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# Annual Statement of Rates (A.S.R.) as a Baseline for Calculating Various Taxes and Premium - A Critical Review

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**Abstract:** *This paper has been written in the context of critically reviewing the practice of using Annual Statement of Rates by various Government departments for computing their respective taxes and premiums. The Author explores the existing method of preparation of the Annual Statement of Rates and suggested some alterations in the same. Arriving at true market value is a difficult task because it needs consideration of many value-governing parameters on a single immovable property which is a time-consuming and strenuous job. Therefore, in order to make ASR much rational than before, the attempt is made by suggesting a methodology that is not going to change the base of the existing preparation methodology and recommended some suggestions which can be practically implementable and helpful to arrive at true market value.*

*The need for automation tools like a real-time updating system along with a geological information system in the existing system is addressed to avoid manual errors. Which may achieve a rational ASR to some extent.*

**Keywords:** *Annual Statement of Rates, Taxes, Premium, Regression Analysis, Mean and Median, Realtime updating system, Geological Information System.*

## I. INTRODUCTION

In India, buying and selling of immovable properties have become an integral part of the 21st century. The number of sales transactions is highest in the state of Maharashtra. We pay tax to the government in the form of stamp duty at the time of purchase and sale of any property. This tax is levied in a certain percentage according to the true market valuation of the property mentioned in the instrument. To arrive at a true value any immovable property, registering officer needs to refer to one base value document in which the approximate true values of the immovable properties are mentioned. Earlier in Maharashtra state, the document was called Quick Ready Reckoner before the year 1995 and after that, it is called as annual statement of rates. Annual Statement of Rates is the document that shows average rates of lands and buildings situated in every Tahsil, Municipal Corporation, or local body area. Earlier the Annual Statement of Rates was normally used only by the revenue department to compute the stamp duty on the document of transfer. As time passed the improvements are made by the State Government in the ASR according to existing character of development, land use, potential land use, location, change in regulation etc. These improvements in ASR made the revenue department of Maharashtra one of the larger revenue collection departments after the sales tax department.

## II. NEED OF THE STUDY

There are many instances observed when ASR mismatch to market rate (too high or too low) is detrimental to property buyers, High ASR leads to paying extra stamp duty and low circle rate forces to cash deals. Also, in case of the premium levied by the government authorities for incentive FSI, TDR and zone change proposals the discrepancies in the ASR rate and the market rate leads to the financial loss of the common public and the authority. As there are various taxes and premiums on immovable properties that are imposed by various government organizations are computed using ASR rates there is a need to study the repercussions of such practice and frame the suggestions accordingly.

## III. AIM

To review the rationality of Government practices about levying the various taxes and premiums on immovable properties using ASR as a baseline.

## IV. OBJECTIVES

- A. To study the different types of taxes and premiums which are computed using ASR as a baseline and their adopted computation methodologies.
- B. To analyse the different perceptions made by various departments behind the use of ASR to compute relative taxes or premium, also comparing their cash flow before and after the use of ASR.
- C. To find out the grey areas in the Tax assessment or computation methodology adopted by concern departments and suggest the improvements in ASR or in existing tax computation methods as required.

D. To arrive at a win-win situation for both the Government and taxpayer i.e., exploring the potential of the state to collect maximum revenue without the uproar of the common man.

### V. SCOPE OF THE STUDY

The study will not only critically review the practice regarding use of ASR but also suggest the solutions accordingly. The research will include analysis of selected Taxes and premiums in which ASR is used as a guideline. Find gaps and explore the untapped aspects of improvement in ASR.

### VI. LIMITATIONS OF STUDY

The study area will be limited to some survey numbers from Hadapsar area within Pune Municipal corporation limit Maharashtra State India.

### VII. TYPES OF TAXES/PREMIUM AND LEGAL PROVISIONS

From the above literature the various taxes and premiums are enlisted in the table with relative act and their respective sections and concern department.

Table I  
Taxes and Premiums According to Different Acts

Tax/ premium	Concern Department	Adopted computation methodologies with legal provision	
The Income-tax Act 1961			
Capital Gain tax	Income Tax Department	Section 50 C Capital Gain Tax is levied on stamp duty valuation if consideration value is less than the stamp duty valuation. [1]	
The Mumbai Municipal Corporation Act, 1888			
Property Tax	Municipal Corporation	Provision for levying property tax by capital value method is added in section 128 [2]	
The Maharashtra Municipal councils, Nagar panchayats and Industrial townships act 1965			
Property Tax	Municipal councils, Nagar panchayats	Provision for levying property tax by capital value method is added in Section 105 [3]	
The Maharashtra Land Revenue Code 1966			
Conversion Premium	Collectorate of district	Lands can be converted from occupancy Class- II to Class-I only after payment of required premium under section 29A [4]	
The Maharashtra Regional and Town Planning Act 1966			
Additional FSI premium	Town planning and valuation department and ULB	Rate as may be fixed by the State Government or the Planning Authority, for grant of an additional Floor Space Index or for the special permissions.	
Potential FSI loading premium	Town planning and valuation department and ULB	Rate as may be fixed by the State Government or the Planning Authority, for grant of an additional Floor Space Index or for the special permissions.	
Zone change Proposals	Town planning and valuation department and concern ULB	Section 20 Zone change from Agricultural use to Residential use 50% rate of ASR [5]	
NA permission charges in RP areas	Town planning and valuation department and concern ULB	Premium For permission in peripheral Area around Gaothan is 5% for RP area	
Development Charges [6]	Town planning and valuation department and concern urban local body Under section 124	Amendment 10/8/1992	Amendment Date 29/11/2010
		Second Schedule added	Second Schedule was Substituted
		Arbitrarily range of rates (Min and max) were specified.	Specified the percentage rates of developed land mentioned in the ASR.
		Shift from Arbitrary practice to rational practice is initiated by government.	

