31 (25%)	15 (12%)	32 (25%)	126 (100%)
Discipline among operators	57 (46%)	24 (19%)	13 (10%)	32 (25%)	126 (100%)
	Reasonable		High	No Remark	
Fare Rates	60 (48%)		34 (27%)	32 (25%)	126 (100%)

Bracketed figures indicate % to total.

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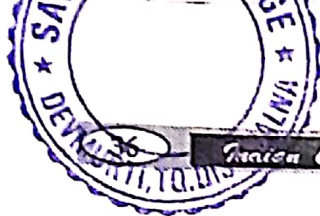Sagar BCA College
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While we think of altering the usual design of the bus, we should also think of the cabin of the driver and the seats of the passengers which deserve to be bifurcated by a glass partition (wall). This will save the passengers from the trouble of din created by the engine as well as save them from the foul smell of cumbustible crude oil of the engine.

Many people complained about unclean buses.

In the eyes of 15% families interviewed the efficiency of the KMT service was deplorable. There expressed dissatisfaction with the uncertainty of operations on various routes.

The behaviour of the conductors, in the opinion of many people, also was objectionable and a matter of much concern. Most of them were dissatisfied with the untidy dress of conductors as well as unkept hair and arrogant behaviour with the public.

As regards the rates of fares almost 48% households expressed that the rates were reasonable, whereas 27% remarked that the rates were unreasonab'e and the rest i.e. 25% did not pass any remark (Table No. 3).

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MICRO FINANCE - A TOOL FOR POVERTY ALLEVIATION IN THE GLOBALISED SCENARIO - FOCUS ON WOMAN SHG'S

Ms. Ghule*
Dr. V.V. Mahajan**

Globalisation leads to integration of economies of different countries in a global economic order. Globalisation can be defined as the process of integrating country's economy with a view to capturing global opportunities for long-term growth and development. Globalisation has come to stay and India has to live with it. No country big or small developed or developing, rich or poor can afford to live in economic isolation. That is the harsh reality and we have to understand it. It also means the entry of MNC's and the problem of unemployment is going to become more serious due to rapid progress towards globalisation.

In a country like India, where there are about 320 million poor [36% of the population], in the Globalised scenario Micro-enterprise and micro-finance development have emerged as major strategies to combat the twin issues of poverty and unemployment that remains a major threat to the economy.

The basic idea of micro-finance is simple: if poor people are provided access to financial services, including credit, they may very well be able to start or expand a micro-enterprise that will allow them to break out of poverty. The access to credit and the opportunity to begin or to expand a micro-enterprise may be empowering to the poor. Ultimately the aim is to empower the poor and mainstream them into development.

In India, micro-finance has been recognised as one of the tools to attack poverty. Therefore, in the area of Micro-finance, the NGOs

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who had their focus on social agenda have taken upon themselves the task of functioning as change agents promoting people's organisations and functioning as feeder -banks linking unreached micro entrepreneurs with the banking system.

According to a 1995 World Bank estimate, in most developing countries the formal financial system reaches only the top 25% of the economically active population - the bottom 75% have no access to financial services apart from moneylenders -

In India too the formal financial institutions have not been able to reach the poor households, and particularly women, in the unorganised sector. Problems are-high transaction costs, lack of traditional collateral, not recognising the poor as creditworthy etc.
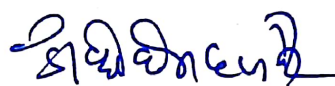
Many economies, including the Indian, experimented with subsidized credit for the poor. But the only tangible outcome perhaps was the increase in Non-performing assets. The realization has come that the core issue for the poor was access to credit rather than the cost of credit. In fact one of the contributions of Micro finance can possibly be the 'end of interest rate debate'. Micro finance has proved time and again that it is access and not interest rates that are a constraint for the poor.

Micro finance is based on certain truths

- That the poor are bankable; - micro finance constitutes a statement that the borrowers are not 'weaker sections' in need of charity, but can be treated as responsible people on business terms for mutual profit -
- That almost all poor households need to save, have the inherent capacity to save small amounts regularly and are willing to save provided they are motivated and facilitated to do so -
- That easy access to credit is more important than cheap subsidised credit which involves lengthy bureaucratic procedures.
- Peer pressure in groups helps in improving recoveries.

Micro-finance initiatives has the following objectives:

- Offering cost effective approaches to formal institutions for wider coverage of poor, thereby supplementing their efforts.
- Testing other micro-finance delivery innovations as alternative channel and depending upon the prospects and potential, synergise the tested alternative channel with the formal system.
- Focus on women
- Empowerment of poor

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Globalisation leads to integration of economies of different countries in a global economic order. Globalisation can be defined as the process of integrating country's economy with a view to capturing global opportunities for long-term growth and development. Globalisation has come to stay and India has to live with it. No country big or small developed or developing, rich or poor can afford to live in economic isolation. That is the harsh reality and we have to understand it. It also means the entry of MNC's and the problem of unemployment is going to become more serious due to rapid progress towards globalisation.