**TABLE II**  
Perceptions Made by Various Departments Behind the Use of ASR

Capital Gain Tax	
Earlier Method for levying tax	Acquisition of immovable property by the Government when it was found that fair market value was higher than the consideration stated in instrument of transfer.
Perceptions behind the use of ASR	To avoid malpractices like showing undervaluation of any property
Property Tax	
Earlier Method for levying tax	<ol style="list-style-type: none"> <li>1. Unit Area method and Rateable value method</li> <li>2. The rate for per unit area was fixed arbitrarily.</li> </ol>
Perceptions behind the use of ASR	<ol style="list-style-type: none"> <li>1. Need for rational method for tax assessment.</li> <li>2. Revenue generation is main concern for urban local bodies.</li> <li>3. 73<sup>rd</sup> and 74<sup>th</sup> Constitutional amendment leads to decentralisation of powers and financial burden on urban local bodies.</li> </ol>
Conversion Premium	
Earlier Method for levying tax	<ol style="list-style-type: none"> <li>1. Rate per unit area is fixed arbitrarily.</li> </ol>
Perceptions behind the use of ASR	<ol style="list-style-type: none"> <li>1. Need of Rational Document to decide value of land.</li> </ol>
Premiums and Development Charges	
Earlier Method for levying tax	The rate for per unit area was fixed arbitrarily decided by ULB

**TABLE III**  
Existing Methodology and Observations

Capital Gain tax	
Existing Methodology	Direct Adoption of valuation made by state valuation authority in case the if the valuation stated in instrument is less than the valuation made for calculation of stamp duty.
Factors affecting computation	<ol style="list-style-type: none"> <li>1. Stamp Duty Valuation, 2. Alignment of ASR with Market Rate</li> </ol>
Tools Used	Direct use of Valuation made by stamp duty and Registration department
Property Tax	
Existing Methodology	Capital value method 1. ASR values of particular year is decided as base values. 2. Multiplying factors are decided as per the use, existing amenities and infrastructures.
Factors affecting computation	<ol style="list-style-type: none"> <li>1. Base Year, 2. Multiplying Factors, 3. Use of the property 4. Vacant or occupied etc</li> </ol>
Tools Used	<ol style="list-style-type: none"> <li>1. GIS based Property detailing</li> <li>2. Calculation by professionals using software.</li> </ol>
Conversion Premium	
Existing Methodology	<ol style="list-style-type: none"> <li>1. Prescribed percentage are decided by the state government on the value computes using Annual statement of rates</li> </ol>
Factors affecting computation	<ol style="list-style-type: none"> <li>1. Land Tenure, 2. Depends On use like residential, commercial etc. 3. Defined rate of premium</li> </ol>
Tools Used	<ol style="list-style-type: none"> <li>1. No Additional Tool required</li> </ol>
Premiums and Development Charges	
Existing Methodology	<ol style="list-style-type: none"> <li>1. Prescribed percentage are decided by the state government on the value computes using Annual statement of rates</li> </ol>
Factors affecting computation	<ol style="list-style-type: none"> <li>1. Alignment Of ASR with Market Rate and land use</li> </ol>
Tools Used	<ol style="list-style-type: none"> <li>1. No Additional Tool required</li> </ol>

### VIII. INTRODUCTION TO STUDY AREA

The delineation of the area which is shown in Map:1 shows the Hadapsar village map. The area is selected because it has plenty of sell purchase transactions and have variety of residential developments to study different considerations which affect value of property.

The Pune Solapur highway (NH65) is passing through the area; also, there is well known Magarpatta city on northern side of the highway and Sasane Nagar on southern side in which congested locality is present.

In the Hadapsar area the survey number are selected in such a way that the variety of development can be captured. The analysis is done on selected survey numbers only.

Following are the survey numbers which are selected according to the development and access road.

TABLE IV  
Characteristics of Survey Number

Sr. No.	Survey Number	Number Transactions	Characteristics of Survey Number
1	46	75	<ul style="list-style-type: none"> <li>• South side of the highway with mixture of plotted layouts</li> <li>• Congested and slum like area in the vicinity.</li> </ul>
2	47	57	<ul style="list-style-type: none"> <li>• South side of the highway with Mixture of plotted layouts and high-rise building. And slum like area in the vicinity.</li> </ul>
3	55	17	<ul style="list-style-type: none"> <li>• Mixture of plotted layouts and high-rise buildings</li> </ul>
4	72	119	<ul style="list-style-type: none"> <li>• Main road access and Residential area.</li> </ul>
5	73	104	<ul style="list-style-type: none"> <li>• Gunthewari plotted development and 12m road access</li> </ul>
6	74	5	<ul style="list-style-type: none"> <li>• Gunthewari development. And 12m road access</li> </ul>
7	87	32	<ul style="list-style-type: none"> <li>• Mhada colony and Main Road access.</li> </ul>
8	115,116	194	<ul style="list-style-type: none"> <li>• Commercial area like showrooms, other amenities like police station etc.</li> </ul>
9	136	83	<ul style="list-style-type: none"> <li>• In the vicinity of Magarpatta city.</li> </ul>
10	147	92	A. Magarpatta city residential apartments with direct access to main road.
11	141	8	B. Commercial use buildings like offices etc
12	139	150	C. Residential apartments in Magarpatta city
13	145	124	D. Residential apartments in Magarpatta city
14	311	44	E. Gunthewari development and low-income group stakeholders.
	Total	1104 sales transactions are analysed.	

### IX. INTERVIEW WITH DEPARTMENTAL EXPERTS

Following are the experts were interviewed from different departments related to different taxes and premiums.

TABLE V  
Experts Related to Different Taxes

Department	Type of Tax/ Premium
Town planning Department	Premium, Preparation procedure of ASR
Private Developer	Premium
Pune Municipal Corporation	Property Tax
Chartered Accountant	Capital Gain Tax
Collectorate Pune	Conversion Premium

## X. EXPERT SUGGESTION

The questionnaire is so prepared for experts from different field and seek their opinion about respective taxes and premium.

The motive behind the questionnaire is to know how and why the annual statement of rates is used by the different departments apart from the registration department.

And to know about difficulties faced by these departments regarding the methodology of levying taxes or while using the annual statement rates.

For example, public uproar, court cases, etc. and after that whether they need improvements in ASR or methodology to maintain the win-win situation for common public and the government. The opinion and suggestions from the experts are as follows:

- A. Micro detailing of value zones in urban areas with GIS platform
- B. Amendments in Maharashtra stamp act (determination of true market value) rules -1995 for practical issues.
- C. Direct linkage of sub registrar sales for quick knowledge of demand at particular area.
- D. The guidelines in UDCPR should be considered while preparing ASR (for e.g., Zoning, FSI and other pros and cons)
- E. Amendment in act to low down and to make rise in rates.
- F. ASR preparation method must be checked. Basis for like yearly rise etc
- G. Number of Guidelines should be minimised to avoid confusion.

From the expert opinion, it's been seen that the various departments do not want any improvement in the methodology of levying taxes and premium. Also, the common public uproar is seen to be on the Annual statement of rates and the experts have suggested the improvements in the preparation methodology of the Annual statement of rates by which microlevel detailing of the properties can be achieved.

Therefore firstly, the methodology of preparation of the annual statement of rates can be studied, and accordingly, the proposals can be formulated to improve or rationalise ASR.

## XI. ANALYSIS OF PREPARATION METHODOLOGY OF ASR

The procedure and the related guidelines for preparation of Annual Statement of Rates, is formulated in Maharashtra Stamp (Determination of True Market Value of Property) Rules, 1995.

The methodology adopted for the preparation of ASR by the Government, for the efficient working and preparation of ASR is elaborated below.

- A. Discussion with Local representatives and Stakeholders like Architects, Valuers, Planners, Builders, Advocates, Chartered Accountants, landowners, etc.
- B. Preparation of Draft ASR by divisional officers based on principles of valuation
- C. Submission to Joint Director of Town Planning, Valuation.
- D. On Last date of February each year draft ASR will be submitted to Inspector General of Registration
- E. Meetings with Divisional officers.
- F. Finalization of ASR

The document of sale purchase of any property is registered by sub registrar officer, such registered documents data is made available to the divisional valuation officer for further analysis. Following are the steps which are used in sequence for the increment in the percentage rates of the ASR.

- 1) Distribution of sale transaction according to value zone.
- 2) Arrangement of sale transaction in particular value zone in ascending order
- 3) Determination of average & median

Apart from this mean and median calculation for yearly rise in ASR, the policies carry equal importance and may differ from place to place depending on its inherent characteristics.

## XII. DISCREPANCIES IDENTIFIED IN ASR AND COMMON AREAS OF PUBLIC UPROAR

- A. Use of sales statistics for proposing the increment in the ASR.
- B. In case where the sales statistics is not available the methods seem to be ineffective.
- C. The value zones made in ASR, includes many survey numbers, so survey numbers having maximum sale instances affect the values of survey number with lesser transactions.
- D. One survey number with different type of development have different rates leads to confusion for sub registrar.
- E. It is time consuming and need more working officials.
- F. Unrealistic valuation made by considering wrong rates or the unrealistic rates quoted in the ASR, the seller or purchaser may face financial loss in capital gain taxation process.
- G. No automations like computer programs in the ASR preparation process gives rise to manual errors like missing numbers, zoning, confusion in rates to be applied in valuation etc.

## XIII. SALES ANALYSIS

As discussed above the value zones in the present ASR are made according to the value governing characteristics and the properties with same character. These value zones include many survey numbers which may hamper the micro level detailing of the values and the true market rate. The attempt is made to analyse the sales instances of individual survey numbers.