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The basic idea of micro-finance is simple: if poor people are provided access to financial services, including credit, they may very well be able to start or expand a micro-enterprise that will allow them to break out of poverty. The access to credit and the opportunity to begin or to expand a micro-enterprise may be empowering to the poor. Ultimately the aim is to empower the poor and mainstream them into development.
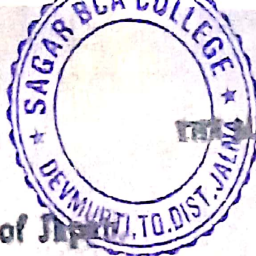
In India, micro-finance has been recognised as one of the tools to attack poverty. Therefore, in the area of Micro-finance, the NGOs

...overnment of Japan.

The System of attracting deposits is closely linked with the system of food (Rice) procurement. Rice is the main crop in Japan. The farmers, according to law have to sell their surpluses of rice to Government through cooperative Societies. As soon as members deliver their rice to their Societies the prices of rice are credited to their deposits accounts. Some portions of such deposits are set off against the loans recoverable from members. A rest of the deposits are withdrawn by the farmers as and when they need. Though the farmers withdraw some portions of deposits, a sizeable part of these deposits remains with the cooperative societies.

Marketing of Crops

Marketing is important function of cooperative society. It generally arranges marketing of rice, barley, cereals, rape seed, potatoes, starch, fruits, and milk on behalf of their members. However of all these commodities, rice is marketed through cooperatives in the largest quantity. All the marketable rice is purchased by the Government under the price support scheme that accounted for about 65% of the marketing turnover (1979) of the societies. There were instances where products were sold to bulk consumers like factories, hospitals etc.

As the cooperatives undertake the function of marketing they watch very carefully the quality and standard of the products. Similarly the Societies do supervise the crops when these are in progress.

Each cooperative society provides almost all the facilities of marketing i.e. collecting surpluses from individual farmers, transporting the same to the nearest assembling centre, grading and standardization, processing, warehousing, packing and transporting to the consuming places. Thus farmer is relieved from all the troubles involved in marketing and he is free to look after the farming operations.

Purchasing

The agricultural cooperative society also arranges supply of farm requirements to the members. The supply of fertilisers is most important. The cooperative society each year assesses the requirements of their members in a systematic way and places indents to the National Purchase Federation, which in turn purchases the necessary quantities from the factories. The factories to some extent, supply fertilisers, on credit on the guarantee of Central Cooperative Bank. Central Cooperative Bank gives such guarantee on the basis of agricultural Bills payable to Society. The cooperatives in year 1979 had alone transacted more than 82% of the fertilisers used in the country. This shows effective arrangements of cooperative in the matter of purchasing fertilizers and distributing the same to the farmers.

Fodder, insecticides and implements are also supplied by cooperative Society. Similarly they also undertake the supply of agricultural machinery, equipments and impliments. Almost every Society runs a consumer store either in the form of provision store or departmental store. Society supplies provisions, medicines, milk etc. at the door of residence of consumers.

AGRICULTURE COOPERATIVE MOVEMENT IN JAPAN

Prof. Dr. V. S. Shitole,
M. Com, Ph. D.,

&

Prof. V. V. Mahajan,
M. Com.

The total geographical area of Japan is 37103 thousands of hectares. Most part of his area is mountainous, only 1.69% or 528 thousands hectares of such area is used or growing crops. As the population of Japan was 130 Millions (1980), per capital arm land accounted less than. 05 hectare. Out of the total cultivable land 59% was under paddy and rest was under other crops requiring less water. All the cultivable land is not suitable for the Agricultural because some portion (2/3) is covered by alconic ash. This portion of land is still waiting for improvement.

Prior to world war-II, landloardish and small holdings were major characteristics of Japanese agricultural More than 50% land was used to be cultivated by tenants, who, turn, used to pay rent to land-loards in land. These tenants and Agricultural labourers were often in the clutches of land-lord-m-money lenders. After the World War the conditions of farmers turned deplorable, therefore, Government introduced measures of land reforms. Each farm household, according to the measures of land reforms, was allowed the ownership 3 hectares of land. The excess land i. e. more than 3 hectares was to be purchased the Government from the concerned owners at marginal rates These excess lands,

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thus taken from the people, were redistributed to landless tillers who later on formed the Agricultural Co-operative Societies. The Government after 1950 has started to play a significant role in promoting the Agricultural Co-operatives. Peasant proprietorship, co-operative efforts and new techniques of production had accelerated the growth of agricultural sector. By the end of 1960 agricultural production was increased upto 50% of the pre–War–Level.