### A. Finding Correlation in the Sale Transaction

The attempt is made to correlate the sales instances and establish relevant mathematical model. The regression method is used to find co-relation with actual consideration in the document and the valuation as per ASR.

Regression is a statistical method used in finance, investing, and other disciplines that attempts to determine the strength and character of the relationship between one dependent variable (usually denoted by Y) and a series of other variables (known as independent variables).

The output would include a summary, similar to a summary for simple linear regression, that includes:

R (the multiple correlation coefficient), 2. R squared (the coefficient of determination), the correlation coefficient, denoted by r, is a measure of the strength of the straight-line or linear relationship between two variables.

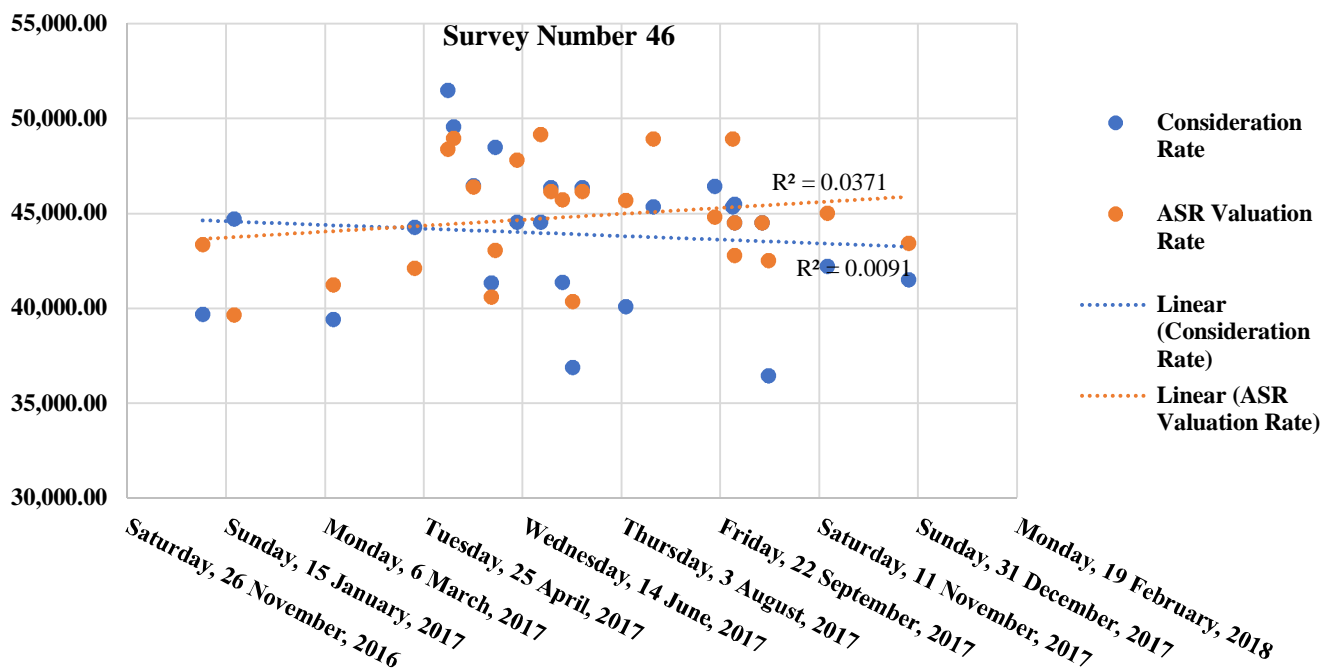


Fig. 1 Graph for year 2017 survey number 46 showing R<sup>2</sup> values

After using regression method, it has been seen that there is weak relation (in between 0 to 0.3) in the variables so the mean median is the only method can be used for analysis.

**B. Mean and Median Method**

The existing method which is used by the government is ‘mean and median method’. The same method is used here but it is applied for the sale instances available for individual survey numbers. The Analysis of each survey number is made example given below.

**TABLE VI**  
Analysis of Survey Numbers

Deed Number	Type	plot/ bungalow/ flat	floor number	parking facilities	Consideration Paid	Valuation As per ASR	survey number	Address	Area of property	Date of Transaction	Base Unit Rate as per consideration	ASR rate as per valuation	actual ASR	% Above or below ASR
2844 /2017	transfer deed	Flat	10	1	87,00,000	85,40,451	115	Magarpatta City, Hadapsar	132.85	20 /3/ 2017	65,487	64,286	74,180	1.87%
7511 /2017	transfer deed	Flat	10	1	90,00,000	98,44,471	115		132.76	7/11/17	67,792	74,152	74,180	-8.58%
54 /2017	assignment deed	Flat	3	1	70,00,000	69,28,235	115		101.08	1/3/17	69,252	68,542	74,180	1.04%

Following table shows the median of rise and fall for each survey number and actual rise and fall in rates given for each year.

**TABLE VII**  
Rise and Fall for Each Survey Number

Survey Number	Year	Number of transactions	Rise/fall Median	Value zone	ASR	Actual Rise/fall (%)
46	2017	25	0.00	30/464	49100	
	2018	25	0.06			0
	2019	16	3.09			0
	2020	12	5.72			0
73	2017	45	-1.89	30/464	49100	
	2018	23	-1			0
	2019	14	-2			0
	2020	22	-1			0

From the above table it has been seen that the yearly rise given in the ASR is different than the required percentage of rise and fall. There are instances where the rise is not required. Instead, reduction to the ASR rate is necessary. Likewise for all the survey number rise and fall is made.

Further analysis made on the existing method it has been observed that the practise of taking maximum of Mean and median is giving some sort of inaccuracy to decide rise or fall to the ASR. for example: If we plot the mean and median on the graph of consideration value and the ASR value in year 2017 of survey number 46 the mean line is much above than the median line. Also, the median gives the consistent results with all the instances equally distributed on either side of trend line. But the mean line is differing from the true market value.



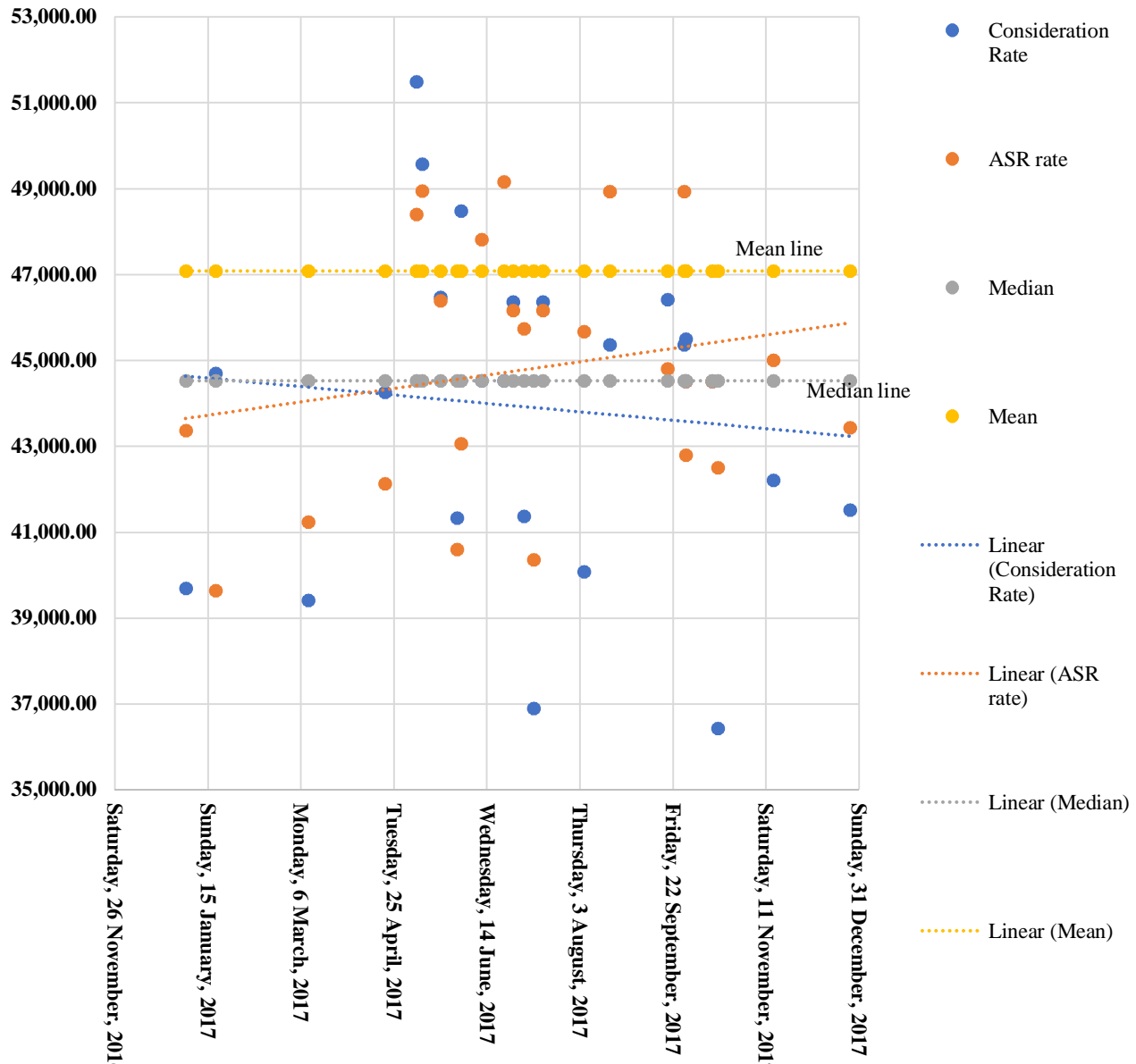


Fig. 2 Graph showing Mean and Median line for Survey number 46 in year 2017

The calculation of the mean incorporates all values in the data. But the median is generally considered to be the best representative of the central location of the data.