Thus it appears, that the foundation of cooperative movement in Japan was made by the Government in order to improve the system of land management. The land which was previously cultivated by few owners, was started to be cultivated by many farmers on the basis of cooperative principles. At the initial stage the Government was eager to implement its drastic land reformes programmes under the gamut of cooperatism however the few wealthy people controlling the economy of Japan had put several obstacles to the efforts. Consequently till 1950, Cooperation in agricultural sphere was stagnated. After 1950 the Government felt a dire need of developing agriculture for meeting home-needs. Consequently there was heavy negligence over attaining self-sufficiency in peasantry. But Japan was not in a position to produce as much as it was needed for the domestic consumption.

Such inadequacy of production of food-grain was due to the reasons mentioned below :

i) Japan's export of industrial products rapidly increased and it accumulated the foreign exchange (1978) to the extent more than 30,000 million. Small portion of this foreign exchange was sufficient for importing food-grains and meeting deficit.

ii) Cost of farm operations in Japan as compared to the industrially advanced countries and even some developing nations was often large.

iii) Decline in farming population at an annual rate of 3 9 has considerably affected agricultural production.

iv) Prices of farm lands were sky rocketing in response to strong demand for land to be used for industrial and housing purposes.

Agricultural Cooperatives in Japan

The farmers of Japan like Indian farmers had to depend upon Money Lenders for their production and consumption needs, these farmers since long back (1898) had recognised the need for cooperative associations and they started such organizations without the patronage of the Government. Gradually i. e. after Second World War the Government has started to take active interest in promoting cooperative spirit among the masses. As a result of efforts from the Government and from the people the cooperative movement has seen good days. Several forms of cooperative organizations confining attentions on credit and non credit activities were emerged at large proportions after 1960. Many of these organizations were based on principles of meeting multiple needs of the people.

Such units are known as multipurpose societies in India. These multipurpose Societies undertake the functions like.

1) Financing production and consumption needs,

2) Providing banking services,

3) Marketing of crops, supplying seeds, cattles, fertilisers, machines, cloth, groceries, etc.

4) Providing guidance in farming,

5) Financing subsidiary occupations and

6) Constructing housing accommodations.

At the end of the year 1980, there were 7,823 multi-purpose societies covering cent percent farm population. The total number of memberships of all such societies was more than 14 millions.

Loans Disbursement :

The role played by the Japan's Government in the matter of promotion of cooperative agricultural Societies became significant after 1964 The Government had started to route its financial assistance in agricultural sphere through cooperative institutions. As a result of this, the share of loans disbursed by cooperatives has been, at the margin, higher than the total agricultural loans released by the rest of the financing institutions. This fact can be confirmed by the statistical data given in Table No. 1.

Table No. 1

A share of Agricultural Loans disbursed by various financing Institutions (1979) in Japan.

Name of Financing Institution	Share of Loans in percentage
1	2
i) Agricultural Cooperative Societies.	60%
ii) Agricultural Forestry and Finance corporation.	18%
iii) Commercial Banks.	8%
iv) Agricultural Improvment and Sellers's Funds.	2%
v) Others	8%
Total	100%

Source : Report on Agricultural Finance Government of Japan (1980).

Table shows that more than 60% agricultural loans released by the agricultural cooperative societies, where as 18% loans released by Agricultural Forestry and Finance corporation, 8% by Commercial Banks, 2% by Agricultural improvement and Seller's funds and rest i e. 8% loans released by institutions other than above. The loans given by the Agricultural Cooperative Societies are found to be useful because of the following reasons. :

1) Prompt payment of loans.
2) Disbursement in adequate proportion.
3) Reasonable Rate of interest.
4) Flexible terms of loans.
5) Convenient repayment schedule.

The above said advantages inherent in the procurement of loans are often absent in the most of the countries where agricultural loans are released. Despite the above merits of agricultural cooperative loans, the reference of Mode of Issuing loans will be worth while to mention here. This mode of issuing loans is entirely different from the practise adopted in India, where system of Cooperative agricultural credit is old enough.

The loans are not only given to member on consideration of Security of tangible assets like landed properties, standing or anticipated crops, Houses, income and share in cooperative societies but also given after taking into account personal elements like mental habits diligence, skill, thrift health etc. Thus, cooperatives are very careful in advancing loans, As far as possible loans are advanced for production purposes and they are usually in kind. During the last two and half decades the cooperatives have been releasing the loans on larger and larger scale. Consequently, the outstanding loan figures have also been gone up considerably from 31 billion yens in 1950 to 3,318 billion yens in 1980.

Deposits

An interesting feature of the Japanese cooperative movement is the accumulation of deposits to the extent more than which is required to make advances for agricultural purpose. During the last decade (i. e. since 1966) the deposit position in cooperation has shown a remarkable improvement.

1949	–	96 billion yens
1960	–	668 ,,
1966	–	2,333 ,,
1971	–	6,187 ,,
1977	–	9,823 ,,
1980	–	13,975 ,,

Source : Report on cooperative Finance,