C. Additional Observations

- 1) Survey numbers in same value zone in ASR show different rise and fall in the rates.
- 2) The ASR is a market-driven document that must be flexible enough to get true market value like making sudden fall or sudden rise in rate to some extent.
- 3) Making value zones is micro level detailing but doesn't show true market value always, as it includes number survey numbers with different development characters.
- 4) Arriving at a true market value is seen to be impossible as one cannot predict the exact value of any property. So, the attempt is required in such a way that the ASR must be rational enough than previous year ASR's.
- 5) It's also been seen adequacy of the valuation done by sub registrar need to verify because there are some evidences where the sales from the same location with same area having difference in ASR valuation. the examples of such sales are given in the table below.

**TABLE VIII**  
Difference in ASR Valuation for Similar Built-Up Area and Location

Deed No	Type	flat/ bungalow	floor number	Consideration Paid	Valuation As per ASR	survey number	Address	Area of property	Date of Transaction	Base Unit Rate as per consideration	ASR rate as per valuation
9453/2017	sale deed	Flat no.604	6	41,14,200	43,50,000	73	HARSHAD CONSTRUCTION ASHOK NAGAR , HADAPSAR	92.83	24 August 2017	44,320	46,860
576/2017	sale deed	Flat no.203	2	41,97,000	44,12,434	73	HARSHAD CONSTRUCTION ASHOK NAGAR , HADAPSAR	92.83	21 January 2017	45,212	47,532
4522/2018	sale deed	Flat no.501	5	77,11,750	77,11,750	115	MAGARPATTA CITY , HADAPSAR	106.69	09 April 2018	72,284	72,284
5535/2018	sale deed	Flat no.503	5	98,35,000	98,35,000	115	MAGARPATTA CITY , HADAPSAR	106.00	02 May 2018	92,783	92,783

**XIV. PROPOSALS AND RECOMMENDATIONS**

*A. Analysis of Sale Instances According to Each Survey Number*

In case of existing method of sales analysis, the sales for value zones i.e., sale instances which are present in each survey number are analysed together. For example, in case of value zone number 30/464 in Hadapsar area includes 11 survey numbers therefore the sale transactions present in these survey numbers are analysed together.

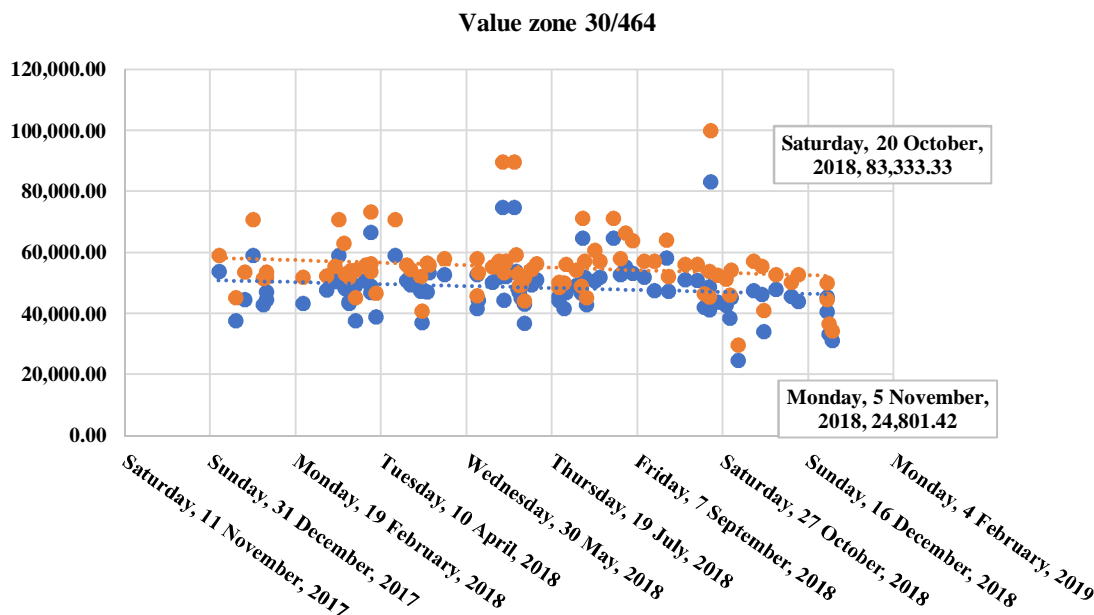


Fig. 3 Graphical Representation of Value Zone 3/464 in Year 2018

As seen in the graph the minimum to maximum range of sale is in between Rs.24801/- per sq.mts to Rs.83,333/- per sqmts as a result the median calculations will yield different value and the chances of errors due to variable data will increase with increasing variety of sale transactions.

But if we consider each survey number the graph of sales present in the different survey number will show the different trend and also the range of minimum to maximum is lower than the whole value zones so, the chances of errors are minimum. The graph below shows the sales from survey number 46 in year 2018.

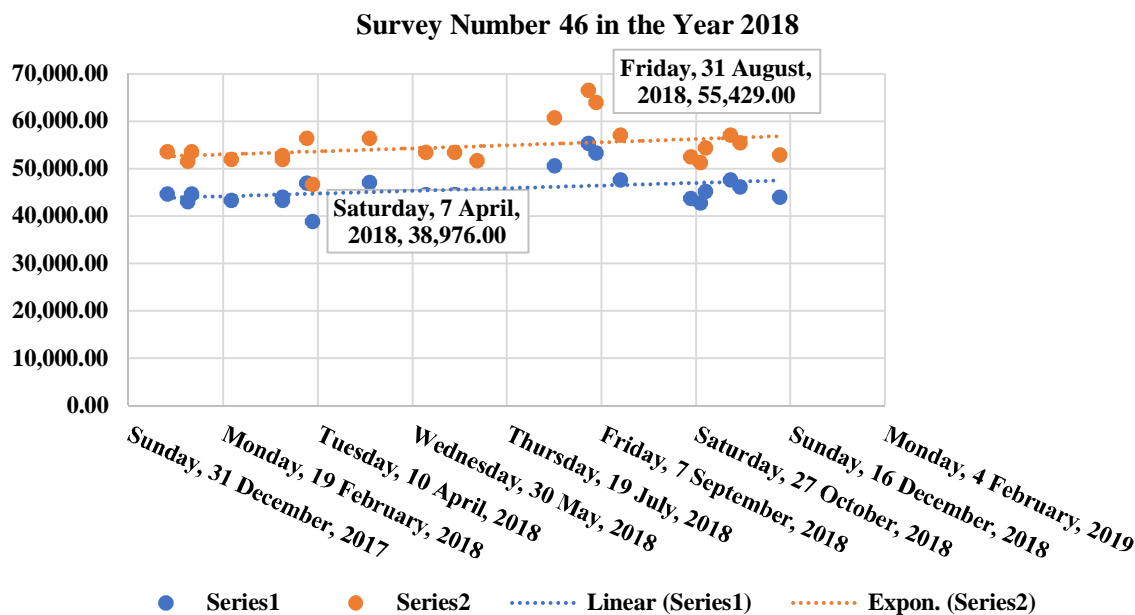


Fig. 4 Graphical Representation of Sales in Survey Number 46 in Year 2018

**Advantages**

- 1) No confusion of different value zones with same survey numbers.
- 2) Use of available village maps.
- 3) No need of detailed survey and finding out value governing parameters for the value zones.
- 4) No confusion regarding addition and exclusion of survey number from one value zone to another.
- 5) Rate for each survey number is itself micro detailing of ASR.
- 6) Effect of each sale of individual survey number is taken into account.
- 7) The cause of the Rise and fall in rate can be easily interpreted.
- 8) Use of median gives the rational rise and fall.
- 9) Chances of errors due to variable data will be minimum with minimum variety of sale transactions. And error due variable to data will be limited to the respective survey number no chance of transfer of error to other survey number.

**B. Considering Weightage Factor while Deciding Rise and Fall in ASR**

As mentioned in additional observations the adequacy of the valuation done by sub registrar is in question because there are some evidences where the sales from the same location with same area differ in ASR valuation. Therefore, it can be argued that the rate of ASR valuation should not be used for comparison or calculation of actual growth.

So, the age factor is added to the median of each survey number in order to arrive at rate of new property which is shown in the table below.

Like the age factor is added in the consideration value, the basic factors which may affect the valuation are location, size, quality etc. but these factors are normally considered at the time of transfer by the purchaser (which reflected in the consideration amount paid) and also effect of these factors are independent of age so these factors may not be used to show representative rates of the area.

**Advantages**

- 1) Consideration of depreciation leads to one step ahead to achieve true market value.
- 2) Analysis only by median gives the rational rise than mean.
- 3) Depreciation shows the drastic change in rise and fall.
- 4) Elimination of sub registrar’s valuation leads to minimum manual errors.
- 5) Easy application of weightages to basic important parameters like age, size, location etc but the age is only factor by which the valuation much affected than other parameters

**C. Considering Rise and Fall in Market Rate**

In case of existing method there was practice of showing the incremental pattern in the ASR, after that the Maharashtra stamp (Determination of True Market Value of the property) Rules 1995 rule number 4 sub-rule number 4 was amended on 12th March 2018 by which Chief Controlling Revenue Authority, in consultation with Joint Director of Town Planning and Valuation Department may propose the rise or fall in rates of ASR. As the real estate market is non predictable the rise and fall must be the part of the ASR. Therefore, in order to propose rise or fall in the ASR there is need of rational assumptions to have rational rise and fall in the ASR.

Finding reason behind the rise and fall is necessary because it may act as indicator for authority to focus on those areas where the value governing services needed and uplift these localities to improve property rates and eventually it will help government to accumulate the revenue in terms of stamp duty, property taxes, premiums and development charges. Following parameters must be considered in while giving rise or fall to the ASR.

**TABLE IX**  
Prerequisites of Giving Rise and fall in a.s.r and Reasons Behind it

Sr. No	Prerequisites of giving rise in ASR	Reasons behind the prerequisites
1.	Average number of sales in the survey number for last three years must be more than 15.	<ul style="list-style-type: none"> <li>• The accuracy of any statistical method is only depending on sample size. The minimum average sample size for last 3 must be 15 in order to analyse the sales.</li> <li>• Sales of last 3 years will give an idea about the trend of development and the transactions.</li> </ul>
Prerequisites of giving fall/ reduction in ASR		
1.	Reduction in ASR is necessary	<ol style="list-style-type: none"> <li>1) ASR must reflect the true market conditions.</li> </ol> <ul style="list-style-type: none"> <li>• Reflection of true market condition will eliminate the chance of unnecessary financial burden on public.</li> </ul>
2.	Average number of sales in the survey number for last three years must be more than 15.	<ul style="list-style-type: none"> <li>• The accuracy of any statistical method is only depending on sample size. Therefore, minimum average sample size for last 3 years must be 15 in order to analyse the sales.</li> </ul> <ol style="list-style-type: none"> <li>2) Give an idea about the trend of development and the transactions.</li> </ol>

**D. Yearly Percentage Rise in ASR**

As shown in the table from proposal number 2 the market showing different percentage of rise and fall in the rates. It must be understood that the ASR must reflect the market rate even it is less the ASR or more than ASR. Also, by making ASR survey number wise the rise and fall in the rate will only depend on the sales transactions in the survey number only. And accordingly, the people from the same locality never complain about the rate. Now in case of survey number 46 there is no rise proposed in last 4 years but as per the median of each year the rise is needed from year 2017.

TABLE X  
Yearly Percentage Rise in ASR

Survey Number	Year	Number of transactions	Median	Value zone	ASR rate	Proposed Rise in ASR (%)	Required Rise/fall (%)
46	2017	25	53,442	30/464	49100		9
	2018	25	53,521		49100	0	9
	2019	16	52,835		49100	0	8
	2020	12	56,557		49100	0	15

If in year 2017 the rise to the ASR is given at 9 %, the value of ASR will represent the market value. And also, the rise of 9% will never be disputed by the public because the sales are already above the ASR. The rates in the survey number 46 could be proposed like shown below.

TABLE XI  
proposed rates for survey number 46

Year	Median	ASR rate
2017	55442	
2018	53521	55400
2019	52835	53520
2020	56557	52800
2021		56560

Advantages

- 1) Consideration of falls leads to one step ahead to achieve true market value.
- 2) Consideration of two-way behaviour of market.

E. Real Time Updating System

The real-time web is a network web using technologies and practices that enable users to receive information as soon as it is published by its authors, rather than requiring that they their software check a source periodically for updates.

Now this system may be useful for the valuation wing who are responsible for the preparation of ASR. If the data of registered document updated in real time with particular format made available to the valuation office for each survey number it will enables valuation officer to trend about the transaction at particular survey numbers which will help them in analysis of sales.

Advantages

- 1) System enables valuation officer to keep on eye about transaction and the demand at various areas.
- 2) Quick knowledge about the trend of sales.
- 3) At a glance graphical representation of sales of any survey number enables trend of transaction (below and above the ASR) at an area.
- 4) Counter check for sub registrar’s valuation, for example; in case of any drastic rise and fall in any sale due to any manual error or wrong interpretation in valuation this can be corrected by valuation officer and the further errors can be eliminated easily.
- 5) Knowledge of trend of sales in particular area gives an idea about the value governing services.
- 6) Easy to find the rise and fall in number of transactions at particular area. As the average number of transactions decides rise and fall in rates of ASR.
- 7) No need of separate calculation, direct analysis of sale is possible.

#### *F. Geographical Information System (GIS) Platform*

A geographic information system (GIS) is a framework for gathering, managing, and analysing data. The data which can be generated from the real time updating system can easily be attached to Arc GIS software by which at a glance location and the demand can be seen on the map.

#### Advantages

- 1) Cognizance of various data like Zone change proposals, NA permissions data, upcoming projects taken while preparing ASR will help to rationalize ASR.
- 2) Project induced rise or fall rate can be identified easily.
- 3) Various type of value governing parameters can be considered while giving rise and fall to the ASR
- 4) Various changes in land use can Zone change proposals, NA permissions data, upcoming projects.

#### *G. Guidelines Regarding Valuations*

The guidelines are the integral part of ASR. These are issued to arrive at a valuation of the property considering its own pros and cons so it is recommended to take consideration of these guidelines while computing different development charges and premiums.

### **XV. POSTSCRIPT**

The research study started with an aim of studying different type of taxes and premium where the Annual statement of rates is used as a base line for computation.

In the research the evolution of quick ready reckoner to Annual statement of rates is studied first. After that in second phase, the reason behind the use of ASR to compute the different taxes and premiums is found out by studying them along with their concern acts, notifications, existing methodology of levying taxes and premium with observations and inferences.

In third phase the experts from the different departments are interviewed and seek their opinion about Public Uphear while levying premium and Improvement needed in ASR/ method of levying premium/both. Almost all the experts highlighted the problems they faced regarding the ASR only, according that their suggestion about the Improvement in ASR, Suggestions for Any innovative technique for improvement in ASR are analysed.

Now in fourth phase the adopted methodology for preparation of ASR is explained along with observations and grey areas in the existing ASR preparation methodology and valuation system. After that the attempt is made to propose some modification in the existing methodology which are practically implementable and micro level detailing of ASR can be achieved.

In the last phase automation in the existing system is suggested to address the manual error and time-consuming data analysis. The real time updating system along with GIS may be the future solution for rational ASR.

Finally, the objective of the study that improving ASR in such a way that the ASR must ensure minimum public uproar without affecting the revenue of the government i.e., win-win situation for both public and the government.

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